

## Queensland Transport's Response to Issues Paper – Forum 5: Transport, Planning and the Build Environment

Queensland Transport submits the following information in response to specific issues discussed in the paper (Forum 5) about Transport and Planning, and notes that the issues have been raised at the Garnaut Climate Change Review Public Forum on 19 February 2007, other discussions with stakeholders, and research. Queensland Transport proposes that voluntary travel behaviour change programs be seriously considered as an economically viable component of any domestic climate change mitigation strategy. In particular, Queensland Transport's response highlights the many valuable 'behaviour change' initiatives that have been implemented as part of Queensland Transport's TravelSmart program that is a part of the broader TravelSmart Australia framework. The TravelSmart program aims to lower emissions generated by passenger transport by encouraging the use of different modes of transport, for instance, switching from private cars to public transport, walking or cycling. The initiatives discussed below aim to encourage and promote alternative methods of transport within the areas of communities, schools, workplaces, and destinations. The success of these initiatives has decreased the number of vehicles travelling on Queensland roads.

### Background

Transport is Queensland's fourth largest contributor to greenhouse gas emissions (after the stationary energy, land use and agriculture sectors) comprising 12 percent of total emissions (carbon dioxide equivalent). Of this, 85 percent is from road transport. Increasing levels of greenhouse gas emissions from the transport sector are due to factors such as:

- increasing number of vehicles travelling on Queensland roads
- growing average vehicle kilometres travelled
- an historic preference for larger vehicles.

The Queensland Government has to date:

- invested \$235 million in the south east Queensland integrated regional cycle network between 2005 and 2026. In addition, the government is providing **cycling and pedestrian facilities** as part of new road projects, such as the Gateway Bridge duplication.
- released **ClimateSmart 2050 - Queensland climate change strategy 2007: a low carbon future**. The strategy is a significant step towards reducing greenhouse gas emissions in Queensland and provides a platform for the government, community and industry to move to a low carbon future. It aims to achieve a national target of 60 percent reduction in 2000 greenhouse gas emissions by 2050. *ClimateSmart 2050* is a \$414 million investment to deliver the next steps in Queensland's climate change response. A key commitment is the establishment of a \$300 million Queensland Climate Change Fund, with interest earned on the fund providing an estimated ongoing funding source of approximately \$20 million each year for future climate change initiatives. In addition, \$114 million will support the delivery of new initiatives outlined in this strategy. These new investments complement the government's existing \$300 million commitment to the delivery of clean coal technologies. When combined with industry contributions of \$600 million, Queensland's commitment to climate change totals \$1.3 billion.
- **banned broad scale vegetation** clearing across the State, preventing up to an estimated 20 million tonnes of greenhouse gases entering the atmosphere. This action alone is largely responsible for assisting Australia meet its Kyoto targets.
- Reduced (in 2000) the overall emissions intensity of our energy generation fleet by introducing the **Queensland 13 percent Gas Scheme**.
- Supports the Queensland ethanol industry by **mandating a five percent blend of ethanol** for all petrol sold in Queensland by 2010.
- Opened (in March 2007), the **Queensland Climate Change Centre of Excellence (QCCCE)**, the first of its kind in Australia, bringing together Queensland's climate change scientific and policy expertise.
- introduced (in January 2008), a new **environmentally friendly rating system for vehicle registration duty**. The new scheme is a gradual levy based on the number of cylinders. This will provide motorists with an incentive to play their part in helping tackle climate change by encouraging the purchase of smaller, more fuel efficient vehicles. Queenslanders will be

encouraged to offset emissions from their vehicles through the annual registration renewal process. Offsetting would be achieved through balancing the emissions produced by a car through measures such as planting trees. Similar to the national GreenPower program, consumers can elect to pay to have their emissions offset through an accredited scheme. This program is voluntary and will support and link to the ClimateSmart Living education campaign.

- launched a state wide marketing campaign that focuses on **increasing consumer knowledge about the benefits of ethanol**, dispel the myths that could negatively influence consumer behaviour and provide factual information to motorists.

