

# TRANS SCAN

A scan of emerging trends in mobility and the built environment

Volume 1

Number 1

July 1998

## Exploring alternative transport and land-use futures

*The relationship between transport and land-use planning is brought into focus in this first edition of TransScan. Some of the highlights in this edition explore that relationship and other emerging developments in mobility:*

- Representatives from the three departments discuss emerging issues in the South West arising from a growing population, booming industry and an ageing road network. (Page 5)
- Despite certain computer systems being declared free of the Year 2000 (Y2K) Millennium Bug, experts are still warning of big problems. (Page 8)
- The Select Committee on Perth's Air Quality has recently released its report clearly stating that addressing transport related emissions is now a top priority to address the city's air quality. (Page 10)
- Malcolm Bullpit, visiting from the UK, spoke passionately about innovative and practical solutions which are offered by safety audits. And while Western Australia considers changes to driver training, Scandinavia reports varied results from similar initiatives. (Page 12)
- Cycling schemes around the world emphasise the point that roads should accommodate the needs of all users. Interesting initiatives in Edinburgh and Copenhagen are featured. (Page 14)
- The UK Government is considering how to develop indicators of sustainability to appraise and monitor transport projects. (Page 17)
- A new report, argues Intelligent Transport Systems (ITS) could generate economic benefits in Australia of \$3.8 billion by 2012. (Page 18)



WHILE preliminary planning starts on new ferry services for Perth's Swan and Canning Rivers (Page 19), Charles Cox, owner of one of the city's oldest ferries, believes he has scored a world first by applying new, energy saving technology to his paddle steamer, Decoy (above). The ferry now has its 1905 diesel-assisted steam engine, connected to eight roof-mounted solar panels (right) to pre-heat the water.

Mr Cox believes the arrangement will cut fuel costs by up to 80%.



## Welcome to TransScan

WELCOME to the first edition of *TransScan* - a quarterly journal which brings to its readers worldwide scans and discussions on emerging trends in mobility and the built environment.

The new journal is the successor to Main Roads' *RoadScan* and is published as a cooperative venture between Transport WA, Main Roads WA and the Ministry for Planning. The quarterly is prepared by Strategic Scan with the assistance of staff of the three agencies.

The editorial committee welcomes discussion on the issues raised in *TransScan* and invites readers to submit letters for publication. Correspondence for publication should be sent by fax to the Editors (08) 9362 6248 or by email to [scanasia@highway1.com.au](mailto:scanasia@highway1.com.au)

TRANS SCAN is prepared quarterly by Strategic Scan and three agencies of the Western Australian Government



Volume 1 Number 1 July 1998  
ISSN 1440 - 8996

## TRANS SCAN

A scan of emerging trends  
in mobility and the built environment

TransScan is an initiative of  
Transport WA, Main Roads Western  
Australia and the Ministry for Planning and is  
produced by

Strategic Scan  
PO Box 300  
Osborne Park  
Perth  
Western Australia 6917

Tel: 014 463 188  
Fax: (08) 9362 6248  
E-mail: [scanasia@highway1.com.au](mailto:scanasia@highway1.com.au)

### Editorial Committee:

Mr Ian Ker, Transport WA  
Mr John Chortis, Ministry for Planning  
Mr Trevor Terry, Main Roads WA  
Ms Trudi Lang, Strategic Scan  
Mr Peter Terry, Strategic Scan

### Letters to the Editor

*TransScan* welcomes letters for publication, preferably by email. They should be no longer than 150 words and while every effort will be made to publish such letters in full, *TransScan* reserves the right to publish them in extract if necessary.

### Disclaimer

Strategic Scan takes all reasonable care in the preparation of this document which represents the results of scanning and analysis over the past three months from sources listed within, but accepts no responsibility for any loss which may be sustained by any person or organisation which relies on information in this document.

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## About *TransScan*

*TransScan* monitors change world wide and is based on analysis of information scanned by staff of Transport WA, Main Roads Western Australia, the Ministry for Planning and the research organisation, Strategic Scan.

The aim is to stimulate the informed discussion necessary for the departments to operate more effectively in a period of rapid change. The subject matter will often challenge assumptions. At the same time it seeks to familiarise readers with an ever changing environment. It is not possible to predict tomorrow, but it is possible to make calculated assessments about the future.

Fundamental to this approach is the recognition that the future is here now. When decisions are made on what is thought the future will bring, those decisions help shape that future.

Information which appears in *TransScan* does not represent definitive research. The contents is the result of a scan made in the past few months. On an ongoing basis, such scans will expose ever more new and emerging themes.

## Land-use management

# Debate over strategies widens

THOSE with an apocalyptic view of city life next century, will find considerable merit in Stephen Potter's suggestion that the only viable policy option for handling future growth in private, motorised travel is to "predict and prevent".(1)

Certainly the scan for the June Quarter has shown worldwide debate hotting up over the precise influence land-use planning can have on mobility and travel demand.

Here in Perth, policy makers found themselves at the centre of one such controversy when the State Government launched its own Transform WA transport plan.(2)

At the same time in Canberra, the Parliamentary Inquiry into Road Funding, criticised the Federal Government for spending so much on national roads - without first having a strategic plan for transport.(3)

"Improving the quality of a road is meaningless without knowing what kind of quality is relevant to users' needs and how each section of road integrates with the rest of the road network as well as how well it connects with other forms of transport," the inquiry reported.

At the international macro level, there can be no doubt that the land use/transport debate is at a critical stage.

Within five years, more than half of the world's population will be living in cities (4) and as Singapore has discovered, aspirations to car ownership go hand in hand with rapid urbanisation - no matter how much land-use planning is applied.(5)

At the micro level there has been considerable debate in the United States as to just how beneficial are the grid-shaped street



*Internationally, traffic congestion and the land-use/transport debate, have reached a critical stage*

patterns advocated in New Urbanism - one of the key planning tools in land-use management.(6)

In a recent address, Robert Cervero, of the University of California's Department of City and Regional Planning, said it was important to recognise that transport and mobility were not the key

objectives of New Urbanism's "traditional" neighbourhood designs.

"First and foremost, urban designers are trying to instil a sense of community, an attachment to place," he said.

"To some degree, there is an undercurrent of social reform be

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## What really happens when road capacity is cut?

HARD evidence of the "symmetry hypothesis" - reduced road capacity leads to a reduction in traffic volume - has been documented in the UK report Traffic Impact of Highway Capacity Reductions: Assessment of the Evidence.

Using 60 case studies, it shows that on average a 25% reduction in traffic was achieved. However, reductions do seem to depend on the amount of available capacity on other routes and a range of behavioural responses by drivers.

People's reaction to congestion - such as altering their travel times to avoid it - have not apparently been factored in by transport modellers according to Local Transport Today.

For the UK, the potential impact is that existing models could overestimate peak hour traffic demand and the benefit of new road projects. (Note: WA takes its measurements over 24 hour periods, not peak hours.) The UK is now developing new software to attach to modelling packages.

*Continued from previous page*

### Strategy debate widens

hind these designs.” He added: “Studies might show traditional neighbourhood designs have very marginal impacts on travel, however, this does not mean we should not create such places. . .if nothing else, they are widening our choice in living, working and travelling environments.”

However, Cervero does say that if the grid patterns of the new street layouts are going to succeed in encouraging walking, and deterring motoring, it is important to place intersections every “400 to 500 feet instead of every 1500 to 2000 feet”.

“Where cars must stop repeatedly, as with four-way stops, and where preferences are given to pedestrians and cyclists, one is less inclined to drive a car,” he says.

“Thus, I would argue, it is not so much the configuration of streets as it is the grain of the design that are likely to bear on travel behaviour.”

