How to Prepare a Bike Plan
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Introduction

Cycling is vital to any integrated transport network. It provides healthy, fast and convenient travel with minimal impact on the environment.

The NSW Government supports bicycle riding as an important part of the transport mix and has set a target in the state plan, NSW 2021, to increase cycling, recognising that well-planned and integrated bicycle networks can contribute to more accessible, sustainable and connected communities.

**Bicycle riding target in the Draft Long Term Transport Master Plan**

By 2016, our target is for the number of bicycle trips in the Greater Sydney region to double, with further growth in cycling for all trips in NSW, particularly in urban centres, by 2031.

This guide, while predominately for local councils, can be used by anyone who wants to develop a bike plan, for example schools, hospitals, universities and businesses.

The guide is supported by an online Prepare a Bike Plan tool, designed to work hand in hand with this guide.

The online tool will also include a mentor system, whereby technical experts will answer questions and provide advice.

**Why develop a bike plan?**

One of the main reasons to develop a bike plan is so you can take a coordinated and strategic approach to delivering cycling infrastructure and promotional programs in your community. Through the development process, you will establish cycling objectives for your area or organisation, and identify the activities needed to achieve these objectives.

Once complete, your bike plan will help you to communicate your plans to members of the community, your staff and other organisations.

Your bike plan can also help you to secure funding, and will help you to justify this funding against clear objectives.

A properly implemented bike plan should:

- Contribute to a healthy, active and liveable community.
- Help reduce greenhouse gas emissions.
- Improve bicycle and pedestrian infrastructure.
- Reduce dependency on private motor vehicle usage.
- Reduce road congestion.
- Reduce parking congestion.
- Increase mobility and independence for those without cars.
- Increase capacity for local public transport networks.
- Reduce health costs, travel times, noise and vehicle operating costs.

**Updating an existing bike plan**

If you already have a bike plan, you can use this guide to assess whether your bike plan needs updating and what sections should be reviewed. The checklist provided in Appendix C will help you to assess the currency and relevance of your plan's objectives. Most bike plans are less likely to be relevant after five years.

The advice throughout this guide may also provide ideas on how to improve your bike plan beyond the basic requirements.
**How to use this guide**

If you have never developed a bike plan before you may want to use this guide as a step-by-step manual for developing your bike plan from beginning to end.

If you have experience developing bike plans, this guide may act as a ready reference to assist with your bike plan’s structure or content development, or simply as a checklist to ensure you have included all the aspects you want in your bike plan.

To draw your attention and help you navigate through the document, some text has been highlighted in either grey or blue boxes.

The grey boxes contain examples or helpful tips, eg ........................................

The blue boxes summarise the outputs you may aim to achieve at each step in the preparation of your bike plan, eg ........................................

Throughout this guide you will be directed to supporting documents for additional information and to [bicycleno NSW.gov.au](http://bicycleno NSW.gov.au). A full reference list is included at Appendix A.

**Table 1** provides a snapshot of the bike plan process. This guide may also be useful for a local council to work in partnership with a consultant.

**Table 1. Summary of the bike plan process.**

<table>
<thead>
<tr>
<th>Phase</th>
<th>Step</th>
<th>Can a consultant do this?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. Budget, staff and timing</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>2. Set up a management team</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>A: Preliminaries</strong></td>
<td>3. Review your existing planning and delivery documents</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>4. Review the land use planning context</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>5. Set your objectives</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>6. Prepare a project brief</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>7. Determine your bike plan’s structure</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>8. Work with your communications team</td>
<td></td>
</tr>
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<td></td>
<td>1. Collect data to understand cycling in your area</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>B: Preparing the bike plan</strong></td>
<td>2. Assess existing routes and infrastructure</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>3. Identify proposed routes</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>4. Map a network of routes</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>5. Plan and design for cyclists’ requirements</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>6. Set priorities for the network</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>7. Estimate the costs and benefits of your bicycle program</td>
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<tr>
<td></td>
<td>8. Promote cycling in your area</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>9. Promote road awareness and safety</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>10. Encourage employer programs</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>11. Identify funding streams</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>12. Establish an implementation plan</td>
<td>Yes</td>
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<tr>
<td></td>
<td>13. Review bike plan development</td>
<td></td>
</tr>
<tr>
<td><strong>C: Finalising the bike plan</strong></td>
<td>1. Publicly exhibit your draft bike plan</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>2. Finalise your bike plan</td>
<td></td>
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<tr>
<td></td>
<td>3. Launch your bike plan</td>
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</tbody>
</table>
Phase A: Preliminaries

Step 1: Budget, staff and timing

The cost of preparing a bike plan can be upwards of $30,000 in regional areas and $40,000 in urban areas. Before you commence, identify what funding is available to develop your bike plan.

Roads and Maritime Services (RMS) administers NSW Government funding for cycling projects, under programs allocated by Transport for NSW.

If you work for a local government council in NSW, you can apply to RMS for funding assistance for the development and implementation of a bike plan. More information can be found at bicycleinfo.nsw.gov.au

You should allow approximately three to six months to develop your bike plan and to consult with the community. The bike plan will need support from your management and the dedication of an enthusiastic employee with knowledge of bike plans.

Outputs:
- Confirm funding for the preparation of your bike plan.
- Allocate a dedicated employee to work on the bike plan.

Step 2: Set up a management team

The bike plan’s management team will guide the development, drafting, exhibition, finalisation and launch of the bike plan. Your management team could include:

- Interested council officers.
- Council planners and engineers.
- Council sustainability services representative.
- Council community services representative.
- Council road safety officer.
- Local RMS representative.
- Local area health service representative.
- Local Police representative.
- Private bus operator and/or rail representative.
- Bicycle NSW or local Bicycle User Group members.

A diversity of council and community representatives will help identify the many varied issues relating to cycling in your local community. This will also produce stronger outcomes during implementation.

Key members of the management team should also attend the Designing for Pedestrians and Bicycle Riders course. This course will help you to understand the basic requirements of pedestrians and bicycle riders, and outlines the suite of engineering treatments available to you when planning and designing for active transport. The course includes a field work component where you will audit the walking and cycling environment around the course venue and experience first hand what it is like to be a pedestrian and bicycle rider.

Outputs:
- Establishment of the bike plan management team.
- Terms of reference or agreement document stating how the team will run.
- An agenda for the first meeting.
- A list of team members who should attend the Designing for Pedestrians and Bicycle Riders course.
Step 3: Review your existing planning and delivery documents

A thorough review of existing bicycle and land use planning documents will help you identify work already undertaken by your organisation. Examples of documents may include:

- An existing bike plan: review what has and has not been implemented, priorities, effectiveness of promotional programs.
- Pedestrian access and mobility plan (PAMP): helps identify origins and destinations, existing facilities, future plans for pedestrian infrastructure or new road works that could be shared with cyclists.
- Community strategic plan (CSP) or Social Plans: include population growth figures, challenges facing the Local Government Area (LGA), Council’s vision for the LGA’s future and objectives in areas such as sustainability, tourism and equity. For example, the Newcastle CSP includes a strategic direction to create a more ‘connected city’, which could be achieved through integrated cycle and pedestrian paths.
- Delivery program: sets future priorities and services and will identify whether cycling projects are planned or the type of projects prioritised over cycling projects.
- Operational plan: sits beneath the delivery program and looks at what Council intends to achieve in the current financial year and includes budget estimates and costs. It identifies whether funding is already set aside for cycling programs or whether further investigation is needed.
- Annual report: outlines achievements against deliverables identified in the delivery program and operational plan. It can also identify budget constraints and opportunities.
- Open space/public park/reserve plans of management: identify cycleways and walkways, key origins and destinations and areas such as parks with mountain biking facilities that require access. Open space plans detail access facilities and barriers to access.
- Road safety strategic plan (RSSP): includes statistics on cycling related accidents and objectives for safer roads.
- Sustainability plan: identifies targets that can be addressed by cycling, such as decreasing greenhouse gas emissions, producing more liveable towns and cities and managing population growth through better urban design.
- Tourism plan: may include cycleways to promote visitation or become an attraction in their own right. For example, the Bellingen Tourism Strategy includes ‘developing a series of walking and cycling tours which emphasise the intrinsic character of each locality’.
- Transport management and accessibility plan (TMAP): identifies initiatives to reduce car dependency and increase public transport use, walking and cycling.
- Previous submissions to local, state or federal government authorities: will help you to prepare new submissions for funding.

The local government planning and reporting framework

(from Planning a sustainable future manual, NSW Division of Local Government, Department of Premier and Cabinet, 2010)
Check out bicycleinfo.nsw.gov.au to see if neighbouring LGAs have undertaken a bike plan. Specifically look for strategies due to be implemented in the short term, any regional networks or paths that link to your LGA, nearby bike facilities that could be included in key origins and destinations, and opportunities to pool funding or to develop a regional bike plan across LGA boundaries.

Outputs:
- A summary of the work already completed by Council, current priorities and/or existing cycling commitments.

**Step 4: Review the land use planning context**

State-level objectives and funding priorities can impact upon the way your council plans for transport and land use outcomes at a local level. Council’s local policies, plans, strategies and schemes can incorporate cycling as a component of land use planning.

In addition to the planning and delivery documents already identified, the following planning instruments may clarify your council’s cycling objectives:
- Local environmental strategy: may include an access or transport strategy.
- Local environmental plan (LEP): provides the context and rules for all local planning decisions and actions.
- Development control plan (DCP): sets standards or requirements for particular types of development or development areas.
- Section 94 contributions plan: identifies local public amenities and services required as a consequence of new developments.
- Precinct or concept plans: contain design principles, staging of development, movement networks, distribution of public open space areas and subdivision patterns.
- Development assessment process: may require bicycle facilities to be provided as a condition of consent.
- Local area traffic management schemes: may consider cycling in conjunction with initiatives such as 40km/h high pedestrian areas, 10km/h shared zones and low volume mixed traffic streets.

**City of Sydney review of local planning**

The City of Sydney’s LEP includes provisions for developers to streamline construction of bicycle friendly facilities. Changes include:
- Excluding end of trip facilities - such as showers, change rooms, lockers and bicycle storage facilities - from floor space calculations, ensuring these facilities do not impact on a development’s floor space ratio.
- Providing less car parking in new developments close to train stations, major bus routes and local services.
- Requiring new non-residential developments to include on-site bike parking and end of trip facilities.
- Changing the fee structure and hours for new public car parking facilities.

