



Voluntary Employer Travel Plans: Can they work in New Zealand ?

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ABSTRACT

Employer Travel Plans (also known as Green Travel Plans, Mobility Management Plans) originated in the United States (US) and the Netherlands in the late 1980s. The US adopted a regulatory approach with the main aim of addressing air pollution problems. By contrast to the US, the Netherlands and United Kingdom governments adopted a 'voluntary' approach to implementing Employer Travel Plans.

Booz Allen Hamilton has been undertaking a research project for Transfund New Zealand to pilot (voluntary) Employer Travel Plans (ETPs) in New Zealand. In addition, Environment Canterbury has recently trailed ETPs in three employers in Christchurch. These projects are providing useful lessons on the types of issues which need to be addressed and overcome in fostering the voluntary take-up of ETPs in New Zealand.

This paper outlines the results (to date) of these two New Zealand ETP research projects, and compares the results with those reported internationally for voluntary ETPs. Lessons learned so far from the New Zealand experience are identified and initial conclusions in regard to the likely result of voluntary ETPs in New Zealand are drawn.

Introduction

This paper outlines the results (to date) of two projects that have been undertaken in New Zealand to trial the potential for Employer Travel Plans :

- 4 Booz Allen Hamilton has been undertaking a research project for Transfund New Zealand to pilot (voluntary) Employer Travel Plans (ETP) in New Zealand. Two case study employers were selected, and Travel Plans have been developed for these employers.
- 4 Environment Canterbury has initiated three pilot travel plans. Two Christchurch organisations were selected, in addition to Environment Canterbury itself, and travel plans were developed, implemented, monitored and evaluated over an 18 month period.

This paper commences with a brief description and history of Employer Travel Plans, and where they have generally been applied. A summary of the main lessons learned from the international experience with the implementation of Employer Travel Plans on a voluntary basis is then provided. This review particularly focuses on practical implementation issues and constraints to take-up, along with identification of key effectiveness factors.

The paper then summarises the results to date of the New Zealand Employer Travel Plan trial projects, and the lessons learned from these. The New Zealand experience is then compared to the international experience, and an attempt made to draw conclusions in regard to the likely success of voluntary Employer Travel Plans in New Zealand.

Employer Travel Plans – What are they?

A travel plan (also known as Trip Reduction Programmes, Green Travel Plans, Green Commuter Plans, Mobility Management Plans) is a general term for a package of travel demand management measures aimed at promoting greener, cleaner travel choices and reducing reliance on the car.

An employer-based travel plan (ETP) focuses on implementing incentives and disincentives, which aim primarily to change the modal choice of an organisations' employees for the journey to work¹ (Rye, 1999). The package of measures adopted is tailored to the specific site or organisation and involves the development of a set of mechanisms, initiatives and targets that together can enable an employer to reduce its impact of travel during the commuter journey to work.

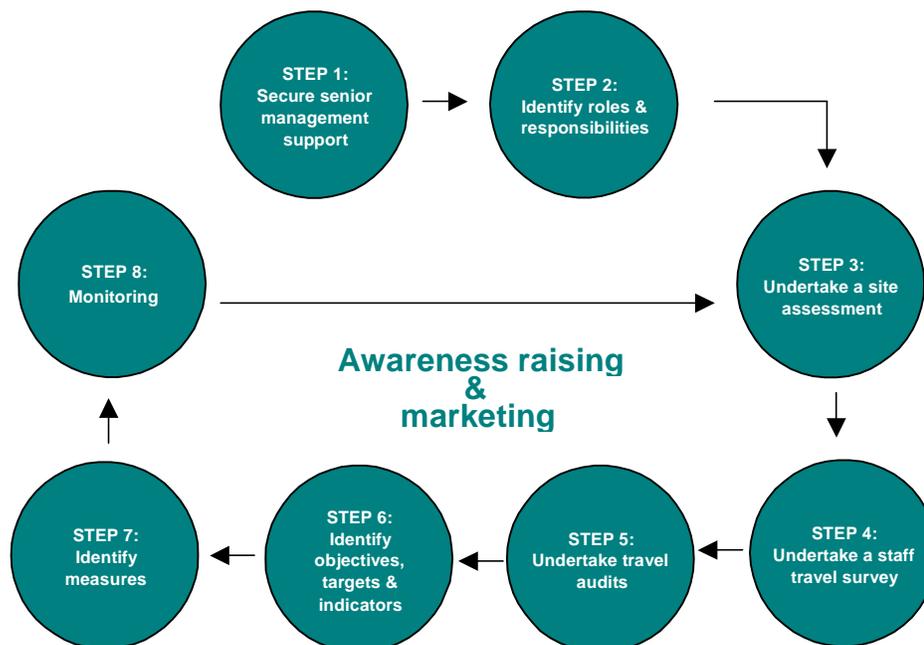
Disincentives (the 'sticks') that an employer may choose to implement include car parking management schemes, usually involving reducing levels of parking available or charging employees for parking. Incentives (the 'carrots') include improved on-site infrastructure and facilities for cyclists and walkers, introducing rideshare schemes, priority parking and guaranteed ride home schemes for employees who rideshare, discounted public transport passes and other financial incentives (DETR, 1998). In short the purpose of an ETP is to make it easy for employees to use alternative modes of transport for the journey to work, while at

