Precinct wide travel plans – learnings from Rouse Hill Town Centre

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Abstract

In February 2003, Planning NSW and Landcom, selected Lend Lease and The GPT Group as the preferred partners to create The New Rouse Hill, a state of the art regional centre consisting of a mix used Town Centre, residential neighbourhoods and community spaces. ‘The New Rouse Hill’ was planned as a transit-oriented development and the effective integration of land use and transport planning was considered essential if the development was to succeed commercially and contribute to the achievement of the range of planning objectives of both state and local government agencies.

Transport Demand Management initiatives were identified in the 2002 joint venture proposal and included a provision for a $3 million funding allocation to be sourced from a development levy. A Transport Management and Accessibility Plan (TMAP) was prepared in November 2005 which provided a basis to guide the Travel Demand Management (TDM) Program to inform the design, operation and evolution of The New Rouse Hill to achieve acceptable levels of sustainable transport behaviour. As a precinct (rather than employer) based program, the TDM strategy was path breaking in its aspirations and implementation.

Rouse Hill Town Centre opened in September 2007 and a dedicated travel coordinator was engaged to deliver the precinct wide travel plan. Since 2007 various strategies have been employed to achieve the outcome and to provide a self-sustaining travel planning environment. The aim of this paper is to assess how sustainable travel has been absorbed by the residents, employers and users of Rouse Hill and its surrounding suburbs. The conclusions inform the development of precinct based travel demand strategies both in Australia and beyond as to strategies which have been particularly successful.

1. Introduction

In the early 1980’s the NSW Department of Planning identified Rouse Hill to the north west of Sydney as a location for a subregional centre. The New Rouse Hill development, as it is known, is expected to comprise up to 1,800 dwellings accounting for 4,500 new residents, with community facilities including a primary and high school. In addition to this the GPT Group has invested $470 million in developing Rouse Hill Town Centre, which is at the heart of the 120 hectare The New Rouse Hill site. The Centre provides significant retail, leisure and commercial properties with more than 220 stores including Woolworths, Coles, Big W, Target and Best and Less. There is also a nine screen Reading Cinemas complex.

As part of the developer agreement Landcom, Lend Lease and GPT were required to provide a transport levy of $3 million used to fund travel demand management initiatives. In addition, the development also included $16 million for other sustainable transport
initiatives such as the construction of a bus transit interchange, provision of walking and cycling links between the surrounding development and Rouse Hill Town Centre, the provision of bike parking, reduced parking supply relative to an equivalent-sized development, a paid parking management system to reduce unnecessary circulation traffic.

Rouse Hill Town Centre was planned as a transit-oriented development closely aligned with the public transport system and includes a major public transport interchange, Bus services travel to Parramatta and Blacktown via the Transitway and other bus services travel to Sydney CBD via the M2 motorway. The Transitway is utilised by a large number of bus routes that link surrounding suburbs to major centres and employment hubs such as Norwest Business Park and Westmead. The interchange is also planned to be the location of a station on the North West Rail Link from Epping via Castle Hill. Government's requirements for sustainable development meant that planning included significant walking routes to the interchange from all parts of Rouse Hill Town Centre and parking for 300 bicycles on site, in addition to cycle lockers provided by the Road and Transport Authority.

Transport Demand Management initiatives were identified in the 2002 joint venture proposal and included a provision for a $3 million funding allocation to be sourced from a development levy. A Transport Management and Accessibility Plan (TMAP) (Maunsell 2005) was prepared in November 2005 which provided a basis to guide the Travel Demand Management (TDM) Program (PBAI 2007) to inform the design, operation and evolution of The New Rouse Hill to achieve acceptable levels of sustainable transport behaviour. Despite these initiatives, developed as part of a precinct wide travel plan initiative seeking to encourage more sustainable travel by workers, shoppers and residents, the GPT’s Rouse Hill Town Centre presents a challenge for travel demand management initiatives. Understanding transport demand management for the residential community is timely, given the expansion of the residential community since 2008 and the future growth predictions.