## Queensland Transport – TravelSmart

TravelSmart is a voluntary travel behaviour change program aimed at encouraging people to reduce private vehicle travel in favour of more sustainable modes of walking, cycling, public transport and car pooling (ride sharing) as well as shorter trips. TravelSmart Australia forms a component of the Lowering Emissions from Urban Traffic: An Integrated National Strategy, which was endorsed by the Australian Transport Council in August 2002. The Queensland component of TravelSmart Australia contains four integrated sub-programs each tailored to address different aspects of people's trip patterns. The sub-programs are: communities; schools, workplaces, and destinations. They form part of an integrated program of low cost low risk voluntary travel behaviour change projects Queensland Transport intends to undertake as part of a wider set of travel demand management initiatives currently under consideration by Queensland Transport. Since its inception in Queensland, TravelSmart has implemented a number of valuable behaviour change initiatives in the sub-program areas that impact directly and positively to the climate response. Many of the initiatives used the Individualised Marketing (IndiMark) technique developed by Socialdata Australia (a transport solutions company in Europe and Australia).

### 1. Communities

The TravelSmart communities program encourages entire suburbs to change the way they travel and be less dependent on motor vehicles. The idea behind this program is that people will favour environmentally friendly transport choices if they have access to information they need, such as public transport timetables, journey planners, cycling and walking maps and so on. Households that already use environmentally friendly transport (such as public transport, cycling or walking) and those that choose to try environmentally friendly transport are rewarded for their efforts. The following pilots, projects and programs have been implemented.

#### 1.1 - TravelSmart Suburbs Brisbane Pilot – The Grange

The TravelSmart Suburbs Brisbane Pilot in 2001 – 2002 was the first successful application in Queensland of voluntary travel behaviour change technique that was able to achieve and demonstrate a meaningful shift to environment friendly modes of travel. The Pilot was conceived by Queensland Transport originally to test options for achieving reductions in greenhouse gases and other urban pollutants in the transport system. It was able to achieve a range of whole of government and agency outcomes across environment, demand management, transport, health and education. The Pilot's major partner was the Brisbane City Council and involved the participation of numerous organisations such as QR Citytrain, Brisbane Transport, Bicycle Queensland and private bicycle shops and Heart Foundation. Over 450 Households in the inner northern suburbs of Brisbane participated and the key results were:

- **Walking increased 16%**
- **Cycling increased 6%**
- **Public Transport use increased 33%**
- **Car as driver trips decreased 10%**
- **Car as passenger trips decreased 5%**
- **Vehicle kilometers travelled decreased 10%.**

#### 1.2 – TravelSmart Suburbs Townsville pilot

During 2003, Queensland Transport, in partnership with the Australian Greenhouse Office, Townsville City Council and Sunbus, trialled the TravelSmart Communities program in Townsville, North Queensland. The project was undertaken in the Townsville suburbs of Mundingburra and Hermit Park and involved over 10 000 households using IndiMark™ methodology. A before-travel survey established existing travel patterns before distributing appropriate materials and information concerning travel choices. Following this

application phase, an after-travel survey was undertaken after a few weeks of residents trying alternate means of transport. Major changes in behaviour included:

- ***Walking journeys increasing by 26 percent***
- ***Car-as-driver trips being reduced by eight percent***
- ***Cycling increasing by 15 percent***
- ***Public transport use increasing by 13 per cent.***

Final results indicate the pilot project has been successful in achieving a shift in favour of environmentally friendly transport.

### **1.3 - TravelSmart Communities Project – Brisbane North**

About 50 percent of all journeys made are less than five kilometres. Queensland's large urban areas are experiencing levels of congestion that create significant economic, environmental, health and social costs. Queensland Transport has recognised that substantial change in how we travel is needed. In Brisbane's North a project has been implemented that aims to encourage residents to use alternative transport for shorter journeys. The project is jointly funded by Queensland Transport, the Australian Greenhouse Office in the Australian Government Department of the Environment and Water Resources, and the Brisbane City Council in partnership with TransLink. In 2006, a survey of more than 70 000 households in Brisbane's northern suburbs revealed that 52 percent of households were interested in reducing their car use in favour of sustainable transport. Project results include:

- ***49 percent increase in walking***
- ***58 percent increase in cycling***
- ***22 percent increase in public transport.***

The project reduced 114 million kilometres from private car travel equating to a 13 percent reduction in vehicle kilometres travelled in private cars.

### **1.4 – TravelSmart Communities Project – Redland Shire**

In 2004, Queensland Transport's TravelSmart team worked with 10 000 households in the Redland region to promote the use of sustainable travel, such as public transport, cycling and walking. The program reduced 25 million kilometres per year from private car travel among the participating households. The results equate to a 12 percent reduction in kilometres travelled in private cars.

