# Capability Statement
# Institute for Sensible Transport

Institute for
**Sensible Transport**
www.sensibletransport.org.au

# Who we are and what we do

'a city is judged by the quality of its streets.'

Jane Jacobs

**The Institute for Sensible Transport is an Australian transport consultancy focused on helping cities become more vibrant and sustainable. We develop innovative, data-led transport strategies, rigorous analyses and carefully designed plans, all focused on helping to make cities more liveable, sustainable and vibrant.**

As the urbanist Jane Jacobs said, a city is judged by the quality of its streets. We are committed to the application of evidence based, best practice transport strategy to help make city streets great.

We work with all levels of government, both in Australia and internationally on sustainable mobility, disruptive transport innovation, professional development, as well as policy and strategy formation.

## Our key capabilities include:

- Disruptive transport innovation

- Active transport planning, forecasting and cost benefit analysis

- Bicycle plans, strategies, network designs, and 'complete streets' development

- Car parking policy and reform

- Active transport wayfinding strategy and design

- Study tours and seminars on transport innovation

- Electric bike policy and assessment of impacts

- Bike share feasibility and evaluation

- Transport emissions auditing and emissions reduction strategy development

- Place based transport plans

- Shared transport platform policy development.

# Our People

# Dr Elliot Fishman

## Director

As the Director of the Institute for Sensible Transport over the past 15 years, Elliot has played a pivotal role in all of our major projects and leads our work on bike share, e-bikes, disruptive transport and professional development. Dr Fishman has extensive experience in the field of integrated transport planning, and was coordinator and lecturer of the Integrated Transport Planning course at RMIT University.

Dr Fishman's ability to inspire cities to think boldly about the city they want to be in 50 years is highly sought after, both in Australia and internationally. Elliot has led investigations for governments around Australia on emerging transport technology and the implications for policy makers. Dr Fishman is ranked by Stanford University in the top 2% of scientists globally. He completed his PhD at the Centre for Accident Research and Road Safety and his Post Doc at Utrecht University in the Netherlands.

Dr Fishman is a leading thinker on integrated transport and sustainable mobility planning, having provided advice to the Prime Minister's Office, Transport for London and the NYC Department of Transportation. In recent years he has prepared ambitious, best practice transport strategies for local governments in Victoria, South Australia, Tasmania and NSW. These have included land use and transport planning elements that have sought to maximise the beneficial components of emerging transport technology, such as MaaS possibilities and the shift from short car trips to active transport. Dr Fishman's innovative work on the possible impacts of driverless vehicles has led governments to rethinking how best to capitalise on the emergence of these technologies.

Elliot has written for The Age, Newscorp publications, the Canberra Times, Sydney Morning Herald as well as many of the world's highest-ranking peer reviewed transport journals. Elliot has undertaken work for the OECD and the National Government of Singapore. Dr Fishman is an experienced communicator and has facilitated a large number of transport planning workshops and has an excellent ability to write technical documents accessible to a wide audience.

# Liam Davies

## Senior transport analyst and cost benefit modeller

Liam is a Senior Transport Analyst and has worked for the Institute for Sensible Transport since late 2015. Prior to his appointment at the Institute for Sensible Transport, Liam was RMIT's top transport planning student, demonstrating his understanding of transport research and strategic principles, emerging issues and best practice transport innovation. He has an in depth knowledge of the Victorian Planning Scheme as well as the NSW DA and LEP process.

Liam's excellent GIS and analytical skills have helped our clients understand their current transport problems and his ability to envision a path towards a more sustainable, less car dependent future has proven tremendously valuable to the government agencies he has worked with. Liam has a deep understanding of all modes of public transport, including their operational and infrastructure requirements. There is always a public transport element in the projects Liam is involved in.

# Vaughn Allan

## Senior transport analyst

Vaughn has worked as a Transport Analyst at the Institute for Sensible Transport since 2017. He has also worked at the Department of Premier and Cabinet, and Bicycle Network. Vaughn has a very strong understanding of the Victorian Planning Scheme, transport data analysis, street redesigns, integrated transport, active transport and GIS based analysis and modelling.

# Our People

# Takuya Katsu

Takuya is in his final year of a Masters in Urban Planning and Design at Monash University. Prior to this, Takuya worked for many years in the film industry, as a sound engineer. Blending these two disciplines, Takuya is passionate about the impact and influence sound has on our cities.

At the Institute, Takuya takes a lead role in the development of info graphic material, car parking assessment and visualisation, policy review and visual communication. Takuya is a competent map maker and creates visual storyboards using ArcGIS Online and other online platforms.

# Jack Batson

Jack is a geospatial scientist with a passion for creating high quality, engaging maps. Jack is able to bring together data across a range of fields to create insights for clients on transport and land use patterns.

Jack has a passion for cities and a deep interest in the factors that influence how people choose to move. He completed his Honours project on dissecting the 20-minute neighbourhood concept and is highly competent in the use of GIS tools to examine transport and land use data. His keen eye for detail and aesthetics elevates the work of the Institute and helps clients make informed decisions regarding the future of their city.

# Jessie Tram

Jessie is currently undertaking a Bachelor of Urban and Regional Planning at RMIT. She completed undergraduate transport planning and received the highest mark in her year. Her excellent analytical skills combined with strong written communication helps to make the Institute's reports clear, accessible and impactful. Her passion for transport planning and the potential to make cities better underpins the motivation she brings to her work

# Selection of recent projects

# Melbourne Bike Network Model

**This project was commissioned jointly by Melbourne's five inner most Councils and Resilient Melbourne. It involved the development of a Model to determine the level of bike riding taking place across the Inner Melbourne Action Network (IMAP) and forecast the increase in bike riding due to infrastructure upgrades.**

The Model provides a range of analysis options that can be visualised into either static or interactive maps. We provided maps that illustrated showing crash exposure, and the projected number of daily bike trips on every street and road in the study area. Additional analysis opportunities were also realised, including the ability to filter Model variables to create 'corridors of opportunities', including one that highlights areas most likely to mode shift from cars to bikes.