The principles of New

Urbanism are an intrinsic part of the Ministry for Planning’s new Community Design Code.(7) (See too Page 5) They also look likely to be adopted by the British Government as part of its new housing development code.(8)

The UK’s new housing code is itself to be intricately linked to the Integrated Transport Strategy soon to be outlined in a much awaited government White Paper.

The imminent strategy is responsible for sparking much of the land use/transport debate current in Britain, and the comments quoted earlier from Open University, Senior Research Fellow, Stephen Potter, that “predict and prevent” is now the only viable option.(1)

According to Potter, eight years ago when Britain’s 1989 Road Traffic Forecasts were published, government started to recognise it had run out of options.

“... government became aware that even a road-building

program that would bankrupt the UK would fail to accommodate the amount of traffic forecast for the early 21st Century,” he said.

Latest UK statistics show how quickly time is running out. Due to growing congestion, road speeds in London are now down to average speeds of 10 miles per hour - 9% less than four years ago.(9)

However, there is no shortage of ideas to help put matters right. Here is a sample drawn from a survey of British government and academic planning experts and featured in the *Town & Country Planning* journal (10):

- Limit edge-of-town developments to prevent further decline of existing retail infrastructure
- Offer tax incentives for car pooling
- Set a ceiling on car parking spaces
- Limit heavy trucks to arterial roads
- Develop electronic road pricing as a priority
- Adopt land use configurations which encourage walking - and subject future urban developments to a “sustainable access audit”
- Give more road priority to buses
- Prevent development in any area not linked to a high-quality public transport service
- Offer tax exemptions on season travel tickets, home delivery services, teleworking, and all other “green” travel initiatives
- Tax private, non-residential parking

#### SOURCES

- (1) Political courage, by Stephen Potter, *Town & Country Planning*, April 1998
- (2) The Great Roads Robbery, by Dr Jeff Kenworthy, *The Greener Times*, May 1998
- (3) “Parliamentary Inquiry recommends Commonwealth establish a strategic national transport plan”, *Australian Planner*, No 1, Vol 35, 1998
- (4) “Controlling the environmental impact of transport: Traffic management schemes and their influence on consumer behaviour” by Enda McGovern, *Sustainable Development* 6, 23-30 (1998)
- (5) “Land transport policy and land-use planning in Singapore” by Tai-Chee Wong, *Australian Planner*, No 1, Vol 35, 1998
- (6) “Urban Design Issues Related to Transport Modes, Designs and Services for Neo-traditional Developments”, Address by Robert Cervero, University of California, Berkeley
- (7) “Livable Neighbourhoods” Ministry for Planning, December 1997
- (8) “End of the road for cul-de-sacs in future housing estate design”, *Local Transport Today*, 9 April 1998
- (9) “Congestion makes case for Integrated Transport Policy”, UK Department of the Environment, Transport and the Regions, 16 April 1998 <http://www.coi.gov.uk/coi/depts/GTE/coi0383e.ok>
- (10) “How to jump off the transport policy merry-go-round” *Town & Country Planning*, April 1998

## Focus on the South West

WESTERN Australia's South West is one of the country's fastest growing regions - a booming population and buoyant industries which generate more and more road freight. Here we talk to **Larry Guise**, Regional Manager, Ministry for Planning; **Derek Lee**, Regional Manager, Main Roads, and **Steve Beyer**, Manager Regional Policy and Planning, Transport WA about the growth pressures and inevitable conflicts.

## The rush to save the 'Golden Egg'

THE raw statistics tell much of the story. By 2025 some 163,000 people are expected to be living in the South West region - almost twice as many as today. (1)

Over much the same period (to 2020), resource industries like mineral sands, silica sands, timber, and woodchips, are expected to grow to a point where they are generating 50 million tonnes of freight annually - 22 million tonnes of it destined to be hauled by trucks.

Although Asia's economic downturn has not been factored in, the growth trends are sufficiently robust to indicate future problems.

To add to the complexity, the sheer number of people moving into the South West - either as permanent residents, or tourists - is and will be, posing a serious threat to the tranquil lifestyle that is the region's prime attraction.

While there is no single solution, Ministry for Planning's newly published design code, *Livable Neighbourhoods* with its emphasis on New Urbanism, is likely to contribute significantly to how the people-side of the equation is worked out. (2)

From the roads aspect, a key factor will be in the detail of Main Roads' long term road man-

agement for the region. Over the next ten years, that program is likely to include considerable improvement to the main arterial network which includes some realignment to bypass points of projected congestion.

Transport, in its newly completed Southern Province Transport Strategy - a document which groups the Peel, Great Southern and South West Regions together as one province - has examined pressures on the region in detail. (1) Like Main Roads, it has concluded that realignment of some arterial roads to steer through traffic away from population centres, will be necessary.

All major centres are expanding rapidly and one of the oldest towns, Busselton, now rates as the fastest growing in Australia. By 2001 it is expected to reach city-status with a population topping 23,000.

Tourists are flocking to the region not in their thousands - but millions. Most recent figures put the annual number of overnight visitors at 2.4 million.

"That growth is going to continue for some years to come, and the real challenge now is how to manage it," says Larry Guise.

"We know why people

want to come here. It's the lifestyle: surf, beaches, wineries, forests - and employment opportunities.

"What we have to ensure is that we don't kill the goose that lays the golden egg, because those very things which make the South West so attractive will be destroyed over the next ten years, if we don't manage the way the region develops."

The plans for accommodating that growing population rely heavily on the concepts of New Urbanism as outlined in "*Livable Neighbourhoods* - a new community design code."

New Urbanism brings with it a number of vital ingredients, and the new planning code reflects them in detail, such as "compactness" - so shops are within walking distance; simple road patterns; and "sustainable town centres" which have sufficient local neighbourhoods to be viable.

Already there are at least three large developments being proposed for the region which adopt *Livable Neighbourhoods*'s prime objectives - including a proposal to build a "town of education" adjacent to Vasse, the historic township midway between

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## ‘Saving the ‘Golden Egg’

Busselton and Dunsborough. Under the Vasse proposal, car usage would be cut dramatically and most people who live in the new town would be expected either to walk or cycle to work.

“The proponents are looking at a very futuristic concept,” says Mr Guise.

“Rather than creating a dormitory suburb, they want to build a community which focusses on providing educational services - and could mean everything from pre-primary up to university.”

New Vasse would grow in population from its current 100 to 2500 or more - with a high proportion of the working population employed on the town’s campus and providing the full spectrum of educational services from primary school to university.

But the influence of Liveable Neighbourhoods does not stop there. There is a rural version of the concept being developed to accommodate the increasing number of people wanting to live on hobby farms - particularly within the region’s environmentally sensitive, Leeuwin-Naturaliste district.

To meet the demand - without undermining the district’s agricultural and viticultural industry - the Ministry for Planning has come up with the concept of “enclave” developments.

Enclaves will function much like hobby farms, except a body corporate will take responsibility for farm management, and instead of one household, there will be up to 50 people (20 - 30 houses) within the farm boundaries - and all within a 2 kilometre radius of an existing urban centre.

Over the next 20 years, very little development is to be allowed along the Leeuwin-Naturaliste coastline, and the narrow, winding Caves Road will be kept much



*More trucks are coming*

as it is today. According to Derek Lee, Main Roads is developing plans to further enhance the character of Caves Road.

The introduction of “vertical constraints” - more road-side vegetation particularly “forgiving” shrubs which can take the impact of any car which runs off the road will improve the scenic value and safety of the road.

According to Mr Lee, the extra vegetation will eliminate the road’s “open vistas” and produce a more confined feeling - encouraging most motorists to drive more slowly.

But the region’s traffic management is the major concern.

“The biggest problem we are facing is essentially the mix of traffic - and that is going hand in hand with the general growth in traffic,” says Derek Lee.

“It is not just tourist traffic that is building, but mining and industry are also adding large vehicles to the road network and that is mixing with the tourist traffic, the commuter traffic, the cyclists and pedestrians.