One in four people switched to public transport in the Redland Shire after an innovative program to promote sustainable forms of transport was introduced. Other results included:

- ***Walking increased 55 percent***
- ***Cycling increased 29 percent***
- ***Public transport use increased 27 percent***
- ***Driver-plus-passenger car trips increased 2 percent***
- ***Vehicle kilometres travelled decreased 12 percent.***

This initiative has continued in communities across northern Brisbane.

## **2. Destinations**

The TravelSmart Destinations program encourages people visiting a destination to use environmentally-friendly transport options as an alternative to motor vehicle use. Any popular destination can be more TravelSmart, such as shopping centres, universities and hospitals, all which attract thousands of visitors or clients each week and generate high levels of traffic. The TravelSmart Destinations program helps destinations develop and implement site-specific travel plans. Strategies used in a destination travel plan include: promoting alternative travel choices via marketing plans and events; improving the quality and availability of site-specific transport information; offering regular visitors individualised support such as personalised timetables; providing incentives to users of alternative transport types; improving routes to the site; and increasing access to technology to eliminate the need to travel by motor vehicle. The following projects and programs have been implemented.

### **2.1 – TravelSmart Destinations Project - Kelvin Grove**

A TravelSmart Destinations Project was implemented at the Queensland University of Technology (QUT) Kelvin Grove campus in 2004, with outstanding results. The TravelSmart team, in consultation with the

project working group (formed by academics, university administrators, student union and State Cycle Unit representatives), analysed the before-travel survey results and site assessment report to develop a site-specific travel plan. The strategies included:

- Strategy 1: Information and encouragement
- Strategy 2: Promotion of walking and cycling facilities
- Strategy 3: Public transport information and incentives
- Strategy 4: Car pooling
- Strategy 5: Telecommuting.

The plan included implementation, monitoring and review of the TravelSmart destination project. To gauge implementation success, an after-travel survey was distributed to Queensland University of Technology Kelvin Grove staff and students. According to respondents, the project resulted in:

- **Vehicle kilometres travelled reduced by 26 percent**
- **Car trips (as a driver) decreased from 51 percent to 34 percent**
- **Car trips (as a passenger) increased from 6 percent to 10 percent**
- **Motorbike/scooter trips increased from 1 percent to 3 percent**
- **Walking increased from 5 percent to 39 percent**
- **Cycling increased from 2 percent to 5 percent**
- **Train trips increased from 5 percent to 14 percent**
- **Bus trips increased from 23 percent to 39 percent**
- **Ferry trips increased from 0.5 percent to 3 percent.**

## 2.2 – TravelSmart Destinations Project - Varsity Lakes

A TravelSmart Destinations Project launched in late 2006 in Varsity Lakes that encouraged residents to make better use of local buses, bikeways and walking paths in an effort to promote the advantages and benefits of using sustainable transport and getting outdoors and being active. The Varsity Lakes Project is jointly funded by the Department of Housing (Community Renewal) and Queensland Transport with assistance from Queensland Health. Initiatives that took place from December 2006 to August 2007 included:

- TravelSmart community launch
- Distribution of TravelSmart information packs to interested residents including incentives to encourage them to travel smart such as backpack, pedometer, water bottle and sunscreen
- Distribution of community access guide and a map of Varsity Lakes area showing walking and cycling paths and bus routes
- A series of free cycling maintenance and skills workshops
- Public Transport awareness day with a local bus operator travelling around the neighborhood distributing timetables and TransLink merchandise
- Development of a palm sized walking pamphlet containing information on walking distances in Varsity Lakes between popular destinations
- A sponsored afternoon tea event to support the 'Walking School Bus' initiative that encourages children to walk to and from school in conjunction with Community Renewal and Gold Coast City Council stakeholders
- A TravelSmart family fun day promoting and engaging residents to participate in healthy activities including: TravelSmart treasure hunt; rock climbing wall, cycling workshops; and jumping castle.
- Distribution of a transport information package including transport information and community maps
- Sponsorship and incentives to local community resource centres to start Walking Groups in conjunction with University students.

Final surveys were conducted in September 2007 to determine what effect the TravelSmart project had on the residents in the area and revealed:

- **Decrease in the number of kilometres travelled by car**
- **Large number of residents were aware of the TravelSmart program in their area, with most recalling the events run in the local park**
- **The most common change in behaviour was people walking more**
- **Increase in the amount of residents using the local park**
- **Small increase in residents using public transport.**

Final reports were given to the Australian Greenhouse Office and the Department of Housing in November 2007.

