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## Turning Strategies into Actions – Integrated Land Use and Transport Planning in Western Australia

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### Abstract

In Western Australia, the last ten years has seen the evolution of a strategy towards a balanced approach to transport provision and use. Land use and development planning have a key role to play in the package of measures put forward in the strategy. There is however no one central document which sets out the policy for integrated land use and transport. Instead there are a range of documents produced by different government agencies, and with differing status in terms of implementation. Furthermore there appears to be a misalignment between strategies and actions, with little evidence of implementation that achieves balanced transport outcomes.

The focus in this paper is on the contribution of land use planning to the achievement of balanced transport outcomes. The paper reviews the current planning strategies and processes and puts forward a range of measures which could assist in turning strategies into actions and therefore in implementation. The suggestions for action are based upon research and experience of current international planning practice, and include action in the three areas of planning policy, planning applications and assessment, and the players involved in planning.

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### **Introduction**

In Western Australia, the last decade has seen the evolution of a strategy towards a balanced approach to transport provision and use. A range of documents produced by different government agencies offer strategies that seek a move away from car dependence and towards providing for transport choice. Land use and development planning have a key role to play in the package of measures put forward in the strategy. There is therefore a long-standing policy environment in favour of private car travel reduction.

A 'balanced transport system' is defined as one which moves away from a transport system dominated by low occupancy car travel towards a system in which public transport and non-motorised options are feasible for many trips. Within this context there is a broad policy remit to seek transport provision for all modes, not simply private car travel, and to ensure land use and development are accessible by all modes of transport. However the extent to which this broad policy remit remains rhetoric is a key question. There would appear to be a misalignment between the policies and strategies and the action through implementation.

This paper then, focuses on the actions land use planners can take towards achieving implementation. The need for integration is seen as a key aspect and Westerman provides a useful perspective on this issue,

"Integration implies a concern with the whole, agreement in common outcomes, and a commitment to actions and targets to achieve these outcomes. Integration is more than coordination, which still allows different outcomes to be pursued"  
(Austroads, 1998, pp.3)

With this perspective in mind, the current strategies and policies are examined. They are measured against the end product, development, and an assessment is made as to the extent to which implementation of balanced transport strategies have occurred. The conclusion is that implementation is left wanting. The paper offers a range of measures that could assist in turning current strategies into actions. These are based upon research and experience of current international planning practice together with research into the obstacles facing the planning profession in Western Australia.

### **The current land use planning and transport strategies**

There is no one central document which provides the policy for integrated land use and transport. Instead it is necessary to take account of a range of documents produced by both the Ministry for Planning (MfP) and Department of Transport (DoT) at State level, and documents produced by local government. These documents offer strategies designed to operate at different levels and via different decision making frameworks.

### Land use planning strategies

Since the introduction of strategic planning in Perth with the Stephenson-Hepburn Plan of 1955 the important relationship between land use and transport has been acknowledged. That early plan called for urban containment and the creation of self-contained communities by providing land for employment in close proximity to residential areas. The later Corridor Plan of 1970 responded to the growth in car ownership and use and congestion of the Perth central area by proposing an urban form based on four corridors with regional centres providing the means to counterbalance congestion in the central area. The strategy included the need to establish an efficient public transport system. The current strategy was put forward in 'Metroplan' in 1990 and retained these principles, seeking to concentrate employment generating activities and community facilities around the public transport network. It included a strategy for urban consolidation in order to reduce travel distances and support public transport.

The current planning policy framework comprises a set of policies, strategy plans and statutory instruments (figure one). There are a large number of 'strategic policies' and some cover the whole state, others just the metropolitan area, others focus on one particular sector (such as regional centres, or the basic raw materials policy). Most of these policies set out broad principles rather than detailed guidance. For example the State Planning Strategy sets the broad principles for development, such as the infrastructure principle which seeks to ensure land use, transport and public utilities are mutually supportive. The Metropolitan Centres policy sets out criteria for retail and commercial development at regional and district centres and includes the need to consider access by public transport, walking and cycling. One problem is that such broad principles are open to wide interpretation both by the designer and the reviewer or person assessing the development proposal.