“Safety is our main consideration, and we have to look at ways of separating traffic types.”

Providing attractive routes for particular types of traffic is one way to achieve this.

Progressively over the next

ten years Mr Lee is expecting road maintenance costs to soar as the bulk of the South West’s arterial road structure - originally built in the 1960s - comes up for renewal.

“Once you start a reconstruction program like this, you have to ask yourself many basic questions,” says Mr Lee.

“You have to ask if it is not more appropriate to build arterial routes that bypass the towns and provide only fast communications between different

parts of the region, or if providing access and servicing small local communities is more important.”

From Transport’s view point, Steve Beyer sees little likelihood of a radical change in the way freight is carried in the South West over the next 20 years.

Deregulation of the transport industry has considerably reduced government’s ability to influence it. However, the move by government to open the Westrail network to private operators, and the possible sale of Westrail in the short term would stimulate real efficiency and increase competition within the transport sector. It would have the potential of taking rail back into areas of transport it has lost since deregulation.

Says Mr Beyer: “The way I see things going in the next ten years, it is going to be necessary for social and environmental policy to have a much stronger influence over how transport works.”

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## Waterfront redevelopment

## Bringing people back to the inner city

THE next ten years will see billions of dollars spent around the world redeveloping and revitalising neglected riverfront and port areas. The scan for this quarter offers only a glimpse of the huge changes taking place including the change in attitudes to water environments.

America's Riverfront Commons Corporation, which is responsible for the redevelopment of the river system through the city of Columbus, Ohio, talks of the trend as an end to the community turning its back on the river. (1)

In an overview of its planning and design principles it states that the riverfront is "a hidden jewel in the heart of Columbus, an untapped resource . . ."

The Columbus 20 year plan is largely designed to rid the riverfront of industrial sites, and turn the banks into a 14km corridor of parks and recreational ar-

reas - including a Riverfront Amphitheater

In London, where the Thames Gateway project is now entering its third year, the redevelopment authority is running an advertising campaign to attract new investment and promote the river as the city's focal point. (2)

The Thames Gateway is the largest urban "regeneration" project in Europe, and includes as one of its biggest projects, the 181 acre exhibition "dome" which Britain is constructing to mark the new millennium.

As in London, some of Australia's largest redevelopment projects are associated with obsolete port facilities - Sydney's City West project and Melbourne's Docklands development. (3)

Western Australia too has been reflecting similar trends with port side redevelopments in Fremantle and Bunbury and the ma-

JOR riverfront redevelopment at East Perth.

In all cases the developments will produce significant changes in population.

For example, over the next 20 years in Sydney, the City West project will see the district's population increase from today's 3000 to 20,000 with a projected workforce of 40,000. (4)

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## Shopping habits set to change



Copyright: Isovel Refrigeration

Solar panels being tested for mobile refrigeration

IN SEPTEMBER, Britain's giant food retailer, Sainsbury, plans to launch the country's first nationwide, home-shopping service using phone, fax, and the Internet. If the company's estimates are correct, the service could have an early impact on travel patterns. Sainsbury calculates that between 5% and 10% of its customers will use the service.

**The figure could well prove conservative. According to Local Transport Today (9 April, 1998), home shopping is likely to account for more than 25% of all UK retail sales within ten years.**

Meanwhile bulk food trucks may take on a new look. Sainsbury is working with Southampton University and UK manufacturer, Isovel Refrigeration, to develop solar power for mobile refrigeration. As the photo shows, the solar panels are mounted on the trailer roof.

# How much disruption should be expected?

FOR the past three months, Year 2000 Press Clippings - a commercial Internet service - has listed up to 50 media reports a day on worldwide problems associated with the Year 2000 (Y2K) Millennium Bug.(1)

While the list may not be exhaustive, it is indicative of the unease internationally and within Australia that too little is being done to rectify the computer date problem before the 2000 deadline.

**Within the road and public transport area, Western Australia is claiming to be free from bugs. Transport WA have had an audit conducted on the bus and ticketing systems and been assured "Y2K will not be an issue". At the same time, Main Roads has used the Y2K threat to fast track its traffic signalling and control upgrade, and as a result, now claims a bug-free system.**

But while this section of transport infrastructure is believed to be Y2K compliant, there are plenty of other warnings that the world could be facing unprecedented levels of social and economic disruption - including within the wider transport area.

**"While no one can yet predict the extent of the disruption, we all know what happens when only one major system experiences minor glitches," writes John Peterson, president of the Arlington Institute "think tank" and author of the best selling book, The Road to 2015.(2)**

"The dense webs by which we have woven the modern world into existence are highly vulnerable, even fragile. And most people don't have any sense of the levels of interdependency that make our lives possible," he says.



*Modern ships can have up to 100 embedded chips aboard*

Although Y2K's "big crunch" will come on 1 January 2000, some expect widespread problems to emerge around the world from 1 July 1999 when the 2000 fiscal year begins.

**In the United States, where levels of awareness are considered high, a Congressional subcommittee estimates that only 63% of 7850 Federal Government computers deemed "vital" - including those used in national security, health, safety, and transportation - will be Y2K compliant by the critical date.(3)**

On June 11, the US House of Representatives Appropriations subcommittee set aside \$US2.25 billion in emergency funding to assist "civilian agencies" fix the Y2K problem.

One of the big problems is noncompliant, embedded - and in many cases, forgotten - chips. Any one of them has the potential to stop working and cause havoc.

**The UK Government's Audit Commission quotes research showing that about 5%**

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## TRANSNet

A regular review of mobility-related sites on the Internet

CURITIBA in south-east Brazil has grown in population from 200,000 people in 1950, to 2 million now. Yet while car ownership there is high, three-quarters of commuters use buses. Some planners believe the city, and its long-time architect Mayor, Jaime Lerner, hold the answers to many of the world's problems of traffic congestion. They discuss Curitiba at <http://www.3.islandnet.com/~arton/polurban.html>

**THE New Zealand Transport Minister has been inviting the public to provide online comment about road funding reforms. Replies can be found at <http://www.roading.govt.nz/trans.nsf>**

*TRUDI Lang's lecture on alternative indicators, focused attention on the State of Oregon (US). (See page 14) But Oregon's influence on trends does not stop there. A new community-based group, 1000 Friends of Oregon, recently succeeded in reversing a decision to build a suburban freeway through Portland. Now they are telling the rest of the world how at <http://www.teleport.com/~friends/LUTRAQ.htm>*

**ENTHUSIASM for mono-rails seems to ebb and flow. Right now around the world there appears to be an up-swing. The Monorail Society is keeping track at a new website, <http://www.monorails.org>**

Disclaimer: The inclusion of these sites does not mean endorsement by the publishers. They have been selected for interest value.

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## How much disruption from Y2K?

of “simple embedded systems” fail when tested - and that in more complex systems, the failure rates range from 50% to 80%.(4) Worldwide it is estimated that there are more than one billion embedded chips in operation.

In Australia, State and Federal governments have stepped up their individual campaigns to warn business of the dangers of Y2K noncompliance.(5) The Australian Stock Exchange, like many others around the world, is now requiring all listed companies to declare their risk exposure.

**It is worth noting that there is an expectation that some office buildings will “fail”. The problem was highlighted by the Australian legal firm, Coltmans Price Brent when it issued a warning to commercial property owners that they could face “huge potential damages claims” if embedded, problem chips in their buildings cut off lifts, air-conditioning, security, and emergency services.**

But no matter how quickly Australian business and government agencies take action to com-

ply, the repercussions on the country from outside could prove serious.

With most companies (wherever they might be based) operating “just in time” supply systems, there is little built-in slack to cope with serious delays and disruptions.