Precinct wide travel planning was blue-sky at the time when the GPT group was required to fund a sustainable development planning focus at Rouse Hill. The aim of this paper is to assess how sustainable travel has been absorbed by the residents, employers and users of Rouse Hill and its surrounding suburbs. Section 2 outlines the background to travel plans and in particular area wide travel plans, section 3 details the range of travel plan initiatives introduced in the Rouse Hill Town Centre, section 4 details the survey used to provide a baseline for the travel behaviour of residents in the environs of New Rouse Hill. Section 6 provides a discussion and conclusions.

2. Literature review
Travel Plans can be defined as “a package of measures tailored to meet the needs of individual sites and aimed at promoting greener, cleaner travel choices and reducing reliance on the car. It involves the development of a set of mechanisms, initiatives and targets that together can enable an organisation to reduce the impact of travel and transport on the environment, whilst also bringing a number of other benefits to the organisation as an employer and to staff” (Energy Efficient Best Practice Programme 2001). Another definition is “a long-term management strategy for an organisation and its various sites or business park that seeks to deliver transport objectives through positive action and is articulated by a document that is regularly reviewed” (British Standards Institute 2008). As
such it can be seen as a range of measures implemented by an organisation in order to encourage individuals who travel to and from that particular organisation to use something other than a single occupancy private car as the main means of transport (Rye et al 2011). In North America they can be known as ‘trip reduction plans’ whereas throughout Europe the term ‘mobility management’ can be used. In the UK travel plans have become an important component of what has become known as ‘Smarter Choices’ (Department of Transport 2004). Travel Plans have been seen has having the potential as a ‘soft, non-infrastructure’ measure to address a country’s transport problems and CO$_2$ emissions (Rye et al 2011). Travel plans have been developed with a range of organisations and locations in mind, including workplaces with large numbers of employees, organisations which attract a range of one-off or regular students or visitors, including hospitals, schools and universities, airports, government organisations and recreational facilities (Wiblin 2010). Travel plans can be mandatory or voluntary. For example, in the UK they can be required as part of the development consent as was the case for Rouse Hill Town Centre where the travel plan for the new development was required as a condition of consent. Examples of travel plans in Australia and New Zealand include:

- Workplace travel plans: City of Darebin, Melbourne (Myers 2005); New Zealand Government Agencies (Gammie and Vandersar 2003).
- University travel plans: Flinders University (Aitken 2004), Monash University (Cooper and Meiklejohn 2003), and a summary of Australian universities (Curtis and Hollings 2004).
- School travel plans: Auckland (Sullivan and Percy 2008); Victoria (Peddie and Somerville 2005), Auckland (Morton 2005); and Melbourne (DiPietro and Hughes 2003).
- Hospital travel plans: QE11 Medical Centre Perth, (Wake 2007).

The main feature of these travel plans is that they have been introduced by a single employer, be it workplace, university, school, or hospital. Area-wide travel plans, that is a travel plan for destinations with multiple employers of different sizes, are less common, at least in Australia. Travel plans for locations with multiple employers, businesses or user types bring both benefits and challenges. Locations such as business parks, retail parks, and airports are normally owned or managed by a private or public organisation with a number of tenant organisations located on the particular site. Area-wide travel plans commonly funded by a levy or a tenant fee, employ a travel plan coordinator who implements, manages and monitors the area-wide travel plan (Enoch 2012). In many respects the area-wide travel plan operates in much the same way as it would at a single organisational level such as a university or a hospital, with the main difference being the number of organisations/tenants involved (Enoch 2012). Area-wide travel plans utilise similar measures to single organisation travel plans and in addition to those detailed in the following section, can include, enhanced walking and cycling facilities and infrastructure, incentives to use public transport, carpooling, and parking management.

Over time travel plans could “develop from the original concept of influencing travel demand and encouraging more staff to travel in more sustainable ways … to become much more … of a business management tool” (Roby 2010 pp.8).