## **2.3 – TravelSmart Destination Program - Townsville (James Cook University)**

After James Cook University in Townsville participated in a TravelSmart program, almost four times as many staff and students walked to and from campus than before. Survey results also showed that after taking part in the program, almost twice as many staff and students chose to cycle to and from campus. In early 2004, the university and the TravelSmart team designed a series of fun and educational events—such as 'Market Day' and 'Car Less Day'—to promote better use of existing public transport. Walking and cycling proved to be ideal for the flat terrain at the northern Queensland campus.

## **2.4 – TravelSmart Destination Project - Mackay**

The TravelSmart team is assisting Mackay families to *TravelSmart*, by providing information about local bus services, bike paths and walkways. Other information includes tips on safe cycling and keeping fit. A recent survey revealed that nearly 48 percent of selected households in Mackay may start using, or may increase their current use of, sustainable modes of transport, such as public transport, cycling, walking and car pooling. TravelSmart activities such as monthly 'walk to school' days and cycling workshops are assisting children, parents and staff to experience the benefits of travelling smart, such as less congested roads, a reduction in greenhouse gas emissions, and improved personal fitness. Media advertising was launched in February 2007, and workshops to build TravelSmart skills and awareness were conducted in April and May, 2007. Further research is being conducted to assess any change in how residents use transport options. TravelSmart Mackay is an initiative of Queensland Transport and the Australian Greenhouse Office in the Australian Government Department of the Environment and Water Resources in partnership with Mackay City Council, Mackay Transit Coaches and Queensland Health.

## **3. Schools**

The TravelSmart schools program encourages school communities to consider environmentally-friendly transport options as an alternative to motor vehicle use. The program targets journeys to and from school and considers all household journeys. TravelSmart Schools also assists school communities in dealing with local traffic congestion, road safety and health issues. Schools are provided with information packages (Travel plans) about environmentally friendly travel options that are used to encourage parents to consider alternatives when driving children to and from school. The Travel plans are developed with participation from school community, local government and Queensland Transport representatives and combine a range of strategies to help influence the school community with regard to: school policies and environment; involvement of the school and community; and classroom activities. The Travel plan is tailored to meet the individual schools needs. Some activities included in Travel plans include:

- conducting classroom activities and bicycle skills education
- promoting bus use and good behaviour on public transport
- a roster volunteer parents, carers and teachers to accompany groups of children to the bus stop or as they walk or cycle to and from school
- ensuring that the school entry and exit points adequately favours the movement of pedestrians, cyclists and buses, over cars
- establishing parent car pooling clubs with social activities
- conducting activities to raise awareness and educate people about how easy it is to be TravelSmart
- working with stakeholders, such as local government, police and transport providers, to address local barriers to safe walking, cycling and public transport use, or ways to enhance the physical environment for travelling smart.

### **3.1 - TravelSmart school projects**

Eight TravelSmart school projects were completed in 2005 and six schools were working towards becoming TravelSmart in 2007. Most schools are well on the way to finalising or implementing the travel plans with the assistance of Queensland Transport. Queensland Transport helps schools with:

- parent consultation including forums
- materials for the classroom

- 'how to' information about public transport, walking, cycling and car pooling through a transport access guide for their site
- newsletter articles, posters, brochures and incentives
- promotional events and competitions
- establishing and supporting supervised walking or cycling groups
- working with stakeholders such as local government, school transport operators and road safety advisers
- ideas about ways to shift the dominant car culture and challenge misconceptions about travelling to and from school.

In addition, many TravelSmart schools undertake an event called the 'TravelSmart Family Challenge'. The challenge runs over a two-week period where students are encouraged to try walking, cycling, car pooling and public transport to get to and from school each day. Students record their travel patterns on a class log. At the end of the challenge, a celebration day is held at the schools to acknowledge achievements. Parents and local councillors are invited to join in the fun. A prize draw is conducted and certificates of appreciation are presented. It should be mentioned that all communities involved have been keen to find ways to reduce local traffic congestion and find better ways to use available public transport. All the projects featured strong collaboration between parents, teachers, local stakeholders and the TravelSmart team, including community meetings, an information kit for parents, research into community perceptions about sustainable transport and events like the Family Challenge, Celebration Day and Walk to School Day.

### **3.2 – TravelSmart school projects - Sunshine Coast**

Results from an innovative schools project on the Sunshine Coast have revealed that one in three families no longer use a car as their main transport to and from school. The survey assessed an innovative TravelSmart project that aims to encourage school communities to use sustainable forms of transport like bicycles, walking and public transport. Other project results showed an increase of 50 percent in use of public transport whilst almost 25 percent more students were cycling to and from school. Four primary schools in the Sippy Downs region participated: Chancellor State College, Harmony Montessori School, Matthew Flinders Anglican College, and Siena Catholic College.