**Integrating cycling into council planning**

You can make cycling an integral part of the planning for your community by:
- Ensuring sustainable travel plans are incorporated within new residential developments.
- Ensuring relevant DCPs and section 94 contributions plans include provision for bicycle facilities.
The background reading you should undertake to understand bicycle planning from a state level is available at bicycleinfo.nsw.gov.au. These documents are also listed in Appendix A.

Outputs:
- A list of the land use planning objectives and priorities that will impact planning for cyclists in your area.
- A list of opportunities for incorporating cycling into local planning (for example, through sustainable travel plans, DCPs, precinct plans, s94 contribution plans or Voluntary Planning Agreements associated with planning or development proposals).

Step 5: Set your objectives

Your bike plan’s objectives should align with your organisation’s broader planning and policy goals, and not necessarily just its transport goals. For example, you may find your bike plan could contribute, directly or indirectly, in other areas such as

- Health.
- Community.
- Equity.
- Land use planning.
- Commerce or economy.
- Recreation.
- Education.
- Tourism.

Examples of objectives from council plans to which a bike plan could contribute

<table>
<thead>
<tr>
<th>Objective</th>
<th>Council Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improve access to education facilities</td>
<td>Lithgow City Council Social Plan</td>
</tr>
<tr>
<td>Address increasing levels of obesity</td>
<td>Lake Macquarie City Council Social Plan</td>
</tr>
<tr>
<td>Address the lack of activities for young people</td>
<td>Lake Macquarie City Council Social Plan</td>
</tr>
<tr>
<td>Promote good air quality</td>
<td>Wagga Wagga City Council Community Social Plan</td>
</tr>
</tbody>
</table>

Your objectives should be supported by performance indicators or targets against which you will be able to measure the success of your bike plan. The use of performance indicators will also help you to formulate realistic objectives. See Figure 1 for examples of performance indicators.

If baseline data are limited, you may be able to estimate cycling participation rates and potential growth rates from neighbouring LGAs or from LGAs with similar environmental factors and demographics, in order to set measurable objectives.
Step 6: Prepare a project brief

You will need to decide whether to use in-house resources to develop your bike plan, or to engage an external consultant. Either way, a project brief will be needed to set out the scope of what the bike plan is trying to achieve. A project brief template is included at Appendix D.

The project brief should include:

- Bike plan objectives.
- Project background.
- Existing bicycle programs and infrastructure.
- Relevant background documents and data.
- Terms and conditions for appointing an external provider, if relevant.

The brief should also allow for:

- Progress meetings with the bike plan management team.
- Participation in community and stakeholder consultations.
- Site visits to assess the local cycling environment.
- Public exhibition of the draft bike plan.
- Formatting the draft and final bike plan to suit your organisation’s objectives and meet the criteria of potential funding bodies, if relevant.

Outputs:

- A project brief.
Step 7: Determine your bike plan’s structure

Your draft bike plan should encompass all the information that is used to make decisions and help support any actions outlined in your bike plan, including:

- Reference to background studies.
- Stakeholder engagement.
- Existing cycling environment.
- Proposed bicycle strategy.
- Recommended works.

A suggested table of contents for a bike plan is presented in Appendix F as a guide only. How you develop your structure will depend on the size and scale of your bike plan. You may find the structure will change as the bike plan is developed and as you get a better idea of the plan’s priorities and proposed actions.

Components of a typical bike plan

Clever design will help you to highlight the key points of the bike plan for managers and decision makers. For example Figure 2 illustrates how the Blue Mountains Bike Plan 2020 highlights its recommendations to ensure they are easy to find throughout the document.

Figure 2: The Blue Mountains Bike Plan recommendations are highlighted throughout the document so they are easy to find (from Blue Mountains Bike Plan 2020, Blue Mountains City Council).

Outputs:

- A draft structure for your bike plan.
- Key design elements that will help to highlight important information in your bike plan.
Step 8: Work with your communications team

Good communication throughout the development and implementation of your bike plan is essential. An ongoing relationship with local media will help you to achieve positive reports and strong community interest in your bike plan. Media liaison can support efforts to encourage community input and will help you identify ongoing issues or community perceptions.

Engage your communications team from the outset to let them know the plan is being developed and the points at which you will need their assistance.

Engaging with stakeholders

You will need to work with external stakeholders throughout the development, exhibition, finalisation and implementation of the bike plan. Stakeholder consultations could include representatives from:

- Local bicycle user groups (BUGs), pedestrian groups, cycling clubs and bike shops.
- Interested community members.
- Local businesses and chambers of commerce.
- Schools or tertiary education institutions.
- Local public transport providers.
- Roads and Maritime Services.
- Bicycle NSW.
- Local area health service.
- Destination NSW or the local tourist authority.
- Department of Sport and Recreation.
- NSW Police Force.
- NSW National Parks and Wildlife Service.
- Neighbouring councils.

Your communications team can provide advice regarding stakeholder engagement, and help organise an initial workshop to canvass community issues and opinions, especially during **Phase B: Preparing the bike plan.** This workshop will help you identify issues and potential or preferred bike riding links and corridors. A follow-up workshop should be conducted once a draft bike plan is released for public comment.

You may also wish to engage with stakeholders via online media, be it an online engagement tool on your own website or involvement in online cycling communities such as **Sydney Cyclist** or **Bicycle NSW.** A questionnaire template is included in **Appendix E.**

More traditional publicity activities, such as local advertising, face to face consultation at community events and wider research being undertaken by Council into local travel behaviour will help you to gather stakeholder input.

Outputs:

- A communications plan for the preparation and launch of your bike plan.
- Engagement with your organisation’s communications team.
- Initial community and stakeholder engagement.
Phase B: Preparing the bike plan

Step 1: Collect data to understand cycling in your area

In addition to the information gathered during your review of existing plans and documents, you will need to collect current information relating to cycling in your local area, such as:

- Observational counts of major bike routes and bike parking at transport interchanges within your LGA.
- Council travel surveys, including pedestrian movements.
- GPS powered tracking applications on smart phones that allow cyclists to identify popular origins and destinations and the routes taken to access these locations.
- Local bicycle crash data.
- Traffic volume and speed data, especially on potential cycling routes.
- Social, demographic and population data.

Broad scale data are also available through sources such as:

- Roads and Maritime Services’ permanent bicycle counters (collected on key RMS infrastructure in the Sydney metropolitan only).
- Bureau of Transport Statistics’ annual Household Travel Survey which includes cycling usage and the annual Sydney Cycling Survey (started in 2010) which reports on cycling participation and perceptions towards cycling.
- The five yearly Census includes details of bicycle usage for journeys to work on census day.
- Australian Bicycle Council National Cycling Participation Survey.

Community surveys

Community surveys will help you determine existing and potential use of cycling in specific areas and will provide a basis to determine future growth. Surveys should be aimed at residents, recreational cyclists, commuters or sports groups and data collected should include origin and destination, problems encountered by cyclists and trip purpose.

Saddle surveys

A saddle survey involves cycling along existing and proposed routes, noting where work is needed to reduce hazards or risks (including during adverse weather conditions). The saddle survey should include experienced and novice riders who realistically represent a wide range of cycling abilities.

Types of cyclists

Bicycle riders can be classified into eight broad groupings as described in Table 2.

Further work has been undertaken to understand the motivations and concerns of non-cyclists who are interested in cycling, or cycling more, and these are detailed in Table 3.

There could be other road user groups who feel negatively affected as bicycle networks grow, including car and truck drivers. Your bike plan should recognise these groups and their concerns and offer mitigating strategies.

bicycleinfo.nsw.gov.au links to information about cycling data in NSW and methods of collection via Cycling in NSW – What the data tells us (Parsons Brinckerhoff for PCAL, December 2008) and the Bicycle Federation of Australia’s ‘Bikeability Toolkit’, a resource for people undertaking a saddle survey.
Table 2. Types of bicycle riders (adapted from the Austroads Guide to Traffic Management - Part 4).

<table>
<thead>
<tr>
<th>Category</th>
<th>Rider characteristics</th>
<th>Riding environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-cyclists and potential cyclists</td>
<td>Do not currently ride; have potential to with effective encouragement.</td>
<td>Generally would begin with off-road paths, footpaths (where permitted) or very low volume residential streets.</td>
</tr>
<tr>
<td>Primary school children</td>
<td>Cognitive skills not developed, little knowledge of road rules, require supervision.</td>
<td>Similar to that of non/potential cyclists.</td>
</tr>
<tr>
<td>Secondary school children</td>
<td>Skill varies, developing confidence.</td>
<td>Generally use on-road facilities or off-road paths where available.</td>
</tr>
<tr>
<td>Recreational</td>
<td>Experience, age, skill vary greatly.</td>
<td>Desire off-road paths and quiet local streets, avoid heavily trafficked routes, more experienced will prefer to use road system for long journeys.</td>
</tr>
<tr>
<td>Commuter</td>
<td>Vary in age, skill and fitness, some highly skilled and able to handle a variety of traffic conditions.</td>
<td>Some prefer paths or low stress roads, willing to take longer to get to destination, others want quick trip regardless of traffic conditions, primarily require space to ride and smooth riding surface, speed maintenance.</td>
</tr>
<tr>
<td>Utility</td>
<td>Ride for specific purposes (eg shopping), short length trips, routes unpredictable.</td>
<td>Not on highly trafficked roads, needs include comprehensive, low stress routes, appropriate end of trip facilities.</td>
</tr>
<tr>
<td>Touring</td>
<td>Long distance journeys, may be heavily equipped, some travelling in groups.</td>
<td>Often route is similar to that of other tourists.</td>
</tr>
<tr>
<td>Sporting</td>
<td>Often in groups, two abreast occupying left lane, similar needs to commuters.</td>
<td>Travel long distances in training on arterials, may include challenging terrain in outer urban or rural areas, generally do not use off-road because of high speed and conflict with other users.</td>
</tr>
</tbody>
</table>

Table 3. Motivations and concerns of non-bicycle riders.