¹ ETPs may also cover on-business travel by staff, visitor travel to the site, and deliveries.

the same time making it difficult or financially unattractive for employees to use their cars.

The theory behind travel plans is that the process of implementing and monitoring should be a dynamic process that will grow and develop with time and in accordance with the changing circumstances of an organisation and the environment in which it works. It is not meant to be a one-off event to be undertaken and completed, nor is it a document to be produced and put on a shelf (Booz Allen Hamilton, 2003).

Figure 1. The Travel Plan Process



Source: Adapted from Steer Davies Gleave (2003).

Brief History

Employer Travel Plans (ETPs) originated in the United States (US) and the Netherlands in the late 1980s. The approach taken in the US was to require employers over a certain size (generally 100 employees) to implement 'Trip Reduction Plans' to reduce the single-occupant car commuting trip, and to increase car occupancy. The main motivation for these plans was to address air pollution problems, particularly in southern California, which was the first state to introduce legislation requiring Trip Reduction Plans. This is discussed further below.

The Netherlands Government has actively encouraged employers to adopt ETPs since the early 1990s, and there is now a national network of Transport Management Associations (TMAs), funded mainly by the Government, to carry out

this task. They offer advice and assistance to employers who are interested in implementing ETPs.

ETPs have also become an important part of national transport policy in the United Kingdom (UK). All local authorities are required to stimulate ETPs as part of their Local Transport Plans, and the UK Government is seeking to encourage widespread voluntary take-up of travel plans. To this end it earmarked funding for 111 travel plan advisors across the country to assist employers (and schools) to develop travel plans. In addition, the UK has linked travel plans to land use planning policy. Planning Policy Guidance 13 (PPG 13) requires 'all major developments comprising jobs, shopping, leisure and services' to include a travel plan (DETR, 2002)(a major development is defined as more than 1000m² for retail and leisure, and more than 2500m² for offices and education).

Travel Plan Applications

Internationally travel plans have been applied and used as policy and management tools in three dimensions: on a regulatory basis; as a land use planning mechanism; and, as a voluntary adoption programme for employers.

- *Regulatory basis.* Implementation of ETP's from a regulatory basis have occurred predominantly in the US starting with Southern California's Regulation XV during the 1980's. This was administered by the local Air Quality Management District (SCAQMD), (Rye, 1999). Similar legislation occurred throughout other US states until a number of factors including economic recession, the high cost imposed on businesses and the extensive administrative requirements, lead to the project being abandoned nation wide except in the Pacific Northwest
- *Land use measure.* The UK has used ETP's extensively as a landuse planning measure. Travel plans are encouraged through the Planning Policy Guideline Note 13 (PPG13). Under this, travel plans are to be submitted alongside planning applications for all major developments, smaller developments which would generate significant amounts of travel, and where a travel plan would help address a local traffic problem associated with the planning application (Allcorn, 2001). ETPs as a land use planning measure can also be enforced in the UK through agreements based on Section 106 of the Town and Country Planning Act 1990 (DETR, 2001; Rye 2002). This states that local planning authorities can enter into agreements with developers or other persons about the way land will be developed in an attempt to regulate or restrict the certain developments or final uses of the land. This has been interpreted to include agreements, which allow certain types of development with the proviso that a travel plan and/or certain types of infrastructure must be put in place (Bradshaw and Lane, 1998).
- *Voluntary programme for employers.* Internationally travel plans have been used most extensively in the form of voluntary programmes for employers. The UK and the Netherlands have led the way in promoting voluntary ETPs. This was formally recognised in the Department of Transport's *Transport White Paper* in 1998. Specifically the White Paper called for Government

