



Department of
Transport

SAFE ACTIVE STREETS NATIONAL WORKSHOP

PERTH, WESTERN AUSTRALIA
23-24 MARCH 2017
WORKSHOP REPORT



Department of Transport

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INTRODUCTION

The first Safe Active Streets National Workshop was held in Perth between 23 and 24 March 2017 at the Perth Town Hall. Close to 200 delegates comprising State and local government, private sector transport planners, traffic engineers, urban planners, advocacy groups and individual campaigners from across the country attended the two-day workshop.

With many states now exploring low-speed safe active streets and bike boulevards, the two day workshop was designed to enable discussion about what has been achieved, what is planned, issues and the future.

Workshop overview

After an introduction by the Honourable Rita Saffioti MLA, Minister for Transport; Planning and Lands, the first day of the workshop focussed on the Perth Safe Active Streets Program and the experiences from the three subsequent projects over the previous 18 months.

The day involved a number of presentations which covered the three safe active streets projects which were under construction in Bayswater, Mount Hawthorn and Belmont from a number of viewpoints and disciplines. The presentations and panel session provided detailed learnings from the route selection process, early concept development, before and after studies, behaviour change programs and community activation.

The Five Community Group, who lobbied for a safe active street in the Nedlands and Claremont areas, presented on the importance and the role which community groups can play in introducing change to a community. These sessions were well received and generated useful conversation and feedback among the delegates.

The presentations and panel discussion were also an excellent precursor to the site visits, where the delegates spent an afternoon on bikes or a bus to experience the safe active streets that had already been transformed or were under construction, while also experiencing many other aspects of Perth's cycling and transport infrastructure.

The first day of the workshop concluded with a networking session at the Perth Hellenic Club, which was capped off with a presentation by prominent Dutch cycling advocate and blogger, Mark Wagenbuur.

Day two took a national and international approach to knowledge sharing with presentations and panel sessions on active travel and safe active street projects currently underway in Adelaide, Melbourne, Sydney, Brisbane and Canberra. The final session of the conference included a presentation by Mark Wagenbuur on cycling in the Netherlands.

Overall, the workshop was an excellent opportunity for the delegates to showcase what had been happening around Australia in the cycling infrastructure space and to share the knowledge and experience gained in delivering bike boulevard projects from a number of perspectives.

Gaining an insight into the ways these projects are delivered in different jurisdictions will be important moving forward, and at a national level, this knowledge sharing experience takes us a step closer to normalising this form of street treatment.



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DAY ONE

Day one of the workshop focussed on Perth's Safe Active Streets Program and the subsequent bike boulevard projects completed in the previous 18 months.

Presentations were given by those involved in the development of Western Australia's first bike boulevards and provided detailed learning's from the route selection process, early concept development, before and after studies, behaviour change programs and community activation.

Attendees were then able to experience the three projects on site by bus or bike and the day was capped off with an evening session with prominent Dutch blogger Mark Wagenbuur.

A summary of the workshop findings from day one

Given that there are no Austroads guidelines for 30km/h streets the first three bike boulevard projects have faced some challenges, but by taking an engaged and collective approach across state and local government, the private sector, community and advocacy groups ideas have become a reality.

These ideas have been progressively improved as each project and each stage has been planned and designed and we are now seeing some fundamentals established such as:

- Road widths should ideally be in the order of 4.5 metres and one section has gone down to 4.2 metres.
- Parking on surplus pavement should be slightly raised, be a different colour and be planted at regular intervals to break up long straight sections of street.



- Standard sight line requirements should not be followed (except at regulatory controlled intersections) as uncertainty reduces operating speeds without sacrificing safety.
- Traffic calming in the form of raised plateaus, lateral shifts and one lane slow points should be placed at 100-120 metre centres with a maximum spacing of 150 metres.
- Any cross road that is 50km/h or higher should not only be calmed at the intersection with the safe active street with raised plateau, but also on approach with raised flat topped speed humps to ensure that all approaches are down to a 30km/h operating speed.
- Signage is minimised with no signage for traffic calming devices and regulatory speed limit signage being reduced.
- Collaborative design development and reviews with a mix of state and local government representatives, advocates and three to five private sector representatives creates an innovative environment that breaks down the attachment to past standards and guidelines.
- Independent peer reviews through the various stages of the projects keeps a fresh set of eyes on the designs to find any safety issues or missed opportunities.
- A post opening Road Safety Audit should form part of any project to capture any unintended safety issues with mitigation measures to follow.
- Behaviour change programs that engage with the community are a fundamental part of any project.
- Demonstration projects enable new standards to evolve that are fit for purpose and work in practice, which also enables change at a faster rate.
- Overall, the approach involves Imagineering, Inspiring and Influencing (the three I's) to enable outcomes.



A summary of the presentations

Route planning for Perth's first bike boulevards

**Andrew McClurg, Department of Transport WA; Francois Sauzier, City of Vincent and Crawford
Connell, City of Belmont**

The theme of this presentation was the route planning process that was undertaken for the pilot projects in Bayswater, Belmont and Mount Hawthorn. The following aspects were covered:

- Reasons for choosing a bike boulevard rather than other forms of infrastructure;
- Principles of route selection for a bike boulevard;
- Criteria used in selecting the preferred option; and
- Key issues and challenges arising between route selection and delivery.

All three projects are different in terms of the types of attractors they are serving, their surrounding land uses and geography. However, each project has the following in common:

- Each route is on an existing desire line (between origin and destinations) and fills a gap in the cycling network. However, these routes (and subsequent redesign) are unattractive to faster cyclists and/or group rides and are instead aimed at everyday cyclists;
- The projects provide a link to existing cycling infrastructure;
- They assist cyclist access to local destinations such as schools, parks, train stations and local town centres;
- The routes have low existing traffic volumes (generally below 1,000 vehicles per day); and
- It is critical to identify issues that are likely to affect community acceptance of the concept early in the planning process.



Early concept development
Dick van den Dool, GTA Consultants

Dick van den Dool (GTA Consultants) presented on the development of early concept designs for the Bayswater and Mount Hawthorn projects and provided some insight into the design principles used for these two bike boulevards.

- The initial design principles were based on research of best practice design in the Netherlands for low-speed and volume streets.
- The concept design for Bayswater and Mount Hawthorn was an iterative process with many evolutions, based on input from project partners, key stakeholders and community feedback.
- The key factors influencing design evolution were parking requirements, sight lines, finding the appropriate carriageway width to achieve a 30km/h environment while accommodating car and bike movement, community feedback to proposed turn restrictions and Main Roads Western Australia' approvals.