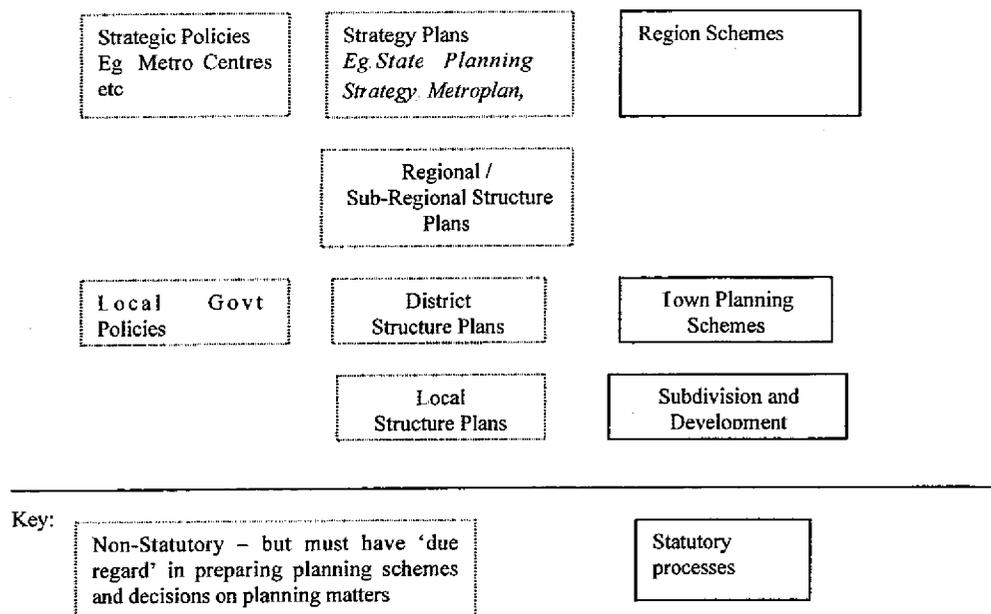
In addition to strategic policies and plans the state government produce a set of 'operational policies' found in the 'Policy Manual'. Of these, fourteen make some reference to transport related planning considerations, but the policies generally apply to large sub-divisions and mainly apply to residential land use. Policy DC 1.6 'Development near Metropolitan Railway Stations' is an exception and seeks high density development around station precincts, this also lacks prescription or guidance in terms of which precincts might be appropriate for particular uses or integrated transport infrastructure such as a bus interchange or park and ride facilities.

Strategy Plans are intended to apply the strategic and operational policies in order to set out the physical form of development and are prepared at different levels of detail, from Metroplan (discussed briefly above), through regional, district and local structure plans. State planners prepare the former plans, developers and local government the latter. The degree to which different players in the process include balanced transport considerations is very varied.

Local government also produce planning policies, although this is on an ad hoc basis and is responding to particular issues in that authority. For land use transport issues for example, one authority has a policy on aged persons accommodation which seeks

development location within 800m walk of local facilities and 200m walk to a bus stop, and even addresses footpath gradients

Figure One: Western Australia Policy Framework and Statutory Instruments



Statutory instruments within the policy framework are Region Schemes, Town Planning Schemes and the assessment of subdivision and development proposals. Guidance on the content of Town Planning Schemes is provided to local government through the Model Scheme Text (draft) (WAPC, 1997). This provides for local government to produce local planning strategies, which could for example set out their strategy for balanced transport. It also sets out the sort of criteria to be used in assessing development applications, including access and egress, parking of vehicles, traffic generation, public transport access (Model Scheme Text, Part 10 2).

#### Transport planning strategies

The Department of Transport has produced a series of documents under the umbrella of the WA State Transport Policy. Some develop the notion of a balanced transport strategy. ‘The Way Ahead: Metropolitan Transport Directions for Western Australia’ supports increasing the public transport modal share by the provision of 50 new low floor buses per annum, and providing for new rapid transit in particular locations. The journey to work is targeted for car travel reduction. The ‘Metropolitan Transport Strategy, produced by DoT in close consultation with the Ministry for Planning (MfP) and other transport operators continues the balanced transport theme. The main focus is

on achieving a different modal split away from private car travel, guidance on the role of land use planning is offered.