The following section provides details of the kind of measure that has been introduced as part of the area-wide travel plan initiative in the Rouse Hill Town Centre.
3. Travel plan initiatives introduced at the Rouse Hill Town Centre

A package approach was originally adopted since this was intended to provide greater impact. The Travel Demand Management package included a number of initiatives such as the Green Travel Club, Information Centre and events and promotions targeted at the travel of multiple user groups, namely: workers, shoppers and residents, and overseen by a travel coordinator. In 2010, with the requirement that all programs should be self-sustaining (without a coordinator) when the funding expired in June 2013, there was a change in focus. The shift was to provide information as opposed to financial incentives for travel behaviour change.

**Travel Coordinator**

The area-wide travel plan included the creation of a Travel Coordinator position at Rouse Hill Town Centre with the prime responsibility for overseeing the implementation of the program and its continuing development. Appointed in December 2007 the travel plan coordinator was a dedicated position employed by GPT as part of the Centre Management team. This role based on-site at Rouse Hill Town Centre, funded by Lend Lease, GPT and Landcom, was part of the $3 million transport levy. The initial focus of the position was one of establishing the travel demand management program through the development of promotional material most notably the Walking and Cycling Guide, the Transport Access Guide, developing the Green Travel Club concept, and marketing dedicated bike parking and carpooling spaces. This role will end at or around the end of funding, in June 2013.

**Green Travel Club**

The Green Travel Club was launched in February 2008, aimed at engaging employees at Rouse Hill Town Centre. The focus was on educating staff as to the importance and benefits of using alternative modes of transport, namely ride sharing/carpooling, public transport, walking or cycling. The idea behind the Club was to give the members a sense of ownership and team spirit in their efforts to effect environmental change and their own travel behaviour. Membership was free and all new employees were invited to join the Green Travel Club. There were a range of membership benefits which included: a welcome pack; an online ride share database that linked drivers with passengers; access to showers and 300 bike parking spaces; information on travel and safety tips; and access to all Green Travel Club events and competitions. The Green Travel Club enabled the Travel Coordinator to gather vital information about employees including home location, age, employment status (full-time/part-time/casual), employer, mode used at time of joining, and preferred mode of travel for use in further developing the program. Over time the Green Travel Club evolved. In year one, the Green Travel Club focused on raising awareness of the Club and green travel. Membership included a welcome pack (cap, water bottle, lanyard, can cooler and bag), personal travel plan and $40 Trek Bicycle Store voucher. Events and promotions were low investment, but high incentive, with the dual purpose of raising awareness and stimulating membership. In year two, the focus continued to be on increasing membership, but was also aimed at maintaining the original base and on incentive based promotions. Membership continued to include a welcome pack, but the personal travel plan was replaced by the “welcome to” pack to encourage behaviour change. A program of targeted events and promotions were developed to enable mode shift away from single occupancy
car trips. A strategy to grow membership and engage members was developed. A change behaviour model was adopted, with stages of pre-contemplation, contemplation, preparation, action, and maintenance.

Key findings from an analysis of the Rouse Hill Town Centre Green Travel Club Membership include:

- A fluctuating membership given the nature of the retail sector with high staff turnover and part-time and casual staff;
- Full-time, relatively older workers, from smaller businesses are more likely to be members of the Club than other employees;
- Major stores have a higher proportion of part-time and casual staff, and these are typically more difficult to engage;
- The majority of Green Travel Club members are female, similar to the proportion of all on-site employees (70%);
- The store manager has a significant impact on participation by store employees, as they can encourage new staff to become members during the induction process.

Around May 2010, about one-third of Rouse Hill Town Centre employees (1,000 out of 3,000 employees) were members of the Green Travel Club (Rouse Hill Town Centre Green Travel Club Membership Database, 2010). However, these members were highly incentivised and, although the cost per member had dramatically fallen from about $1000 per member in 2008 to $25 per member in 2010, this was not financially sustainable without on-going funding. Perhaps more importantly, there was only a very small on-going commitment to new travel behaviour at the end of incentivised period.