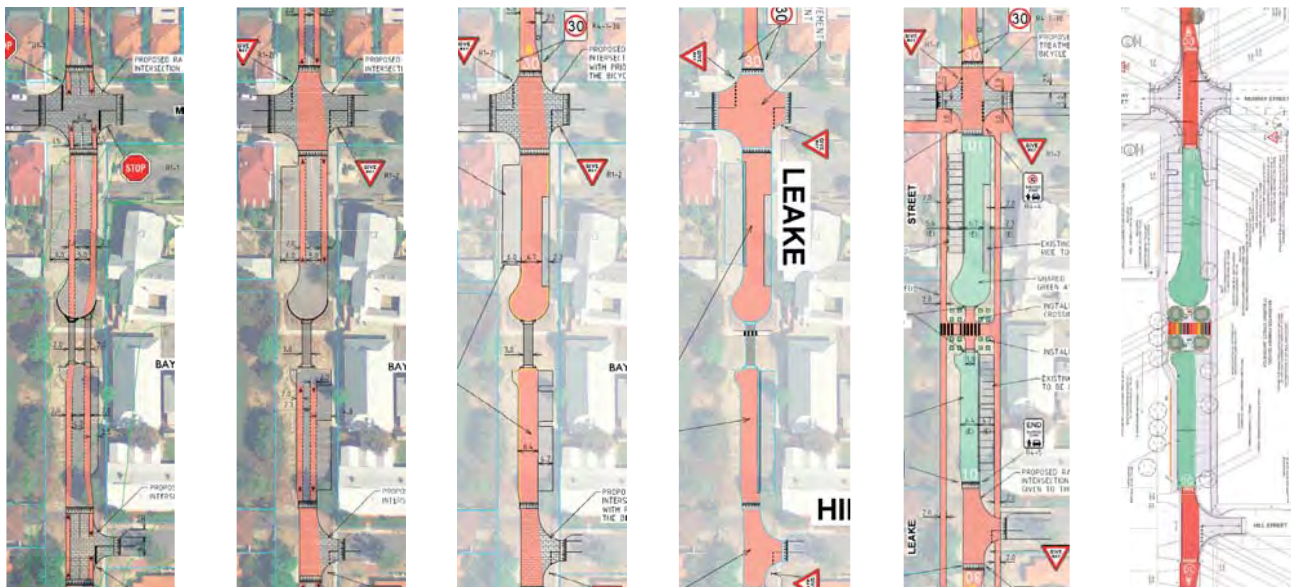


Figure 1: Design Development - Leake Street, Bayswater



Before and after studies

Andrew McClurg, Department of Transport WA

This presentation highlighted the need for monitoring the outcomes that occur as a result of changes made to streets as part of the Safe Active Streets Program. The monitoring program for safe active streets is particularly focused on measuring and evaluating the following:

- An increase in safety for vulnerable road users;
- An increase in the number of women and children making local trips on bikes;
- A reduction in vehicle numbers and vehicle speeds;
- An increased 'spread' of bike trips over a typical day; and
- Lower crash rates on the route.

The methodology for measuring these objectives before and after construction will involve a quantitative and qualitative approach (for upcoming projects) that will measure:

- Traffic volume and speed on the route as well as the surrounding network;
- Crashes;
- Existing cycling demand on the route as well as the surrounding network through pneumatic tube counts and video surveys;
- Demographics, behaviour and route choice via video surveys;
- On-street/verge parking stress manually counted; and
- Community perceptions and attitudes towards the bike boulevard captured through a combination of intercept and online surveys for passing bicycle/foot traffic and residents living on the route and parallel streets.



Behaviour change program
Sophie Wallis, Uptink

- The Safe Active Streets Behaviour Change Program aims to encourage local people to ride bikes safely, to local destinations at anytime.
- The approach to behaviour change has been to identify and approach local groups and stakeholders and discuss the project with them. Out of these conversations a better understanding of how the bike boulevard can benefit residents is achieved as well identifying the potential barriers (to cycling) and what's needed to address these.
- With this established, residents can be encouraged to come up with solutions and directed to existing resources such as local government programs and State government programs and grant opportunities.
- So far, this approach has been successful in identifying local champions or community groups and supporting them in implementing their own initiatives to encourage people onto their bikes.

Behaviour Change and our approach

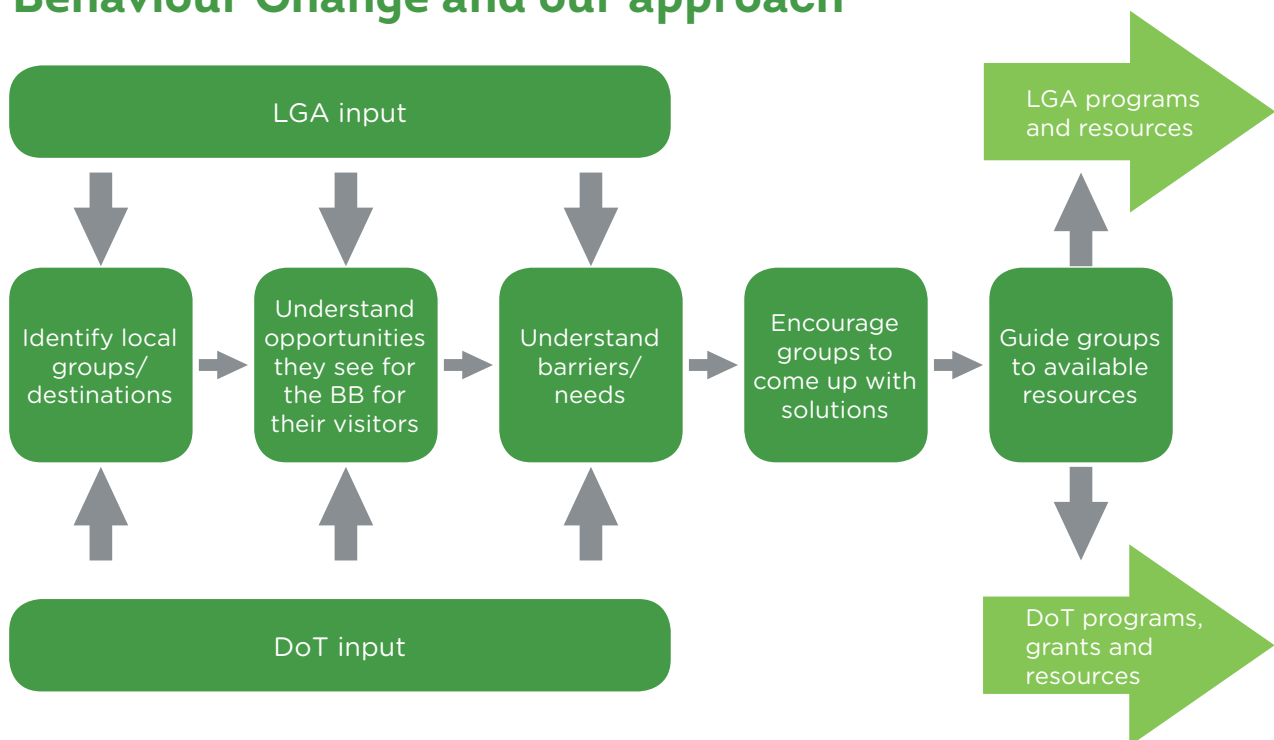


Figure 2: Safe Active Streets Program - the approach to Behaviour Change. Source: Uptink



Community advocacy - Nedlands to Claremont Safe Active Street Project **Natasha Blycha, Miriam Stanborough, Five**

Five are a local community group advocating for a higher level of active transport by making walking, running and cycling easier, safer and more convenient. The group are advocating for these changes to be made through low cost infrastructure improvements and behavioural change. In doing so, they hope to transform Perth suburbs into communities where people will feel safe and confident enough to make their local trips without their cars.