The Model was developed with a methodology designed to be easily updatable by Council staff and expandable to Greater Melbourne and other metro areas.
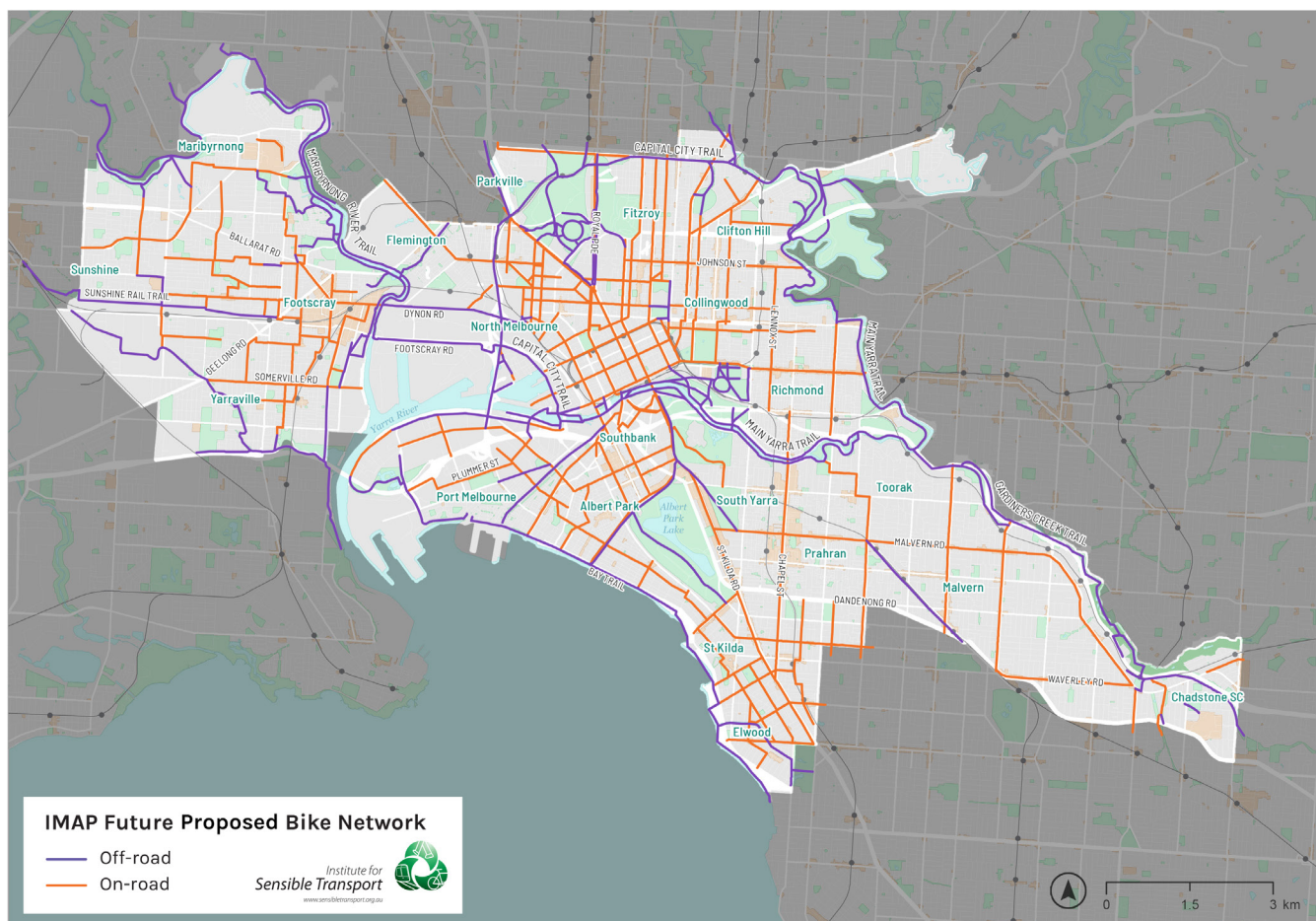


**Bike Network**

# Bike Network Prioritisation Tool

**We were commissioned by Transport for NSW to develop a geospatial prioritisation framework to assist in the staging of their proposed Principal Bicycle Network for Sydney and Parramatta. The Framework was able to analyse over 1,300km of future proposed network, providing a score across 16 individually weighted criteria.**

Transport for NSW were presented with a representation of their proposed network, in terms of how each element performed across each of the 16 criteria. The 16 criteria were divided into *desirability* and *deliverability* categories. The *desirability* and *deliverability* conceptual framework (as shown below) was used to inform the development of the bike network, such as prioritising links and estimating latent demand for cycling.

Our network tool is also useful for costing the proposed network, and how the use of different designs can influence overall cost.
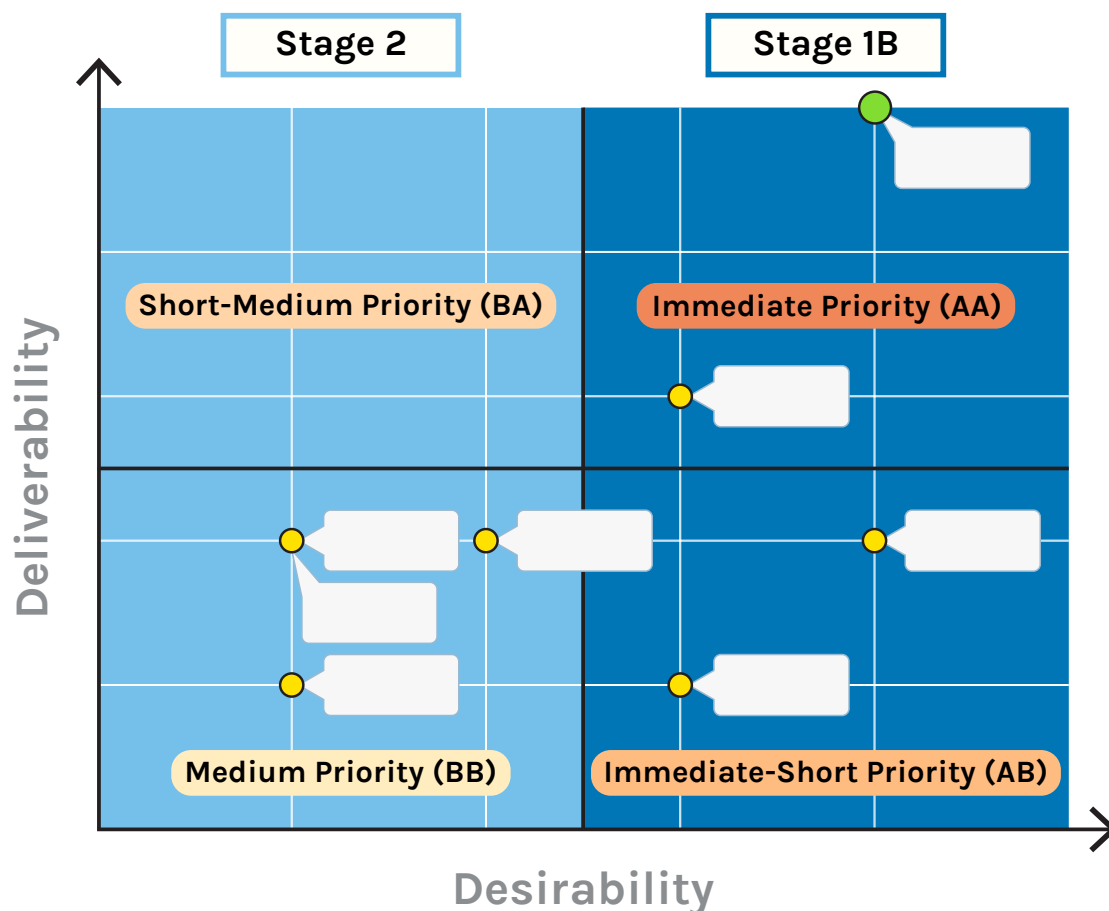


