

# Guidelines for undertaking Transport Assessments in New Zealand and Australia

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## **ABSTRACT**

The Auckland Regional Transport Authority (ARTA) published guidelines on undertaking Integrated Transport Assessments (ITAs) in the Auckland Region, in October 2006. These guidelines seek to ensure that adverse transport effects associated with development are **avoided or minimised**. This is in contrast to “traditional” Traffic Impact Assessments, which seek to **mitigate** the effects and have a natural focus on traffic rather than other transport issues.

The development of guidelines is expected to go some way towards ensuring that a Transport Assessment covers all aspects of the transport system and that developments, structure plans, or plan changes will be integrated with land use planning and that they will pay due regard to all relevant policies.

This paper will:

- set the context regarding the planning and transport situation in Auckland;
- summarise the contents of the ARTA ITA guidelines; and
- outline the availability of traffic or transport guidelines throughout Australia, and identify common ground and inconsistencies.

This paper seeks to respond directly to the conference theme: namely to seek to increase consistency throughout Australia (and New Zealand).

# 1 Introduction

This paper provides details on the development of Integrated Transport Assessment Guidelines, published by the Auckland Regional Transport Authority in October 2006. It also sets the scene regarding the Auckland context and sets out issues encountered in developing the guidelines.

The paper then compares the various guidelines for undertaking traffic and transport assessments throughout Australia and provides conclusions on the merits of seeking greater convergence within Australia (and indeed New Zealand).

## 2 The Auckland Context

Successful modern nations are based around thriving cities. The continued success of Auckland as New Zealand's major commercial and population centre, and only city of international scale, is vital to the nation's long-term prospects. To ensure this success, and the future well-being of the growing Auckland region, it is essential to plan and implement world-class transport and infrastructure. To ensure an integrated, safe, responsive and sustainable transport system, it is important that all elements of the system are considered in relation to each other and to the system's interaction with land use and development. Transport is not just a means in itself, but an integral component of modern life, with multiple dimensions and perspectives that affect our day to day lives.

The Auckland region is New Zealand's only city-region of international scale, representing over one third of the economy. It is home to around a third of New Zealand's population and contributes a third of national gross domestic product.

The most significant driver of the development of the Auckland region's transport system is its rapidly growing population and economy. In 2006, over 1.3 million people were living in the region and it is estimated that by 2021 the population will have grown by 440,000 people – the current population of Greater Wellington - and it will accommodate around 37 percent of the national population. By 2041 it is expected that 2 million people will be living in Auckland.

To accommodate this growth the Auckland region developed the Regional Growth Strategy (RGS) in 1999. This Strategy highlights the intention that growth in the region should be focussed within the existing metropolitan urban limits, with the majority of growth to occur within identified centres and along corridors. However, while the RGS was adopted in 1999, implementing the growth concept has been another issue for the region to contend with.

The Local Government (Auckland) Amendment Act 2004 (LGAAA) was enacted with the specific purpose of addressing the difficulties faced by Auckland and its specific transportation concerns. It offered the Auckland region a unique opportunity to both accommodate future growth in a sustainable manner and to support the development of a world class transport system for the region.

Along with establishing the Auckland Regional Transport Authority (ARTA), the LGAAA also required the regional council and seven territorial authorities to change the Regional Policy Statement and the district plans to integrate the land transport and land use provisions and make those provisions consistent with the Auckland Regional Growth Strategy.

### 3 Who is ARTA?

ARTA was established on 1 July 2004 under the LGAAA, and began operating on 1 December 2004. ARTA is responsible for implementing the goals set out in the Regional Land Transport Strategy (RLTS). On a day to day basis, ARTA carries out the planning and funding of public transport, promotes alternative ways to get around Auckland, and coordinates and integrates transport across the region.

If ARTA is to invest public money with confidence it needs to be satisfied that future land use planning across the Auckland region will be co-ordinated with the requisite passenger transport investment and service improvements. Future land use planning must also be:

- sufficient to support the planned passenger transport services;
- appropriately located in areas that can be served efficiently by passenger transport;
- designed to ensure good access by, and to, passenger transport; and
- encourage use of passenger transport by providing high density multi-purpose (mixed use) development close to transport interchanges and stops, as well as by integrating development with passenger transport infrastructure.

ARTA developed three key land use and transport planning principles that have influenced its submissions on plan changes. These principles are:

- facilitate the development and implementation of appropriate transport infrastructure;
- ensure that transport considerations do not have a detrimental effect on urban form; and
- promote and encourage the development of a land use form that supports passenger transport and travel demand management.