departments to introduce travel plans and lead by example. In addition local authorities, businesses, community organisations, schools and hospitals are encouraged to develop their own travel plans, and individuals and families are encouraged to consider their own travel habits (DETR, 1998). Similarly in the **Netherlands** ETP development has been exclusively through voluntary programmes for employers. In 1989 the Second National Transport Structure Plan was published which sets targets for the adoption of travel plans. Employers employing more than 50 were encouraged to voluntarily implement travel plans. (Rye, 1999)²

International experience

Practical implementation issues

The international experience has found a number of key implementation issues which need to be addressed when setting up an ETP :

- 4 *Management Commitment.* Allcorn (2001) emphasized necessity of management commitment and support for a successful ETP. He noted that many senior managers do not see the direct benefits of implementing an ETP to their operations and therefore provide only lip service to implementation or can even impede implementation by challenging each step of the process. Allcorn (2001) also noted a tendency for managers to be reluctant to provide necessary funding for projects.
- 4 *Resources.* Berman and Radow (1997) concluded that while larger organisations with more financial and staff resources tended to be able to make a program more successful (although there was no clear relationship between a programs effectiveness and the size of its budget). Shreffler (1996) found that the highest performing programmes were often those with the highest cost per employee.
- 4 *Travel Plan coordinator*³. Allcorn (2001) blamed the lack of experienced travel plan coordinators in the UK as a major reason why many ETPs were struggling. He concluded that having a day-to-day champion was vital to the success of any travel plan.

Constraints to take-up

The international literature has shown that there are significant constraints to the effective and wide-spread take-up of travel plans:

- 4 *Low Perception of Need* - Rye (1998, 2002) found that the majority of UK employers did not perceive that there was a transport problem in their area, and they felt there was no problem with the number of employers driving to work alone. For most businesses employee travel to work does not present employers specifically with any great problems. It would therefore be irrational

² See Rye (1995) for more on this

³ However, Shreffler (1996) found that the highest performing programmes were often those with the highest cost per employee.

for the employers to spend money on what is essentially an altruistic venture (influencing the way their staff get to work for environmental reasons). This lack of rationale obviously affects negatively the business case for spending money on travel plans, and makes it difficult to get the resources necessary to develop and implement a travel plan.

- 4 *Legal requirement.* Berman and Radow (1997) noted that the most successful programs were those that were required to be in place. They concluded that the most effective legal requirement was one that was fairly specific on what targets are to be reached, provided some sort of guidance on measures to reach the targets and had some form of monitoring or an enforcement mechanism built into it. Rye (1995) concluded that regulation should require the employer to make progress towards an agreed employee modal split and impose penalties if the target is not reached.
- 4 *Low Employer Responsibility* – Rye (1998) also found that a substantial proportion of UK employers did not consider that they have any responsibility to reduce the negative impacts of their employees' travel to work.
- 4 *Low push factors* – there are a lack of regulatory requirements for organisations to implement travel plans. Without being required to do so most organisations will not be motivated to introduce travel plans (Rye 2002).
- 4 *Taxation Barriers* - personal taxation and commuting: employer contributions to employees commuting expenses are subject (in the UK) to personal taxation which impacts on the type of measures which will be implemented in travel plans. This affects their likelihood of success (Rye 2002).
- 4 *Deregulated public transport* - the deregulated nature of public transport in the UK makes it very difficult for employers to get public transport services to their worksite as they are often uneconomic and won't be provided by commercial operators (Rye 2002).

Key Effectiveness Factors

The international literature has shown that there are a number of key characteristics regarding the ETP, and the organisation in which it is to be implemented, which determine how effective the travel plan will be.

Travel Plan Components

With regard to the characteristics of the travel plan itself the Open University (2001a) in the UK found that schemes that incorporated financial incentives could achieve reductions in trips numbers by 8 – 10% and those that incorporated financial disincentives achieved reductions of 15% and higher. Conversely schemes that only provided information for example of public transport would have very limited impact (0-3%).