**Desirability and deliverability conceptual framework**

# EV Charging Implementation Plan

City of Port Phillip, 2019

**In partnership with SGS Economics and Planning, we led this project for the City of Port Phillip, to prepare their transition to a zero-emission fleet by 2028. This project involved a detailed analysis of best practice electric vehicle charge examples, from both Australia and overseas, and an audit of the Council's existing fleet.**

We also developed a proposed publicly available charging network, including a policy to allow residents without off street parking to charge their vehicles.

Our work with the City of Port Phillip provided the blueprint for a zero emission fleet and a publicly available charging network.



**A public charging network is essential for greening Australia's vehicle fleet**

# Sustainability Mobility Plan

**In partnership with SAGE Automation, we developed the Launceston Sustainable Mobility Plan. We worked as part of a larger consortium on a Smart Cities project designed to help Launceston take advantage of changes to transport technology (e.g. on demand transport, micro mobility) to support Launceston's ambition to become Australia's most liveable regional city.**

The development of the Sustainable Mobility Plan included consideration of all modes of transport, as well as measures that take advantage of emerging technology to maximise the efficient use of space and resources.

Cycling was one component of this Plan and included an enlarged network of bicycle infrastructure. The map shown below was developed for this project and indicates both the type of bicycle infrastructure proposed and the estimated travel time to travel between key centres.



**Launceston conceptual bike network showing existing and proposed routes with estimated journey times**

# Narre Warren Access & Movement Study

**We were commissioned by Casey City Council to prepare the Narre Warren – Fountain Gate Access and Movement Strategy. The Strategy identified transport and infrastructure projects to support a recently adopted Structure Plan for the Fountain Gate Narre Warren Metropolitan Activity Centre. The project was funded by the Victorian Planning Authority's Streamlining for Growth Grant.**

We used a mix of Census data, number plate surveys, and site visits to develop a deep understanding of how people access the area and where they come from. This project delivered a set of recommendations covering enhancements to the pedestrian environment, enhanced cycling options, better integrated public transport and more effective parking management. We also delivered recommendations designed to reduce the impact of through traffic on the activity centre.

This Access and Movement Strategy provided a comprehensive set of actions designed to change the transport landscape in Narre Warren Fountain Gate, in order to achieve the goals set out in the Structure Plan, and the targets established in this Strategy. The key challenges and actions are summarised in the figure below.



| Major challenges | Key actions | | | |
|---|---|---|---|---|
| Poor pedestrian amenity and safety | New crossings opportunities | Raised threshold treatments | Lower speed limits on key streets | Lower traffic volume on pedestrian priority streets |
| Barriers to cycling as a transport mode | Key cycling links including protected bike lanes on Webb Street and Victor Crescent | | Better integration of cycling and public transport | |
| Poor bus service | More direct routes | More bus stops in key destinations | Better coverage | |
| Enhanced station access and connection to Fountain Gate | Pedestrian and cycle bridge over Cranbourne Rd to station | Green spine along Webb Street | | |
| Car parking | Real time information displays on parking availability | Parking controls to better coordinate supply and demand | | |
| Legibility | Wayfinding strategy to provide directional signage for people walking and cycling | | | |

**Narre Warren's major transport challenges and key actions**
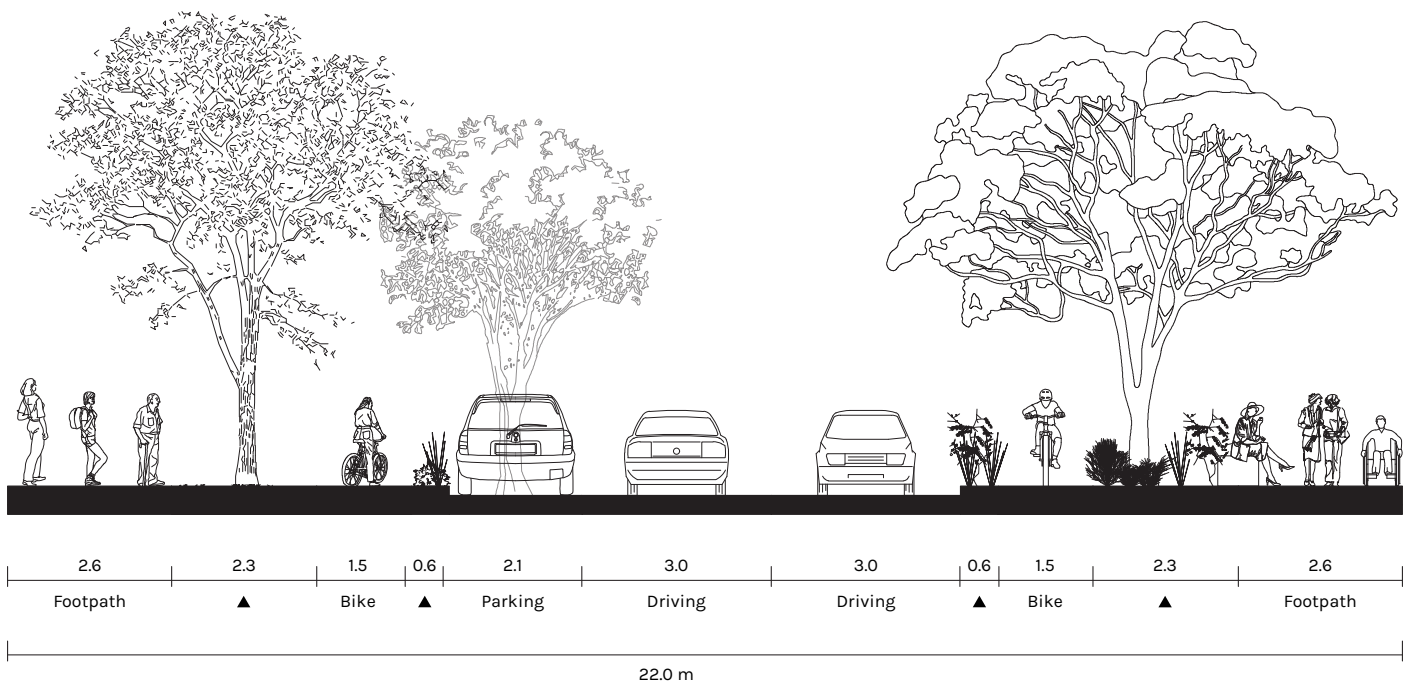
# Yarra Ranges Integrated Transport Strategy