- The group was founded by a core group of members with varying skill sets, political persuasions and risk tolerance. Importantly, the Five group created a network of school representatives from the numerous public and private schools in the area, who are very influential stakeholders.
- Social media has been leveraged to expand the influence of their network and increase community awareness of what they're trying to achieve.
- The group has also gathered support from cycling advocacy groups and local businesses. This has helped give the Five group credibility and gain momentum. Building these connections has also helped them find a pathway to the right people in State government, which has in turn provided a more direct line of communication and influence with local government.

This is a model that could be a precedent for similar projects in other suburbs.

To find out more about Five, visit:

<http://fivewalkruncycle.net.au/index.php/about-five/>



A summary of the panel discussion

Panel discussion one - lessons from bike boulevards in Perth

Peter Kartsidimas - WSP Parsons Brinckerhoff, Dick van den Dool - GTA Consultants, Emerson Richardson - Jacobs, Matt Root - Flyt, George Rimpas - City of Bayswater, Francois Sauzier - City of Vincent and Crawford Connell - City of Belmont

In the first panel of the workshop, lessons from Perth projects were reviewed in some detail.

Key findings:

- In Perth examples so far, the cycle street configuration has generally been chosen (instead of the suggestion lane or advisory lane approach). There are multiple reasons for this:
 1. The suggestion lane approach may be seen as too radical;
 2. Residents are keen to retain the on-street parking outside their homes; and, given the generally narrow widths of inner suburban Perth streets, the suggestion lanes would have prevented on-street parking; and
 3. Suggestion lanes might not have allowed additional tree planting to be undertaken within the existing carriageway.
- No long/steep sections of street have been experienced in projects, so the design has generally not been changed to allow cyclists dedicated space when travelling uphill.
- Despite residents' wanting to keep their on street parking spaces, there should be a clear design priority to maximise green space and trees by reducing the number unnecessary parking spaces. This will also help to control speeds, as large expanses of unused parking reduces the impacts of narrowing the road to reduce the operating speeds of motor vehicles. Planners should have data from parking surveys conducted throughout the day and week.
- Creation of liveable streets should be the main goal. It is helpful to get residents onside. Safe active streets should be visually appealing, especially through greening, so that the benefits (beyond transport considerations) are clear.
- Design flexibility is often required to meet residents' needs, respond appropriately to the context of each street, and achieve safe active street goals. At the same time, safe active streets need to be identifiable and have some level of continuity.
- Among other goals, speed control is paramount. Design should be self-enforcing, making 30km/h the logical speed for these routes. Active enforcement may be used if monitoring shows that it is necessary, but too much reliance on enforcement should be taken as evidence of inadequate design.



- Red asphalt is considered important to signal a change in the status or function of streets, and is likely worth the cost. Overall costs for projects need to be monitored and compared to assess value (within and between states).
- Safe active street design past schools is a challenge, not least given problems with children being driven to school, and very busy school drop-off and pick-up areas. However, it is also an opportunity to expand the focus of bike infrastructure to include the school drop off/pick requirements to encourage greater levels of riding to /from school by creating a safe and encouraging environment.
- Designers have been (and will be) working closely with schools on the Bayswater (Leake and May Street) and Belmont (Surrey Road) bike boulevards. Additional off-road treatments in the busiest areas should be considered as options. Getting schools onsite with projects is important, not least because they can also help to promote the street.
- Safe active streets may, in the future, be able to be applied to roads with more than 1500 vehicles a day. However, it has been a deliberate decision to not take on anything too challenging as demonstration projects to allow people to get used to the concept and avoid damaging the brand. For now, where vehicle volumes exceed this limit, steps to re-route traffic should be considered.
- Retrofitting safe active streets to post 1970 cul-de-sac subdivisions may be possible, although route choice will be more difficult due to generally poorer connectivity between streets and to destinations.
- In any new subdivisions, all new local streets should be designed for 30km/h speed limits, and the Departments of Planning and Transport and local government agencies should be proactive and encouraging with developers.
- Way finding signage and marking strategies still need to be developed. Way finding should include distances and riding times to destinations.
- Effective monitoring of the results of the safe active streets intervention is essential, including traffic counts, speed monitoring, cycle numbers, and ideally, the behaviour, demographics and attitudes of street users and residents through surveys/questionnaires.
- The effects on surrounding streets should also be monitored.
- Community consultation is critical when working on local streets, and in all Perth examples, demonstration of support from the majority of street residents (responding) was required.



Site visits

Background and organisation

To provide a visual understanding of the context and feel of each project, all delegates attending the conference were given the opportunity to visit the three safe active streets in the inner suburbs of Perth.

The sites visited were:

- Shakespeare Street, Mount Hawthorn (construction complete, between Green Street and Scarborough Beach Road);
- May and Leake Streets, Bayswater (partially constructed); and
- Surrey Road, Belmont (construction has just commenced with a single slow point constructed at the northern end of the route, near the Great Eastern Highway).

From the main conference venue at Perth Town Hall, delegates were given the choice of visiting each boulevard either by coach or by bike (hired bikes were offered). Two groups of delegates travelled by coach and walked around each boulevard from a central location; coach routes were planned to provide some idea of the location of other cycling infrastructure. Four groups went by bike, allowing them to ride each route and experience transitioning between different types of bike infrastructure.

Two of the bike groups took a shorter (32 kilometre) route, visiting all constructed sections of the projects; while the other two took a longer (43 kilometre) route, allowing them to ride the full length of the proposed Surrey Road route as well as new Principal Shared Paths constructed as part of the Gateway WA Project.