Similar results were found in the Netherlands. A study by Ligtermoet (1998) reviewed a number of studies from the Netherlands in addition to 40 other organisations that monitored their travel plans. He found that travel plans with

'basic' measures such as rideshare schemes could achieve a reduction of 6-8%, while plans with more 'luxury' measures such as employer-provided buses, public transport subsidies or parking management could achieve reduction in vehicle trips by 15-20%

Organisation Characteristics

A limited amount of research has been carried out into the specific characteristics of an organisation which may affect the likelihood of success of travel plans :

- 4 *Employer Size.* Rye (2000) noted that virtually all completed travel plans in his study were by organisations with 200 or more employees. He postulated that smaller organisations may not have the resources to develop and implement a travel plan⁴.
- 4 *Location.* The most effective travel plan programmes were found in organisations located in suburban central business districts or the regional central business district fringe, not in more isolated suburbs. In the Netherlands, Van Der Mass (1996) also noted similar results with the highest performing organisations located in town centre or urban settings with good access to public transport.
- 4 *Parking.* Sites with scarce parking had four times the vehicle trip reduction rate of sites with ample parking (Shreffler, 1996).
- 4 *Services.* Employers with significant services such as food or banking on or near the site had four times the vehicle trip reduction of isolated sites without on-site services. Again the UK DOT (2002) made similar findings, noting that all the case study organisations had a range of services nearby for staff, which may have contributed to the ability to achieve vehicle trip reduction.
- 4 *Site Design.* Cambridge Systematics (1994) found that travel plan programmes were most successful at aesthetically pleasing sites. Related to this, a comparison of US and Netherlands studies (Shreffler 1996) concluded that travel plans were more successful when implemented by progressive organisations that showed concern for the environment, the increasing impact of congestion, employee well-being and their external image.
- 4 *Specific Needs.* Shreffler (1996) concluded that successful programmes addressed specific needs of employers such as lack of parking and employee recruitment, and were not just a response to government policy or regulation.

New Zealand Experience

Transfund Research Project

The Transfund ETP research project involves developing ETPs for two case study employers, assisting with the implementation of these travel plans, and monitoring their impacts. The case study organisations selected were the Auckland Central branch of the NZ Police and the Christchurch City Council.

⁴ However, Comsis Corporation (1994) found that there was no positive correlation between the size of the employer and the size of the vehicle trip reduction achieved. The UK DOT (2002) also came to a similar conclusion noting that organisation size was not critical to either the level of modal change an organisation can achieve or the final levels of car use.

Auckland Central Police is located in the central business district of Auckland, and is the largest Police office in Auckland, with around 350 staff located on site. Up until several years ago Police staff were able to park in the surrounding streets. This facility has largely been removed as a result of the Auckland City Council imposing on-street parking restrictions in the area. Retention of staff is a major issue for Auckland Central, and the 'parking squeeze' has added to this. Police management have examined different ways for addressing this issue, and agreed to participate in the ETP trial in the hope that it may provide alternative travel options for staff⁵.

A Central Police staff member was assigned as Travel Plan Co-ordinator (these duties were added to a Senior Sergeant's existing duties). The process for developing a travel plan outlined earlier in this report was followed: a site assessment was undertaken, focus groups were held with a cross-section of staff, and a staff travel survey carried out. A draft travel plan was then developed, with a series of proposed travel policies (see Table 1). The draft travel plan was subsequently approved by the Auckland Central management. However, the proposals to subsidise public transport fares and to provide an interest free loan for cycle purchase could not be proceeded with. These two policies would effectively change staff compensation and would require a change to the national award.

⁵ The Travel Plan also covered travel for visitors to the site.

TABLE 1 NZ POLICE: PROPOSED TRAVEL POLICIES – JOURNEY TO WORK

Travel Mode	Policy
Car Pooling	<p>Internal Policies</p> <ul style="list-style-type: none"> • Establish a formal car-pooling scheme for staff • Provide a 'guaranteed ride home' support scheme • Provide (10) car-parking spaces for car-poolers at Central
Cycling	<p>Internal Policies</p> <ul style="list-style-type: none"> • Provide an interest-free loan for cycle purchase for staff
	<p>External Policies</p> <ul style="list-style-type: none"> • Negotiate reduced cycle purchase price with local retailer • Advocate to city councils for maintenance of existing cycleways and provision of new cycleways
Public Transport	<p>Internal Policies</p> <ul style="list-style-type: none"> • Subsidise public transport fares <p>External Policies</p> <ul style="list-style-type: none"> • Negotiate reduced public transport fares for staff with operators • Obtain free trial ticket from operators for staff • Advocate to operators for more direct bus routes and closer stops to Auckland Central Police station
Walking	<p>External Policies</p> <ul style="list-style-type: none"> • Advocate to city councils for new off-road walkways.