Yarra Ranges Council
2018

**We prepared a 20-year Integrated Transport Strategy for Yarra Ranges, a peri-urban and partly rural municipality on the eastern fringe of Melbourne. The Strategy was endorsed by Councillors in May, 2020.**

Community consultation was an important element in the development of the Strategy, and this included pop up sessions, online surveys and interactive online maps of both the strengths and limitations of the transport system.

A detailed analysis of existing travel behaviour was undertaken, and this found that over half of all car trips were under three kilometres, partly dispelling the myth that most car trips are too long to do by foot or bike. Our analysis of land use patterns also found that 90% of the population lives in just 9% of the land area.

In the Yarra Ranges, where many streets were designed decades ago, the strategy delivers a set of preferred street redesigns (as shown below) to adapt to today's transport and liveability challenges.



| 2.6 | 2.3 | 1.5 | 0.6 | 2.1 | 3.0 | 3.0 | 0.6 | 1.5 | 2.3 | 2.6 |
|---|---|---|---|---|---|---|---|---|---|---|
| Footpath | ▲ | Bike | ▲ | Parking | Driving | Driving | ▲ | Bike | ▲ | Footpath |

22.0 m

**A preferred street redesign for Yarra Ranges' Activity Centres**

# Australian Guidelines for Active Travel

Austroads / Australian Transport Assessment and Planning, 2020

**We have been commissioned by Austroads/Australian Transport Assessment and Planning (ATAP) to update the national Guidelines for Active Travel assessment and planning. This project has required our team to immerse themselves in the latest data/literature regarding:**

- Walking and cycling planning

- Impact and evaluation methodology

- Health impact assessment

- Road safety

- Best practice network design.

The Guidance document is designed to assist practitioners responsible for the planning, design and evaluation of active transport infrastructure.
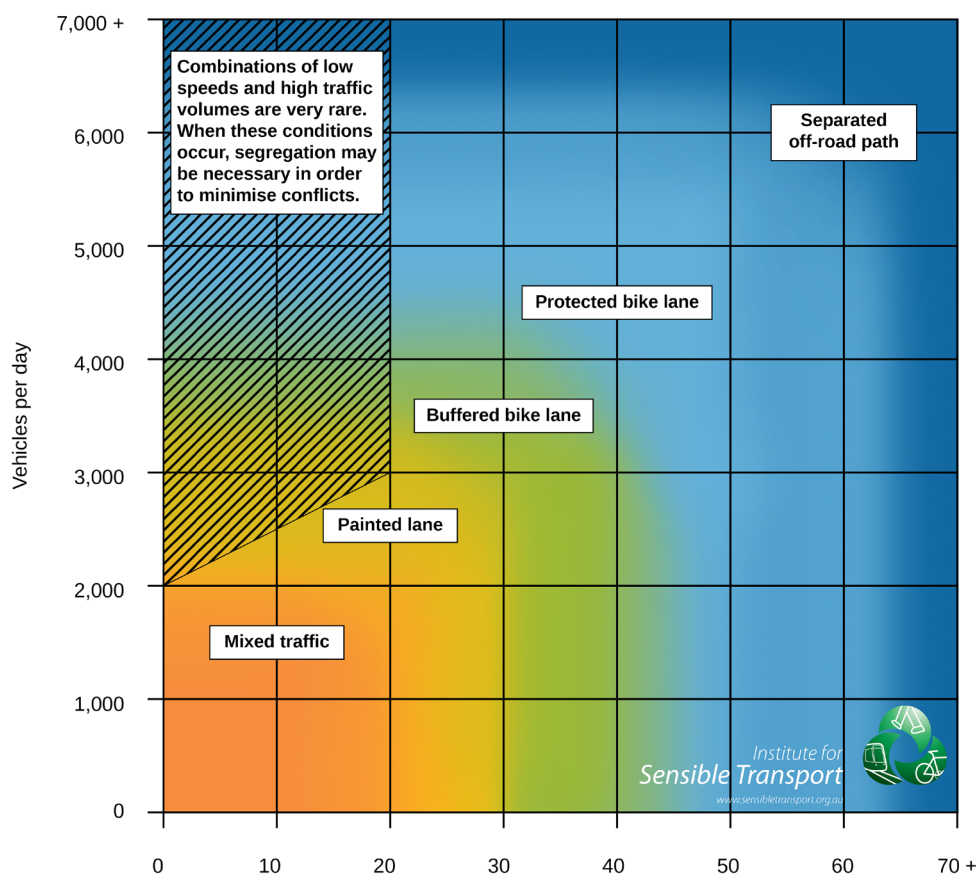


**Tool to determine appropriate bike infrastructure design**

# Darebin Parking Strategy:
## Issues and Opportunities

**This project involved a detailed policy and data analysis on issues related to car parking, to assist Darebin City Council as it began a process of car parking policy reform.**

This project enabled our team to demonstrate what can be gained by reforming parking policy, including the opportunity created when unnecessary parking is replaced by wider footpaths, more green space, protected bicycle lanes and public transport priority routes.

The two images below offer an impression of the conceptual proposal we were able to offer the client, highlighting that when kerbside parking is removed, more space is available for protected bike lanes, dedicated tram routes and more reliable and less frustrating general traffic lanes. Creating these multi-modal 'complete streets' is a core part of our work.