In Asia, South America, and eastern Europe, little is being done to rectify Y2K problems. The Bangkok Post has reported that 70% of Asian businesses could “fail outright or experience severe hardship because of Y2K.” Even in western Europe, where more efforts are being made, disruptions caused by the bug could stretch into 2003, according to one prediction.(6)

US State Governments, notably California, Georgia and Nevada, are introducing legislation to prevent consumers seeking punitive damages if predicted Y2K disruptions result in lawsuits.

The Washington DC Year 2000 Group, drawn from US Government departments, major corporations and the US military, surveyed 230 members on their assessment of the Bug’s likely im-

pact on the American economy.(7) Two-thirds predicted at least an economic slowdown and more than a third believed there would be “local social disruptions”.

**Within the transport sector, there is considerable potential for disruption across all modes - although so far, most public attention has been directed towards problems associated with air safety. For example, Lufthansa has already announced it will not fly its aircraft during the first days of 2000.(2) And Qantas has told the Australian Stock Exchange it now expects to spend \$147 million freeing itself from the bug.(8)**

US State authorities are also being warned that failures or incorrect timing sequences could affect microprocessors embedded in motor vehicles, and highway and rail traffic control systems.(9)

Dr Edward Yardeni, chief economist for US-based Deutsche Morgan Grenfell, says it was computer problems which beset the Union Pacific railway company last October when it lost track of hundreds of freight wagons across America. Writing in his book, *Year 2000 Recession?*, Dr Yardeni suggests that in a worst case scenario the millennium bug could cause even more disruption.(10)

**“Just the way Union Pacific has lost track of many of its freight cars, we could lose track of vital components of our economy,” he says.**

The London-based Lloyd’s Register is so concerned by the Bug’s potential impact on shipping that it has established a website, Ship2000, to alert ship-owners.(11)

Large modern tankers and cargo vessels are likely to have more than 100 chips embedded in their systems.

The London-based Entropy Management estimates that up to 20% of those chips are likely to fail because of millennium problems. If nothing else, such failures could bring serious congestion problems to ports.

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- (2) “The Year 2000: Social Chaos or Social Transformation”, by John L Petersen et al, The Arlington Institute, <http://www.arlinst.org>
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- (4) UK Audit Commission, <http://audit-commission.gov.uk>
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# Tackling Perth's air pollution problems

AIR pollution is one of the most regularly cited environmental concerns of the community. The key culprits at the metropolitan level are photochemical smog and particulate haze which are caused disproportionately by the transport sector. It is this sector which is coming under increasing pressure to lessen its impact on the environment.

This point is highlighted in the newly released report of the Select Committee on Perth's Air Quality.<sup>(1)</sup> Its Chairman, Mr Fred Tubby MLA, said, "It must be accepted there are no silver bullets left to be fired at industry - the key issue for the future of Perth's air quality is transport based - cleaner vehicles, cleaner fuels and greater reliance on public transport."

The Committee spent twelve months consulting extensively with local, interstate and international experts to address the issue and devise solutions. One of its key findings is that improvements in Perth's air pollution in the future will only be achieved through close co-ordination of transport planning, infrastructure development and environmental planning.

The report also argues that an urban structure must be created which supports public transport, cycling and walking over private vehicles.

While cars and light commercial vehicles are the major source of pollutants, emissions from diesel vehicles have a disproportionate impact. Best estimates of the health costs of motor vehicle emissions in Australia is approximately \$50 million per annum according to the report, prompting the Committee to argue that potential health costs must be borne in mind.



*Promoting more bus travel*

Modelling of the number of cars likely to be on the road in the future, and the total number of kilometres being travelled, indicates that Perth's air quality could well continue to decline. The report also notes that advances in vehicle emission technology alone will not be enough to stem the problem.

However, it is not only air quality in metropolitan areas which is cause for concern. One of the recommendations of the report is for air quality issues in rural areas to be investigated - particularly in parts of the more populous South West.

Ian MacRae, who prepared the Ministry for Planning's submission to the Select Committee and brought the report to the attention of TransScan, says it is important to note that Perth is currently recognised as having good air quality. There are, however, concerns that continual growth in the number of vehicles and wood stoves will see this deteriorate. "The main task is to more closely

regulate these factors to ensure that Perth can grow without its air quality deteriorating," he says.

Mr MacRae believes that it is significant that the Committee did not come down too heavily on vehicles generally, but focused on those causing most of the problem - that is, the polluters. The recommendations therefore focus on control and monitoring of emissions through such things as vehicle testing and trading-in of polluting vehicles.

"The Western Australian Government has always been reluctant to introduce vehicle testing and penalties for polluters despite the fact that most other States have such programs. This report pushes for it so it will be interesting to see whether this is pursued or whether the emphasis will continue to be on blaming the car per se," says Mr MacRae.

Reduction in total vehicle kilometres travelled is also recognised in the report as important to reduce a deterioration in air quality. Higher density developments, bus lanes, light rail and car sharing are all promoted as ways of reducing travel distance.

Many of the recommendations can already be found in the strategies of Transport WA, the Ministry for Planning, and Main Roads.

A whole of government response, which will include a response from Main Roads and Transport, is currently being prepared through the Department of Environmental Protection (DEP) with the aim of submitting it to Cabinet and the Legislative Assembly in August.

#### SOURCE:

(1) Report of the Select Committee on Perth's Air Quality, Legislative Assembly May 1998

## Action plan for cleaner air

THE report of the Select Committee on Perth's Air Quality recommends a number of transport and land use planning related solutions which are aimed at quickly beginning an implementation program to address air quality.

These include:

- Establishment of a coordinating committee made up of government, industry, business and community representatives who would be responsible for implementing an Air Quality Management Plan
- Development of integrated land use and transportation policies so as to minimise the air quality impacts of future growth in the metropolitan area
- A range of community education campaigns communicating the importance of good air quality and how people can contribute to this
  - Promotional campaigns aimed at increasing cycling, walking and use of public transport (especially for distances under five kilometres)
  - Increasing funding to the travel demand management program, Travelsmart (discussed in the last edition of RoadScan)
  - Introducing a light rail network and as an interim measure allocating bus priority lanes along highways during peak traffic periods
- Creating dedicated bus lanes on the Kwinana freeway and dedicated car pool lanes on the Mitchell freeway
- Expanding the metropolitan rail network
- Expanding the bicycle network by providing bicycle access in all new road constructions and other initiatives
- Creating an Economic Advisory Committee to review all new major transport and urban projects to ensure the goals of the Metropolitan Transport Strategy are being achieved
- Including in the EPA's environmental impact assessment process, emissions arising from the project's transport
  - Amending local government By-Laws to ensure non-residential building approvals give due attention to the needs of cyclists, pedestrians and public transport users
  - Providing better bicycle and customer facilities at public transport stations
  - Reducing the number of all day parking places in the Perth central business district
  - Implementing vehicle emission and roadside testing programs
  - A range of measures to ensure fuel quality and cleaner vehicle standards

## Forecasts will keep track of pollutants

• The Federal Government is establishing an air quality forecasting system which will predict daily levels of photochemical smog, particle haze and carbon monoxide in many Australian cities by the year 2000.(1) Mr Martin Cope of CSIRO Atmospheric Research says, "We will provide two forecasts. One will show predicted levels of pollutants. The second will show how air quality might improve on high pollution days if there were a concerted public response, such as more people using public transport."

