INTEGRATED TRANSPORT SOLUTIONS UNDER THE LAND TRANSPORT MANAGEMENT ACT 2003

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Abstract

The release of the New Zealand Transport Strategy and the enactment of the Land Transport Management Act 2003 ("LTMA") represent a fundamental change in the funding and management of land transport in New Zealand.

Under the new statutory regime of the LTMA, Transit New Zealand ('Transit') will play a greater role in processes that relate to land use proposals which have the potential to adversely affect the integration, safety, responsiveness or sustainability of the transport system, particularly in regard to state highways.

Transit aims to take a more strategic approach to state highway planning to consider economic, environmental and social issues. This will require a stronger focus on working collaboratively with territorial authorities in particular to ensure an integrated and consistent approach to land transport management.

The issues that will be discussed in this paper include:

- *Integrated transport planning*
- *roading hierarchy*
- *access management*
- *travel demand management*
- *reverse sensitivity.*

1 Introduction

Transit New Zealand ('Transit') is currently revising its procedures and the way it conducts business in response to the Land Transport Management Act 2003 ('LTMA'). It is developing solutions under the LTMA that give effect to the Act. Transit's new and evolving policies have potentially widespread impacts, for developers and territorial authorities. The focus of this paper is on 'integrated solutions', which Transit has implemented as a result of the new legislative mandate. Part of Transit's response has included a reorganisation of Transit's staff to establish a dedicated Transport Planning team which aims to take a more strategic approach to state highway planning – taking into account social, environmental and economic factors, and to influence other players in the wider transport system to do the same. The team is focussed on working collaboratively with territorial authorities to ensure a consistent approach to land transport management and integration of roles. This paper first outlines relevant aspects of the LTMA it then goes on to present Transit's views on roading hierarchy, access management, travel demand management and reverse sensitivity. These are outlined below along with key messages from Transit's guiding environmental document the *Transit Environmental Plan (Version 1 – November 2004)*. These initiatives are fundamental to achieving integrated transport solutions under the LTMA.

2 New legislative framework

2.1 Land Transport Management Act 2003

The release of the New Zealand Transport Strategy and the enactment of the LTMA represent a fundamental change in the funding and management of land transport in New Zealand. This change arose from Government recognition of the interaction between changes in land use, traffic growth and pressures on the land transport system. The New Zealand Transport Strategy ('NZTS') was released in December 2002. The Strategy identifies the principles of:

- Sustainability
- Integration
- Safety
- Responsiveness

To align with the above principles the Strategy sets out the following five transport objectives:

- Assisting economic development
- Assisting safety and personal security
- Improving access and mobility
- Protecting and promoting public health
- Ensuring environmental sustainability

In November 2003 the LTMA was enacted. The LTMA implements the principles of integration, safety, responsiveness, and sustainability identified in the NZTS.

2.1.1 Transit's statutory objective and functions

Transit was established under the Transit Act 1989, as a statutory body with the primary focus of operating a safe and efficient state highway system. Under the new legislation Transit's statutory objective, as defined in Section 77 LTMA, is:

> *"(1) To operate the State highway system in a way that contributes to an integrated, safe, responsive, and sustainable land transport system.*
>
> *(2) In meeting its objective, Transit must exhibit a sense of social and environmental responsibility…"*

Transit therefore is now required to play a greater role in resource management processes that relate to land use proposals which have the potential to adversely affect the integration, safety, responsiveness or sustainability of the state highway system. To assist Transit to respond to the 'new drivers', Transit developed its Strategic Plan which contains the following five goals:

1) Ensure state highway corridors make the optimum contribution to an **integrated** multi-modal land transport system

2) Provide **safe** state highway corridors for all users and affected communities

3) State highways will enable improved and more reliable **access and mobility** for people and freight

4) Improve the contribution of state highways to **economic** development

5) Improve the contribution of state highways to the **environmental and social** well being of New Zealand, including **energy** efficiency and public **health**.

2.1.2 Key themes

The LTMA marks a significant change in direction from previous land transport legislation. This change in direction is reflected in three key emerging themes:

- Sustainability;
- Integrated management; and
- New funding arrangements.

2.1.3 Sustainability

The LTMA places a new emphasis on land transport being managed in a sustainable manner which is reflected in:

- Purpose of the LTMA which is to contribute to the aim of achieving "an integrated, safe, responsive and sustainable land transport system" (section 3);
- Amendments to the statutory objectives of Transit (the body responsible for the State highway system) and Land Transport New Zealand (responsible for funding State highways and other land transport projects) – which now incorporate sustainability considerations (sections 77 and 68);
- Requirements for Transit and Land Transport New Zealand to exhibit a sense of social and environmental responsibility in all new activities and decisions
- Five sections of the LTMA that refer to the NZTS objectives which include "ensures environmental sustainability" (sections 12, 19, 20, 48 and 58).