<table>
<thead>
<tr>
<th>Category</th>
<th>Reasons for not cycling</th>
<th>How to encourage people in these groups to cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women</td>
<td>Safety/comfort (perceived and actual), cycling attire including helmets, greater desire to cycle for leisure/fitness than for commuting, safety, health and fitness issues (AMR Interactive for RTA, 2009).</td>
<td>Exclusive bicycle lanes and off-road routes, increased driver awareness, more end of trip facilities, more cyclists on the road (Environmetrics for City of Sydney 2006), increased opportunities for casual surveillance opportunities.</td>
</tr>
<tr>
<td>Elderly</td>
<td>Safety (perceived and actual), health and fitness issues (AMR Interactive for RTA, 2009).</td>
<td>Exclusive bicycle lanes and off-road routes, increased driver awareness, more end of trip facilities, more cyclists on the road (Environmetrics for City of Sydney 2006).</td>
</tr>
<tr>
<td>People from non-English speaking backgrounds</td>
<td>Restricted access to cycling information and safety campaigns, as well as cultural barriers.</td>
<td>Improve availability of information on cycling and safety campaigns in languages other than English.</td>
</tr>
<tr>
<td>Teenagers and school children (source: Horspool, 2003)</td>
<td>Distance from home to school, safety (this decreases as students get older), access to appropriate bicycles, cycling alone.</td>
<td>Implement Bike Buses and school bike mechanic programs; provide off-road paths to get to school, construct safer crossings and supply secure facilities to store bikes at school.</td>
</tr>
</tbody>
</table>
Case Study: Super Tuesday Annual Bike Counts

Super Tuesday is an annual bike commute count organised by Bicycle Network in Victoria. It uses volunteers to collect data about cyclist numbers and route usage over one morning each year, generally the first Tuesday in March. In 2011, Super Tuesday was conducted across 33 metropolitan councils at 880 sites. Collated data are prepared for participating councils, providing data and trends about cycling at an LGA level.

Outputs:
- A list of existing cycle programs, including promotional or education programs, for your area.
- All available cycling data for your area.
- Results of the saddle survey.
- Identification of cyclists and non-cyclists in your area.
- Identification of the barriers preventing people from cycling.

Step 2: Assess existing routes and infrastructure

Your existing routes and facilities should be assessed to determine whether they still meet the community’s needs and whether they require remedial work or upgrading as part of your bike plan.

Outputs:
- Itemise all upgrade or remedial work required to existing bicycle routes or facilities.

Step 3: Identify proposed routes

Your bicycle network will be based on key origins and destinations in the area, identified through stakeholder input and your own investigations. You should also seek advice from your neighbouring councils on trip generators in their LGAs so you can achieve good connectivity.

Local bicycle routes should also integrate with ferry wharves, railway stations and bus or transport interchanges, with bicycle parking available at these hubs.

Key trip generators may include:
- Residential areas.
- Business and employment districts.
- Retail centres.
- Open space, sporting or recreational grounds.
- Art and entertainment precincts.
- Community facilities.
- Education facilities.
- Public transport interchanges.

As you plan your network, you should be constantly assessing your proposed routes against the five principles for good network design:

1. Coherence: link popular destinations with residential streets via local and regional routes; maintain a consistent quality of infrastructure along the length of a route; provide good signage.
2. Directness: respect desire lines; provide routes that are as direct as safely practicable; avoid long detours.
3. Safety: maintain or improve the road safety of riders, pedestrians and motorists; maximise opportunities for social interaction and casual surveillance.

4. Attractiveness: provide attractively designed and located facilities that complement the surrounding environment and enhance the riding experience; well designed and located paths can become an attraction in themselves.

5. Comfort: provide smooth surfaces, easy gradients, appropriate infrastructure and treatments, and good maintenance.

It may be too soon in the process to identify what type/s of infrastructure you will use in different sections of your bicycle network, as feasibility studies or more detailed investigations may be required. However, you should be thinking about suitable types of infrastructure as you are planning your routes. More information on different types of cycling infrastructure is included in Appendix B.

Well placed paths provide opportunities for surveillance both to and from the pathway. This enhances the safety of path users and the surrounding neighbourhood (from NSW Planning guidelines for walking and cycling, Dept Infrastructure, Planning and Natural Resources, 2004).

Attractive paths complement the existing environment.

Outputs:

- A list of the key origins and destinations within and adjacent to your LGA.
- Identify proposed routes to be included in the bike plan.
- An assessment of the routes against the five NSW Bicycle Guidelines criteria and their connections to public transport.

Step 4: Map a network of routes

Mapping your existing and proposed routes will help you to identify gaps in your network and ensure you have linked key origins and destinations.

Mapping during the planning stages of your bike plan should include as many alternate routes as possible on the understanding that, during feasibility and concept design work, routes will be modified or eliminated if unsuitable.
Where possible, identify the different types of infrastructure you plan to incorporate along a route, for example:

- Off-road facilities – bicycle path, shared path, separated path.
- On-road facilities – bicycle lane, road shoulder, mixed traffic lane.

Your planning map will provide the foundation for any promotional maps that you provide to the community.

**Outputs:**

- A map of current and proposed routes.

**Step 5: Plan and design for cyclists’ requirements**

In addition to easily navigable and connected paths and lanes, efficient and effective bicycle networks should be supported by well-planned and well-located bike facilities, for example:

- Bicycle parking.
- Signage.
- Specialised infrastructure treatments.
- Showers and lockers.
- Water fountains and rest stops, especially on recreational or touring routes.
- Bicycle pump facilities.

The lists in **Appendix A**, as well as [bicycleinfo.nsw.gov.au](http://bicycleinfo.nsw.gov.au) include the background material you’ll need to look at to design for cyclist requirements. Documents include:

- NSW Bicycle Guidelines.
- Austroads Guide to Traffic Management.
- Austroads Guide to Road Design.
- Austroads Guide to Road Safety.
- Cycling Aspects of Austroads Guides.
- NSW Safe System Approach.
Bicycle parking

Bicycle parking can range from purely utilitarian on-street racks to secure bicycle cages to street art (see Figure 3 – Figure 10). Bicycle parking requires a balance between functionality, convenience and security, as illustrated in Figure 11.

Figure 3: Temporary bicycle rack, suitable for activities or events that don’t require permanent parking

Figure 4: Metal ring secured to utility pole designed for one bicycle per ring

Figure 5: Metal rack secured to the ground designed for multiple bicycles

Figure 6: Metal rail secured to the ground designed for two bicycles per rail

Figure 7: Bicycle racks within a secure bicycle cage

Figure 8: Functional art

Figure 9: Secure bicycle cage

Figure 10: Bicycle lockers
Signage

At the very least, signage should provide clear and unambiguous way finding for riders using a particular route. Signs should be displayed at every junction or decision point. Signage may also provide indicative journey distance and times (see Appendix B).

Specific facilities

The safety and amenity of bicycle riders can be greatly enhanced by the incorporation of specific facilities along the route or at the end of the trip. Examples of such facilities are illustrated in Figure 14 to Figure 19. Further examples of bicycle-specific facilities are included in Appendix B.

The Austroads Guide to Traffic Management, Guide to Road Design and the NSW Bicycle Guidelines can help you determine the suitability of these facilities in your network and the most appropriate locations to install them.
The location of facilities must reflect the types and number of cyclists expected to use them. The Planning Guidelines for Walking and Cycling suggests the number of parking spaces and end of trip facilities required per commuter cyclist.

Figure 14: Signalised crossing for cyclists
Figure 15: Bicycle head start box at traffic signals
Figure 16: Water fountains and seating
Figure 17: Bicycle pump
Figure 18: Showers
Figure 19: Lockers

Outputs:
- Proposed cycling facilities and the rationale for their inclusion and location.
- Identification of these facilities on the network map.
Step 6: Set priorities for the network

The implementation your bike plan will most likely take place over more than one budget cycle, so you will need to prioritise your route construction and promotional programs. Think about some of the following criteria when assessing your priorities:

- Safety.
- Likely usage.
- Cost and benefit.
- Connectivity with local and adjoining bike routes across jurisdictional boundaries.
- Impact on the local community.
- Ease of construction.
- Community needs and expectations.
- Integration with existing Council programs.
- Synergy with other road works.
- Connectivity to transport interchanges.
- Connectivity to local centres and other key destinations.

Case Study: Prioritising routes in Bathurst and Parramatta

Bathurst City Council included a number of questions in the Bathurst Community Access and Cycling Plan 2011 to assist with prioritising networks. Questions included:

- Will the project connect to the existing or future cycleway or footpath network?
- Will the project rectify a connectivity issue or complete a missing link?
- Will the project service a large section of the community?
- Is there an alternate or safer route available?
- Will the project directly improve the recreation network?
- Can the project be appropriately funded?

Projects were rated depending on how many criterion were met. The resultant scale, between 1 and 4, helped provide a list of priorities for the construction of bicycle routes.

Parramatta City Council used the following weighted points criteria* based on destination/origins accessed by the cycling infrastructure to prioritise routes:

- Extension of Parramatta Valley Cycleway (10 points).
- Education facilities (10 points).
- Key transport nodes (8 points).
- Shopping centres (8 points).
- Recreational facilities (8 points).
- Community facilities (5 points).

*High priority routes were those with a score between 40 and 50, medium priority routes between 39 and 24, and low priority routes less than 24.

Outputs:

- A table that clearly prioritises bike plan routes (this could also form part of your implementation schedule).
Step 7: Estimate the costs and benefits of your bicycle program

One of the most effective ways to assess the priority of the different elements of your bike plan is to undertake an economic evaluation. This will help you to:

- Demonstrate the bike plan’s value for money to the community.
- Enable ranking of the projects within your plan for budgetary purposes.
- Meet NSW Government requirements, where applicable, for an economic appraisal of all projects over $1 million.
- Assist the case for funding your plan.

At this stage, you will probably just want to determine high level estimates for the various elements of your proposed program. More comprehensive cost benefit analyses, including feasibility studies, should be undertaken as projects are developed for implementation.

More information on cost benefit analyses can be found in Appendix H.

Outputs:
- A high level estimate of cost for each element of your proposed bicycle program.

Step 8: Promote cycling in your area

You will need to promote cycling and the bike plan throughout the process, from when you commence working on the plan to when it is exhibited, launched, and then implemented. Education and information programs will promote cycling to the entire community, and can be implemented cost-efficiently and quickly compared to infrastructure.

It is worth setting some criteria to assess which programs to implement. Criteria could include expected community participation, how easy the program is to implement and administer, whether it provides value for money and how compatible it is with your bike plan’s objectives. Once you have decided which promotional programs will be implemented, document these in your bike plan.