The Green Travel Club webpage, hosted on the Rouse Hill Town Centre site, is a central information and communication source linked to travel information such as timetables and trip planning. Individuals from the Green Travel Club were transferred to this database with the Rouse Hill Town Centre being the focus of information. The updated website allows the Travel Coordinator to make changes easily and quickly and facilitates two way communication between the Coordinator and members, as well as members to members. For instance, the site also includes a car pooling database and while you do not need to be a Green Travel Club member to access information, but do need to be a member to access information such as carpooling. Ultimately, it will allow members to input how they travel to the Centre and calculate their carbon footprint. In the longer-term the website will become the responsibility of the Rouse Hill Town Centre Management with a facility for established user groups to maintain their own presence.

**Information Provision**

In addition to the various information, guides and maps available, visitors to Rouse Hill Town Centre can take advantage of an Information Centre shopfront which offers travel information such as bus timetables and brochures, and is manned by Rouse Hill Town Centre staff. The Information Centre employees have access to data bases and can provide customised information of bus times and trip planning. The original plan always saw information provision as important. Changes in technology (eg smart phones) and the identified need for practical information (eg where to buy public transport tickets) has meant that there has been a greater focus on the electronic provision of information.
Events and promotions
Events and promotions have always been used in order to keep the green travel message centre stage. Historically, events and promotions were events including BBQs for Walk to Work Day, Ride to Work Day and World Environment Day; free movie nights for Green Travel Club members and free dinner for Green Travel Club members at a restaurant at Rouse Hill Town Centre to bring members together and support each other. However, these would not have be financially sustainable without funding and the trend since 2010 has been around community events already in the Rouse Hill Centre calendar and incorporating greener travel and a healthy life-style agenda.

Advocacy and lobbying
Advocacy and lobbying for improved sustainable travel options is another key element of the role of the Travel Coordinator. This included working with The Hills Council on walking and cycling networks, and with bus operators and Transport NSW and Infrastructure on bus services (frequency, hours of operation and routes) and access to tickets. This has required developing an understanding of the role and responsibilities of different stakeholders and their relationships.

Although this is continuing, the coordinator has been undertaking a phased withdrawal from centre stage by the creation of user groups which undertake their own advocacy and lobbying. The long-term intention is that the user groups will exist beyond the funding in June 2013. For example, a resident’s community transport group exists to raise awareness about local transport needs: this group lobbies government directly. A bike users group now independently runs social rides each weekend, provides maintenance and other training and lobbies directly local and state government for infrastructure improvements. The bike users group nominated the Rouse Hill Town Centre for a national cycling award.

Having outlined a range of the Travel plan initiatives introduced at the Rouse Hill Town Centre and the change in emphasis, the next section details the method used to establish a baseline against which future progress in sustainable travel can be assessed.

4. Method
An initial exploratory qualitative stage was undertaken in May 2011. This aided in informing the main quantitative stage of the research and developing the survey instrument. As such, focus group discussions were held in the Rouse Hill Town Centre, with residents of The New Rouse Hill and The Ponds. In total four focus groups were conducted among parents with younger children (1 focus group), Teenagers without a driving licence (2 focus groups, male and female) and full-time workers (1 focus group). The focus groups provided a clear guide as to the questions to ask in the survey. This was followed by the main quantitative phase which was undertaken in August 2011, with a total of 378 responses across four suburbs, highlighted in Figure 1.
In terms of the four suburbs surveyed, an online survey was undertaken with the residents of The New Rouse Hill (n=71) and The Ponds (n=157), with email invitations to residents sent out by the Community Manager directing them to customised and branded online web surveys. In addition, flyers were posted through the letter boxes in TNRH directing residents to their online survey.

A telephone survey was also undertaken with residents of Kellyville Ridge (n=76) and Beaumont Hills (n=74). Participants were provided with movie tickets as gratuity in order to increase the response rate.