• The Federal Government is also planning to introduce an environmental protection measure on diesel vehicles. And NSW is

considering setting a zero growth rate in per capita vehicle kilometres by 2011.(2) In the private sector, a British company is reported to have developed a "particle trap" which can be attached to engine vehicles and is said to remove 95% of the small particles found in diesel exhaust.(3)

• **Greenhouse gas emissions trading is seen to be an important tool for countries to meet their commitments under the Kyoto Protocol on climate change. In New Jersey, USA, the State government has recently signed an agreement with the Netherlands to design a prototype for international greenhouse gas emissions trading.**(4)

**And in Australia, the House of Representatives Standing Committee on the Environment, Recreation and the Arts is investigating regulatory arrangements for emissions trading and will be holding hearings in Perth in July. The Bureau for Resources Science's latest Climate Change Newsletter includes a number of articles on the type of issues to be addressed.**(5)

• Environmental liability of private contractors and government departments has been emphasised again with the NSW Road and Traffic Authority (RTA) facing a fine of \$30 000 for not undertaking work in "an environ

*Continued next page*

mentally responsible way.”(6) As old paint from a bridge was removed, it fell into the local waterways causing the EPA to halt the work of the RTA until safeguards were put in place.

• **The Institute of Transport Economics in Norway has found that meeting the twin goals of safety and the environment in road traffic results in as many conflicts as it does synergies.(7) Reductions in the volume of traffic offer the most synergies, however reducing mobility is not always practical. The question to be asked is how can adverse environmental side effects and accidents be reduced without curbing people’s mobility?**

## SOURCES

- (1) “Tomorrow: Fine, with clean air and a low particle count” CSIRO, 15 May 1998 <<http://www.csiro.au/news/mediarel/mr1998/mr98119.html>>
- (2) “Air plan: NSW to push for NOx trading and national diesel controls” in Environmental Manager, Issue No. 192, 10 March 1998
- (3) “Clean bill of health for particle trap” by Mick Hamer in New Scientist, 21 February 1998
- (4) “New Jersey and the Netherlands: Initiate Historic Joint Effort on Climate Change” by the Center for Clean Air Policy to Coordinate International Emissions Trade, 5 June 1998 <<http://www.ccap.org/press-2.html>>
- (5) Climate Change Newsletter, Vol 10, Number 2, May 1998 <<http://www.brs.gov.au/ccs/ccn/10v2.html>>
- (6) “Pollution fine a warning for agencies and contractors” in Australian Environment Review, Vol 13, No. 3, March/April 1998
- (7) “Safety and the environment in road traffic - conflict or synergy?” by Trygve Slheim & Terje Assum in Nordic Road and Transport Research, No 1, 1998

# Safety audits in the planning process

*SAFETY audits are being used increasingly in Australia to ensure the physical aspects of roads contribute as much as possible to higher levels of safety. (Austroads has developed a well respected guide on the subject) Interest culminated in the International Road Safety Audit Forum held in Melbourne in May. One speaker was Malcolm Bullpit of TMS Consultancy and until recently the Traffic Management Policy Manager for Kent County Council (UK). In addition to speaking at the conference, he met with a number of transport groups including those in Western Australia. Trudi Lang caught up with him between these meetings to discuss directions in safety audits and other mobility issues.*

MALCOLM Bullpit has two key starting points when it comes to road safety. First, prevention is better than cure. He told conference participants: “The principle of safety audit, as used by many highway authorities is that the engineers involved in accident investigation and prevention use their accumulated knowledge of common safety issues to ensure that mistakes are not repeated in future layouts.”

The second starting point is that roads and transport are essentially about the safe movement of all classes of users. Such groups include, pedestrians, cyclists, motorcyclists, high occupancy vehicles, public service vehicles, freight vehicles and private vehicular traffic. It is also important to realise, says Mr Bullpit, that everyone is a multiple user of transport. He says, the safety engineers role therefore, is to consider the needs of all these users.

The concept of the safety audit is not new. It was developed over 150 years ago as part of ensuring the safety of the rail network. It is only in recent times that engineers have applied the same principles to the road network. Addressing the conference he said “Whilst major new road construction started in the 1920s, it took some 60 years to realise that this

new transportation facility required a similar overview of operational safety by a third party.”

Safety audits are becoming an increasingly popular tool to assess the safety of new and existing road projects.

Mr Bullpit says there are essentially three stages to the safety audit process. Stage 1 is carried out at the preliminary design stage where alternative layouts are considered. Stage 2 audits occur when the chosen project has been worked up to the design stage, but not yet let to contractors. And Stage 3 takes place just before the opening of the project when it is almost completed. Mr Bullpit says that agencies are starting to introduce a Stage 4 audit which is undertaken after the project has become operational.

As part of the process, extensive checklists have been developed to ensure all safety aspects of a project are covered. However, Mr Bullpit is concerned that this approach may not be the best way to move forward. “It is my personal view that some check lists are too comprehensive and reduce the application of safety audit procedures to a mechanical process which does not encourage original thought about the manner in which the proposal will operate in

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## Safety audits in planning

the real world," he told conference attendees.

One of the side effects of safety auditing is the legal ramifications it has in conferring responsibility for safety on the road projects themselves. If an audit is carried out and the recommendations are not acted on, agencies could be found liable in the case of an accident occurring. "In the UK, case law has yet to be established and precedents set, but it is this fear of legal action that has apparently put safety audits on the back burner in the USA," says Mr Bullpit.

Although there is some criticism of the cost of safety auditing, it is believed that savings in reduced accidents more than make up for this. For example, in Australasia, it has been calculated that auditing could add up to 4% to design costs. However, potential accident savings have been estimated to be close to one third of what would normally be expected. Mr Bullpit also argues that roads subject to safety auditing could save money as the need to go in later to fix up problems is reduced.

To make safety auditing even more effective in the future, he believes it is important that auditing be seen as a continual networking process and forum for people working in different disciplines. "The idea is for everyone to be talking to each other, to bounce ideas around and to create an atmosphere that encourages lateral and innovative thinking," he says

It is also important, says Mr Bullpit, that transport agencies are not hijacked by single interest groups. Safety issues will become more community led in the future and the needs of all customers must be taken on board.

Finally, Mr Bullpit believes



*Do helmets send the wrong message?*

there is merit in considering the creation of a regulatory body to oversee safety auditing for roads. Raising the idea at the Melbourne conference he said: "Railway engineers have lived with this form of regulatory authority for many years to the benefit, in safety terms, of their customers. Perhaps, therefore, we owe our road users a similar level of protection to ensure that prevention is better than cure."

Mr Bullpit made a number of other points in his interview. These include:

- **Much transport planning and policy is about giving the right messages. Mr Bullpit believes that the compulsory use of cycling helmets is not sending a good message. What is being said, in this case, is that cycling is dangerous and not a good thing. But he says, most cycling accidents result in leg or arm injuries - not head injuries**

- Capacity (building more and more roads to cope with traf-

fic growth) is no longer king in the UK. In Mr Bullpit's view, safety - of all road users - is the bottom line

- **There is a movement away from building bus specific lanes or even moving buses to the left of roads. Instead, by letting buses use the whole road, they can deliberately slow traffic**

- 10 000 left hand drive vehicles enter the UK each day as a result of the Channel Tunnel posing additional traffic safety issues

- **Fewer pedestrian underpasses are being built in the UK, largely because**

**they are regarded as unsafe, attracting people who could harm others. Instead, they are putting pedestrian crossings on the road, and using the opportunity to maximize the road space for all road users**

- The British Government is considering taxing greenfield developments (new urban projects) and using those taxes to provide assistance for the development of brownfills (projects in existing urban areas). In this way, a clear message will be sent about the need to fill in existing suburbs rather than continually developing new urban areas

- Safety and sustainability go hand in hand

- Roads are increasingly being designed in the UK for all users - not just cars and trucks

- **The experience of road privatisation suggests that it leads to increased traffic volumes.**

## Cycling alternatives

# How bikes can help calm traffic

THERE are a number of technical and policy initiatives being developed throughout the world to support cycling as a viable transport mode. Some were raised by, Mr Malcolm Bullpit, formerly of Kent County Council, when he addressed transport groups in Perth (see page 12).