Promotional programs must inform, persuade or remind the community of the benefits of cycling and how they can get involved. Promotional programs and initiatives may include:

- Promote new sections of infrastructure and show how they integrate with your existing network.
- Promote and support annual NSW Bike Week.
- Promote and support Ride to Work Day and the Ride to School program.
- Nominate a local ‘cycling champion’ in the community as a role model to promote cycling.
- Distribute information about bicycle initiatives through local e-bulletins, newsletters, local media or Council’s website.
- Hold an annual community bike ride, support local BUG groups or promote any programs established and administered by community groups.
- Introduce valet bicycle parking at community events.
- Use high visibility staff such as Rangers or Road Safety Officers to promote key programs and routes, particularly NSW Bike Week and Ride to Work Day.
- Provide a dedicated cycling page on Council’s website.
- Support promotional programs for Council staff and contractors.
- Regularly prepare or update the map of bicycle routes and facilities.
- Prepare Transport Access Guides - concise presentations of how to reach locations by public transport, walking and cycling, such as the one available for the RMS North Sydney office.
- Establish a commuter bike bus program.
- Provide community bicycle education and/or maintenance courses.
Case Study: The Watershed Bike Library

Newtown’s Watershed Bike Library is a library of specialist bikes and equipment for use by local residents, businesses and visitors. Library membership is a one-off fee of $10 for residents and $20 for non-residents. Bike loan is free for the first three hours, $10 for 24 hours or $20 for the weekend. Bikes are mostly hired for short trips that would normally be conducted in a car.

The Watershed has attracted 170 members in 12 months and loan fees are covering the costs of bike repair and maintenance. It requires around one third of the time of a council staff person during peak months, but staff acknowledge that an automated system may streamline the borrowing process and reduce staff management time.

Garage space is required to store the bikes, and start up costs are small (particularly if integrated with an existing local library). The Watershed transfers the bike into the temporary ownership of the person hiring the bike, reducing risks and hence costs.

Visit the Green Living Centre (formerly the Watershed) for more information.

All photos and information sourced from The Watershed staff and website.

Case Study: Valet bicycle parking at the Sydney Festival

Sydney Festival First Night is attended by around 200,000 people and valet bicycle parking is offered for about 300 bikes. Bicycles could be parked for free, behind the main stage and at another location in Hyde Park and attendants ensured the safety and security of all bicycles from 1pm until midnight.

‘Bike Bus’ initiatives

A ‘Bike Bus’ is a group of people who cycle to work, university or school in a group, using a set route and timetable to pick up more “passengers” on the way. Examples of bike buses in Sydney include:

- Lane Cove Public School “Bike Bus” from school to the Flat Rock Reserve in Willoughby for junior sport.
- Bourke Street Public School Bike Bus along Bourke Street Cycleway.
- Macquarie University Bike Bus every Wednesday morning.
Case Study: Fairfield Bicycle Recycling

The Fairfield City Council and the Western Sydney Cycling Network (WSCN) bicycle recycling program collects old or disused bicycles and restores them for community use. Visit: Premier’s Council for Active Living - Active Travel Case Study: Fairfield Bicycle Recycling or Western Sydney Cycling Network.

Promotional maps

Maps should show the route, facilities, points of interest that attract cyclists, the relationship to the surrounding road system and community facilities. Cyclists should be able to locate themselves on the map and identify the nearest and most appropriate routes. An example of a cycling map is shown in Figure 20.

Routes and features (eg bike parking) should be mapped using appropriate Geographical Information System (GIS) software. A standard GIS table of fields for mapping as used and recommended by RMS is shown in Appendix G.

Figure 20: North Sydney Council’s cycling map is designed to assist people wanting to get around by bike in the LGA. It is available online, at the local library and at Council chambers.

A selection of cycling maps for both urban and regional areas can be found at bicycleinfo.nsw.gov.au which also includes detailed resource information, including Section 7.3 of Cycling Aspects of Austroads Guides which can help with choosing the appropriate type of path.
Cycle tourism

Cycle tourism appeals to many cyclists at varying levels of ability and rider characteristics. Cycle tourism is a growing market within the Australian tourism sector, particularly within the nature-based tourism segment. Available research demonstrates that cycle tourism has the potential to make an active contribution towards the economic revitalisation of regional Australia as well as improve quality of life for its residents. Cycling tourism is an ecologically sustainable product, which is expected to continue to grow in popularity.

A number of identified key drivers have led to an increase in the demand for cycle tourism, including:

- Consumer interest in holistic health and wellbeing.
- More Australians than ever are making purchasing and lifestyle choices that reflect their concerns about health and wellbeing, the environment and sustainability.
- Consumer driven response to sustainable tourism.
- Government promotion of sustainable tourism.

(REF: Victoria’s Cycle Tourism Action Plan 2011-2015; National Visitor Survey, Tourism Research Australia, Canberra; Bicycle Federation of Australia)

Programs to support cycle tourism include:

- Establishing/supporting commercial cycle tour businesses.
- Distributing cycle tourism guides.
- If relevant, promoting the NSW Coastline Cycleway.
- Developing cycle tourism webpage.

Links to the Cycle Tourism Toolkit, to assist development of cycle tourism guides, can be found at bicycleinfo.nsw.gov.au

Established cycle tourism routes in NSW include the Tracker Riley Cycleway along the Macquarie River corridor in Dubbo, Warners Bay Cycleway, Lake Macquarie and Fernleigh Track, Newcastle.

The Fernleigh Track is a shared path that runs along the route of a former rail corridor in the Newcastle and Lake Macquarie regions, providing a pleasant route through bushland with links to adjoining residential communities. The track is used for local commuting and recreational purposes and forms part of the NSW Coastline Cycleway.
Shoalhaven City Council has created maps of 30 popular cycling routes throughout rural Shoalhaven. The routes link major population centres and popular tourist destinations.

Each map details tourist spots, caution points, water and food stops, bike shops, emergency spares and lookouts. Each route is also given a difficulty rating, ride length and estimated travel time which is included on the route map.

Outputs:
- A list of all the cycling promotion information, activities, events and ideas referenced to how they contribute towards success of your bike plan.

**Step 9: Promote road awareness and safety**

Your bike plan should focus on road safety and bicycle awareness to ensure all road users understand their responsibilities when it comes to bicycle riders. Examples of activities to include are:

- Liaise with Council’s Road Safety Officer to coordinate bicycle education, events coordination and community involvement.
- Hold cycling proficiency and bicycle maintenance courses.
- Develop a feedback mechanism for the local community to identify issues with existing bicycle facilities/programs.
- Investigate a public bicycle hire scheme (see the Australian Bicycle Council checklist).
- Target motorists to raise awareness of bicycle safety, legal obligations and road rules.
- Link to safety and education campaigns such as the Amy Gillett Foundation or Cycling Promotion Fund from Council’s website.
- Support CARES (Community and Road Education Scheme) Bicycle Education Program in local schools.
- Appoint a dedicated sustainable transport officer.

School education programs ensure children are trained in safe road user behaviours. Where possible, parents should be involved in the education program so that lessons can be reinforced at home and parents can facilitate the safe transportation of bikes to and from school for the program. You should develop an ongoing program, rather than a one off event and ensure all programs for children under 10 years of age are conducted off-road.

In accordance with Department of Education and Community requirements, the teacher to student ratio for cycling activities must not exceed 1:20 off-road and 1:15 for on-road activities.

Education training groups that provide bicycles for the programs relieves teachers of the responsibility to check the safety of helmets and bikes, especially if they are not qualified to do so.
RMS brochures that can help you to develop road safety educational information to promote compliance and low risk riding for cyclists can be found at bicycleinfo.nsw.gov.au

Outputs:
- A list of all the cycling road awareness and safety information, activities, events and ideas referenced to how they contribute towards success of the bike plan.

Step 10: Encourage employer programs

Programs can encourage a workplace culture of cycling, and Council should lead the way. The RMS Workplace Travel Planning Workshop has plenty of ideas. Actions could include:

- Develop a generic workplace travel plan for the LGA and distribute to employers.
- Introduce a workplace bike fleet and/or review the car fleet program (see the TravelSmart Australia bike fleet cost-benefit calculator).
- Host a Ride to Work Day breakfast.
- Use the NABERS Commuter Transport Tool to motivate employees to use more sustainable modes of transport.
- Encourage large employers to develop green travel plans.

Green Travel Plan

A Green Travel Plan encourages greater use of public transport, walking and cycling and can include benefits for staff who cycle to work such as:

- Easy access to secure, high profile bike racks.
- Shower and locker facilities.
- Interest free loans to purchase a bicycle.
- Cycle riding and maintenance training sessions.
- A bicycle fleet for attending nearby meetings.

Outputs:
- A list of employer programs that may be included in your bike plan.
Step 11: Identify funding streams

Funding for your bicycle program can come from within your organisation, from external funding bodies, or a combination of both. Your bike plan will ensure you have a coordinated approach to funding, will allow you to consider the best funding sources for your plan’s various projects, and will help you to achieve value for your money.

If you are applying for external funding, you’ll need to write a submission. Your submissions should be very clear and show the outcomes you are hoping to achieve. Look for opportunities to undertake joint projects with neighbouring councils or with local community groups.

Don’t forget, you will need to fund the ongoing maintenance of infrastructure and some promotional activities, so include these ongoing costs in your funding submission.

If you have a Council Road Safety Officer (RSO) he or she may be able to help with writing submissions for certain funding programs.

Case Study: Ermington Bay Nature Pathway

Parramatta City Council was granted $1,307,500 under the Jobs Fund initiative for the Ermington Bay Nature Pathway.

The aim of the Jobs Fund initiative was to support and create jobs and skills through projects that build community and social infrastructure.

RMS funding

RMS has funds available to assist local councils to implement their bike plans.

To apply for RMS funding, you must develop a project submission that clearly articulates the planned outputs, including the projected increase in cyclist numbers or improvements in riders’ satisfaction. Submissions should show how cycleway projects will be part of an identified transport network. They are more likely to be successful if they illustrate how planned routes provide links across jurisdictional boundaries.

RMS also offers block grants to councils as a contribution towards the cost of works on regional roads and can provide funding to promote NSW Bike Week.

Find out more from:

- The RMS local councils guide.
- The Memorandum of Understanding between councils and RMS.
- Your regional RMS representatives.
Council funding streams

Your council’s budget may have several areas from which you may be able to access funds for your bicycle program. Specifically, cycling projects could be incorporated within:

- Existing Pedestrian Access and Mobility Plan (PAMP) program.
- Footpath construction program (can be used to construct shared pathways).
- Traffic calming measures (on-road cycle infrastructure can be used to create a low-speed vehicle environment, particularly in regional centres).
- Open space programs (shared pathways can be incorporated within the upgrade of community parks).
- Major road projects on your local roads.
- Council road maintenance and upgrade programs.
- Section 94 contributions plans and Voluntary Planning Agreements related to individual development proposals (obtain advice from your Council Road Safety Officer (RSO) or a planning officer on development applications in relation to bicycle matters).
- Sustainability Levy - local governments may seek permission from the Minister for Local Government to permit a levy specifically for sustainability projects.