The main land use planning strategies emerging from this review of policy are set out in Figure 2 (for more detail on their content refer to WAPC, 1998). It is clear that the strategies are wide ranging and cover a full range of considerations appropriate to achieving balanced transport outcomes. A number of issues arise from this review. These include firstly the sheer number of documents it is necessary to review before arriving at a list of balanced transport type planning considerations, secondly the differing degree of detail or prescription which leaves scope for a wide ranging interpretation of what might be a 'good' outcome and finally the status of "guidance".

**Figure 2 Current Approaches to Achieving Balanced Transport Outcomes in Western Australia**

**A: Location and type of development**

1. Self-containment - Location of employment in relation to residential uses and public transport; provision of local facilities.
  - i) Maintain Perth CBD as main centre
  - ii) Develop employment centres and higher residential densities in regional centres
2. Encourage mixed use development
3. Encourage/facilitate intensive development around rapid transit stations.
4. Locate new business parks close to residential areas and with good public transport access

**B: Choice of transport modes**

1. Regional centres - improve public transport access and access by other modes
2. Local centres - provide for alternative modes of travel (walking, cycling) and traffic calming
3. Concentration of major traffic generators (hospitals, employment, universities) in locations served by all forms of transport

**C: Limiting car access**

1. Limit car access in congested areas by:
  - i) parking constraints
  - ii) promotion of higher vehicle occupancy rates

**D: Development and provision or protection of transport infrastructure**

1. Ensure service providers make early provision of public transport in new residential areas (in order to encourage adoption of non-car dependent journeys).
2. Designate/reserve land where necessary for regional cycle network
3. Car-pooling - provide strategically located "pick-up and drop-off points" - for journey to work.
4. Provide reservations for extended rapid transit system to new periphery of metropolitan area
5. Identify public transport routes and protect and enhance them through transport planning
6. Transport impact statements for major development.

### The holes in the sieve – examples of implementation failure

It is acknowledged that "It is impossible to change urban structure and form in the short term, except in limited areas of cities." (Austroads, 1998, pp 97). Research carried out for the Department of Transport, UK in 1996 noted that "initiatives involving the impact of policy changes in future land use patterns clearly involves long lead times before change on the ground is evident... it could be up to 10 years before changes are evident in land use patterns resulting from the implementation of [policy] PPG13" (WAPC, 1998a, pp29). However Western Australia has long established policies and the evidence presented below suggests there is clearly a need for something more if they are ever to achieve implementation.

It is also acknowledged that a land use strategy forms only one element of the package of measures Goodwin and his team termed the "Elements of the New Realism" (Goodwin P et al, 1991). Clearly whilst other measures in transport provision, taxation etc are important, this should not diminish the responsibility of land use planners in effecting change

Whilst systematic research has not been conducted, the examples of implementation failure offered below are occurring apparently at odds with the planning strategies set out earlier in this paper. There may be other planning considerations (or factors outside the remit of land use planning) which merit greater weight in the final decision to proceed with development, nevertheless they reflect lost opportunities for balanced transport outcomes which provide for transport choice. This is especially important when judged against the relative inertia of land use change.

The 40 year strategy of self-containment has yet to prove its success. Whilst Kemp notes that "the dominance of the Perth CBD as an employment centre has declined over the last 30 years, falling from 34% of metropolitan employment in 1961 to below 18% in 1991" (Kemp, 1997, pp33), the push to get self-containment of regional centres has not been successful. The aim of 60% self-containment (of jobs and housing) has not been met; most regional centres have achieved about 30% self-sufficiency. Instead employment development has spread from the CBD into inner city suburbs. In 1991 75% of the metropolitan region employment was in the inner area in locations which are difficult to access by all modes of transport (Kemp, 1997).

Another strategy for urban containment put forward in Metroplan sought to provide for 20% of new housing to be satisfied through suburban renewal and infill. However in a survey of 15 inner and middle ring local authorities, six were looking to "down code" the 'R' Code densities of large areas to lower densities thereby undermining the opportunity for providing residential development close to facilities with potential for travel choice and reduced trip length (McClure, 1998).

The MFP operational policy DC 1.6 Development Near Metropolitan Railway Stations adopted in 1990 promotes high density residential and commercial development in railway station precincts. There are few if any examples of implementation on the ground. Yet local authorities are supposed to take account of this policy in their Town Planning Scheme, and the process provides for this to be audited by the MFP. Even

where high densities are zoned these are considered as maximum standards, therefore if the applicant put forward a development proposal with lower densities it cannot be refused. A proposal such as this at R40 was made for land zoned R80 adjacent to an inner urban station in 1998. It would seem that action only occurs when the state government itself takes the initiative, as it did at Subiaco station by creating a Development Commission. Even in this case balanced transport policies can be undermined when other considerations take precedence. In this case high levels of parking are proposed for development, despite its proximity to the station. This not only fails to take the opportunity to encourage mode shift but also sends the wrong message to others.