**High Street, Thornbury, VIC (current)**



**High Street, Thornbury, VIC (conceptual proposal)**
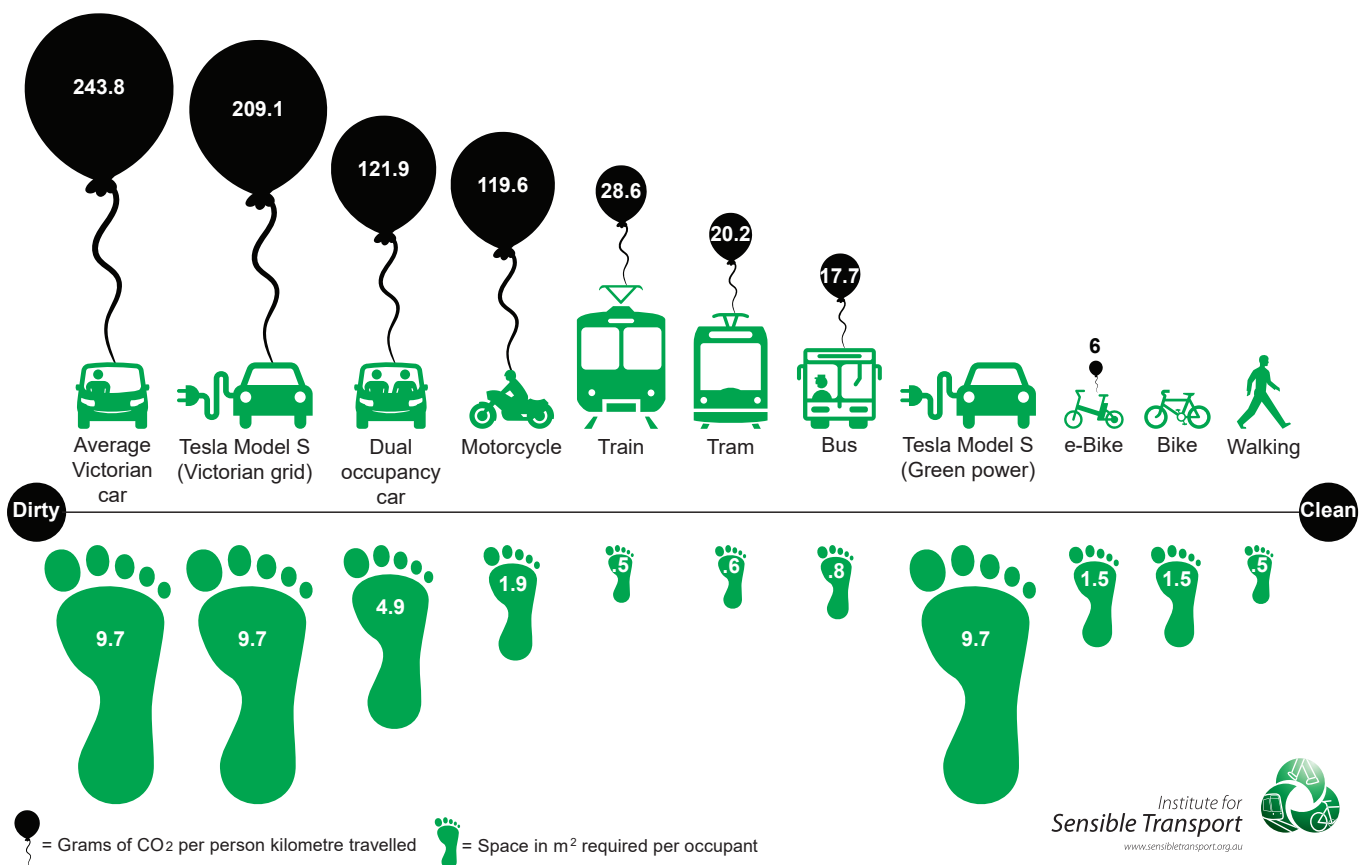
# Transport and Emissions

City of Melbourne, 2018

## We assisted the City of Melbourne in developing a stronger understanding of the emissions within their municipality attributable to transport (air, land, water).

We were able to provide a snapshot and data led discussion of current trends in transport emissions. We aligned the City of Melbourne's method of calculating emissions with international (GPC) protocols. This project also provided a set of recommendations designed to bring the City of Melbourne's transport emissions in line with climate change commitments.

To help illustrate the relationship between emissions, and space consumption, we developed the infographic shown below, which demonstrates why public and active transport are so important for growing cities seeking to reduce their emissions and congestion levels.

The black balloons represent emissions, while the footprints represent the space consumption of the different transport modes shown.



| Mode | Emissions (g) | Space (m²) |
| --- | --- | --- |
| Average Victorian car | 243.8 | 9.7 |
| Tesla Model S (Victorian grid) | 209.1 | 9.7 |
| Dual occupancy car | 121.9 | 4.9 |
| Motorcycle | 119.6 | 1.9 |
| Train | 28.6 | .5 |
| Tram | 20.2 | .6 |
| Bus | 17.7 | .8 |
| Tesla Model S (Green power) | | 9.7 |
| e-Bike | 6 | 1.5 |
| Bike | | 1.5 |
| Walking | | .5 |

**Dirty** ⟶ **Clean**

● = Grams of $CO_2$ per person kilometre travelled

👣 = Space in $m^2$ required per occupant

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## Understand the emissions and space intensity of different transport modes

# Dockless Bike Share
## Parking Infrastructure Guidelines

VicRoads,
2017

**Melbourne, like many other cities, witnessed the unplanned introduction of dockless bike share in 2017.**

In this work, we assisted the Victorian government develop an understanding of the parking requirements of dockless bike share and what measures could to taken to enhance the contribution of this growing mode of transport to mobility options in cities.

In this VicRoads commissioned report, we highlighted the experience of other cities with dockless bike share and identified strategies that could be used in Victoria to enhance micro-mobility options while protecting the public realm from an influx of randomly placed bikes.