Case Study: Tweed Shire Council bike fleet

Tweed Shire Council’s staff bicycle fleet includes 13 bikes across offices, depots and treatment plants.

The program was initially funded through the sustainability budget. The cost of new bikes is covered by facility asset managers.

Bikes are chosen based on their suitability for each facility. Each fully equipped bike costs between $500 - $700. Safety gear has also been purchased and staff must attend an induction before accessing the bikes.

State Government programs

NSW Government funding for bike riding programs include:

- Office of Communities - Sport and Recreation.
- Sport and Recreation Participation program and Facility Grant program (sign up to the email alert service that publicises funding opportunities).
- Office of Environment and Heritage.
- Environmental Trust - an independent statutory body that supports environmental projects that do not receive funds from usual government sources.
- Department of Planning and Infrastructure Sharing Sydney Harbour Access program, Metropolitan Greenspace Program and NSW Coastline Cycleway Grants program.
- Department of Premier and Cabinet Community Building Partnership program.

Various NSW Health programs also encourage active and healthy living.
Australian Government Programs

Funding opportunities available for cycling programs include:

- Roads to Recovery Program.
- Black Spot Program.
- Local road grants.
- Financial assistance grants to local government.
- Nation Building Program.
- Infrastructure Australia funding or advice.

Links to all grants opportunities, including a list of federal, state and local government funding programs can be found at bicycleinfo.nsw.gov.au. The Cycling Resource Centre monthly e-newsletter provides information on cycling funding opportunities.

Community and corporate sponsorship

Businesses like to be associated with the community and may contribute to bicycle equipment for community groups or monetary support for encouragement programs.

In the UK, for example, Barclays Bank, in agreement with Transport for London, is the exclusive sponsor of the Barclays Cycle Hire and Barclays Cycle Superhighways schemes until 2018. Four cycleways have been completed, with another eight due for completion by 2015. Each superhighway typically costs between £8 million and £11 million, which includes supporting measures such as cycle training, maintenance and parking.

Whilst this is a large scale project, corporate sponsorship and naming rights agreements could interest businesses in NSW for smaller scale projects.

Funding may also come from registered clubs. Clubs that earn over $1 million annually in gaming machine revenue provide funding for community projects and services, including for cycling programs, workshops and distributing maps.

Under certain conditions, individual and corporate taxpayers may claim tax deductions for donations to the cost of cycling facilities through the Australian Sports Foundation. Find out more from info@asf.org.au or (02) 6214 7868.

Case Study: Community funding and volunteers

Part of the total cost of the Narooma to Dalmeny cycleway in Eurobodalla Shire Council was funded by community donations (federal, state and local government funding made up the difference).

Community volunteers constructed low risk areas of the project, working seven days a week with tradesmen volunteering on weekends. This reduced costs and provided greater community understanding of the constraints of the project and the necessities of construction (such as removing trees). The increased sense of community ownership and pride has boosted tourism numbers.

Outputs:

- The funding sources to be included in your bike plan’s implementation (including infrastructure and non-infrastructure programs).
Step 12: Establish an implementation plan

An implementation plan will help to move your bike plan from concept to reality. Your timeframes don’t need to be exact at this stage but they should broadly indicate what you hope to achieve when, during the life of the plan. Actual dates and times will be confirmed as you begin to implement your bike plan, and will be subject to the priorities and budget constraints of your organisation’s annual delivery program.

Your implementation plan should include such items as:

- The establishment of an implementation working group which will monitor and drive the implementation process.
- An implementation schedule which includes both construction (eg schedule of works) and non-construction projects.
- Communication and media opportunities for promoting bike plan initiatives and milestones.
- Bike plan review cycle/s.
- A reporting schedule that includes reporting against your key performance indicators.

Your bike plan working committee or advisory group can coordinate implementation across relevant parts of your organisation. The working committee may be a continuation of the bike plan management team and it will focus on:

- Identifying priorities to assist the implementation schedule.
- Holding public events to promote the bike plan and associated programs.
- Representing the interests of cyclists in the LGA.
- Monitoring and reviewing the bike plan.

Example – schedule of works
(adapted from Wyong Shire Council On-Road Bicycle and Shared Path Strategy (2010) and Blue Mountains Bike Plan 2020 (2009)).

<table>
<thead>
<tr>
<th>Action no.</th>
<th>Location</th>
<th>Requirement (eg parking, signage, education program)</th>
<th>Linkages/benefit</th>
<th>Length (m)</th>
<th>Priority/Start date/End date</th>
<th>Cost estimate ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Eastern Road, Killarney Vale</td>
<td>Provide continuous shared pathway from Wyong Rd/Tumbi Rd roundabout to Bay Village shopping complex.</td>
<td>Playgrounds, sportgrounds, reserves, shopping precincts, schools, community facilities, and medical facilities are linked via this path.</td>
<td>1000</td>
<td></td>
<td>250,000</td>
</tr>
<tr>
<td>1.21</td>
<td>Fletcher Street Road overbridge</td>
<td>Install two bicycle network route directional signs.</td>
<td>This bridge forms a useful link to L2 &amp; L3. It needs to be marked as a cycle route.</td>
<td>N/A</td>
<td>High</td>
<td>720</td>
</tr>
</tbody>
</table>
Example reporting - Bicycle Account

The City of Melbourne publishes an annual Bicycle Account which reports on cycling crash data, cycle counts, new infrastructure and end of trip facilities, community survey results and progress against its bike plan.

You can view the Melbourne Bicycle Account or the 2011 Australian Local Government Bicycle Account by visiting:

- Melbourne Bicycle Account
- Austroads Bicycle Account

Outputs:

- An implementation schedule with timeframes, priorities, the responsible business area, and other metrics tabulated against actions, events and milestones that should include: media & communications; delivery of both infrastructure & supporting non-infrastructure programs and initiatives; monitoring; and, performance reporting.

Step 13: Review bike plan development

Take the time to review your draft bike plan to ensure your objectives are clear and your proposed actions are realistic, meet your objectives and are measurable.

Ask someone who has not been involved in the development of your bike plan to check over it. Fresh eyes will identify gaps in your plan, help to improve clarity, and provide editorial feedback that will enhance the presentation of your bike plan, including spelling, grammar and formatting.

Outputs:

- A review of your draft bike plan.
Phase C: Finalise the bike plan

Step 1: Publicly exhibit your draft bike plan

Public exhibition gives all interested parties the chance to review and comment on your draft plan. Activities during this period could include:

- A follow up stakeholder workshop that involves those who attended the initial stakeholder workshop, along with other interested parties.
- A public display/exhibition at Council chambers, public places (such as shopping centres) or community events.
- A link on the front page of your organisation’s website and on any other relevant community sites.
- Developing online forums and/or surveys in consultation with your communications team.
- Emailing local constituents and other parties who may have registered interest in your bike plan.
- Contacting the local media and getting the news out on how people can have their say.

All public exhibition material should include guidelines for making a submission as well as the contact details of the person managing the public exhibition process. As part of the feedback process, you may decide to release a Submissions Report which will describe how each of the issues raised will be addressed.

Case Study: Shape your State discussion forum

**Shape your State** is a NSW Government initiative to provide a forum for people to express their views on future transport and planning policy direction and could provide ideas on how to conduct your own online consultation.

**Outputs:**

- A clear communications strategy to promote the bike plan and encourage feedback.
- Engagement with as wide a range of stakeholders as possible.
- A system to easily collate and report back on submissions and feedback.

Step 2: Finalise your bike plan

Feedback obtained during the public exhibition period should be assessed by your bike plan management team and the plan should be amended appropriately.

Once the bike plan has been finalised, it should be approved by your organisation’s executive officer/s. In the case of local government, this will involve submitting your bike plan for formal endorsement by the Council.

You can forward your final bike plan to RMS who will include it with other bike plans on [bicycleinfo.nsw.gov.au](http://bicycleinfo.nsw.gov.au)

You can also provide your mapped network of routes in GIS format to RMS for uploading into the master NSW cycling geo-database. This database forms the basis of RMS’s CyclewayFinder which is a searchable map of bicycle infrastructure in NSW.

**Outputs:**

- A final and approved bike plan.
Step 3: Launch your bike plan

A high profile launch of your bike plan will promote cycling and Council’s initiatives to the general community. This will increase interest and participation and open more opportunities for community consultation.

Ideas for your bike plan launch include:

- Promote the release of the bike plan on your organisation’s website.
- Advertise in local media.
- Organise a public launch that involves the mayor, local media, local members of parliament, community members, chambers of commerce and other businesses, and other stakeholders. You may wish to support your launch with a public bike ride.
- Invite public assistance in implementing the bike plan and encourage involvement and ownership from within the community.
- Distribute the bike plan to all stakeholders who assisted with its preparation.
- Display the bike plan at Council chambers and local retail areas.
- Present internally to educate staff on links between the bike plan and other plans and programs.
- Provide a cycleways map with bike information, safety hints, the rights and responsibilities of cycling, key origins/destinations, and how to use shared paths to the community and stakeholders.
- Distribute your cycleways map as widely as possible and advertise its existence through local media and online forums.