He told of new technical initiatives to calm traffic and to send clear signals to car drivers that cyclists have equal right to road space and associated services.

Interesting technical standards are being developed by Sustrans and its partners. Sustrans is a registered charity charged with designing and building routes for cyclists and walkers in the UK.(1)

This organisation is responsible for the National Cycle Network and Safe Routes to Schools programs. Mr Bullpit sits on the organisation's steering committee.



Photo: City Council of Edinburgh

*A new road layout in Edinburgh puts cyclist at the front*

An initiative by the City Council of Edinburgh, is featured in the picture on this page.(1) On this road, advanced stop lines enable cyclists to bypass traffic waiting at signals.

This picture was taken in Edinburgh and shows a central feeder lane which also protects cyclists from vehicles using the dedicated left turn lane.

Other lessons from the development of the UK National Cycle Network include; routes in

urban areas should be shorter and quicker than comparable motor vehicle routes. And creative funding solutions need to be explored.

For example, the Bicycle Association and independent cycle dealers are raising over a million pounds for the Network through a levy of 0.25% of the value of all new bikes sold.

More than 95% of new bikes are covered by the scheme, reports Sustrans.

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# Trends in cutting the youth road toll

IN an effort to reduce accident rates among young drivers, Western Australia is considering changes to driver training and other initiatives. Scandinavia has been testing its own brand of initiatives with mixed results.

Research by the Institute of Transport Economics (report 371/1997) has found that changes to driver training and licensing in Norway had no "significant effect on the accident risk" of young people.

A number of changes were made in 1994-95 including reducing the age limit for driver training, increasing the minimum age of instructors, increasing the amount of practical training time,

and developing a more comprehensive licensing test. The Institute found that these changes made little impact on the accident rate of those drivers who received their license during the first year after the changes.

The findings differ from research by the Swedish National Road and Transport Research Institute. In its report,

"Evaluation of 16-years age limit for driver training" the institute found that increased practice time before getting a license, reduced accident risks by more than a third after license were issued.

(As previously reported in *TransScan's* predecessor publication, *RoadScan*, Sweden has set a

future target of zero for road fatalities.)

Another report by the Swedish National Road and Transport Research Institute (titled "Young Car Drivers), analyses the effectiveness of driver training.

It argues that while education for drivers is very important it must be extended beyond purely how to maneuver a vehicle and understanding the road rules.

Instead, a new approach is needed which includes risk perception and personal insight.

This represents a shift from driver training to a road user programme which must also convince young people of its importance.

## Events update

### Risk Management and the Future

27-28 Aug. 1998  
Lismore, NSW  
gcm@scu.edu.au

### Fourth International Conference on Urban Transport and the Environment for the 21st Century

31 Aug-2 Sept 1998  
Lisbon, Portugal  
Email: Paula@wessex.ac.uk

### Transport Librarians Conference

29 Sept, Sydney, NSW  
Email:  
gayem@ozemail.com.au

### Australasian Transport Research Forum, 22nd Annual Conference

30 Sept-2 Oct 1998  
Sydney, NSW  
Email:  
MendigoL@transport.nsw.gov.au

### Fifth World Congress on Intelligent Transport Systems: "Toward the New Horizon Together"

12-16 Oct 1998  
Seoul, Korea  
Email:  
krta@chollian.dacom.co.kr

### Beyond Oil: Transport and Fuel for the Future

4-6 Nov 1998  
Launceston, Tasmania  
Email:  
conf.design.1st@trump.net.au

*If you have an item for Events up date, please email the Editors at <scanasia@highway1.com.au>*

**Disclaimer:** The inclusion of items in this column does not represent endorsement by the publishers. They have been selected because of their possible interest to TransScan readers.

## Copenhagen finds a way to sponsor a free ride

MORE than a dozen cities around the world are now offering free bikes as a way to discourage private motor vehicle travel in busy areas. One of the most successful is Copenhagen with its so called CIOS Free City Cycle project (2)

The scheme was discussed in the recently released report from the Select Committee on Perth's Air Quality. (See page 10)

The Copenhagen project now has more than 2300

bikes on the street. It is a private, non-profit venture with sponsors providing much of the money for the bikes, through advertisements in the wheel spoke area and panels in the frame of the bike (see the accompanying picture). The local city authority provides the stands.

The scheme works through 120 stands scattered around the central part of the city in areas where a lot of people frequent.

For example, bikes are found around train and bus stations, parking lots, office buildings, shopping centres, parks and tourist attractions.

Users pay a deposit of about \$5 into a slot on the handlebar of the bike to unlock it, and are able to use it for as long as they like.

However, they are unable to go outside the designated Free City Bike area (the inner city). When the bike is returned to any of the 120 stands, the \$5 is re-

funded automatically to the user. People do not have to return the bikes to the designated stands, but if they don't, they forego their deposit. Demand for the scheme is growing. A Danish newspaper fol-



Photo: CIOS Free City Cycle project

*Bike sponsorship in Copenhagen - almost a collector's piece*

lowed a bike for a day and found that it spent only 8 minutes in the stands!

The bike was used by 12 different people from 6 different nationalities. Thus, in addition to fulfilling a useful transit service for locals, it appears to provide an attractive tourist service.

The bikes have unique components not found in standard bikes, and special tools are needed to remove many parts.

It is differences such as these which deter theft and keep the number of stolen bicycles to a minimum.

### SOURCES

- (1) Sustrans Annual Review 1997. See also the WWW page <<http://www.sustrans.org.uk>>
- (2) CIOS "Free City Cycle - Copenhagen" <<http://www.cios.com/>>

# New figures to shape policy?

COULD a new breed of progress indicators be about to alter the way society sees itself and in the process, change the way countries are governed?

It is this possibility - and its implications for government departments - which was explored when TransScan's co-editor, Trudi Lang, addressed stakeholders in the Main Roads lecture series, Facing the Future.(1)

**Her argument is that around the world, more and more people are questioning the use of purely economic indicators as the best way to measure well-being and advancement.**

For example, by using Gross Domestic Product (GDP) as an indicator, high petrol consumption - and consequently pollution - can appear as "progress". Yet such pollution harms the community's health and subsequent well-being.

An alternative approach would be to add social and environmental measurements to the economic equation to produce what are variously known as alternative progress indicators or sustainability indicators.

There are even some indicators which attempt to give economic, social and environmental components a monetary value so that they can be compared with GDP. One such example is the "Genuine Progress Indicator" (GPI).

There are many versions of GPI's being tested in the developed world, including one modelled by the Canberra based policy research centre, The Australia Institute.

As the accompanying graph shows, when Australia's GPI figures are set beside GDP, it is clear that advancement, measured in this way, has not been improving

as much as we had thought. Ms Lang admits alternative indicators are not without their critics.

**"As yet no one agrees whether wellbeing should be measured by one component indicator (such as GPI), or as a set of individual indicators," she told the audience.**

"Critics argue that bundling the components together may provide a very catchy comparison with GDP, but it runs the risk of muddying assumptions and weightings."

She said there was little agreement either about what constituted "sustainable development" or what the community's vision of the future really was.

"Without these, indicators risk being arbitrary and conflicting", she said.

Nevertheless organisations like the United Nations, the International Monetary Fund, the World Bank, and governments were developing alternative indicators to measure wellbeing.

In the United States, the

State of Oregon had, after community consultation, developed its own index of progress indicators and was now using them to set community goals and write policy.