A key aspect of the development of these principles is that while instrumental in informing ARTA's response to the plan changes, and subsequent resource consent applications, future plan changes, structure plan processes and such like, they also influence ARTA's planning, programming and decision making processes with respect to transport investments.

In order for ARTA to successfully fulfill its statutory obligations, it has a role in ensuring that a high degree of integration between land use and transport planning takes place.

Effective land use and transport integration require land use provisions which facilitate the development of long-term transport solutions, while also providing for land uses that support sustainable management within the Auckland region.

Appropriate land use provisions within the RPS and district plans can help deliver sustainable transport outcomes. Inappropriate land use provisions are more likely to hinder or prevent positive outcomes for both transport and land use from being realised. The relationship between land use and transport planning is fundamental to the ongoing success of the Auckland region.

The development of the Integrated Transport Assessment Guidelines is a direct result of the requirement to integrate land transport and land use provisions in the Regional Policy Statement and district plans.

## 4 Why develop guidelines?

Clearly a question to consider at the outset is “why did we need guidelines”. Guidelines have been developed elsewhere, notably in Scotland and more recently in England and Australia, but this in itself was no reason to assume that guidelines were necessary for New Zealand. As noted above, the Auckland Regional Policy Statement now refers to the need to undertake “Integrated Transport Assessments” and it seemed desirable for this term to be properly defined, with guidelines available as to what is entailed. However, we suggest that the need is more fundamental than this, as it just makes sense that guidelines are provided on how to undertake transport rather than traffic assessments.

The expectations of Traffic Impact Assessments are now fairly well known, and many consultants have sought to widen out the ambit, such that their reports are now termed “Transport Assessments”. However, the coverage of the “non traffic” issues is very varied, and it is apparent that many consultants are still delivering “traditional” traffic impact assessments, without due regard to national (New Zealand), regional and local strategies and policies to reduce the demand for travel and to reduce the dependence on travel by single occupancy private vehicles.

New Zealand legislation refers to the need to “avoid, mitigate or remedy” adverse effects. We would suggest that traditional traffic impact assessments seek to **mitigate** effects, whereas an integrated transport assessment can consider the potential to **avoid** adverse effects.

We also suggest that there is currently too much “advocacy” with current assessments. It is probably not too controversial to suggest that many consultants copy the conclusions to their assessments from their previous ten assessments, even before writing the rest of the report. This predetermined conclusion will say “this report has demonstrated that the proposed development will have no more than minor effects on the adjacent road network”. It is maybe naïve to suggest that new guidelines will miraculously resolve this issue, but there is an emphasis in the ARTA guidelines on the identification of all positive and negative effects.

## 5 ARTA's Integrated Assessment Guidelines

### 5.1 Background

ARTA is trying to be more proactive, rather than reactive, to structure plans, plan changes and resource consent applications. Proposed method 2.6.12.8 in Plan Change 6 of the Regional Policy Statement, as notified, stated:

*“TAs (Territorial Authorities) shall ensure that proposals for new major traffic generating activities are subject to a transport audit as a specific part of the Assessment of Environmental Effects (AEE). The audit should include an evaluation of the applicant's proposals, assumptions regarding how transportation needs will be met, tangible proposals for meeting those needs including costings and the identification of sources of funding, and the proposed parking provision.”*

Following notification of the plan change, ARTA and the Auckland Regional Council developed guidelines for undertaking such audits. During the process of developing the guidelines, ARTA consulted with a number of different parties (councils, developers, interest groups etc) and it quickly became apparent that the title “Transport Audit” gave the wrong impression. Audits are often carried out after the fact, rather than prior to anything proceeding. It was therefore determined that a more appropriate name for the guidelines would be “Integrated Transport Assessment (ITA) Guidelines”. As it turns out, the ITA acronym has been useful, as we have emphasised in all presentations that the guidelines represent a natural change in emphasis “from TIA to ITA”.

There was also significant apathy and/or antipathy from a number of local council officers that they didn't need any help from ARTA, they knew what they were doing, they had been doing it for years. However, ARTA presented evidence to the LGAAA Hearing Panel on the ITA Guidelines and were able to provide the Panel with evidence of where the ITA Guidelines had been applied and the value that they added to the process. We have now received the decisions on the plan changes and the requirement for an ITA to be undertaken is included in the policy statements and plans.