Outputs:

- A launch to promote your bike plan.
- A cycleways map for the community.
Appendix A: List of relevant guidelines and standards

**Essential background documents**
- Metropolitan Plan for Sydney 2036 (NSW Government, 2010)
- NSW Long Term Transport Master Plan (2012)
- Cycling Aspects of Austroads Guides (Austroads, 2011)
- NSW Bicycle Guidelines (RTA, 2005)

**RMS documents**
- Bicycle and Pedestrian Program Guide (RMS)
- Research on barriers to cycling in NSW (AMR Interactive for RTA, 2009)
- The provision and use of bicycle parking at Sydney Region public transport interchanges (RTA, 2009)
- Evaluation of the costs and benefits to the community of financial investment in cycling programs and projects in NSW (PwC for RTA, 2009)
- Cycling in NSW – What the data tells us (RTA, 2008)
- How to Prepare a Pedestrian Access and Mobility Plan (RTA, 2002)

**Other NSW Government documents**
- NSW 2021 Plan (NSW Government, 2011)
- Planning and Reform Manual (Division of Local Government, 2010)
- Planning Guidelines for Walking and Cycling (NSW Department of Planning and Infrastructure, 2004)
- Premiers Council for Active Living case studies (NSW Government, 2010)
- Local government integrated planning and reporting

**National documents**
- Austroads Guide to Traffic Management (Austroads, 2009)
- Australian Cycling Participation 2011 (Austroads 2011)
- Victorian Cycling Strategy (VicRoads, 2009)
- Pedestrian-Cyclist Conflict Minimisation on Shared Paths and Footpaths (Austroads, 2006)
- The Cycle Friendly Workplace (Bicycle Victoria, 2003)
- Green Travel Plans (Bicycle Victoria, 2012)
- Forecasting demand for bicycle facilities (Austroads, 2001)

**International documents**
- Tempting Teenagers to Cycle (Horspool, 2003) (New Zealand)
- Economic Appraisal of local walking and cycling routes (Sustrans)
Relevant websites

- BicycleInfo
- Premiers Council for Active Living
- Bicycle NSW
- Australian Bicycle Council
- Cycling Promotion Fund
- Cycling Resource Centre
- Amy Gillett Foundation
Appendix B: Definitions and abbreviations

Definitions

Bicycle  A vehicle with two or more wheels that is built to be propelled by human power through a belt, chain or gears.

Bicycle facility  A public facility especially constructed for bicycle traffic. This term has broad use and can refer to any part of a bicycle route, bicycle path, bicycle lane, associated signage or parking equipment.

Bicycle route  Any marked route that forms part of a bicycle network. The route may utilise different types of bicycle facilities and may be on-road or off-road in the road related area or through parks and reserves.

Bicycle networks  A defined set of bicycle routes which make it possible to travel around a region by bicycle in a safe and connected manner.

End-of-trip facilities  A general term for public or private facilities located at the end of a bicycle journey that when provided can encourage higher bicycle patronage. Commonly provided or desirable end-of-trip facilities include the provision of secure bicycle storage, clean shower and toilet facilities, and secure lockers for personal items. End-of-trip facilities may be further enhanced with the inclusion of laundry services, a bicycle maintenance service or area, and access to food and drinks.

Footpath  An area open to the public that is designated for, or has as one of its main uses, use by pedestrians.

Off-road  A bicycle path or shared path is said to be off-road when it is located on a road related area paralleling a road, or through parks or reserves or within public transport corridors or other public or private land not open to motor vehicle traffic.

On-road  A bicycle facility is said to be on-road when it forms part of the road such as a bicycle lane or a shoulder shared with parked vehicles.

Road related area  Is any of the following:

- An area that divides a road.
- A footpath or nature strip adjacent to a road.
- An area that is not a road and that is open to the public and designated for use by cyclists or animals.
- An area that is not a road and that is open to or used by the public for driving, riding or parking vehicles.

This can include the area that divides the road (median), the footpath or nature strip or an area designed for exclusive use by bicycles (bicycle paths).
### Types of bicycle infrastructure

#### Off-road

<table>
<thead>
<tr>
<th>Bicycle path: A length of path for the exclusive use of bicycle riders. A bicycle path must have either designated signage or pavement markings.</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Bicycle path image" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Shared path: An area open to the public (except a separated path) that is designated for use by bicycle riders and pedestrians. A shared path must have either designated signage or pavement markings.</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image2" alt="Shared path image" /></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Separated path: A length of path where an exclusive bicycle path is complementary to an adjacent footpath. The separation may be visual (painted line) or physical (dividing strip or raised median).</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image3" alt="Separated path image" /></td>
</tr>
</tbody>
</table>
### Types of bicycle infrastructure (continued)

<table>
<thead>
<tr>
<th>On-road</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bicycle lane</strong>: A lane that is sign posted for use by bicycle riders only and marked with painted lines or a coloured surface, without a physical separation from motor vehicles. Riders are required to use these lanes unless it is impractical to do so.</td>
</tr>
</tbody>
</table>

| Road shoulder lane: Shoulder lanes are not designed to be used by motor vehicles for general travel, however may be used for emergency or breakdown purposes. Unless explicitly prohibited, bicycles are permitted on all shoulder lanes. |

| Bicycle contra-flow lane: Some streets permit motorised vehicles to travel in one direction only. Bicycles are permitted in the opposite direction by the use of a bicycle lane. |

| Mixed traffic facilities shared with motor vehicles with or without bicycle markings or signage. |
### Types of signage

#### Signage

**Regulatory:** This signage can be provided in combination with the regulatory line marking, and defines the type of bicycle facility provided. Regulatory signage is always used to define the start of a facility.

**Warning, guidance and advisory:** This signage alerts riders to changed or potentially hazardous path or road conditions and is generally used on shared paths to assist with the safe use of these facilities.

**Directional:** Located at route decision points to assist users to find their way around the network. It may also indicate distance and/or estimated travel times.

**Interpretive:** Generally aimed at recreational users, interpretive signs provide route context in the form of maps as well as highlighting features or background of the area.
### Abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABC</td>
<td>Australian Bicycle Council</td>
</tr>
<tr>
<td>Austroads</td>
<td>An association of Australian and New Zealand road transport and traffic authorities</td>
</tr>
<tr>
<td>BNSW</td>
<td>Bicycle New South Wales</td>
</tr>
<tr>
<td>BUG</td>
<td>Bicycle User Group</td>
</tr>
<tr>
<td>CARES</td>
<td>Community and Road Education Scheme</td>
</tr>
<tr>
<td>CDSE</td>
<td>Community Development Support Expenditure</td>
</tr>
<tr>
<td>CO₂</td>
<td>Carbon Dioxide</td>
</tr>
<tr>
<td>CSP</td>
<td>Community Strategic Plan</td>
</tr>
<tr>
<td>DCP</td>
<td>Development Control Plans</td>
</tr>
<tr>
<td>DP&amp;I</td>
<td>Department of Planning and Infrastructure (formerly Department of Planning)</td>
</tr>
<tr>
<td>GIS</td>
<td>Geographical Information System</td>
</tr>
<tr>
<td>GPS</td>
<td>Global Positioning System</td>
</tr>
<tr>
<td>HTPBP</td>
<td>How to Prepare a Bike Plan</td>
</tr>
<tr>
<td>LATMS</td>
<td>Local Area Traffic Management Scheme</td>
</tr>
<tr>
<td>LEP</td>
<td>Local Environment Plan</td>
</tr>
<tr>
<td>LES</td>
<td>Local Environment Strategy</td>
</tr>
<tr>
<td>LGA</td>
<td>Local Government Area</td>
</tr>
<tr>
<td>NABERS</td>
<td>National Australian Built Environment Rating System</td>
</tr>
<tr>
<td>PAMP</td>
<td>Pedestrian Access and Mobility Plan</td>
</tr>
<tr>
<td>PCAL</td>
<td>Premier’s Council for Active Living</td>
</tr>
<tr>
<td>RMS</td>
<td>Roads and Maritime Services (formerly the Roads and Traffic Authority)</td>
</tr>
<tr>
<td>RSO</td>
<td>Road Safety Officer</td>
</tr>
<tr>
<td>RSSP</td>
<td>Road Safety Strategic Plan</td>
</tr>
<tr>
<td>TMAP</td>
<td>Transport Management and Accessibility Plan</td>
</tr>
<tr>
<td>TAG</td>
<td>Transport Access Guide</td>
</tr>
<tr>
<td>TfNSW</td>
<td>Transport for New South Wales</td>
</tr>
</tbody>
</table>
Appendix C: Updating a bike plan checklist

**Stage 1: Identifying objectives**

This checklist can assist with updating a bike plan in house or for determining what needs updating to include in a project brief to provide to a consultant.

If you tick any of the **highlighted** boxes please update the bike plan based on the outcome of these reviews or do a thorough review of the bike plan if the review timeframe has lapsed.

<table>
<thead>
<tr>
<th>Bike plan Objectives</th>
<th>Y</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does the bike plan list key aims and objectives?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are these objectives measurable and unambiguous?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Were these objectives prepared in accordance with these key documents, including:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was the bike plan prepared within the last five years?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bike plan Team</th>
<th>Y</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Was a bike plan Team established to steer the project?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Were a range of council and community representatives included on the management team and were the issues raised by these representatives considered for inclusion in the bike plan?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Stage 2: Identifying issues

### Research and Review

<table>
<thead>
<tr>
<th>Document/Plan</th>
<th>Y</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Existing bike plans/cycling strategies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pedestrian Access and Mobility Plan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Plan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community Strategic Plan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delivery Program</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operational Plan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annual Report</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Open Space Plans of Management</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Road Safety Strategic Plan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sustainability Plan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tourism Plan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transport Management and Accessibility Plan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Previous submissions to government authorities</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Have any of these plans been updated since the bike plan was prepared? 

- Has the council developed any of the above plans, which were not present previously? 

- Were council planning documents reviewed to determine council’s statutory requirements surrounding cycling? 