With the growing emphasis on long-term sustainability, Transit is focusing more on promoting and protecting the strategic function of state highways. Transit must ensure that the state highway network is sustainably managed given its pivotal role in our economy and society. Transit's role under the new statutory regime has changed from road builder/operator to manager of a land transport system. This relates to a change of thinking from operating road corridors in a safe and efficient manner to integrating the transport system with land use planning. The national state highway system is one of New Zealand's key infrastructural

assets. In the transport sector it occupies a unique position in the roading hierarchy by providing national and regional strategic links.

Achieving a sustainable land transport system requires Transit and other transport infrastructure providers to collaborate in order to protect the strategic function of state highways and integrate local roads with the state highway network. Sustainability requires appropriate recognition of the roading hierarchy in regional and district planning documents. Protection of the through traffic function of the strategic roads (such as State highways) in this classification is vital to ensure the longer-term viability of these routes. Transit must engage in regional and district planning processes to see that decisions result in an appropriate level and nature of land use development next to existing and future key arterial routes. This will ensure a joint contribution to the land transport system in an integrated and sustainable way.

Sustainable transport planning requires planning and environmental management to reduce the adverse effects of state highways. This means a consistent approach by territorial authorities to land use planning and to reducing reverse sensitivity effects through district plan provisions (which will be addressed later in the paper). It also requires other modes of travel such as rail and ferries to be considered, with implementation of measures to actively manage travel demand.

2.1.4 Integrated management

Integrated management removes the emphasis from planning for roads in isolation, and focuses on planning for land transport as a whole, with public passenger transport and demand management solutions incorporated. At a national level, an integrated and sustainable transport system is critical to the social, economic and cultural wellbeing of the country and its people. Transport infrastructure represents a physical resource, which requires careful management.

Transit's statutory objective is a clear example of an integrated management approach:

- **Old legislation: Transit Act 1989** "to operate a **safe and efficient** State highway system";

- **New Legislation: LTMA**: "to operate the State highway system in a way that contributes to an **integrated, safe, responsive, and sustainable land transport system**".

The LTMA also provides a new directive for Transit to give "early and full consideration to land transport options and alternatives". Transit must consider the integration of road/rail/ferry transport and pedestrian and cycle facilities or in other words modal integration. Making sure that alternative options for transport have been considered provides for a more fully integrated (transport) system. In addition, the long-term planning of local roads and state highways needs to integrate transport system planning with appropriate land use development.

3 Transit's solution - implementation of new directives at district and regional planning level

Examples of how the new "sustainability" and "integrated management" directives of the LTMA are being implemented by Transit at a district/regional planning level:

- roading hierarchy;
- accesses onto the state highway;
- Travel Demand Management; and
- reverse sensitivity effects on development adjacent to the state highway.

3.1 Roading hierarchy

Transit has long recognised the roading hierarchy classification as an important planning tool to offer protection to managing its state highway network in a safe and sustainable manner. The LTMA has given new impetus to this tool as a means of achieving a better integration of land use and transport, and Transit will proactively seek its inclusion in regional and district planning documents.

Transport services and land use need to be aligned so that the Strategic routes[1] and transport corridors are protected from activities that can compromise their efficiency and safety. *The Auckland Regional Land Transport Strategy 2003* sets out the definition of the roading hierarchy relevant to the Auckland region this is included as Appendix 1.

Transit will look at whether planning document policies need further development to give assurances that the needs of through traffic on Strategic routes are recognised, and that the routes will be maintained and developed to cater for various forms of traffic (including trucks, passenger transport, cars and bicycles) that need to use the roads. Territorial authorities will be encouraged to include plan provisions which ensure land use and property access are compatible with frontage road operations and objectives at all levels of the roading hierarchy.

3.2 Land use planning

Sustainable transportation planning is directly related to many land use planning issues. Effective land use planning can allow communities to be better connected, reduce reliance on private motor vehicles, reduce travel distances and assist the road network to be managed in a sustainable manner. Transit and territorial authorities must carefully consider land use and transportation options in response to urban development pressures which are driven by population growth. For example, in Auckland it is anticipated that population will reach two million by 2050[2]. Transit will be seeking active involvement in processes such as, structure plans to ensure that land use and transportation are considered together. Transit will seek to ensure that any land use plans include a package of complementary transport initiatives for

[1] Auckland Regional Land Transport Strategy 2003

[2] Auckland Regional Council: 1999 *Regional Growth Strategy*

example, arterial roads, bus/rail stations, park and ride along with a funding plan to support such initiatives.