### **3.3 – TravelSmart school projects - Redland Bay**

Results from an innovative schools project in the Redland Bay area have proved encouraging with a significant increase in the number of students using sustainable transport. In 2004, Queensland Transport's TravelSmart team worked with primary school communities in Redland Bay, Victoria Point and Coolwynpin to promote the use of sustainable travel like public transport, cycling and walking, to and from school. Results included:

- ***10 percent reduction in the use of private motor vehicles for travel to and from school***
- ***65 percent increase in walking or cycling to and from school***
- ***51 percent increase in using public transport to and from school.***

## **4 Workplaces**

With more people using motor vehicles to drive to and from work, the congestion on Queensland roads is increasing at an alarming rate. By 2011 the number of registered motor vehicles in Queensland will increase by 30 percent from 2.4 million to 3.11 million. More vehicles on the roads mean even greater congestion and air pollution. Queensland Transport acknowledges that we need to use more environmentally friendly, less polluting and healthier ways of travelling to and from work. The TravelSmart Workplace program encourages the use of sustainable modes of transport for journeys to and from a workplace and between workplace sites. Queensland Transport can assist organisations to develop and implement workplace travel plans which provide strategies for reducing motor vehicle travel to and from work such as:

- promoting alternative travel choices through a marketing plan and events
- improving the quality and availability of site-specific transport information
- offering individual support, such as personalised timetables, to regular visitors
- providing incentives for users of alternative transport modes

- increasing the use of technology that might reduce the need to travel to work.

The outcomes of a workplace travel plan include:

- an increase in walking by staff
- an increase in cycling by staff
- an increase in public transport use by staff
- a decrease in the number of motor vehicle trips by staff
- a healthier workforce
- a reduced need for parking at the workplace
- a more environmentally friendly focus for the organisation; and
- benefits for the environment such as improved local air quality with less noise, dirt and fumes, and less impact on other national and global environmental problems.

#### **4.1 – TravelSmart Workplace Projects - Townsville City Council**

Townsville City Council has taken steps to ensure staff are active in promoting and participating in the TravelSmart program. The Townsville City Council improved facilities to encourage staff to walk or cycle to work. The new facilities have so far been a success with many staff choosing to TravelSmart. TravelSmart Coordinators provided education and incentives to use public transport. Staff who used public transport while travelling to work received rail tickets while staff carpooling were rewarded with special car parks. The Townsville City Council hopes these small steps will encourage other people to TravelSmart and build a cleaner environment, and better, safer traffic conditions.

#### **4.2 – TravelSmart Workplace Projects - Stanwell Corporation Ltd**

Stanwell Corporation's commitment to staff health, morale and our environment has helped make it a very successful TravelSmart Workplace. The site assessment, before-travel survey report and travel plan were completed in early 2004. Stanwell Corporation encouraged staff to walk, cycle, car-pool, or use public transport. Incentives included a TravelSmart colouring competition held at the Stanwell Family Picnic Day on 31 July 2004, and the 'TravelSmart to Stanwell' competition where staff listed their sustainable trips to and/or from work in a travel log.

#### **4.3 – TravelSmart Workplace Projects – Department of Emergency Services (Kedron and Lutwyche)**

The TravelSmart team and the Department of Emergency Services are working together to implement Queensland's largest TravelSmart workplace project at the Kedron and Lutwyche sites.

In summary, voluntary travel behaviour change programs, such as the TravelSmart program should be an inclusion in any proposed strategy to mitigate climate change. A recent review of the Brisbane North TravelSmart Communities project highlights the economic advantages of voluntary behaviour change programs in addition to the significant changes in travel behaviour: "The benefits of the Brisbane North TravelSmart project exceed the costs (in present value terms) by a factor of 36:1"<sup>1</sup>. The results of this and other TravelSmart projects support the effectiveness of travel behaviour change programs and the importance of including such programs in the national climate change mitigation strategy.

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<sup>1</sup> Ker, I (2008). *North Brisbane Household TravelSmart\* Peer Review and Evaluation Part 2: Appraisal of Outcomes*. FOR Brisbane City Council: Brisbane, Queensland, p45.

\* This program is a joint initiative of the Brisbane City Council, Queensland Transport and The Australian Greenhouse Office in the Department of the Environment, Water, Heritage and the Arts.