**The problem associated with poorly designed bike share in Melbourne**

# Homebush Bay Wayfinding Strategy and Masterplan
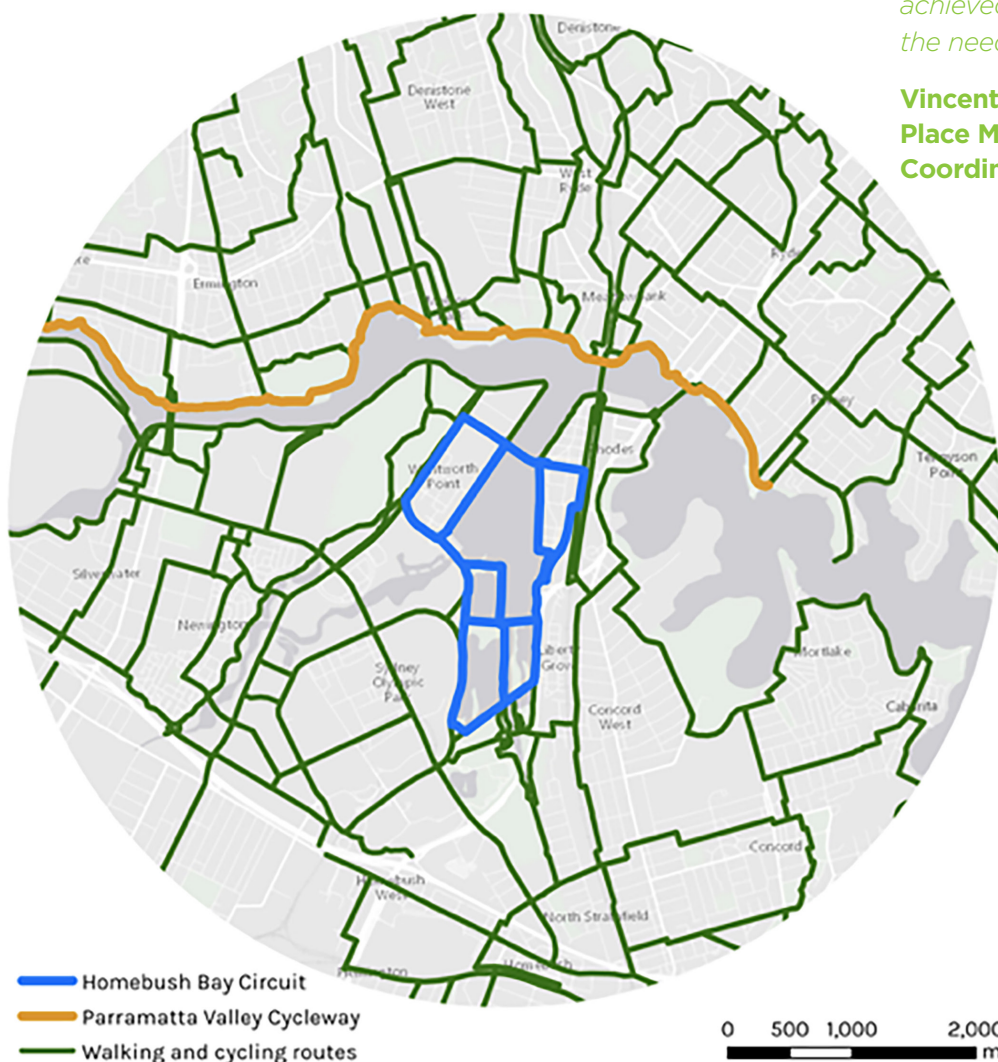
City of
Canada Bay,
2017

**We led an international consortium to deliver a comprehensive design for a cohesive walking and cycling circuit around Sydney's iconic Homebush Bay, the site of the 2000 Olympics.**

This Homebush Bay Wayfinding Strategy and Masterplan was commissioned by the City of Canada Bay, Sydney Olympic Park Authority and the City of Parramatta, and funded by the NSW Government.

## Testimonial

*"The Institute for Sensible Transport were able to demonstrate an exceptional understanding of world's best practice in balancing the needs of different modes of transport and integrating more walking and cycling into local travel…(They) utilised graphically clear street cross sections and mapping demonstrating that the provision of safe and attractive walking and cycling facilities could be achieved on the Circuit while recognising the needs of motorists"*

**Vincent Conroy,
Place Management
Coordinator, City of Canada Bay**



- Homebush Bay Circuit
- Parramatta Valley Cycleway
- Walking and cycling routes

0    500  1,000              2,000
m

**We developed a comprehensive walking and cycling network, integrated with wider transport opportunities in Sydney**

# Bike Plan

**As Parramatta continues its urban intensification and rapid population growth, we assisted the City of Parramatta in the development of a detailed Bike Plan, designed to boost the contribution of cycling to meeting current and future transport challenges.**

This project involved a 'saddle survey' using HD handlebar mounted video and a specially designed mobile app to document existing conditions and potential improvements (see snapshot of data overview below).

A detailed network of bicycle lanes and paths were recommended, costed and usage forecast provided over the next 30 years, taking into account government estimates of population growth rates.

We were able to provide Parramatta with a cost benefit ratio, offering an indication of the long-term return on investment in building their bicycle network. To ensure that the bicycle infrastructure was being recommended in the areas with the highest latent demand, we developed a data-led Bike Use Propensity Index, utilising Census and bicycle count data, the results of which are shown below. This helped to ensure the infrastructure recommended was being placed in the areas most likely to be used.
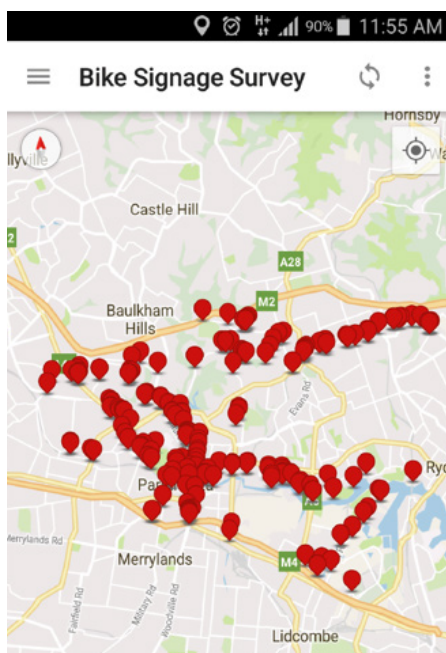


**The collection of detailed, local data in a GIS format is essential to our approach**
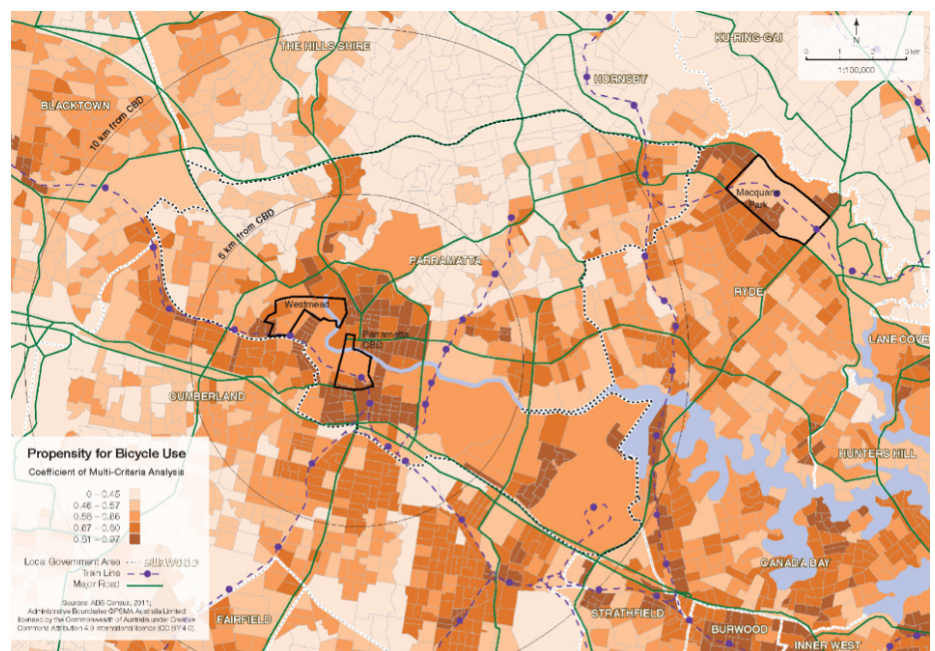