3.3 Accesses onto the state highway

In recognition of the issue of access onto the highway and the new direction in land transport management under the LTMA, Transit has reviewed its approach to state highway access and now places more weight on the long-term implications of access from land use and subdivision activities. Transit recognises that the most significant direct effect from adjacent activities on the operation of an integrated, safe, responsive and sustainable state highway system is that of turning traffic associated with accesses and side roads.

Proliferation of ad hoc access is a risk to the sustainability of the state highway network and can compromise long-term efficiency and sustainability of the network. In this regard, Transit is using both the RMA consenting process, and its powers under the Transit Act in respect of control and management of state highways (including Limited Access Roads), to actively manage:

- all new accesses on to State highways; and
- proposals to increase intensity of use of existing accesses on to state highways.

This will ensure accesses that compromise the operational integrity of the network are avoided or at least minimised. Some of Transit's emerging principles in this regard are outlined below:

1) All new access proposals are assessed in the context of a *plan* for the relevant network that focuses on how an integrated transport/land use mix will be provided that does not compromise the sustainability of the state highway network.

2) All new access proposals are assessed in the context of a *package* of measures to ensure that an acceptable level of service on the state highway is sustained in the long-term. Measures include: land use zoning and activity rules, structure plans, restrictive covenants, physical works to ensure safety, travel demand management techniques, assessment of cumulative effects and Limited Access Road implications.

3) Long-term thinking is essential when considering access proposals. Relevant considerations include: how will this access proposal impact on the network in 10, 20, 30 years time? What other activities are likely to appear in the area as a result of this access? What message does it send to other developers? Does the access, in combination with traffic and land use trends, create a problem for network capacity and integration?

4) Safety is a core dimension of a sustainable network. Access proposals that materially compromise road safety are not acceptable. In addition, the proliferation of accesses along a State highway compromises safety and responsiveness.

5) Efficiency is a core dimension of a sustainable network. Opportunities to rationalise the number of accesses on to a state highway should be taken, and traffic generators in congested areas are strongly discouraged. The use of alternative local roads is preferable to direct access to a state highway.

The upshot of this strengthened management approach is that Transit now requires more comprehensive information about access proposals than traditionally, particularly in respect of how the access proposal fits into the "bigger transport/land use picture". It is important that developers and councils consult with Transit early in the consent process so that any potential adverse effects can be identified and addressed in development proposals at an early stage. To achieve this Transit will need to actively engage with all territorial authorities and work collaboratively to ensure accesses that compromise long-term efficiency and sustainability of the network are avoided or minimised. This will, however, require further investment in skill development and appropriate resourcing.

3.4 Travel Demand Management (TDM)

It is evident that travel demand is increasing to unsustainable levels as a consequence of economic development driving population growth particularly in the northern part of the North Island and a high level of vehicle ownership. It is no longer enough for Transit to simply predict demand and provide for it as well as possible. Measures to actively reduce demand must also be a part of the solution. At the same time the modal split in the use of public transport is very low by overseas standards. An example of this is the recent bus strike in Auckland which had no noticeable impact on network congestion. This suggests that building further capacity is not necessarily the solution and we need to take note of examples used overseas. TDM is concerned about bringing efficiencies into existing transportation systems, and relies heavily on land use management and planning to give it effect.

For Transit, the introduction of travel demand management measures is a required component of the NZTS, the Local Government Act (LGA) 2002, and the LTMA. It is a pre-requisite of the forward funding of all major projects and underpins Transit's transport planning and delivery function.

As well as specific travel demand management measures (such as ramp metering and road pricing), restraining the demand on the State highway network is contingent on other components of the land transport system. These include the local road network, urban/rural development and the availability of other transport options (such as rail, ferries, etc).

To be effective, and recognising that individual trips typically span all levels of the network hierarchy, the overall task of addressing TDM needs to be undertaken collaboratively and in a multi-layered approach in cooperation with other planning and road controlling agencies. This is being actively pursued through a pro-active and continuous programme of ongoing engagement and support to central, regional and local government agencies at all levels.

Such liaison requires working with government agencies including Ministry of Transport and Land Transport New Zealand; with the newly established Auckland Regional Transport Authority; and elsewhere across New Zealand with particular local authorities. It is intended that Transit will implement within the 2005/06 year, the following principal elements of its Travel Demand Policy:

- policy development and delivery of a national integrated strategy;
- commissioning of comprehensive motorway management schemes including ramp metering and priority measures;

- expanded delivery of traveller information services;
- expanded support for alternate modes;
- identify and pursue relevant regional priorities; and
- widened and more active current involvement in transport planning.