The Police ETP process is currently in the implementation phase. Several of the travel policies have been implemented (eg, free travel for 'sworn staff' on the largest Auckland bus operator's services), with other policies soon to be implemented (eg, a 'Travel Options' information day). Follow-up monitoring is planned for November 2003.

A significant feature of the Police case study has been the support of senior management, and their willingness to try innovative ways of addressing the travel/parking issue for their staff. This largely stems from the 'real issue' facing the staff in terms of parking availability for staff.

However, despite this support, the ETP implementation phase has taken longer than expected. This is mainly a resourcing issue. The ETP responsibilities were added to the existing duties of current staff as additional resources were not available for this task. Given the heavy workload of the staff involved this has meant that ETP tasks have often been delayed. A further 'delaying factor' has been the need to co-ordinate with external events, for example, the timetable for the revision of bus services in the region which has delayed the Travel Options information day.

As indicated above, monitoring of the ETP results has not yet been undertaken. However, anecdotal evidence suggests that the free bus travel for 'sworn staff' has resulted in many more journey-to-work trips being made by bus than previously.

Christchurch City Council

Christchurch City Council (CCC) agreed to participate in the Transfund ETP project given that it has had an interest in promoting more sustainable travel for its staff and the wider city for many years. The Civic Offices, along with the Parking Building in Tuam Street and the Glassons Building, were selected as the site for the travel plan. Around 900 staff are employed at these locations.

The CCC set up a Green Travel Plan project, and allocated funding to allow a staff member to act as the Travel Plan Co-ordinator (or, Project Leader). In addition, an internal Project Group/Working Group (made up of CCC staff) was set up to undertake required tasks and review project documents. The CCC Corporate Team (the senior management group) acted as the de-facto Steering Group.

It was determined that the travel plan would cover both journey-to-work and on-business travel. The standard travel plan development process was followed: site assessment, focus groups with staff, and staff survey. The proposed journey-to-work travel policies are shown in Table 2.

Although a travel plan has been developed for the Civic Offices, it has not yet been implemented. This appears to have been the result of several inter-related factors :

- 4 A previous proposal to fund free bus travel for CCC staff, although approved by the Council, was not implemented due to the New Zealand taxation regime which would have required the Council to pay fringe benefit tax on the staff subsidy. This would have increased the cost of the scheme substantially.
- 4 The problems incurred by the free bus travel scheme may have had an impact on management's willingness to consider travel policies which involve direct funding of staff travel costs.
- 4 Although the CCC senior management 'supported' the Green Travel Plan project (as evidenced by giving approval for allocation of staff time to the project), there appears to have been no senior management 'champion' for the travel plan.
- 4 The CCC's involvement in the ETP trial was not motivated by a pressing issue or problem which needed to be addressed, but rather by a general interest in the subject.

The CCC has recently made a commitment to push forward with the travel plan as part of an agreement which it has entered into with EECA (The Energy Efficiency and Conservation Authority).

Monitoring of the ETP will occur after the travel policies have been implemented.