There are a number of cases where the location of high trip generating development is in places where access by means other than the car is difficult or impossible. The development of a car based office park outside the Perth CBD and distant from rail access saw the relocation of a major employer from a CBD location highly accessible by public transport. The development of a food court restaurant in an industrial area stretches the interpretation of "lunch bar". An advertising campaign in the West Australian indicates that the development offers seating for 300 people and 10 karaoke rooms! Located on a major 6 lane highway access to this development will be predominantly by car. Whilst a bus stop is within 400 m of the site (on one side of the highway!) there is no pedestrian path either from the bus stop or into the site. The limited bus service at weekends and evenings to such a location should also be considered.

In two cases the relocation of tertiary institutions (TAFE) from CBD locations to sites inaccessible by public transport raise serious concerns about the place of balanced transport and strategic planning in decision making across government departments. The purchase of land appears to give rights for it to be 'reserved' for public utility use. Because the process is outside the usual development assessment process it is not possible to judge how far balanced transport outcomes were considered. It is clear however that other considerations outweighed this need. At one site, now 10km distant from the CBD, the nearest public transport is 5km away. While a school bus serving a high school co-located on the new site provides some public transport it is not compatible with the hours of TAFE students (200 full time and 1000 part time students). Providing public transport to this decentralised site is not cost effective given the catchment of the TAFE and the opportunity to provide any service is not being considered until 2001. The existing site in the CBD provided the best opportunity for accessible public transport. Pushing young adults into car use was unlikely to have even been on the agenda when relocation was considered.

The original concept plan for one of the strategic regional centres was for a pedestrian centred town square with key elements being retailing, central city offices in perimeter blocks with all parking at the rear, and a soccer stadium which could all focus on the rail station. However the final outcome was watered down, in Stephenson's words,

"The proposed pedestrian system has been destroyed and motor vehicles have been given pride of place" (Stephenson, 1992)

The retail centre is now an inward looking covered mall, surrounded by a sea of car parks, offices separated from the station by vacant land and the stadium pushed out to the periphery of the centre. So whilst partly successful in that retail development does have proximity to the rail station, it did not achieve the full potential of the original design for balanced transport. When considering that government agencies had control over the land through ownership poses the question what put the implementation off track.

It is not just major trip generating developments or the cumulative effect of down zoning which "slips through the holes in the sieve"; small scale or micro level planning considerations are also important to the achievement of planning outcomes. The proposal to develop a retirement home distant from good public transport, where even the orientation of the site took no account of providing for pedestrian access to the nearest bus stop. Retail uses which fail to provide for pedestrian and cycle access into the site. University halls of residence which, whilst in close proximity to university, offer the residents a difficult walk across a high speed four lane highway, a sandpit median strip, and no path in the university.

#### Plugging the holes

There are some examples of successful implementation of balanced transport strategies. For instance, the relocation of local government offices from a decentralised location to the strategic regional centre within walking distance of new electrified rail in 1995. This followed the relocation of a Perth CBD government office to the same centre in 1992.

The retention of at least two bulky goods DIY stores in regional retail centres with limited car parking, attests to the fact that it is possible to co-locate such uses in town centres. By locating such uses in central locations it is possible to provide access for both car users and non car users, and enable a number of retail trips to be served in one location by only one journey.

#### Turning Strategies into Action

The review of policies and strategies in Western Australia is clear in its focus on the need to provide for balanced transport outcomes. Yet there are many examples of implementation failure. A number of changes are required to overcome these problems and enable action. The suggestions offered are based upon research and experience of practice elsewhere. They are considered under the three key elements of the current strategic planning process: planning policy, planning applications and assessment, and the players. The perspective is towards integrated land use planning and transport planning, since this is seen as an integral element of any action to achieve balanced transport outcomes.