Associated with the above principal elements is the development and delivery of widened Transit support for improved public transport, increased walking and cycling, parking controls, car pooling, the introduction of travel plans for educational institutions and businesses, and for actively increasing public awareness of the social and environmental costs of travel.

3.5 Reverse sensitivity

The State highway system can provide a range of significant opportunities and benefits to adjacent communities including access to rural and residential developments, to retail and commercial activities, and as a feeder into a district's road network. Such opportunities and benefits can assist the overall community's social and economic well being. Transit is motivated to ensure we all have responsibility for facilitating the government's goal of quality urban environment and sustainable cities (refer Ministry of Environment. *Sustainable Development For New Zealand, Programme of Action*, March 2003, Government Publishing, Wellington). It needs to be noted that the Transport sector is a key player in the enhancement of urban amenity.

Given the importance of the state highway system, it is essential that the adverse effects on the network arising from adjacent activities are avoided, remedied or mitigated. Of considerable importance, is the effect of incompatible land uses establishing next to, or in close proximity to, the state highway resulting in conflict between the activities – the concept is commonly known as reverse sensitivity.

The state highway is an *effects-producer*. A land use or *sensitive receiver* that is susceptible to the effects of the state highway can include:

- residential and people generating activities such as schools, institutions, and places of assembly;
- upgrading existing developments adjacent to the state highway; and
- a district plan change altering the zoning of land adjacent to the state highway e.g. from rural to residential.

Transit is therefore exposed to the risk of potential action taken by a *sensitive receiver* which can include suing for nuisance, taking enforcement action under the RMA, and opposing any application by Transit for public works under the RMA. Situations occur where tension between the rights of Transit to operate the State highway system, and that of a *sensitive receiver's* right to develop their land as they wish or to enjoy their property free from unreasonable interference or nuisance.

Reverse sensitivity, if not adequately addressed, has the potential to erode away a lawfully established activity. Objectionable levels of noise, vibration and dust can give rise to complaints which can compromise Transit's ability to operate the state highway system in sustainable manner.

Transit is currently developing guidelines for reverse sensitivity effects of developments adjacent to the state highway network. Transit's Environmental Plan (2004) states that it is Transit's intention that this will include guidance as to what reverse sensitivity is, the appropriate balance of mitigation requirements, and will include techniques such as:

- Transit input into district and regional plans;
- "No-complaint" instruments, including encumbrances, side agreements and consent notices;
- Notices to landowners through district plans, designations, written approvals and submissions on resource consents;
- Land acquisition including segregation strips alongside critical road corridors;

Transit's draft policies for mitigating and minimising the adverse effects of reverse sensitivity are outlined below:

(i) To take all reasonable measures to minimise and internalise the adverse effects of the state highway within the transport corridor and designated area.

(ii) To use the provisions of the RMA to protect the state highway from inappropriate activities, and to ensure the adverse effects of adjacent development are remedied or mitigated.

(iii) To participate in the RMA submission process for a subdivision or land use application adjoining, or within close proximity to, a state highway that has the potential to compromise the sustainable operation of the state highway.

(iv) To participate in the district and regional plan process by providing guidance on amenity values, and the standards expected by communities.

(v) To use the designation process to create buffer zones or building setbacks along the highway corridor to mitigate the adverse effects of the state highway.

(vi) To encourage and develop best practice techniques in managing the effects of reverse sensitivity.

3.6 Transit's Environmental Plan

In response to the new 'sustainable transport' mandate from a new government strategy and new legislation, Transit responded on many fronts some of which have been discussed earlier in this paper. Alongside initiatives to manage access, travel demand, reverse sensitivity and promote tolling was the development of a new Environmental Plan.

The purpose of the Environmental Plan is to improve public health and environmental sustainability in New Zealand. This reflects the NZTS focus on ensuring environmental sustainability and protecting public health. It also supports one of the five strategic goals in the 2004 Transit Strategic Plan: "Improve the contribution of state highways to the environmental and social well being of New Zealand, including energy efficiency and public health."

Essentially what the Plan does is, to take the requirement to 'exhibit a sense of social and environmental responsibility' from the LTMA and translate it into Transit's business. The Plan contains an overarching one-page Environmental Policy that applies to the whole of Transit's business including activities by consultants and contractors when working for Transit. The simplicity of a one-page policy attempts to avoid the problems created by a raft of different policies located in different places.