TABLE 2 CHRISTCHURCH CITY COUNCIL - PROPOSED TRAVEL POLICIES – JOURNEY TO WORK

Travel Mode	Policy
Car Pooling	<p>Internal Policies</p> <ul style="list-style-type: none"> • Establish a formal car-pooling scheme for CCC staff • Investigate opportunities for combined schemes • Provide free car-parking spaces for carpoolers in the Council's Tuam Street carpark.
Ride Home	<ul style="list-style-type: none"> • Provide a 'guaranteed ride home' scheme – available for all carpoolers, and for other modes (apart from car driver) who work later than a certain time (eg 8 pm).
Public Transport	<p>Internal Policies</p> <ul style="list-style-type: none"> • Hold public transport (PT) promotion days • Provide Personalised Journey Planning for staff • Make 'guaranteed ride home' scheme available to staff who have to work past a certain time (eg 8pm). <p>External Advocacy Policies</p> <ul style="list-style-type: none"> • Arrange free trial bus ticket with PT operators • Advocate to ECAN for more direct bus routes and higher frequency services.
Cycling	<p>Internal Policies</p> <ul style="list-style-type: none"> • Hold cycling promotion days • Provide an interest-free loan for cycle purchase for staff • Provide cycle repair kit and tools on site • Arrange with cycle shop for repair service during the day • Provide additional showers and lockers for staff, and drying facilities. • Improve cycleway network. <p>External Advocacy Policies</p> <ul style="list-style-type: none"> • Negotiate reduced cycle purchase price for staff with local retailer • Work with LTSA to educate car drivers on 'cycle aware' driving behaviour.
Walking	<p>Internal Policies</p> <ul style="list-style-type: none"> • Hold walking promotion days • Provide additional showers and lockers for staff, and drying facilities. • Improve provision of off-road walkways.
Teleworking	<ul style="list-style-type: none"> • Investigate barriers to teleworking and develop strategy to promote increased use of this option. • Investigate 'hot desks' at service centres.
Alternative Work Hours	<ul style="list-style-type: none"> • Investigate barriers to using these arrangements and develop strategy to promote increased use of this option.
Information Provision	<ul style="list-style-type: none"> • Include advice on availability of bus services, and cycling & walking routes, in Information Pack for new staff.
Car parking	<ul style="list-style-type: none"> • Provide free carparks for carpoolers, spaces nearest to office • Charge for all other carparks – funding used to finance Travel Plan measures • Progressively reduce number of Council funded/provided carparks for staff, aim for 0 staff carparks in 5 years. Do this by 'cashing-out' parking.

Environment Canterbury Project⁶

Overview

The ETP project⁷ initiated by Environment Canterbury involved developing, implementing, monitoring and assessing travel plans for three case study employers in Christchurch: MWH New Zealand (MWH), the Christchurch Polytechnic Institute of Technology (CPIT), and Environment Canterbury (ECan) itself. MWH were approached and the management team was enthusiastic about the project and felt it would be a positive venture to become involved in. CPIT had the added incentive to take part in the project because of a site-specific problem at the campus (the campus was in the process of developing a Parking and travel strategy that included a small TDM component).

MWH and CPIT joined the project with the understanding that ECan would cover the majority of any financial expenses incurred throughout the project and would have the responsibility of organising, promoting and generally implementing the travel plan policies. Both organisations, however, would provide a contact or group of contacts that could liaise with the ECan coordinator to help steer the projects

ECan's aim for the pilot ETP projects was to increase the staff awareness of the various travel options available to them. This was by way of information provision and the participation in "fun" activities with prize incentives that encouraged staff to "experience" alternative forms of transport than a single occupant motor vehicle.

Methods

The process for developing all three travel plans was that outlined earlier in the paper. Site assessments were conducted at all three sites and steering committees were set up to decide on the best way to approach certain policies and give guidance on best practice, when dealing with staff and management groups. Consent was given for the proposed policies by upper management at all three organisations. In some cases this restricted some of the possible policy initiatives, such as at ECan where free trial multi-trip bus tickets were limited to only previously non-bus users due to concerns about the use of ratepayers' money on rewards for council employees. In addition to this, ECan would be liable for Fringe Benefit Tax on top of the cost of the bus passes. To get around this, trial bus tickets were used as a form of 'advertising', which is not subject to FBT.

Baseline staff travel surveys were undertaken at the three organisations at the start of the projects and monitoring surveys were conducted one year later. Table 3 outlines the travel plan policies implemented at all three organisations.

⁶ The findings presented in this section are based on Vandesar 2003. They do not necessarily reflect the views of Environment Canterbury (ECAN).

⁷ ECAN refer to ETPs as Business Travel Plans. This project is therefore 'officially' known as the 'Business Travel Plan Pilot Project'.

TABLE 3. TRAVEL PLAN POLICIES USED IN THE ENVIRONMENT CANTERBURY STUDY.