## Planning Policy

The earlier review noted that there is a range of broad policy documents that set the scene for a more sustainable transport strategy. Further development of policy is needed to ensure effective implementation. With this in mind the MfP have commenced a number of initiatives including the development of a statutory policy for integrated land use planning and transport; the development and trialing of a design code for large new development sites; and an investigation into the potential tools to assess development applications. This paper reports on the progress of that work and the types of actions and levers that will be important to ensure success.

### *A Design Code*

If planning policy is to be effectively implemented, the first step will be to provide for clear policies which guide all players and stakeholders. The development and trialing of Liveable Neighbourhoods Community Design Code (Liveable Neighbourhoods) (Government of Western Australia, 1997b) offers an alternative approach to the design of neighbourhoods and towns. It follows practice elsewhere including Calthorpe's transit oriented development, Portland, Oregon's Smart Development Codes and the Victorian Code for Residential Development. It provides detailed and prescriptive guidance on the form of development and its integration with all modes of transport. The aim is towards a compact form which encourages local employment and a strong focus on public transport and walking.

The strengths of the Code are in the detailed guidance it provides with diagrams and tools – a “how to” document. A technique for calculating walkable catchments is provided (known as the ‘ped shed’), proximity of compatible uses is a central element, how and where to achieve cycle and public transport access. This new guidance therefore offers an important development of broad policy statements seen in earlier policy guidance.

The current shortcomings of the guide are that it only applies to new greenfield sites, and there is no obligation for designers to submit proposals based upon the code. The latter is seen as a necessary step in gaining stakeholder support. The former issue is a greater challenge. To devise principles for application in existing areas will be an important step forward, since to “fix” past urban form and design in order to provide for transport choice offers greater potential returns. This is because it impacts on a significantly larger population of travellers, than does the small-scale increases in development at the urban fringe.

In some established areas the application of the six elements put forward in the code is possible. Inner and middle ring suburbs may offer the better choices with their traditional grid pattern street network. In an exercise we conducted with students this year we demonstrated that using the context and site analysis a broad strategy framework can be drawn highlighting town centres, walkable catchments and assessing their relationship with each other and the transport network. This gives planners direction, it identifies those residential areas not within a walkable catchment of neighbourhood facilities. Bigger questions are raised though about the retail hierarchy

which assumes car access and therefore draws from a wider catchment, and school catchment policy. Both will require resolution if Liveable Neighbourhoods principles are to be effective in achieving balanced transport outcomes. Some local authorities have already adopted the principles of Liveable Neighbourhoods in their Town Planning Schemes. One note of caution is that in seeking to apply the code to other areas the challenge will be to encourage designers and reviewers to adopt all elements, not just the most convenient.

*Statutory Policy for integrated land use planning and transport*

Liveable Neighbourhoods starts its application at the sub-regional level, working within the context of an existing strategic regional framework. At present this framework is provided for by broader policies such as the State Planning Strategy and Metroplan. There is a gap in the policy picture between these levels in respect of an integrated land use and transport policy. In 1997 the MfP started work to fill that gap. The first step was in reviewing the current planning strategies against a wider context of comparable examples of best practice drawn internationally in order to consider which actions would be most suitable in the Perth context. Work is now in progress on the development of a statutory policy. The aim is to give direction on two key aspects: the location of development; and the protection of existing and provision of new infrastructure.

Clear direction is needed on the most appropriate locations for development. At a strategic level this includes siting developments which attract a high number of employees or visitors in locations well served by public transport, and at the local level designing and orienting development to give priority to pedestrian and cycle access. The challenge will be to prevent development in the "wrong" location. This also raises the issue of whether policy makers are prepared to review existing zonings which no longer comply with policy.

This was the dilemma facing planners in the UK when the value of the long established Green Belt policy was questioned in the light of new sustainable transport policy. The drawing of green belts around large cities effectively constrained the outward growth of the city resulting in developments beyond the green belt which lengthened trip distances, particularly for work journeys (since most employment remained in central city locations). Long established green belt boundaries have been re-drawn to cater for development in closer proximity, sustainable transport policies have been given a new weight.