**A data-led illustration of where latent demand exists for future cyclng**

# Hampton Park Central Access and Movement Study

## We recently completed this place-based transport plan for Casey City Council.

The focus was on people, rather than vehicles and this led to a design process in which priority was offered to pedestrians, cyclists and public transport users, as these are the modes that are current under-represented within this Activity Centre.

As with all our work, a data-led approach was taken and this included an analysis of the address of registration for the vehicles parked within the study area (see image below). This provided our team with insights as to the likely distance people may have been travelling to arrive at the Activity Centre. Most vehicles were registered at the same, or an adjoining postcode to the study area itself.
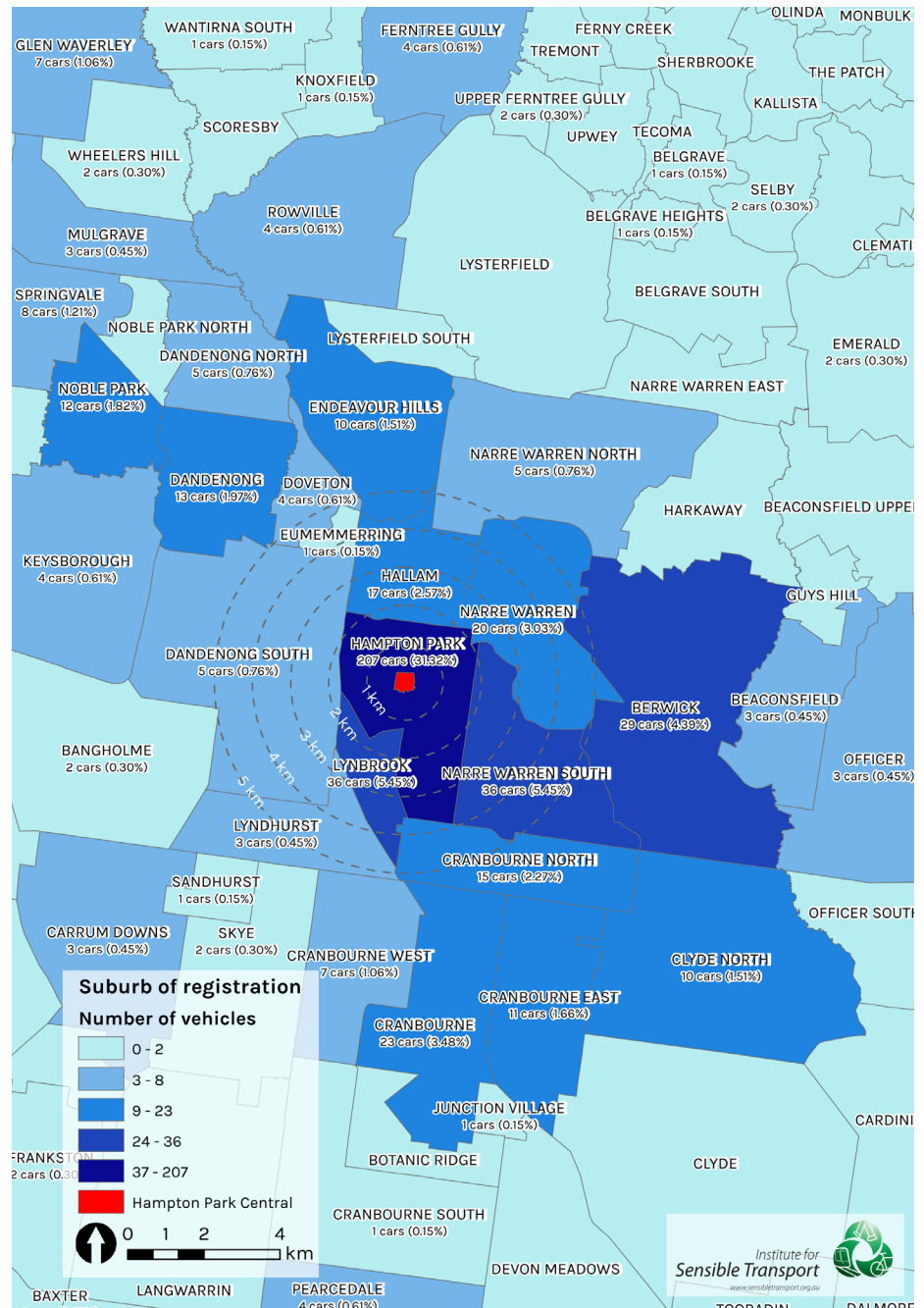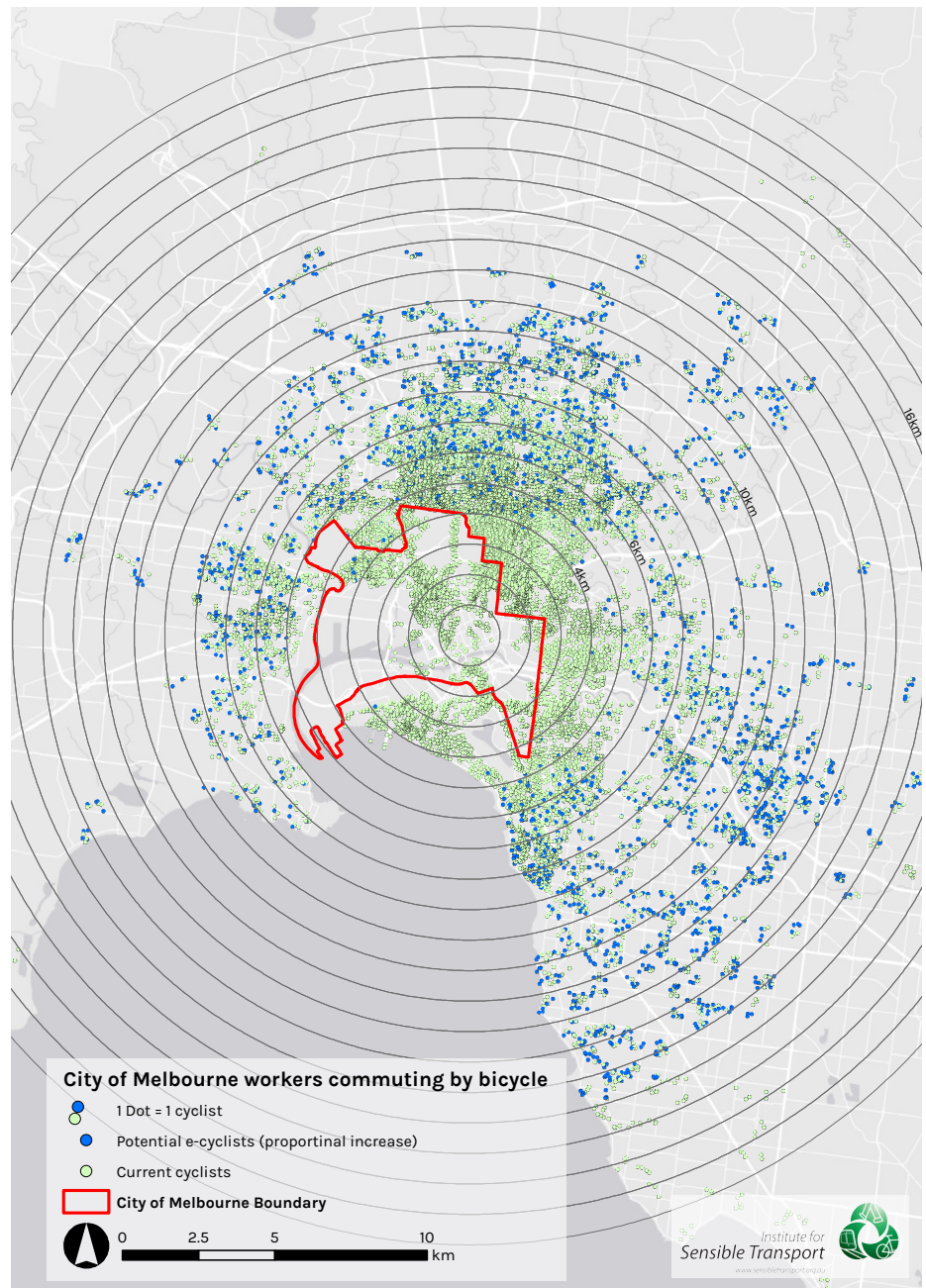