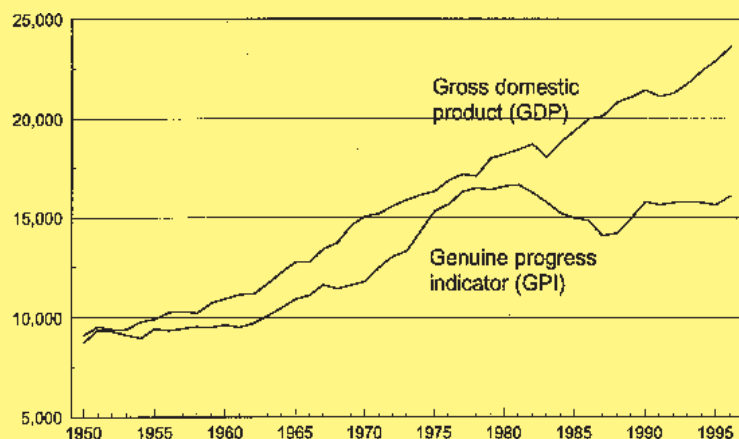
The British Government also has a team of statisticians preparing a set of "eight to ten" indicators covering such matters as climate change, air quality, health, poverty, and the beauty and tranquility of the countryside, to provide a "newsworthy snapshot of Britain's progress and wellbeing".

**Of course, the systematic collection of such information and its publication on a regular basis, would quickly show whether government policies to enhance community wellbeing were really working.**

Ms Lang quoted Germany's social indicator specialist, Dr Heinz-Herbert Noll, as suggesting the main impact of alternative indicators will be in "providing the information which puts issues on the public agenda". In so doing,

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## GPI versus GDP in Australia (Constant 1989-90 dollars per person)



Source: The Australia Institute (1997)

Continued from previous page

## Alternative indicators

### Shaping policy

indicators will impact the political process and programs of public sector agencies.

Similarly, John Cox in the Austroads' report "Roads in the Community", explains how little current indicators tell us about community expectations.

"While there has been improvements in productive efficiency in the road transport sector in the last 20 years, we do not know for sure whether the resultant outputs are helping or hindering the outcomes which the community wants," says Mr Cox.

According to Ms Lang, the new alternative indicators would help fill that knowledge gap and enable community expectations to be better enunciated.

"It also suggests that agencies will have to work closely with stakeholders and the community to plan and develop policy," she says.

Dimitris Tsolakis and Thorolf Thoresen of ARRB similarly argue that it is important to more clearly define who we regard as the customer and that this should be viewed from a whole of community perspective rather than from just a stakeholder or interest group view.

Ms Lang says that such close liaison with the community also implies that future transport policy might be more challenged by human and social factors and less by technological solutions.

Her argument being that human ingenuity and funding opportunities will bring forward a constant stream of new technologies, and although these will be vital in addressing the future transport task, the real question she believes will be: "Can we create new policy tools which honour the diversity of the community, and increasing socioeconomic complexity, as well as contribute to social wellbeing?"

## Europe seeks new index for sustainable transport

ALTERNATIVE indicators are likely to play an important role in shaping Europe's future transport and environment policies.

Europe's environment and transport ministers have agreed that to meet Kyoto environmental targets, they need to "green" Europe's transport, and develop a comprehensive set of indicators of the sustainability of transport.(1)

Meanwhile, Britain's Environment Minister, Michael Meacher, has been urging European Union governments to adopt headline indicators to show the state of Europe's environment.(2)

As possible indicators he is suggesting: greenhouse gas emissions; protection of endangered species; water quality; forests damaged by pollution; total solid waste produced; and urban air quality.

**"Indicators must be a driver for government policy, so that the public can judge for themselves how well we are protecting our environment," Mr Meacher said.**

Britain's Department of Transport is also considering how to develop indicators of sustainability to appraise and

monitor transport projects following the government's new National Cycling Strategy.(3)

**The strategy document suggests the new indicators should emphasise accessibility, reduced car dependence, and reduced energy use and pollution.**

"Such indicators need to be meaningful and usable as performance measures; capable of indicating who gains and who loses; and demonstrating the impact that new policies have on our quality of life," says the document.

### SOURCES

(1) "EU environment and transport ministers agree action plan to green Europe's transport", Department of Transport, 17 June 1998, <<http://www.coi.gov.uk/coi/depts/GTE/coi2882e.ok>>

(2) "Meacher calls for new European environmental indicators", Department for the Environment, 23 June 1998, <<http://www.coi.gov.uk/coi/depts/GTE/coi3020e.ok>>

(3) "Cycling and Sustainable Transport", National Cycling Strategy, Department of Transport, <<http://www.local-transport.detr.gov.uk/ncs/doc6.htm>>

Other potential implications of the new indicators include more transparent decision making and further development of multiple outcome tools for planning at the agency level.

Ms Lang also cites the work of Stephen Dovers from the Australian National University (discussed in the Journal of Public Policy) who suggests that if we are to successfully address sustainability issues (a focus of alternative progress indicators) then we must encourage longevity in policy attention and proc-

esses and find ways of coping with uncertainty.

And finally, Ms Lang says that it will be important to work across traditional jurisdictions to plan and implement programs.

"If we look at the experience of the US White House Interagency Working Group on Sustainable Development Indicators, a key outcome was the connections among issues. People from different departments started looking toward the future and opportunities for collaboration," she says.

# Big jump predicted in Australia's ITS program

WHILE Main Roads prepares its own assessment on the benefits and costs of ITS, the Federal Government has issued a report by BoozAllen & Hamilton, fully supporting the development of a National ITS Strategy.(1)

When he released the report, the Federal Transport Minister, Mark Vaile, said the Australian Transport Ministers Council was also developing an ITS strategy and would be guided by the report's strategic objectives.

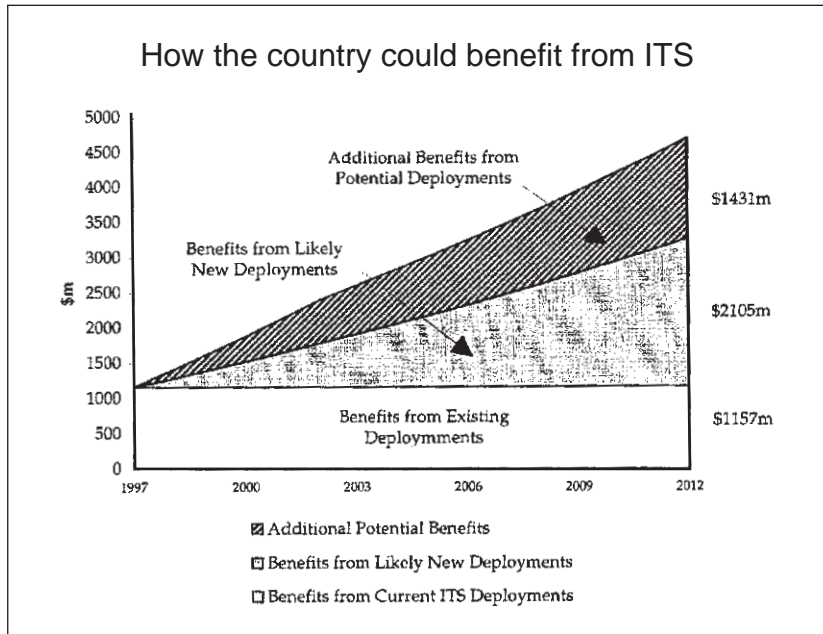
These objectives include:

- Raising community awareness of ITS and addressing privacy concerns
- Developing a program of national ITS projects
- Expanding research and development capabilities
- Encouraging partnerships between public and private sectors
- Developing a national ITS architecture and standards

This type of national strategy is expected to accelerate deployment and integration of ITS systems and generate economic benefits of at least \$3.8 billion per annum by 2012 (excluding export income). ITS is seen as a key element in solutions related to the National Transport Agenda alongside land use planning, pricing, public transport, travel demand, and infrastructure to address transport related issues such as congestion, safety, and the environment.