The policy will need to provide guidance on the protection of existing transport infrastructure including the most appropriate types and densities of development in relation to transport corridors. It should aim to steer high density residential development to public transport corridors with commercial and retail development at nodes along these corridors. This should complement a strategy of protecting freight and high speed intra-urban transport corridors where high density development should be discouraged, and low density industrial and distribution uses which need access to this transport corridor encouraged. In Western Australia there are several classifications of the road system according to transport or administrative function, the land use

dimension is yet to be integrated with these classifications. Keeping stations open and looking to land use solutions to improve catchment potential is another important aspect of protecting existing transport infrastructure

In providing new transport infrastructure it will be important for the policy to guide this to locations where maximum balanced transport benefits can be achieved. This means locating new rail corridors, for example, close to land use and providing for convenient pedestrian and cycle access. In major new development areas it will be important to provide for public transport from day one in order to prevent 'car travel habits'. When no public transport is available the an individual is likely to buy a car; when public transport is introduced at a later stage there will be little incentive to consider using public transport while individuals continue to consider only the marginal cost of car use in travel choice decisions.

There are clearly costs associated with both aspects of this part of the policy. The test will be to see how far decision-makers are prepared to embrace such actions in order to fully implement balanced transport policy. Furthermore strong guidance may not be enough to capture all development proposals and their transport needs, some action may be needed in relation to the place of proposals by government agencies in the planning decision making process. There will be a need to ensure this policy applies to whole of government since some of the most significant major development proposals come from government agencies.

As well as providing clearer guidance the strength of that guidance will be important in assessing development proposals. This new policy is proposed as a statutory statement of planning policy (under section 5AA of the Town Planning and Development Act, 1928). This means decision-makers must have 'due regard' to the policy and in this way effective implementation is more likely. However if the policy is to be upheld in appeal decisions further measures may be required. For example it will be important for the decision reasons to be clearly articulated so that balanced transport considerations can be seen.

#### *Town Planning Schemes (TPS)*

There are weaknesses with the current system of local planning. TPS's do not clearly address the right issues; zoning and land use tables provide a very blunt instrument for directing appropriate development. Densities expressed as maxima also reduce the opportunity to achieve good balanced transport outcomes. The long time scale for preparation and adoption of TPS's further compounds implementation problems.

Some improvements to the system are forthcoming. The Model Scheme Text (draft) (WAPC, 1997) provides two possibilities. The provision for local government to prepare 'local planning strategies' will give an opportunity for balanced transport to one main theme in their approach. The provision for special 'windows' in TPS maps which enable more detailed prescriptions will overcome some of the problems of broad land use zoning.

However the IPS still fails to deliver pro-active planning and remains a reactive approach. In the UK local planning authorities have a system of development planning which, through the use of both Local Plans and Development Briefs, allows them to clearly show the community vision for a given area on a cadastral base. This gives clarity and certainty to designers and developers and planning proposals are judged against these development plans. Furthermore the development plan has primacy in the decision-making process. Some local authorities in Western Australia have the capability to prepare such pro-active development briefs, some already do although not usually within the statutory framework of a IPS. This would be a far more effective system than the current one of dealing with a number of fragmented and disjointed development proposals for which the broad zoning plan offers little in the way of a clear framework of guidance. It would seem that the only means currently available to achieve pro-active planning is through the setting up of development corporations such as at East Perth, Subiaco and now Midland. This may be a costly way forward and affects only small pockets of land. It also undermines the leadership role of local government.

#### Planning Applications

Clear and strong policies alone will not be enough. The method of assessment of development proposals is an important dimension of action for effective implementation. The majority of development proposals are assessed against a set of standards, for examples set backs, garden size etc. This approach tends to distance the assessor from the original policy objectives resulting in ill-considered outcomes. A performance-based approach offers a more considered method to assessment, and encourages a more responsive approach with clear links to policy outcomes. The draft Liveable Neighbourhoods is the first in Western Australia to propose such an approach. In the UK this method of decision making is common practice.

To achieve action appropriate assessment tools are also needed. Earlier policy documents propose the use of Transport Impact Assessment (TIA) and in this respect research into their use and application in Western Australia is currently in progress. TIA takes different forms in different countries. It is always underpinned by some form of statutory policy. For example in the Netherlands the 'ABC Location Policy' provides the framework for classifying and designating locations in development plans according to their accessibility characteristics. A classification of businesses according to their mobility profile is used by planners in order to match the business to the appropriate location. In this way the transport impacts and needs of development are duly assessed in the context of a balanced transport strategy.