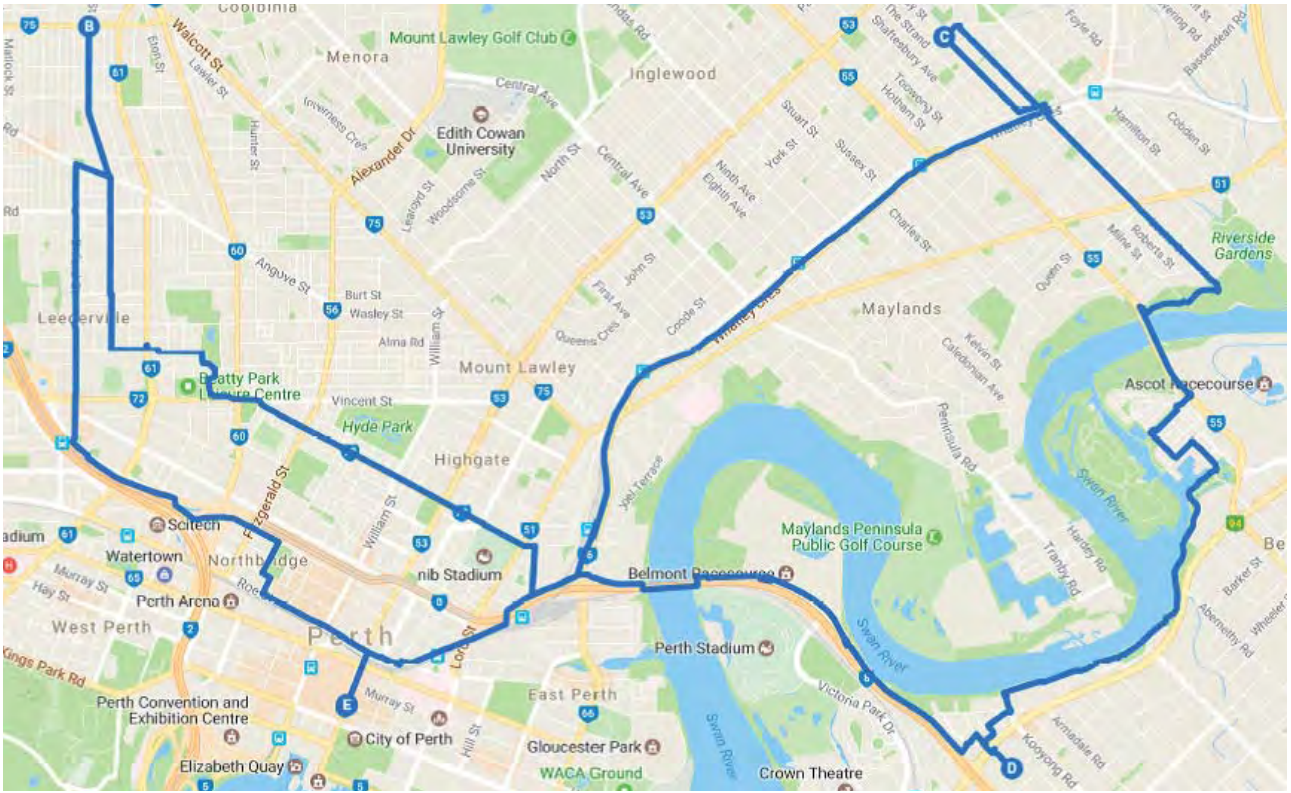


Figure 3: The shorter (32km) route followed by two bike site visit groups

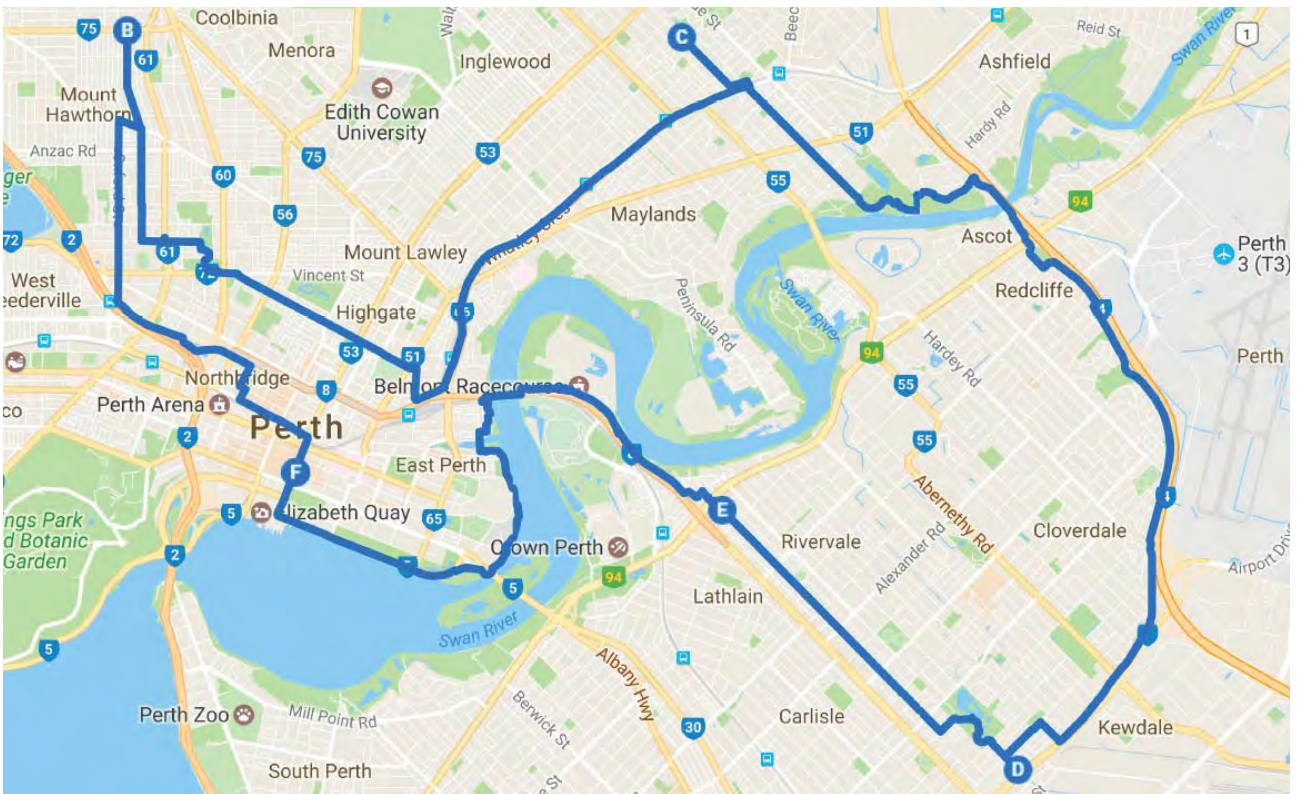


Figure 4: The longer (43km) route followed by two bike site visit groups



Site visit experiences

Delegates were enthusiastic to have the opportunity to go and see the projects on the ground, reinforcing some of the information that they had heard earlier in the day.

Visitors discussed and noted, among other things:

- The design and effect of the Safe Active Streets patch (see Figure 5);
- The treatment of road crossings and transition zones between off-road shared paths and on-street shared space, with varying opinions on the designs' success (see Figures 6 and 8);
- The comparative effectiveness and desirability of the different slow point designs at each of the three locations;
- The comparative effects on feel of the red asphalt at Shakespeare Street and Leake/May Streets compared to the black asphalt on Surrey Road;
- The landscaping approach adopted at each location (Bayswater's was generally preferred due to greater opportunities for new tree planting within the roadway);
- The effect on street feel caused by different carriageway widths;
- The approach to parking provision and the level of use at each site;
- The visibility and adequacy of line marking and separation from traffic in bi-directional lanes in Bayswater;
- The current lack of way finding signage;
- Meeting residents on the street who were happy with the Safe Active Street changes (as well as hearing reports of other residents and businesses who had been unhappy); and
- Seeing children playing on the side of the carriageway in Shakespeare Street.





Figure 5: One bike group around the Safe Active Street patch on Shakespeare Street, Mount Hawthorn



Figure 6: Crossing a single-lane slow point on Railway Parade, Bayswater



Figure 7: Riding along May Street in Bayswater





Figure 8: Inspecting the freshly painted crossing of the bike boulevard in Bayswater linking the primary school to its oval



Figure 9: Looking towards the first slow point on Surrey Road, Belmont

An evening with Mark Wagenbuur

Background and organisation

Capping off day one was an evening session with Mark Wagenbuur. The session started with a networking event, which was well earned after site visits.

Mark provided commentary on blogs from his travels in the Netherlands and other parts of the world such as the United States. Overall the key point was that projects need to create a safe environment for cyclists with great end of trip facilities, while also providing appropriate road, rail, light rail and bus infrastructure to create people centric cities with outstanding mobility and accessibility.

His videos can be viewed at <https://bicycledutch.wordpress.com/>.

2

DAY TWO

Day two of the workshop took a national approach with presenters from Adelaide, Melbourne, Sydney and Brisbane bestowing relevant activities and actions taking place in their cities.