**Understanding where cars are registered**

# Potential for electric bike use in Melbourne

**As part of the City of Melbourne's Transport Strategy Refresh, we provided an analysis of the potential for e-bikes to contribute to the growing transport task facing a fast-growing Melbourne.**

This project included an overview of the latest developments in the e-bike market, the influence e-bikes are having on travel behaviour in other markets and what the City of Melbourne can do to maximise the contribution of e-bikes to provide safe, efficient mobility.



City of Melbourne workers commuting by bicycle
- 1 Dot = 1 cyclist
- Potential e-cyclists (proportinal increase)
- Current cyclists
- City of Melbourne Boundary

0    2.5    5    10
km

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**Helping the City of Melbourne understand the potential for e-bikes to meet the growing transport challenge**

# Transport innovation study tour to the Netherlands

**The Institute for Sensible Transport uses its extensive network of Dutch transport and land use experts to curate a week-long tour of transport innovation in the Netherlands.**

An emphasis is placed on translating best practice examples into the Australian context and past attendees have included representatives from Infrastructure Australia, Transport for NSW and local government transport planners and Councillors from around Australia.

Our study tours look at the Dutch transport and land use system as a whole, with a focus on lessons that can be translated into more car dependent contexts. Whilst it is impossible to ignore cycling in the Netherlands, our study tours take a broader view, encompassing the full set of transport options in the Netherlands and what it means for Australian cities.



**The 2018 study tour delegates learning about street transformation and vibrancy from the chief landscape architect, City of Amsterdam**

# Professional development seminars

2010
- ongoing

**The Institute for Sensible Transport have, for over eight years, held professional development seminars on a range of emerging transport topics.**

These include seminars on:

- Innovations in parking policy and practice, with the world's foremost authority on the topic, Professor Donald Shoup.

- App and ride sharing services and the impact on mobility, with Professor Allan Fels, Uber and the taxi industry.

- The Psychology of Transport Behaviour with New York Times best selling author, Tom Vanderbilt.

- Road user pricing and autonomous vehicles with former Victorian Premier John Brumby, Reserve Bank Board Member Professor Ian Harper, and the then Productivity Commission Chairman Peter Harris.



**The former Premier of Victoria, John Brumby AO, delivering his Keynote address at our seminar on road user pricing in 2017**

# Sydney Bike Share Feasibility Study

Inner Sydney
Councils,
2017

**We assisted a group of inner Sydney Councils understand the global context regarding the rapidly changing international bike share industry.**

Our work included:

- Bike share case studies from London, NYC, Washington, D.C., San Francisco, Melbourne, and Brisbane.

- Key benefits and opportunities for bike share in Sydney.

- Integration of a future Sydney bike share program with public transport, including options for Smartcard compatibility.

- Bike share propensity index: This was developed as a map of Sydney, indicating areas of high and low forecast bike share use.

- Design principles for the placement of docking stations.

- Assessment of suitable bike share hardware for Sydney.

- Optimal process for user sign up and customer interface.

- Consideration of helmet requirements and potential measures to mitigate lower usage levels due to existing legislation.

- Bicycle infrastructure network and impact on usage

- Potential funding sources and program costs.

- Governance and contract management.

# Integrating sustainability

## Creating more sustainable cities and towns through transport innovation underpins everything we do. Naturally, our commitment to sustainability also covers our own business practices.

We lower our environmental footprint everyday through the following actions:

- Our office is powered by 100% certified Greenpower (wind)

- Use public transport and cycling as our default mode of transport to the office, meetings and site visits. Use an electric vehicle when travelling beyond the active or public transport network

- Only use 100% post consumer waste recycled paper in the office

- Offset our emissions from air travel and only choose to travel by air when there are no other options

- Use green/biodegradable cleaning products in the office.

The former Premier of Victoria, John Brumby AO, delivering his Keynote address at our seminar on road user pricing in 2017

# Institute for
# Sensible Transport

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