The purpose of the Environmental Policy is to guide decision making by confirming Transit's commitment to social and environmental responsibility and conveying Transit's priorities in the area. It contains six key messages, with explanatory text, to ensure everyone from Board members to contractors can refer to Transit's environmental priorities with ease. Those key messages are that Transit will be environmentally and socially responsible by:

(i) Protecting and enhancing the environment

(ii) Avoiding adverse effects to the extent reasonable in the circumstances

(iii) Using and managing resources efficiently

(iv) Considering environmental issues early

(v) Contributing to sustainable outcomes by working with others

(vi) Continually improving environmental performance.

The Plan then addresses each key issue at the transport/environment interface, with the Environmental Policy and an environmental risk assessment being key influences. To reflect the importance of tracking Transit's performance, a set of performance measures has been developed for each issue and will be reported against in Transit's triple bottom line annual report.

The key issues covered by the Environmental Plan are:

(i) Noise levels – including day to day operational noise from vehicles using the network and noise from road construction and maintenance activities. The aim being to reduce exposure to unreasonable noise, especially on the existing network.

(ii) Air quality – emissions to air from vehicles are a key concern due to their effects on human health and climate change. Improving our knowledge of State highway vehicle contributions to air pollution and investigating mitigation options is of key concern.

(iii) Water resources – covering water that runs off roads, which contains contaminants, and road design and construction, which affects natural water paths and flows. It is important to avoid harm to sensitive receiving waters from contaminated road runoff.

(iv) Resource efficiency – referring to the opportunities that roading offers to reduce waste sent to landfills and improve the energy efficiency of the transport system.

(v) Culture and heritage – referring to all forms of culture and historic heritage that require protection and management. These special resources need to be managed on a case by case basis and the Plan supports strengthened relationships with key agencies in these areas.

(vi) Visual quality – including the aesthetic form and appearance of state highways in cities, towns and rural areas. The Plan aim is to significantly improve the appearance of state highway verges, batters and landscaping as well as integrate urban design concepts into state highway planning and design.

(vii) Ecological resources – referring to the preservation of indigenous biodiversity and the management of biosecurity risks. Preserving special indigenous resources whenever practicable.

(viii) Vibration levels – covering day to day operational vibration from vehicles using state highways and vibration caused by road construction and maintenance activities. Employing techniques to avoid or at least mitigate the harmful effects of vibration.

In addition to the environmental issues identified above, the Environmental Plan addresses various business practices. In doing so it recognises the importance of *how* Transit carries out its business. Adhering to these particular policies will strengthen the integration of land use and transport.

(i) Land-use planning – achieving an integrated, sustainable state highway network needs compatible land use planning provisions in district and regional planning documents. Transit is becoming increasingly proactive in this area because we recognise that transport and land use planning must be undertaken in parallel if future growth patterns and development issues are to depart from current trends.

(ii) Environmental advocacy – working with others to influence matters that Transit does not control, such as vehicle and fuel standards, helps to improve the overall environmental performance of the network. As pressure mounts on Transit to mitigate vehicle emissions, advocacy becomes more relevant than it has been in the past.

(iii) Contractual processes – sending the right messages and incentives to consultants and contractors and providing practical guidance is an integral part of improving environmental performance. Consultants and contractors deliver the goods on the ground and Transit recognises the pivotal role they play in the social and environmental responsibility equation.

(iv) Environmental assessment – gathering appropriate data and reporting regularly on environmental impacts will help Transit understand and improve its environmental performance. Transit recognises that the current lack of environmental data is a barrier to long term decision making, so the aim here is to implement processes to overcome this barrier.

In the long-term, an Environmental Management System will embed the Environmental Plan in Transit's business. The Plan forms the front-piece of that system and we are currently establishing the other necessary components, many of which exist but need to be brought together in one central system. The Plan is an evolving document and feedback is encouraged from all stakeholders. It will develop further as our environmental knowledge improves and as we learn from the experiences of our counterparts overseas. The current version is Version 1 and each version will be reviewed regularly as input from stakeholders is received. Please provide any comments you may have on the plan to: www.transit.govt.nz

4 Conclusions

This paper has reported on Transit's strategic and operational response to the Land Transport Management Act 2003. What is significant is that a more strategic approach is being taken to state highway planning – taking into account social, environmental and economic factors. Second, Transit is working collaboratively with territorial authorities to ensure a consistent approach to land transport management and to integration of roles and transport functions. Finally, Transit's development of an integrated solutions approach represents a significant step forward in the achievement of more integrated land use and transport planning in New Zealand.

5 Acknowledgements

Suzanne Janissen, Partner, Chapman Tripp Sheffield and Young *Land Transport Planning and Potential Impacts on Development.* A paper presented as part of "Hot House Seminar" an in-house seminar, March 2005.

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