In the UK and New South Wales TIA takes a different form. A classification of development proposals according to their potential impact on the transport network is applied. Those development proposals regarded as having a significant impact are required to provide a TIA. For example, guidelines from the Institute of Highways and Transportation, UK (1994, 1999) suggest a TIA should normally be produced where thresholds exceed 5% or 10% of traffic flow (depending on congestion levels), or where

certain land use types exceed specified floorspace/unit sizes. Where a TIA is required a checklist of information is sought which encourages the designer to provide for safe vehicular access, including access by all modes of transport. The UK government is now drafting a policy which will further enforce these requirements

In Western Australia at present there is no such system. Instead local planning authorities request such information on an ad hoc basis and what information is required depends upon the skill and perspective of the assessor. Moves towards TIA are proposed in the Liveable Neighbourhoods. A list of information required for assessment includes many of the items required in the UK model. However at present this code is discretionary and only applies to new broadacre development sites.

### Players

Key players in the property industry as well as planning agencies and other government structures influence development decisions. The influence of the public as groups or individuals is also significant. Input from these players may be formally provided within the planning process. Equally important are the informal mechanisms for informing decision-makers in the planning sphere. For effective integrated land use and transport planning it is important to understand and provide for these players in the decision-making process. This is often difficult where balanced transport outcomes through land use planning are long-term or diffuse compared to more immediate resource or electoral benefits.

Steps will be needed to ensure integrated land use and transport planning is not hindered by problems of institutional, sectoral or administrative boundaries. All agencies must be involved and have a clearly articulated role to play. An integrated strategy involves not only the physical relationship between land use and transport uses/networks, but also the administrative relationship. This calls for the coordination of agencies, services and operations to ensure the side effects or spin-off benefits of one department's initiatives are fully utilised by other departments. In this way we can ensure true integration and then benefit from the implementation of a total package of measures.

Some examples of action here would include integration between transport providers and strategic planners. For example working together to agree on the role of each rail station in the metropolitan area. Which stations should be developed as a destination for work and retail uses or should they remain as commuter stations in residential locations? Which stations should be promoted as transit oriented precincts with walking and cycling access as priority, which should have park and ride? Once agreement is reached, both groups can proceed with a plan for the integration of transport provision and development proposals.

In another example a local authority at one of the strategic regional centres wishes to pursue a city centre access and transport strategy including proposals to encourage modal shift away from the private car. The authority can control car parking through supply and pricing, but need to ensure access by other modes. A study of access to the centre by walking and public transport from the city's residential suburbs (Curtis C,

1999) found that residential areas were not well served by public transport outside the weekday morning peak. The means by which local government can achieve improvements to service levels are limited since they do not control public transport. The system of Local Transport Plans in the UK (formerly Transport Policies and Proposals) has some merit in this sphere

UK local authorities must prepare a Local Transport Plan every five years setting out their strategy for all modes of transport. The plans are an important element of central government funding to local government, which together with funds local government can get from cash in lieu of car parking provision mean they can be pro-active in providing for access by all modes of transport, and working in partnership with public transport providers. Further proposals in the government's White Paper (DEIR, 1998) will enable local government to collect a tax on private non-residential parking spaces, and for road pricing on congested local roads.

Pricing mechanisms such as these or parking or taxation initiatives on particular land uses are other means of encouraging action for balanced transport outcomes. For these controls to be effective (particularly in respect of competition between competing centres) state-wide coordination will be needed.

Finally, gaining community support for balanced transport objectives will be at the root of any push towards implementation. Whilst there are groups within the community which support such a strategy, what is needed is for the majority of the community to be in support. This can be achieved through education and awareness raising. Frequently, users do not recognise they are part of the problem. At present there is no elected political body with a direct interest in such a programme of community awareness. Consequently there is no mandate for significant improvements in transport sustainability that require state as well as local government action to affect travel behaviour.

### **Conclusion**

This paper has shown the complexity of decision-making processes in support of balanced transport and the way forward in the form of clear direction, strong regulatory support, and assessment practices that are explicitly drawn from policy. Effective action must be underpinned by those with a long term interest in an integrated strategy. This is the whole community, today and tomorrow, with the elected governments. Such action will not occur if we continue to respond to the wishes of players with a short-term special interest in narrow financial outcomes. Effective action may not equally benefit all stakeholders and the challenge remains for evaluation processes which value long term consequences in an appropriate manner given the national, state and local commitment to sustainable development.

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