Figures 2 and 3 indicate the age and status profile of those completing the survey. As can be seen over 50% were in the 30-50 year old age bracket and the majority were married with children. Of those interviewed 64% were female.
The next section details the findings from the survey undertaken, providing information about the New Rouse Hill (TNRH) in the context of the neighbouring areas of The Ponds, Kellyville Ridge and Beaumont Hills.

5. Survey Findings

This section details the findings in terms of responses to questions relating to car and bicycle ownership and use, bus use, cycling, walking and awareness of the green travel initiative.

**Car and bicycle ownership and car use**

As can be seen in Figure 4 the average number of cars owned by TNRH households is lower than that for other suburbs. In fact 55% have more than one car compared with 69-84% for the other three areas. In terms of bicycles (Figure 5) it is interesting to note that overall over 50% of households own a bicycle, although given all the range of travel plan initiatives, as detailed in section 3 somewhat disappointing that the numbers are slightly lower for TNRH.

When relating to car use then a third of those surveyed in TNRH stated that they were using their car less since moving to the area which is encouraging, although a similar proportion (38%) claimed that their usage has increased. This does however compare favourably with The Ponds where car usage has increased for the majority of residents (54%) since moving to the area as seen in Figure 6.
Regarding the use of the car, then in response to the question as to how respondents agreed or disagreed with various statements relating to driving in the Rouse Hill area the results are revealed in Figure 7. Overall, the car is seen as being indispensable by residents in both TNRH and The Ponds areas and in fact two cars were felt necessary in a family situation. Encouragingly however roughly a half of TNRH residents felt that on the basis that facilities are within easy reach via walking, cycling and public transport, then people in the area would be less likely to require a second car.
Figure 7 Attitudes to cars and driving

Bus patronage
With respect to bus use then in the region of 1 in 4 TNRH and The Ponds respondents have used the bus within the last week (see Figure 8). In particular TNRH resident respondents appear to have used the buses more frequently, with 56% in the last 2-3 months compared with around 44% in The Ponds and Kellyville Ridge. Overall, the residents of Beaumont Hills are relatively less likely to use the bus.

Figure 8 Bus Use

Cycling
Figure 9 relates to the last time a respondent cycled. As revealed close to half of TNRH bicycle owners have cycled anywhere in the last month for recreation or transport. This is closely followed by The Ponds.
**Walking**

In terms of walking then two in three TNRH residents reported walking as part of relaxation at least 2-3 times a week. In saying this walking for transport was significantly lower, namely two in five it was somewhat higher at 43% when compared with The Ponds 20%, Kellyville Ridge 25% and Beaumont Hills 25%.

![Figure 10](image-url)

**Figure 10**

**Awareness of Green Travel Initiatives**

Figure 11 reveals the awareness of respondents in TNRH and The Ponds areas to green travel initiatives.

% spontaneously mentioned the following community initiatives

- Walking school bus/walking bus
- Car pooling/sharing
- Cycle paths
- Promoting cycling/cycling groups
- Bus routes available
- Walking paths
- Promoting walking/walking groups
- Public transport/trains
- Bike library
- Encouraging less use of private vehicles
- Special parking for electric vehicles
- None

TOTAL

TNRH

The Ponds
The figures were in some respects disappointing in that although one in four TNRH residents reported that they were aware of green travel initiatives in their area, the awareness was somewhat lower than in The Ponds. In addition, 24% of the TNRH residents reported no awareness of green travel initiatives. By the same token 24% of TNRH residents said they were aware of green travel related community activities in their area, which compared to 28%, 17% and 12% for The Ponds, Kellyville Ridge and Beaumont Hills respectively.

In asking residents about their decision to locate in a particular area, Figure 12 shows that the new residents of the TNRH and The Ponds neighbourhoods identified strongly with the sustainability focus of the development. This contrasts strongly with the older neighbourhoods of Kellyville Ridge and Beaumont Hills. Whilst the marketing of properties is identical, there is a major difference between the developments of the Ponds and TNRH in that properties in TNRH are very much better connected to facilities located in the Town Centre. The Ponds, across the busy Windsor Road, has been planned with walking and cycling routes but has a disconnect in terms of access to facilities located in the Town Centre.