Two interactive panel sessions were held; the first discussed the challenging aspects of safe active street/bike boulevard projects from around Australia and the second focussed on advancing cycling provision and policy to gain ideas for pursuing in the future.

International guest, Dutch cycling advocate and blogger, Mark Wagenbuur facilitated a session in which he shared his global perspectives on cycling

A summary of the workshop findings from day two

Overall, key points on the state of safe active streets and bike boulevard projects around Australia were as follows:

- Low-cost demonstration or trial low-speed local road conversion projects are being embraced across Australia, but funding remains a challenge in some states.
- Most states are either installing or working towards trial 30km/h streets, with New South Wales (NSW) retaining 40km/h streets.
- Quiet, parallel routes adjacent to arterial roads provide a very good option for enhancement for cycling, while also reducing rat running. Route selection in cul-de-sac subdivisions may also be possible (if more challenging).
- The next frontier is incorporating 30km/h streets from the beginning in new subdivisions.
- To be effective at encouraging cyclists to take the route, sharrows should be marked in the middle of running lanes, with spacing generally every 50-75 metres.



- Various combinations of sharrows, road surface treatments, road colourings and destination signage may be used for their role in way finding and in differentiating safe active streets.
- Existing road design guidelines are inadequate for bike boulevard-style projects; however, some road authorities will not accept 30km/h speed limits unless the Austroads guidelines are updated to reflect the option.
- Crossings at arterial roads require careful exploration, and may require changes in access, such as turning restrictions, to safely accommodate cyclist and pedestrian crossing requirements.
- Colour treatments (and/or repeated sharrows) at intersections and midblock crossings are being trialled at some locations to highlight crossing points to motorists.
- The preferred approach for crossing multi-lane arterial roads is via traffic signal control.
- Roundabouts on cycling routes should be modified to radial approaches (i.e., facing approaching vehicles at the centre of the roundabout) rather than the traditional tangential approach to reduce operating speeds.
- Crashes involving cyclists have been trending upwards in recent years in 50 and 60km/h roads.
- No one has all of the solutions, but we must work together and continue to share ideas to develop safe options for the future.



A summary of the presentations

South Australia

Colin Maher, Department of Planning, Transport and Infrastructure

- Bike boulevards are being built in Adelaide's grid road network, with a focus on the eastern suburbs of Adelaide, which do not have rail corridors.
- Streets with fewer than 1000 vehicles/day are preferred, but streets with up to 3000 (or more) vehicles/day are accepted.
- Sharrows (see Figure 10), raised plateaus at intersections, and improved arterial road crossings are among the main street treatments used.
- A small annual budget means there is a focus on value for money and a staged approach:
 - Big ticket items are often completed as part of other major infrastructure projects;
 - Improvements to crossings of arterial roads are a priority, with improvements often staged (median refuge and right turn bans first; then traffic signals for roads with two or more lanes in each direction);
 - Inexpensive sharrows are used extensively elsewhere along routes;
 - Projects are constructed in partnership with local governments.
- Boulevards are intended to achieve the following performance measures:
 - an 85th percentile speed between 25–35km/h, without formal speed limit changes;
 - attract bike riders other than male commuters.
- Some roundabouts have been altered to have approaching drivers face the middle of the roundabout (see Figure 11) to address high crash risk; there has been a measurable reduction in crashes.





Figure 10: A sharrow (road marking) in Adelaide.



Figure 11: Changes to roundabout approaches



Figure 12: Arterial road crossing

Australian Capital Territory

Chris Hocking

- Active Travel Streets are proposed on back streets running parallel to three kilometres of Northbourne Avenue (between Canberra Central and Dickson), the first route of the Australian Capital Territory's (ACT) proposed new light rail system.
- Northbourne Avenue has on-road cycle lanes, but Active Travel Streets are intended to increase cyclist numbers, increase the demographic diversity of cyclists, and reduce rat running by motorists.
- There is significant existing office and residential development along Northbourne Avenue (backing on to the Active Travel Streets). A new 25 metre (8-9 storeys) height limit, and light rail, is expected to drive more development and re-development.
- Current traffic volumes are less than 2000 vehicles/day, although traffic may increase with further development.
- Proposed key features include:
 - Sharrows marked every 50 metres, in the centre of lanes (see Figure 13);
 - Asphalt flat top speed humps every 150 metres, with pedestrian crossing-standard flood lighting at each;
 - Extra (three) sharrows marked across intersections with side streets;
 - At the busiest four-way intersections, a three metre-wide concrete path will be built within the verge to allow cyclists to move off-road;
 - Some changes of priority at intersections;
 - Turn bans are being considered to stop rat running;
 - Raised asphalt platforms to be installed at intersections at a later stage; and
 - A 30km/h speed limit.
- Construction is subject to funding approval; and there are some challenges with approvals from the ACT Government's road authority to a 30km/h speed limit due to the lack of a 30km/h streets guide from Austroads at present.



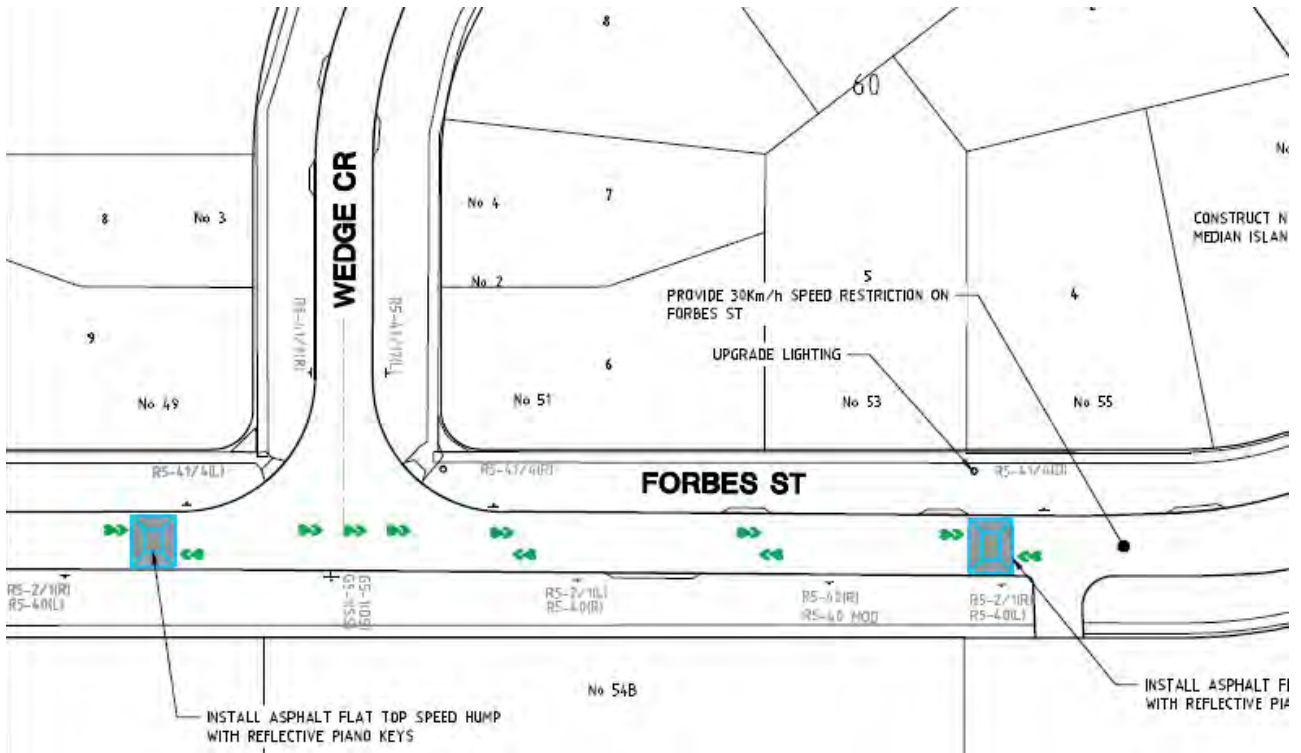
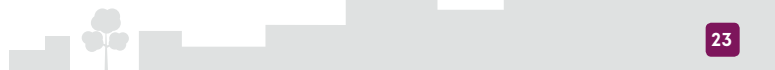


Figure 13: General Active Travel Street configuration.