<table>
<thead>
<tr>
<th>Council Planning Documents</th>
<th>Y</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local Environment Strategy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local Environment Plan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Development Control Plan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Community Strategic Plan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Section 94 Contributions Plan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Master Plans</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Local Area Traffic Management Schemes (LATMS)?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Involving Stakeholders

<table>
<thead>
<tr>
<th>Stakeholder Involvement</th>
<th>Y</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does the bike plan consider cycling issues across a range of council programs, complementary objectives, and community groups?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What consultation was conducted during the preparation of the plan? Did this consultation cover all interested groups/individuals in the community?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Question</td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Was a questionnaire distributed to the community to canvass ideas about what should be included in the bike plan?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Were these ideas considered for inclusion in the preparation of the bike plan?</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Types of cyclists</strong></td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Does the bike plan identify the types of existing and potential cyclists currently present in the LGA?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the bike plan identify those who might be affected by cycling and what their potential issues may be?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the bike plan recognise who the council would like to encourage to cycle and what the potential barriers are preventing these groups from cycling?</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Bicycle use data</strong></td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Was all available bicycle data for the LGA collected and were these trends recorded in the bike plan (eg census data, crash data, population trends, RMS bicycle counter data, etc.)?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Were these trends/statistics used to develop objectives?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Were measures to address issues identified through the collection of this information included in the bike plan?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have any other bicycle data sources become available or been updated since the preparation of the bike plan?</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Key origins and destinations</strong></td>
<td>Y</td>
<td>N</td>
</tr>
<tr>
<td>Were all key origins and destinations for cyclists and potential cyclists identified in the bike plan?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Did this include a revision of land use planning data?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Were key origins and destinations included from outside the LGA boundary?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the bike plan include cycling facilities outside or adjacent to the LGA boundary as key origins and destinations?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have any of the main origins and destinations identified in the bike plan changed since the implementation of this plan?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Stage 3: Preparation

### Infrastructure

<table>
<thead>
<tr>
<th>Question</th>
<th>Y</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prior to planning and designing appropriate cycling facilities, did the person assigned this task read the appropriate reference documents and incorporate these requirements into the bike plan?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the bike plan identify a network of routes?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do these routes:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Integrate with public transport networks?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Link to cycling networks in neighbouring LGAs, if applicable?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Connect key origins and destinations?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Were the routes in the network identified using the five key principles in the NSW Bicycle Guidelines?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the bike plan include planned locations of new on-road and off-road cycling facilities (eg parking, crossings, etc)?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the bike plan include a map showing the cycling network and facilities?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is this map sufficiently detailed and does it show key cycling landmarks to ensure it is useable for cyclists?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Has an implementation schedule been developed that prioritises the construction of this infrastructure and has this been included in the bike plan?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Has an economic evaluation of the proposed routes been conducted and has this been used to assist with an implementation schedule?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Education and Information Programs

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have proposed education, information and promotion programs been included in the bike plan?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Were these developed based on:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Expected level of community participation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Ease of implementation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Council administration requirements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Value for money</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Compatibility with objectives of the bike plan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Integration with other council programs?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have council employee programs been included in the bike plan?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the bike plan include cycling tourism strategies?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Funding

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does the bike plan identify actual or potential sources of funding for implementing and promoting the bike plan?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are these funding sources still current/relevant?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Are there any other funding sources that have been identified since the preparation of this bike plan?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Public Display

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Was the plan put on public display in accordance with the council’s procedures?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Were all comments raised in the public exhibition period considered for inclusion in the bike plan?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was the bike plan provided to RMS for display on <a href="http://bicycleinfo.nsw.gov.au">bicycleinfo.nsw.gov.au</a> ?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Stage 4: Implementation

### Monitor and review bike plan progress

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Has the bike plan been reviewed regularly against performance indicators?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Have these reviews identified the need for any updates to the bike plan?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>If a review period was identified in the bike plan, has the bike plan been reviewed within this timeframe?</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix D: Project brief template

[Project]
[Organisation Name]
[Date]

Project Background

Brief introduction to the bike plan project including the context of the project and the steps taken to prepare the project thus far. This section should also include a discussion of other strategic work undertaken relevant to bike planning and any political, community or other context that may influence the delivery of project.

Scope of works

Project Objective

This section should clearly outline the project objective(s). This can include objectives at an overarching project level and at a project specific level. Also include major risks/constraints to the project.

Project deliverables and Timeframe

Specific list of all the deliverables required as part of the project and the anticipated timeframe(s) that these deliverables are expected to be completed. It is important that each project task and deliverable is described in sufficient detail to avoid later confusion.

Example of timeframes and milestones:

<table>
<thead>
<tr>
<th>Key dates</th>
<th>Milestones</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 January 2012</td>
<td>Brief issued</td>
</tr>
<tr>
<td>1 February 2012</td>
<td>Responses close</td>
</tr>
<tr>
<td>7 February 2012</td>
<td>Consultant formally engaged</td>
</tr>
<tr>
<td>18 March 2012</td>
<td>Draft report submitted</td>
</tr>
<tr>
<td>25 March 2012</td>
<td>Draft final report submitted</td>
</tr>
<tr>
<td>31 March 2012</td>
<td>Final report submitted</td>
</tr>
</tbody>
</table>

Reporting

Details of the expected reporting to be provided by the consultant and the preferred format of these reports.

Assumptions

List any assumptions about the project.
Resources and Background Material

The following background material will be provided to the successful consultant upon appointment:

- [Council name] LEP [Date]
- [Council name] Community Strategic Plan [Date]
- [Council name] Bike Plan [Date] (if a previous version exists).
- [Other]
- [Other]
- [Other]

Response

Respondents to this brief should address the following matters:

Responses will be assessed on the following criteria:

Contact Details

Include contact details for those consultants requiring additional information.
Appendix E: Bicycle survey questionnaire

[insert council name]

Respondent’s details:
Name: ____________________________________________
Address: _________________________________________
Phone: ___________________________________________
e-mail: ___________________________________________

Age:
<15 □ 46 – 55 □
16 – 25 □ 56 – 65 □
26 – 35 □ 66 – 75 □
36 – 45 □ > 76 □

Gender:
Male □ Female □

Are you happy to be contacted for further information?
Yes □ No □

Notes on providing feedback
Please send this form back via [include return options: email, mail, and fax].
For all questions please check the appropriate box and then comment if instructed.
Please answer the following questions where relevant:

Q1. Do you own or have access to a bicycle?
Own □
Have access to a bicycle □
Don’t have access or own □

Q2. How frequently do you ride a bike?
Every day □
At least once a week □
Irregularly □
Never □
Q3. How confident are you about riding a bicycle?

- Highly skilled, no issues with riding a bicycle for commuting, leisure or fitness
- Confident when riding although generally ride for leisure and fitness, rather than commuting
- Interested in cycling more but concerned about safety, etc.
- Not confident about riding a bicycle but interested in learning how to
- Not confident about riding a bicycle and not interested in learning

*Please only answer Question 4 if you do not ride a bike or do so irregularly.*

Q4. What are the primary reasons you don't cycle?

- Perceived/actual safety concerns
- Lack of adequate paths/lanes
- Lack of adequate end of trip facilities
- Other transport modes are more convenient
- Negative image associated with cycling
- Don’t own/have access to a bike
- Lack of time
- Can’t ride
- Weather
- Other

*Please skip to Question 7.*

Q5. What is the main reason you ride a bike?

- Recreation
- Fitness
- Commuting (including taking the kids to school)
- Utility (eg shopping)
- Touring
- Other

Q6. What are the major benefits you experience from cycling?

- Health & fitness
- Enjoyment
- Financial
- Convenience
- Freedom/independence
- Social
- Other
Q7. Where do you predominantly travel to and from (using any mode of transport)?

Home □
Work □
School □
Supermarket □
Tourist attraction □
Sporting facility □
Friend’s or family’s house □
Recreation area (eg beach, park, etc) □
Other □

Please specify exact locations based on your responses above (eg include which shopping complex or the suburb of your friends/family):

Q8. During the week, what mode of transport do you most commonly use and how long would an average trip take? (For example, if you walk to work and it generally takes you five minutes, tick ‘walking’ under ‘less than 10 mins’).

Less than 10 mins
Walking □
Cycling □
Driving □
Public transport □

10 to 30 mins
Walking □
Cycling □
Driving □
Public transport □

Greater than 30 mins
Walking □
Cycling □
Driving □
Public transport □

Q9. What improvements would you like to see that would encourage you to cycle more frequently or at all?

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________
Q10. Are you aware of existing cycle programs in the local community?

Yes ☐ No ☐

If yes, what are they?

________________________________________________________________________

________________________________________________________________________

Q11. Any further comments?

________________________________________________________________________

________________________________________________________________________
Appendix F: Suggested bike plan table of contents

Executive summary
Introduction
Background
   Aims and objectives
   Communications methodology
   Review of existing cycling environment
   Cycling data
   Policy context
   Saddle survey
   Types of cyclists and barriers to greater cycling participation
   Stakeholder feedback and issues
Infrastructure programs
   Current routes
   Proposed routes
   Current bicycle facilities
   Proposed bicycle facilities
   Network priorities
   Wider links and connections
Non-infrastructure programs
   Promotional programs
   Road awareness and safety programs
   Employer programs
   Tourism programs (if relevant)
Funding
   Costs and benefits of proposed network
   Funding sources
Implementation and monitoring
   Implementation schedule
   Monitoring against performance indicators
   Follow up activities

Appendices (not an exhaustive list)
   Physical works schedule
   Community consultation survey
   Results of community surveys
   Results of stakeholder consultation
   Accident locations and reports
   Map of network
   Proposed future stages
   History of bike planning (for this council/organisation)
### Appendix G: Standard GIS fields

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAME</td>
<td>Eg Smith Street</td>
</tr>
<tr>
<td>ALTERNATE NAME</td>
<td>Eg Parramatta Valley Cycleway</td>
</tr>
<tr>
<td>STATUS</td>
<td>Existing Proposed Unknown Underway / Funded</td>
</tr>
<tr>
<td>CLASS</td>
<td>Separated path Bicycle Path Road Shoulder Unknown Mixed Traffic Freeway Shoulder Shared Path No Access Permitted</td>
</tr>
<tr>
<td>IN ROAD RESERVE</td>
<td>Yes No Unknown</td>
</tr>
<tr>
<td>DIFFICULTY</td>
<td>High Medium Low Unknown</td>
</tr>
<tr>
<td>GRADE</td>
<td>Steep Up Steep Down Not Steep Unknown</td>
</tr>
<tr>
<td>WIDTH</td>
<td>Eg 3.0m</td>
</tr>
<tr>
<td>CONSTRUCTION DATE</td>
<td></td>
</tr>
<tr>
<td>SURFACE</td>
<td>Concrete AC Spray Seal Block Paving Unsealed Unknown Timber Steel Fibreglass</td>
</tr>
<tr>
<td>PAVEMENT</td>
<td>Concrete AC Roadbase Gravel Natural Surface Unknown Timber Steel</td>
</tr>
<tr>
<td>BASE</td>
<td>Concrete Roadbase Crusher Dust Sand Unknown Natural Surface Timber Steel</td>
</tr>
<tr>
<td>REINFORCEMENT</td>
<td>Yes No Unknown</td>
</tr>
<tr>
<td>EXPANSION JOINTS</td>
<td>Yes No Unknown</td>
</tr>
<tr>
<td>PLANS</td>
<td>Yes No Unknown</td>
</tr>
<tr>
<td>LIGHTING</td>
<td>Yes No Unknown</td>
</tr>
<tr>
<td>MAINTAINER</td>
<td>RMS Council Unknown</td>
</tr>
<tr>
<td>LINEMARKING</td>
<td>C4 E7 E1 S4 S5 U L7 Unknown</td>
</tr>
<tr>
<td>DIRECTIONAL</td>
<td>Yes No</td>
</tr>
</tbody>
</table>
Appendix H: Cost and benefit components of a cycleway facility

NOTE:
This appendix has been adapted from the draft Transport for NSW “Principles and Guidelines for Economic Appraisal of Transport Investment and Initiatives”, and from the NSW Treasury publications “NSW Government Guidelines for Economic Appraisal (TPP07-5)” and “Economic Appraisal, Principles and Procedures Simplified (TPP07-6)”. For further information on undertaking economic evaluations contact Transport for NSW or the Policy Papers page of the NSW Treasury website.