Travel Policy	Environment Canterbury	MWH	CPIT
Car Pooling	<ul style="list-style-type: none"> • On line facility for car pooling for work trips between Christchurch and Timaru offices. 	<ul style="list-style-type: none"> • Formal rideshare scheme (commuter journeys and lunch time journeys) 	
Cycling	<ul style="list-style-type: none"> • Improvements to cycle facilities • Addition of two new pool bikes • Discount at local cycle shop for staff • National Bike Week events • Bicycle User Group (BUG) 	<ul style="list-style-type: none"> • National Bike Week events (including breakfast provided to all staff that cycled; lunch time ride; various team and individual competitions to get employees cycling) • Cycle promotion breakfast. 	<ul style="list-style-type: none"> • Improvements to cycle facilities • Cycle user survey.
Public Transport	<ul style="list-style-type: none"> • Bus Information Displays • Trial multi-trip tickets for employees • Bus user competitions 	<ul style="list-style-type: none"> • Purpose designed two trip tickets made available to all MWH staff 	<ul style="list-style-type: none"> • Purpose designed two trip tickets made available to all CPIT staff
Walking	<ul style="list-style-type: none"> • Walk-to-work competitions 	<ul style="list-style-type: none"> • Walk-to-work competitions 	
All alternative modes	<ul style="list-style-type: none"> • Car-less Day • Information on sustainable travel policies included in new staff information pack (for new staff). 	<ul style="list-style-type: none"> • Car-less Day 	<ul style="list-style-type: none"> • Car-less Day • World Environment Day (displays and promotions aimed at drawing attention to alternative modes of travel) • Information about alternative modes of transport provided on intranet • Purpose made colour map and brochure detailing transport information for CPIT campus

Because of a tight time frame and a small budget, the types of policies implemented were low level, low cost and relatively easy to implement. However, it was often difficult for the respective employee liaisons at MWH and CPIT to find time for steering group meetings and policy implementation when they were already overloaded with their own duties. The pilot projects revealed that for an ETP to be successful there should be a dedicated coordinator who is an employee at the organisation and is able to commit a significant portion of their working week to the project.

Results

- 4 Because of the relatively short time frame in which the assessment of the ETP's had to be done and the difficulty with implementing and monitoring the travel plan at CPIT, statistical evidence of the ETPs impact is available only from MWH and ECan⁸.
- 4 The travel surveys at MWH and ECAN indicated that behaviour changes were found in the primary indicator (commuter trips per week per mode) used to judge changes in employee travel behaviour. Initial analysis found that a reduction of 1.5% was achieved in the number of car/van driver trips made to ECan per week, and a reduction of 1.3% in the total number of car/van driver trips made to MWH per week (taking into account seasonal influence)⁹.
- 4 Secondary indicators (i.e. levels of Single Occupancy Vehicles – SOV's) used to judge changes in travel behaviour showed that SOV drivers at ECan decreased by 4% and by 16% at MWH. In addition the number of people carrying work colleagues as passengers increased by 66% and 50% respectively.
- 4 A recent after-survey (June 2003) at MWH has found a 14% reduction in car driver trips, with a 161% increase in carpooling and a 52% increase in cycling (and a 5% decrease in public transport). A key part of the MWH travel plan was a formal rideshare scheme, and this seems to have been successful. As previously indicated, the June 2003 MWH after-survey was not a cohort survey and these results are not as robust as earlier reported results. We consider that the decrease in car driver trips at MWH directly attributable to the travel plan is most likely to be similar to that achieved in similar schemes internationally, ie 6-8%.

⁸ Before and after cohort surveys were undertaken at ECAN and MWH, with the after-surveys being carried out 3 months after the Travel Plan interventions. Initial analysis undertaken by Vandesar attempted to adjust for seasonal factors by only reporting travel behaviour change where survey respondents indicated that the ETP 'directly' influenced their travel decision behaviour (no mechanisms were in place to account for seasonal and other external factors). The results reported here as 'initial analysis' results are as reported by Vandesar 2003 (Vandesar did not report results for CPIT employees as the after survey undertaken was not a cohort survey). It is noted that ECAN considered that a higher reduction in car driver trips was achieved: 3.6% at ECAN, 11.5% at MWH, and 11.4% at CPIT (ECAN did not attempt to allow for seasonal impacts on travel in their analysis). Recently MWH has carried out a further after-survey 12 months after the initial before survey (same time of year, June). This after-survey found a 13.7% reduction in car driver trips. However, this was not a cohort survey which means that the results may have been influenced by a change in staff.

⁹ ECAN also point out that car driver modal share was already relatively low at ECAN (42%) and that the degree of reduction in car driver trips achievable from an ETP could therefore have been expected to be reasonably low.