Queensland

Adam Rogers and Jonathan Giles, Department of Transport and Main Roads

- There are few State-controlled roads in Queensland (QLD); most are controlled by local governments.
- The main role of State Government is in providing technical guidance.
- The State has also set a target of doubling the cycle share of work commuter trips, which is proving to be challenging (as is the case in all states).
- Recommendations have been made by GTA Consultants on the use of cycle streets and bicycle advisory lanes (based on Dutch examples).
- Cycle street treatment
 - Typical cross section shown in Figure 14.
 - Recommended for use on local access roads with fewer than 1500 vehicles/day
 - Notable for its use of a 0.75 metre buffer on each side; this is to be installed using something tactile to discourage cyclists from cycling in this area and encourage them to take the lane; while still being easy to drive on.
 - The same design (minus car parking, on either or both sides) can also be used.

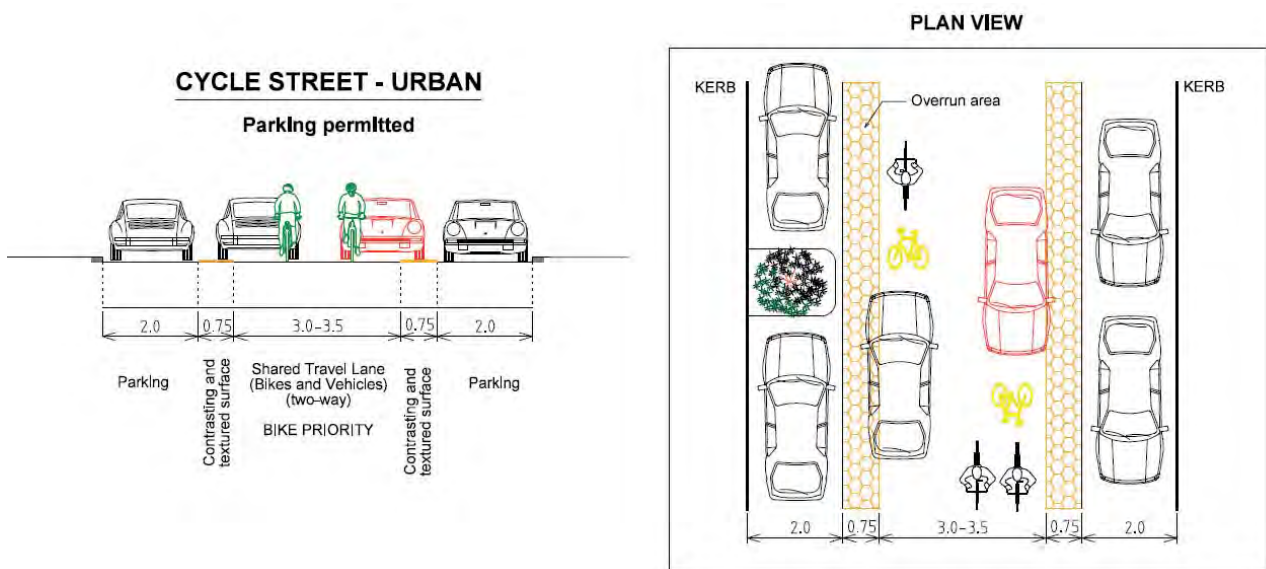


Figure 14: Cycle street configuration

- Advisory lane treatment:
 - On a typical 12.5 metre-wide QLD road, shown in Figure 15.
 - Recommended for use on roads with up to around 4000 vehicles/day (less head-on conflict); above 4000 vehicles/day, dedicated bike lanes are preferred.
 - On hills, there is an option to provide dedicated bike lanes in the uphill direction, and advisory lanes downhill.
 - The same design (minus car parking, on either or both sides) can also be used.

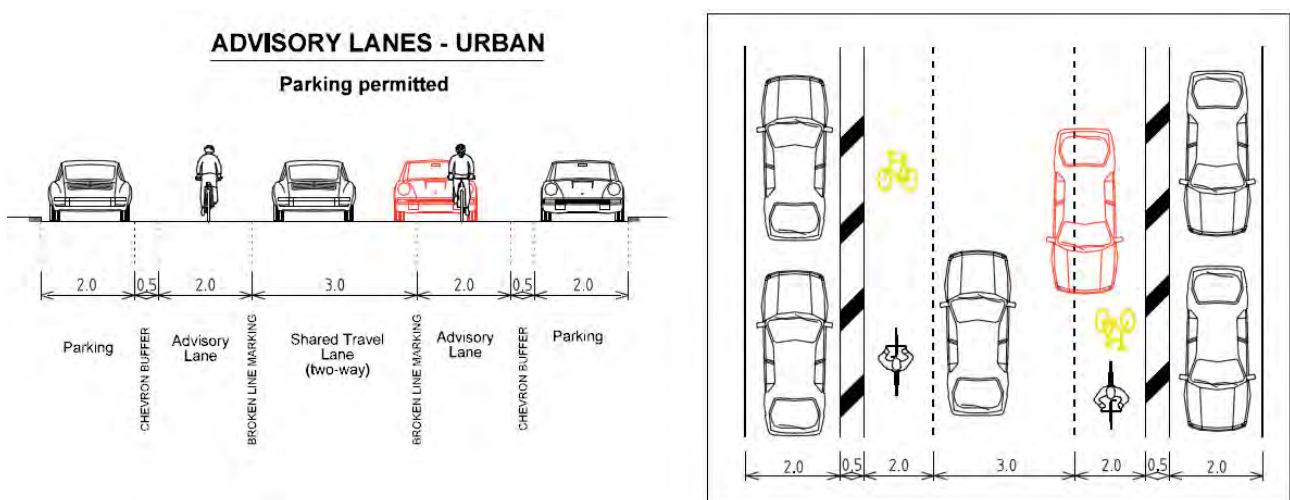


Figure 15: Advisory lanes configuration

- The technical guidance was produced a year ago, but there was no take-up in the first year.
- Grants for 100 per cent of design costs and 50 per cent of construction costs are now available.
- Two projects are currently under consideration:
 - Bike advisory lanes in a rural setting (currently a 50km/h road, with no kerb and channel; and
 - On a service road to an arterial road (narrow, without any existing parking).