Bicycle facility costs

Project capital costs
For the purposes of capital costs, cycleways are divided into on-road, off-road and equipment.

On-road facilities include bike lanes, wide shoulders, wide curb lanes, shared roadways, and signposts and line marking on existing roadways. Off-road facilities can be separate paths away from roads for the exclusive use of bicycles or shared paths used by both bicycles and pedestrians.

Bicycle facilities can also include a variety of equipment including signs, additions to traffic lights to include walk/ride signals and barriers to establish protection or right of way for bicycles.

Where appropriate, provision can be made for bike racks, lockers and even change rooms and showers, particularly in public locations such as transport interchanges.

Construction costs for bicycle and shared paths may include costs for planning, any land purchase, facility design, equipment procurement and installation, and physical construction including utility adjustment. In addition, they can also include expenditure on bridges, drainage, lighting and fences etc.

Initial promotion costs for the new facility can also be included (however, ongoing promotion should form part of the operating costs).

Operating costs
Operating costs are recurring expenses to maintain the cycleway. They generally include cleaning, repainting of roadway line marking, resurfacing, trimming of trees and bushes along routes, landscaping, equipment repair, graffiti removal and any ongoing expenditure on security and safety.

Project capital and operating costs do not include the purchase or maintenance costs for bicycles.

Economic evaluation
To analyse the costs and benefits, an economic evaluation should be undertaken. This is a discounted cash flow of the incremental costs and benefits (i.e. the difference between the base and improved case) over a 30 year period from the year the project opens with capital expenditure include in the analysis in prior years. It can be undertaken on a spreadsheet with pre-loaded formula.

Through the use of formulas in a spreadsheet the costs and benefits can be discounted to determine their present value. This enables different profiles of costs and benefits to be compared on a common basis. The discount rate is normally 7 percent with sensitivity tested at 4 percent and 10 percent. The difference between the present value of benefits and present value of costs is the net present value (NPV) of the cycleway. A positive NPV indicates that a project represents an improvement in economic efficiency compared with the base case. The benefit cost ratio (BCR) is simply the present value of the benefits divided by the present value of costs. The internal rate of return (IRR) is the discount rate at which the present value of the benefits equals the present value of the costs.
Forecasting estimated demand for cycleway facilities

Various methods of forecasting future demand should be undertaken as part of preparing a bike plan. Refer to Austroads *Forecasting Demand for Bicycle Facilities* which recommends:

- Comparison studies and sketch plans based on observing bicycle use can help you forecast what will occur in another, similar area. You can identify variables that may account for any differences. In practise, comparison studies may examine several similar locations and account for differences in bicycle use by thinking about local conditions such as the number of hills, demographics, safety issues, urban design or cultural issues.

- Transport models can identify demand for cycling. They include maximal share studies based on identifying latent demand or surveys to determine constraints on bicycle use and how easy it would be to get people to change modes. Many traditional travel models based on trip generation, model split and traffic assignments also exist. More sophisticated models which rely on the theory that behaviour reflects a choice can also be used. They can be estimated using observed behaviour i.e. revelled or stated preference surveys.

You can also rely on the community consultation and existing data sources highlighted in the main section of this Guide.

Once a planned cycleway project is scheduled for implementation, you should review and update the initial cost benefit analysis undertaken when the project was identified as part of the plan. By updating the cost benefit analysis you can provide more detail, include the estimated final costs of the project and relate to the preferred final route option. The revised cost benefit analysis will confirm the viability of the cycleway and can assist in justifying its funding.

You should also undertake a post implementation review of selected projects in the bike plan when they become fully operational to confirm the benefits are being realised and to assist in planning and delivering future cycleway projects.

You can evaluate the cycleways in the plan once completed by undertaking:

- A project (process) review that examines how the outcomes of the project were achieved.
- A post occupancy (outcome) evaluation, which compares the predicted outcomes with actual outcomes.

Post completion evaluations may include an updated cost benefit analysis. They will allow you to evaluate and improve the level of accuracy of future cycleway evaluations and fine-tune the cycleway after implementation.

**Forecasting estimated demand for bicycling facilities**

To determine new bike kilometres travelled on a planned cycleway, you need to estimate new demand for the facility. For an economic evaluation, key outputs of any forecast will need to include:

- How many people will use the new facility?
- How will the improved bicycle facilities affect other transport modes?

**Estimated economic impact of cycling per bicycle kilometre travelled (2011 values)**

The table below includes more information on the value of economic benefits. These values - known as the parameter values - are expressed in cents per bicycle kilometre and represent the net benefit to both commuter cyclists (compared to car use and including health benefits, bicycle crash costs etc) and recreational cyclists (including health benefits, bicycle crash costs, road cost savings etc). This means you will be able to calculate the benefits for a new cycleway in monetary terms by multiplying the parameter values with the aggregate number of new bike kilometres that will be travelled, as directly attributed to the construction of the cycleway.
<table>
<thead>
<tr>
<th>Parameter</th>
<th>Explanatory notes (these parameters are incremental costs or savings of cycling compared to car use)</th>
<th>Cents per bicycle kilometre</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bicycle user costs/benefits</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Travel time</td>
<td>Cycling is usually slower than car driving or public transport which means that cycling involves a net cost in travel time. However, travel time is not necessarily the primary decision factor when people choose to cycle. People’s decision for cycling as a transport mode is for enjoyment or to improve health and fitness. Thus, no travel time cost or saving is allocated for cycling.</td>
<td>0</td>
</tr>
<tr>
<td>User cost (car vs bicycle)</td>
<td>There is a positive benefit when cycling replaces car trips in terms of savings in fuel, tyre wear and maintenance. The benefits are only offset by the small depreciation, repairs and maintenance costs of an average bicycle. Public transport trips are considered unaffected by the marginal reductions that may come about by a transfer to cycling, therefore reduced public transport costs are not included.</td>
<td>27.00</td>
</tr>
<tr>
<td>Parking</td>
<td>This benefit is applicable only when cycling replaces car trips that involve a parking cost. Such costs include the provision of a parking facility (land) and maintenance of that facility. Parking costs vary depending on the location. On average, a parking cost saving of $0.013/km is allocated. Up to 20 bicycles can be stored in the space required for one motor car or can be stored in otherwise unused areas.</td>
<td>1.30</td>
</tr>
<tr>
<td>Health</td>
<td>An increase in active transport leads to improved health as well as reduced morbidity and mortality. The existing literature suggests that the value of health benefits range from $0.063 to $1.120. A health benefit of figure of $1.05/km is estimated for general use.</td>
<td>105.00</td>
</tr>
<tr>
<td>Bicycle crashes (accident costs)</td>
<td>Accident costs are based on-road accident statistics published by Roads and Maritime Services and travel statistics published by the Bureau of Transport Statistics. Cycling incurs greater accident costs compared to cars, as there are more cycling accidents than vehicle accidents per kilometre travelled. It is assumed that the accident rate in bike paths is the half of the rate on-roads.</td>
<td>-27.00 off-road</td>
</tr>
<tr>
<td><strong>Community costs/benefits</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decongestion</td>
<td>This benefit is applicable only when commuter cycling (and walking) replace car trips. It is assumed that cycling (and walking) impose no congestion cost compared to motor vehicles. An allowance for additional motor traffic generated by improved traffic conditions is built into the parameter value.</td>
<td>29.00</td>
</tr>
<tr>
<td>Air pollution</td>
<td>This benefit is applicable only when cycling replaces car trips. In urban areas, emission reductions (from switching from cars to bicycle travel) can be large because they usually replace short, cold-start trips for which internal combustion engines have high emission rates, so each 1% of automobile travel replaced by walking or cycling decreases motor vehicle emissions by 2% to 4%.</td>
<td>2.90</td>
</tr>
<tr>
<td>Greenhouse gas emissions</td>
<td>This benefit is applicable only when cycling replaces car trips. For each kilometre travelled by bicycle instead of a motor car a saving of approximately 0.3kg of CO₂ could be achieved through reduced motor vehicle travel and improved traffic flow, resulting in more efficient engine running with reduced emissions.</td>
<td>2.29</td>
</tr>
<tr>
<td>Parameter</td>
<td>Explanatory notes (these parameters are incremental costs or savings of cycling compared to car use)</td>
<td>Cents per bicycle kilometre</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td><strong>Community costs/benefits (continued)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Noise</td>
<td>This benefit is applicable only when cycling replaces car trips. While actual noise reduction depends on location and traffic mix, generic values have been determined for noise reduction when bicycles replace passenger vehicles.</td>
<td>0.95</td>
</tr>
<tr>
<td>Water pollution</td>
<td>This benefit is applicable only when cycling replaces car trips. Water pollution includes engine oil leakage and disposal and liquids from air pollution on the road surface generated by exhausts and tyre degradation. The amount of water pollution savings depends on whether the cycleway is within an urban or rural environment, rainfall intensity, drainage path size and types of roads surrounding the route of the cycleway.</td>
<td>0.44</td>
</tr>
<tr>
<td>Nature and landscape</td>
<td>This benefit is applicable only when cycling replaces car trips. This is location dependent and site specific. The impact is currently assessed on the basis of comparing the impact of construction of a new cycleway on habitat, natural vegetation and visual amenity compared with construction of new road space in the same area. In rural areas, the natural environment is impacted while in urban areas visual amenity is impacted.</td>
<td>0.05</td>
</tr>
<tr>
<td>Urban separation</td>
<td>This benefit is applicable only when cycling replaces car trips and in urban areas where construction of an urban cycleway can facilitate better access for cyclists to community facilities. This estimates the improvement a cycleway can bring to an urban area divided by roads and is location dependent and site specific.</td>
<td>0.67</td>
</tr>
<tr>
<td>Roadway costs</td>
<td>Any transfer from motor vehicle to bicycle use will reduce the wear and tear on-roads in the area. The capital, operating and depreciation costs of cycleways are also less than roads. A generic value per bicycle kilometre has been calculated.</td>
<td>4.00</td>
</tr>
</tbody>
</table>

**References:**