- 4 While other initiatives, such as discount on cycles and cycle equipment, were well received by the employees, they did not appear to directly contribute to reductions in car use. However, they may have helped staff find alternative modes when they needed to change modes of travel for other reasons, such as moving house to a different location, or changes in health status.

A clear difference exists between the ETP's described from the Environment Canterbury project and examples of more effective ETPs described in the international literature. Some key differences included: a lack of employee resources available at the pilot organisation; the small budget for the projects meant that measures and policies were focused on those that were simple to implement and involved less financial commitment; and, no disincentives or financial incentives were implemented. In addition, ETP's were mainly developed for research reasons rather than site specific or legislative reasons.

However, the pilot ETPs did achieve a degree of travel behaviour change, which could be considered to be significant given the low level of resources involved. In addition, ECan achieved its aim of increasing staff awareness of alternative travel options. A number of staff tried alternative travel modes for the first time, and may do so again in the future.

Lessons learned from NZ Experience

The experience gained from the New Zealand ETP projects described above is still limited with regard to the specific kinds of policies or measures that would produce the most effective results in New Zealand. The research does however provide an insight into potential problems and issues with the implementation of travel plans in an organisation. In this area a number of clear lessons have been learned:

- 4 *Need for a strong driver to motivate involvement.* Where an organization is faced by a pressing issue (such as a parking shortage which is affecting staff retention, as in the case of the NZ Police) there is a strong 'driver' behind the ETP. This is needed if travel policies involving disincentives or financial incentives are to be seriously considered by senior management.
- 4 *Upper management support is essential.* Support from upper management is essential for a successful ETP to occur. Without management support coordinators may find it difficult getting not only financial resources and staff time, but also may find implementing the more 'controversial' policies such as financial disincentives difficult. While management may initially give their consent for a travel plan to be implemented within an organisation they may be unaware of the full extent of the project and the type of policies that are intended. Therefore it is important to initially provide management with a clear outline of the project so they know what to expect.
- 4 *Delegated travel plan coordinator within the organisation is essential.* The size of the organisation will determine whether this person devotes all or only a portion of their working day to the travel plan. Either way it is essential to have an employee working from within the organisation who is able to devote effective time to the project. The coordinator will be responsible for

communicating and working with management as well as a contact point for staff

- 4 *Effective communications plan.* An effective communications plan must be devised and tailored specifically to the type of organisation the ETP is being implemented within. Internal email is an effective means of communication for organisations where all staff have access to it. However, overuse of this method can produce negative results where employees feel they are being 'spammed' by non-work related emails. In situations like this posting notices on the staff intranet (where available) means that employees are not being personally 'bombarded' with emails and can find out about the ETP at their own leisure. An effective communications plan should involve a wide variety of ways of communicating to employees without over exposure.
- 4 *Non-financial incentives will generally not result in large trip reductions.* The predominant use of non-financial incentives did not produce large travel behaviour changes. While the measures used in the ETP's in the ECAN study were designed to be fun for staff and to a certain extent got employees to try out alternative modes of transport for the journey to work, they did not produce large reductions in vehicle trips. However, the ECAN results show that 'low level' ETPs will produce small travel changes at low cost. This is consistent with international experience.
- 4 *The current NZ taxation regime is a potential obstacle to developing successful ETPs.* Currently in New Zealand, employers have to pay Fringe Benefit Tax (FBT) on any benefits that employees receive and enjoy as a result of their employment. Under this scheme, employers are liable for FBT for anything they provide to their employees at less than the cost to the employer. Therefore travel plan measures such as subsidised public transport passes are subject to heavy taxation. In addition to this, organisations could potentially be taxed on any income generated from charging their employees to park on-site; thereby reducing the incentive for introducing car parking management schemes that ultimately derive some sort of income to the employer.

Conclusions

Overall the New Zealand experience with ETPs to date has produced the type of results, and highlighted the key implementation issues, which would be expected from international experience.

Based on the New Zealand ETP results to date, it could reasonably be expected that similar travel behaviour outcomes could be achieved to those found internationally if similar 'environmental' factors (such as restricted car parking or regulatory requirements) were present and if the ETPs involved both incentives and disincentives.

A major issue which needs to be addressed, however, is the current New Zealand taxation regime which could hinder the provision of financial incentives within ETPs.

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