6. Discussion and Conclusions

Precinct wide travel plans, developing across a range of stakeholders was an ambitious initiative, and would certainly not have happened if there had not been dedicated funding available. Precinct wide travel planning was blue-sky at the time when Lend Lease and The GPT Group were required to fund a sustainable area-wide transport plan for TNRH. While the concept of a precinct wide plan was appropriate the complexity of land use, the diversity of times of arrival and departure time from the Town Centre, the lack of experience in area-wide travel plans not only in Australia but world-wide and the myriad of stakeholders made the development of one cohesive plan challenging. Initially, the plans developed by Maunsell (2005) and PBAI (2006) argued for the development of a suite of projects and initiatives within an implementation framework aimed at trip generators.
Whilst this maybe a common approach for a single site travel plan identifying with single trip generators, the experience at Rouse Hill, because it was an area-based approach, showed that barriers to travel behaviour change emerged from journey purpose. This is why in 2010 the emphasis was changed to provide targeted information for journey purposes rather than trying to incentivise residents or workers as if each were a single, homogeneous group.

Whilst funding at the start was important, in another sense the same funding gave a sense of false security. It allowed incentives to be used at the outset, as informed by the state of the art at the time, together with a marketing approach which in the long term was perhaps not sustainable. It gave rise to relatively simple initiatives which did not have really effective outcomes. There was a realisation that behaviour change happens in stages and the targeting of information at these stages has proved to be a much more effective strategy. Moreover, travel plans around the world comprise disincentives as well as incentives: at TNRH it was not possible to put in place a range of disincentives (such as high parking charges) because of the way in which the original program was structured and a need to attract people to the new centre. Sustainable travel at TNRH has made significant progress in five years although, if starting again, the approach might have been different having learnt from experience.

With the knowledge of hindsight, succession planning would need to start on day one. The understanding of how travel behaviour can be changed in both the short term and the long term, with the latter being more important. ‘Quick wins’ with membership of the Green Travel Club being counted was important at the beginning but many of these members only made short term incentivised changes. In practice, the latter approach of targeting ‘change moments’ (such as changing school, home location) with information has proved more effective alongside mutual support in groups to engender longer term sustainable travel behaviour change. TNRH, in pioneering the area wide travel planning, did not have the opportunity to implement good practice from other such initiatives. It would now be good practice to discuss amongst stakeholders to achieve buy-in as a prelude to designing and implementing strategies and this might have led to stakeholders wanting to collectively fund a continuation beyond the life of the program.

The decision to focus on an area-wide green travel plan was appropriate for TNRH. The area-wide approach offers significant economies of scale: for example, individual organisations within TNRH would not have been able to support individual travel coordinators or the car pooling scheme. Such a scheme would not have been feasible with separate travel plans for different organisations. Such a position allowed a targeting of resources which resulted in greater impact. Moreover, an area-wide travel plan recognises that individual stakeholders fall into multiple groups (a resident can be an employee and shopper, for example) and allows focussed delivery of the sustainable transport agenda.

The survey was designed to provide a baseline for the 2017 mode shift target. Whilst the survey reveals differences between TNRH and the Ponds in terms of attitudes to sustainable transport (see Figure 7), there are other outcomes which require further investigation. Potential purchasers are met with identical marketing of properties in terms of the sustainability focus of the development and this appears to have been successful at
achieving new residents who are more sustainably aware and exhibit more sustainable travel behaviour (they cycle more, have lower car ownership and walk more) than the nearby established neighbourhoods of Kellyville Ridge and Beaumont Hills.

The awareness of travel planning initiatives in Figure 11 does not fit well with the attitudinal answers from the same respondents suggesting that more research is needed to unpick how to better inform residents of initiatives. There are some signs, again needing more research, that individuals do not listen to ‘sustainable transport’ messages and that incorporating this message under the wider umbrella of ‘healthy living’ is achieving more success.

References