To view the QLD Government's technical guidance on the selection and design of cycle tracks visit, <http://www.tmr.qld.gov.au/-/media/busind/techstdpubs/Technical-notes/Traffic-engineering/TN128.pdf?la=en>



Victoria

Rebecca Chase, VicRoads; Michael Nieuwesteeg, Transport Accident Commission

- The Traffic Accident Commission (TAC), as the no-fault insurer for road injuries, funds road safety initiatives in Victoria.
- The Towards Zero strategy, heavily influenced by the safe systems approach, is guiding the government's actions.
- The levels of pedestrian trauma are steady (see Figure 16); the levels of cycling injuries are rapidly increasing (now up to about 2/3 of the level of hospital admissions for pedestrians, having doubled since 2000).
- Pedestrian trauma:
 - Predominantly an issue in metropolitan 50-60km/h zones;
 - Skewed towards older people, and more likely to result in lengthy hospital stays;
 - Half occurs at intersections, half mid-block;
 - Drivers are usually at fault; and
 - Most problematic crash type involves right turning vehicles striking pedestrians from behind.
- Cyclist trauma:
 - Predominantly an issue in metropolitan areas, half of claims in 60km/h zones, and more likely to be at intersections
 - Most victims are aged 26-64;
 - Injured cyclists exhibit very good recovery, with short hospital stays; and
 - Commuter cyclists account for the majority of claims.



- There is now funding for investing in pedestrian and cycling infrastructure:
 - \$100 million from the TAC for the Safer Cyclists and Pedestrians Fund (2015–2019), with sites prioritised based on crash history, and elements of connecting corridors and achieving safe speeds and environments for cyclists and pedestrians.
 - \$50 million for Towards Zero, including a focus on safer travel speeds in local streets. A Safer Travel Speeds on local streets program will be launched this year.
 - Smaller ongoing grants for local government authorities and community projects.

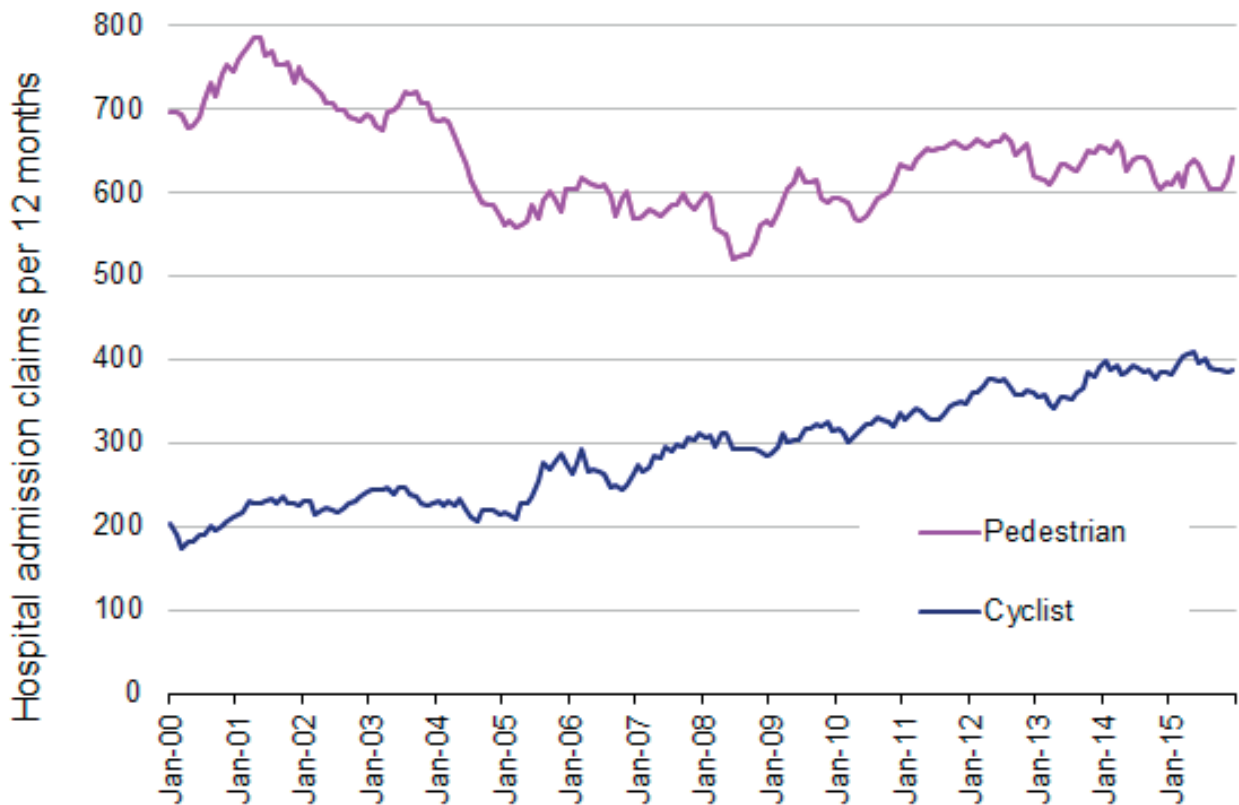


Figure 16: Annual pedestrian and cyclist hospital admission claims to the TAC



New South Wales
Beth Robrahn, City of Sydney

- One of the 10 strategic directions for the City of Sydney is a *city for cyclists and pedestrians*; the City has also had strong political leadership on the issue from its Mayor, Clover Moore.
- There is a focus on separation from traffic, as well as traffic calming, in order to encourage the less confident interested but concerned cyclists.
- Inner Sydney's irregular street network means that there is no Portland-style street grid that can be used for bike boulevards.
- Within an eventual 172km-long cycle network, a regional and local network of priority cycleways has been identified within the City. These are 31km of mostly separate cycleways, of which 12.5km have been built and 8km are under design.
- Shared environments are used occasionally for this network (as well as on local access streets, for which the City has one engineer who is dedicated to improving these local connections).
- In New South Wales (NSW), shared environments are typically approved for streets with up to 3000–5000 vehicles a day at 40km/h – although there is some concern that this may not be sufficient to get the interested but concerned riding.
- Designers were concerned to avoid critical cross section widths identified by the NSW Bicycle Guidelines (3.3–3.7 metre), which might encourage motorists to dangerously squeeze past a cyclist within a lane when overtaking.
- In the shared environment example of Broadway Link, created under a streetscape improvement program, street treatments and traffic calming measures include:
 - Bicycle symbols in the middle (or near middle) of lanes;
 - Slow points through kerb extensions and flat-top speed humps (see Figure 17);
 - Speed limits reduced from 50 to 40km/h;
 - Use in parts of 2 x 2.1 metre travel lanes (a 4.2 metre-wide carriageway);
 - Raised table threshold treatments, and narrowed kerbs at side street entrances (often incorporating plantings);
 - Honeycomb green pavement markings at entrances to the link, sometimes where cyclists cannot be given priority;
 - Street lighting improvements;
 - Turn bans and a set of traffic signals for a cyclist-only straight through movement;
 - Accessibility improvements to intersections;
 - Shared path sections to connect streets that are not through-roads; and
 - Accessibility improvements made at some intersections.
- Blue and white way finding signage (indicating the direction of destinations) is also used.