The report also highlights a vision for ITS in Australia with the aim over 25 years of:

- Reducing road fatalities by 50%
- Reducing transport emissions by 25%
- Reducing road congestion



Source: *Intelligent Transport Solutions for Australia*, prepared by Booz Allen & Hamilton and ITS Australia (1998)

- costs by 25%
- Developing world-competitive freight transport infrastructure and logistics
- Acquiring a growing share of the world market for ITS and services

In Europe, Japan and the US, ITS strategies and programs are well in place. For example, in the US, US\$1.3 billion will be allocated to ITS programs over the next five years. The Americans believe their investments in ITS will generate \$30 billion worth of savings in road constructions over the next 20 years.

Trudi Lang, spoke to Phil Charles, Senior Associate of Booz Allen & Hamilton and manager of the project which produced the ITS report, about the report's findings and directions for the future.

Mr Charles says most ITS developments are currently occurring at the State level and in individual companies. However, he says the report is an indication that to achieve the higher order ben-

efits of ITS, a combined approach by Federal, State and Local Governments in cooperation with industry is needed.

"Transfer of freight between modes - from ships to land transport, from road to rail or air - can become much more seamless and efficient with the use of ITS. Similarly with the transport of people - the integration of car, bus and rail transport needs to be much more efficient and seamless to encourage people to change the way they travel. State and Local Governments will most likely lead these initiatives, with the Federal Government and industry, being key partners," says Mr Charles.

Mr Charles hopes the report will grab the attention of the community and encourage further investment by Governments and industry in ITS. He believes there now needs to be a national strategic approach, with a program of demonstration projects which satisfy agreed criteria.

*Continued next page*

# New look at ferry operations

THE Department of Transport has advertised nationally for submissions from consultants to assist with the preparation of a plan for additional ferry services on the Swan and Canning Rivers. According to a preliminary discussion paper prepared on the subject by the Ministry for Planning, it is possible that new services could be operational within four to five years.

In addition to identifying the most viable routes, the study will explore how an integrated land use and transport planning approach could maximise the patronage of the new ferry services. This will allow sufficient lead time for all agencies, including local government authorities, to ensure the surrounds of the identified sites can be developed in a way which helps rather than hinders the number of potential patrons using the ferry services.

Chris Bebich of the Ministry for Planning, who brought the issue to the attention of TransScan, said the Ministry's discussion paper had been received very favourably by a wide range of



Brisbane's new CityCat - "exceeding all expectations"

stakeholders. A working group chaired by Transperth is now coordinating the project and the consultants report is due later this year.

Mr Bebich says increased ferry services would assist in meeting the Perth Metropolitan Transport Strategy targets for increased public transport patronage as well as providing an attractive tourist service.

The aim of the new Perth services is to achieve the levels of comfort and service which are the hallmarks of Brisbane's high speed CityCat. According to the Bris-

bane City Council, the CityCat has exceeded all expectations, carrying around two million passengers in its first year of operation alone (to November 1997).

Mr Bebich believes that the cost of developing additional ferry services in Perth would be very reasonable compared to normal transport infrastructure. "Ferry services are a relatively low cost public transport option to implement. Ferry docking stations are not expensive to construct and the main infrastructure - the river - already exists," he says.

In other public transport news scanned this quarter:

**PHIL Charles, Senior Associate of Booz Allen & Hamilton and manager of the ITS project undertaken with ITS Australia and commissioned by the Federal Government, told TransScan that there are many good ITS applications for public transport emerging.(2)**

**"Promising public transport ITS applications include providing priority to buses, providing real time information to travellers and helping make better use of the transport infrastructure by intelligent schedul**

*Continued from previous page*

## ITS predictions

"These criteria could include: public-private partnerships, clear benefits for safety, transport efficiency and environment, an opportunity to transfer the results nationally, a multi-modal approach, using leading edge technology and making use of existing infrastructure where possible. In many ways like the Federal 'BlackSpots' program which has been very successful and receives considerable support," he says.

The future success of ITS applications in Australia will depend on getting the interest of

policy makers and decision makers, including politicians. As Mr Charles states: "ITS is seen as repackaging what already exists with a host of new technologies. It needs to be made more specific, more concrete, more relevant to solving our transport problems. We have heard too much of technology solving all our problems - and we are still waiting."

(1) Intelligent Transport Solutions for Australia: Summary Report, Intelligent Transport Systems Australia, prepared by Booz Allen & Hamilton, May 1998

*Continued next page*

Continued from previous page

## Transport services

**ing of public transport across rail, bus, taxi, light rail etc. Kiosks are becoming available where you will be able to inquire, select and pay for multi-mode transport in major cities."**

THE Institution of Civil Engineers has developed a long term strategy for consideration in the UK Government's white paper on transport.(3) The document, 'Vision for Transport 2020', includes a number of public transport suggestions. These include improving journey times and reliability through electronic tolling of bus fleets allowing rapid response to changes in demand or breakdowns; control of congestion by electronic traffic management; cashless payment systems to reduce delays at bus stops; and door to door service in areas of low demand.

For rail and light rail, the report argues that door to door journey times need to be reduced; passenger information systems communication and ticketing must be improved; more comfortable and easier travel needs to be encouraged; lower maintenance costs need to be achieved; better environmental performance needs to be encouraged and key infrastructure enhanced.

## Getting above it all

THIS new monorail system not only provides passenger services, but a freight service too. Its developers are the US-based Owen Transit Group. According to the company's vice president, David Owen, in practice, both passenger and the freight "High Rail" systems can run simultaneously mounted either side of the same glideway.

It is this ability to operate a two-way system from one

structure which helps keep construction costs down, he says. In the US, the installation is estimated to cost US\$13 million per mile. Running costs are estimated at less than the US\$100 an hour. Currently, the company is concentrating on sales in the US.

"Our principal effort is to acquaint governments and communities with the technology," Mr Owen said. The next edition of *TransScan* will examine more of the automated freight systems being developed around the world.



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**A REPORT on busways in Brazil, prepared by the Institute of Transport Studies at Sydney University, shows that for busways to play a similar role to rail, they must feature many of the same characteristics. "It is clear that the more the busway approaches a railway in terms of basic infrastructure (stations, terminals, exclusive right-of-way, high capacity), the more effectively it performs," says the report.(4)**

A DEDICATED lane for buses and other non-car users such as freight vehicles, has opened on a section of road in London to reduce travel times for these users.

The Transport officer who bought this information to the attention of *TransScan* said this was an interesting development because of the attempt to mix freight with other traffic.

This is not usually advocated he says and suggests that maybe a 'horses for courses' approach is better.(5)

### SOURCES

- (1) Discussion Paper: "Improving the Viability of Additional Passenger Ferry Services on the Swan and Canning Rivers by Integrating Transport and Land Use Planning" by the Ministry for Planning, September 1997
- (2) Personal communication. The report referred to is Intelligent Transport Solutions for Australia: Summary Report, Intelligent Transport Systems Australia, Prepared by Booz Allen & Hamilton, Sydney, May 1998
- (3) "A vision for Transport 2020" by the Institution of Civil Engineers, 19 November 1997 Report Briefing at <http://www.ice.org.uk/enginfo/vision2020.html>
- (4) "The future of exclusive busways: the Brazilian experience" by N Smith & D Hensher, Institute of Transport Studies, University of Sydney, in Transport Reviews, Vol 18, No 2, 1998
- (5) "Wandsworth 'no-car' lane opens" in Local Transport Today, 1998
- (6) "Cost-Effective Alternatives to Atlanta's Rail Rapid Transit System" by J Kain in Journal of Transport Economics and Policy, January 1997

**EXPERIENCE in Atlanta indicates that serving public transport needs largely through bus services has distinct advantages. After the opening of the city's new rail system, bus fares were raised and routes fed into train stations.**

**Research evaluating the impact of this development, indicates that the city would have had more success in increasing transit ridership if it had continued to expand bus coverage and retain low fares, rather than building a costly rail system.(6)**