- Other initiatives:
 - More simple provision of contraflow bike lanes on one-way local streets through line marking, coloured lanes and signage.
 - Use of a shared environment treatment, where the side street is raised to footpath level and the same footpath surface applied across the street entrance, at some side street intersections.
 - Occasional use of footpaths (reclassified as shared paths) as a stop-gap measure at difficult intersections.



Figure 17: Flat top speed humps, planters, bike symbol road markings and 40km/h limits



Figure 18: Use of honeycomb road markings without cyclist priority; shared path sections

The Netherlands

Mark Wagenbuur, Dutch Cycling Embassy

- In the Netherlands cities are ranked low on the TomTom Traffic Index; obesity is decreasing, streets are relatively quiet, and children have fairly high levels of happiness, perhaps due to independent mobility.
- As in most of the developed world, cycling levels fell dramatically in the Netherlands from the 1950s. Mass car ownership arrived, planners planned for greater car use. But there was a backlash over inner city demolitions and the safety of children and cyclists, and a new Cyclists Union demanded genuine cycling policies.
- To allow the masses to cycle:
 - Practical, utilitarian bicycles suitable for almost anyone in any weather are needed;
 - Bike parking at home (supported by mandatory bike storage for each household in building regulations);
 - Bike parking at destinations (railway stations, shops etc; increasingly of higher quality); and
 - Dedicated cycling infrastructure, including shared space bicycle boulevards (or 'bike streets'/fietstraats) and protected lanes and infrastructure.
- The Dutch have very strong classifications of roads:
 - National/regional routes (80-100km/h speed limit) – no cycling permitted.
 - Local distributor/collector roads (50km/h) – cycling with physical or visible separation, i.e., protected bike lanes and protected intersections (see Figure 19 from a Dutch-inspired Australian example).
 - Access streets and places (e.g. busy town centres and other destinations, as opposed to through-streets, 30km/h) – low speed shared space.



- Street networks are typically divided into compartments (for motorised vehicles); the principle is to provide quick, direct access for cyclists and pedestrians while motorists must drive out to a peripheral road network. Emergency vehicles can remove bollards etc.
- There are examples where roads have been reclassified, and the street treatments retrofitted accordingly.
- Park and ride shuttles are often provided on the outskirts of cities to reduce traffic entering their centres.
- The bike-train combination can often be used as an alternative to the car (although bikes are not allowed on trains). With high frequency train services, bikes are able to achieve a high level of accessibility across much of the Netherlands.



Figure 19: Dutch-style protected intersection in Caloundra, Queensland



A summary of the panel discussions

Panel discussion two - project challenges and opportunities across Australia

Craig Wooldridge - Department of Transport, Adam Rogers - Department of Transport and Main Roads QLD, Ric Lotzniker - City of Vincent, Doug Pearson - City of Bayswater, Chris Hocking - ACT Government, Colin Maher - Department of Planning, Transport and Infrastructure SA, Rebecca Chase - VicRoads and Beth Robrahn - City of Sydney

The second panel session discussed challenging aspects of safe active street/bike boulevard projects from around Australia.

- Safe active streets are unlikely to require additional measures to make them safe for people who are visually impaired, but projects should be designed to cater for all road users. The use of tactile tiles at intersections might be at the discretion of local government policies (where local governments will be maintaining infrastructure).
- Zebra crossings of slip lanes, wombat (raised zebra) crossings, and raised intersection treatments should be considered to make crossings safer for visually impaired and other pedestrians. Restrictive road authority warrants for the use of zebra crossings may need to be reviewed and challenged.
- The use of sharrows (road markings showing bike symbols with directional chevrons) is an important option to have for bike boulevard design. They have a role in way finding and should be placed in the centre of lanes to encourage cyclists to take the lane. They may be placed every 50-75 metres (there are differing opinions on the ideal gap) and repeated a number of times across intersections to alert motorists entering from side roads. They can help to promote cultural change by validating bike riders' right to take a prominent position on the roads.
- 30km/h speed limits are important, but 40km/h limits may be a good incremental step in some cases. It can be difficult for politicians to push for speed limit reductions; but infrastructure design may achieve this anyway and is probably most important. Local Area Traffic Management (LATM) measures routinely achieve 30km/h speeds without formal speed limit changes.
- Demographic changes (through gentrification or immigration) may not necessarily affect the use of safe active streets. Cycling is increasingly being embraced by the well-off and educated. There may be a role for behaviour change projects for people from countries where cars and car use are seen as status symbols.
- Lessons taken home from WA projects by interstate visitors included:
 - The naked street approach can be used effectively for safe active streets, even on demonstration projects;
 - Landscaping and other soft measures have significant value;
 - Strategies for consultation with local governments and communities;
 - Ideas for transitioning between shared paths and active streets;
 - Reflections on the value of greater changes to street infrastructure compared to more minor street works; and
 - The roles for children's play and other non-transport uses of streets.



Panel discussion three - actions for the future

Craig Wooldridge - Department of Transport, Mark Wagenbuur, Stephen Hodge - Cycling Promotion Fund, Chris Hocking - ACT Government, Colin Maher - Department of Planning, Transport and Infrastructure SA, Beth Robrahn - City of Sydney, Rebecca Chase - VicRoads and Adam Rogers - Department of Transport and Main Roads QLD

The third and last panel session discussed advancing cycling provision and policy more generally.

- Getting the Federal Government involved in the Australian Bicycle Committee (the committee) is vital. The Federal Government has previously been a member until its recent withdrawal. In particular, there is an opportunity to consider mandatory provision of cycling infrastructure in large transport infrastructure projects within the area of influence, not just on the road or rail project corridor.
- The focus of the Committee needs to change to more strategic issues, national policy and the big picture, in addition to covering technical or operational issues via revised processes.
- The creation of a specifically design-focussed body, similar to NACTO in North America—or a group with responsibility for CROW manuals (as in the Netherlands, produced by the Dutch Bicycle Council or Fietsberaad)—might free up the Committee to focus on more strategic/policy roles.
- Attracting the Federal Government will also mean that the benefits of bike infrastructure and greater bike use needs to be clearly demonstrated.
- The potential for cycling to slow down the increase in health spending is a key opportunity: this has already been of benefit in South Australia (where there is a “health-in-all” policy), and was one of the strategic drivers behind the establishment of Active Transport Victoria, a unit within Transport for Victoria. It could also be used to engage Departments of Education in school drop-off and pick-up issues.
- While a NACTO-style body could be valuable in providing technical guidance, it was noted that it would need to be careful not to stifle innovation, given the early stages of bike boulevard design and policy thinking in the Australian context. Such a body could also, however, play a role in lifting the floor in standards for bike infrastructure. Bicycle user groups could also play a role in reviewing designs, as they do in the Netherlands.
- Communicating positive results from safe active streets projects is vital. Conferences like this National Workshop are important to enable conversations and hot-house ideas. Demonstration projects are powerful, showing how better streets can be created, and developing the social licence for politicians to make further changes.
- The importance of updating Austroads to acknowledge and support the implementation of 30km/h zones was raised, especially to gain support from risk-averse professionals. It was also noted that Austroads tends to be conservative (representing the consensus of all states).
- Differences in terminology for bike boulevards/safe active streets/active travel streets are probably not important; there needs to be some flexibility to adopt a different emphasis or adapt the idea to particular contexts.