### 5.2 The Guidelines

The guidelines were developed by ARTA officers with input from Ian Clark of Flow Transportation Specialists. They were developed by reference to current practices in preparing Transport (as opposed to Traffic) Assessments, guidelines from overseas (particularly the Scottish Executive Guidelines of 2006) and with reference to national, regional and local policy objectives within New Zealand.

The development of the Guidelines is to assist and provide certainty around what is required for an ITA. The Guidelines state that the ITA should:

- provide information on how the proposed development fits in with regional and local policies and objectives (or at least does not compromise them);
- provide information on how a proposed development will function in terms of its accessibility by all modes;
- ensure that development is located, designed and managed to promote access by a choice of modes; and
- identify and mitigate any adverse impacts on the transport system.

The aim in developing the guidelines was therefore to ensure that assessments address the same questions, and that these are “the right questions”.

The Guidelines emphasise the importance of an initial scoping exercise, which is to be agreed with the relevant authorities. This is intended to provide developers and consenting authorities with certainty in regard to what is required from the assessment, thus avoiding surprises. This requirement is also intended to recognise that no two assessments will be the same, so the scope of each will be different.

The Guidelines indicate that an ITA should be carried out for the following:

- An extension to the Metropolitan Urban Limit;
- A Structure Plan Process;
- A Plan Change; and
- A major trip generation activity.

The Guidelines include suggested thresholds for what is to be considered to be a major trip generating activity, requiring a full ITA (see Table 1 below) and state that an ITA should include the following:

- Planning and policy framework;
- Land use characteristics;
- Travel characteristics;
- Travel Times;
- Improvements to influence travel;
- Appraisal of impacts;
- Mitigating impacts; and
- Summary and conclusion.

Further details are provided in the Guidelines, which can be found at:

<http://www.arta.co.nz/xxarta/plans-and-policies/>

The guidelines assumed a certain familiarity with Traffic Impact Assessments and guidance on this aspect of ITAs was fairly limited. Since the completion of the Guidelines, ARTA has developed additional guidance on where to find information on topics to be included within the assessments, such as sources of trip rate information, design guidelines, other traffic and transport assessment guidelines and so on. This is expected to be available “on line” by the time of the AITPM conference.

Incidentally, the next paper, on trip rate and parking databases refers to the work being undertaken by the New Zealand Trips and Parking Database Bureau to develop guidelines for Transport Assessments for New Zealand as a whole.

## 6 Practices within Australia

### 6.1 Guidelines within Australia

In order to prepare this paper, we have reviewed the contents of several Australian guideline documents on undertaking Traffic and Transport Assessments, including:

- “Guidelines for Assessment of Road Impacts of Development” (2006), Queensland Government, Department of Main Roads (DMR). As noted by the title, this document is concerned with “road impacts” rather than wider transport effects. Also, it is also geared around the effects of developments on roads within the control of DMR, namely the state controlled road network.
- “Guidelines for Transport Impact Assessment Reports for major land use and development proposals” (2006), Vicroads’. This is a fairly short document which refers to the policy and strategic context, but appears to focus on “traffic impact” rather than issues of “transport impact. However, reference is made to forthcoming guidelines on “Integrated Transport Plans”, which sound like taking the existing guidelines closer to those for Auckland.
- “Transport Assessment Guidelines for Developments” (2006), Western Australia Planning Commission. This is a weighty document which is divided into five volumes. Volume 1 provides general guidance, with volumes 2 to 4 providing guidance on assessments for structure plans, subdivisions and individual developments, respectively (including detailed checklists for these three types of project) and volume 5 providing a more detailed technical appendix. The Guidelines relate to traffic impact and other transport related issues, including details on how to assess accessibility by all modes of transport and the integration of the proposal with surrounding land uses. The Guidelines also recommend an iterative process, between the development of desired land use and transport outcomes, in order to avoid adverse effects, where possible.

We are aware that Austroads is developing “Guide to Traffic Management Part 12 – Traffic Impacts of Developments”, which is due for publication in 2008 and we have viewed a draft. However, given the current status of this document, as an early draft, we consider it inappropriate to comment on the contents in detail at this stage.

## 6.2 Comparison of Guidelines

This section of the paper seeks to compare the contents of the various Australian guidelines with the ARTA guidelines.

Most guidelines follow a similar pattern in the terms of the general content of a Traffic or Transport Assessment, namely:

- Existing conditions;
- Proposed vehicle access arrangements;
- Traffic generation;
- Proposed parking and loading facilities;
- Future base case – without proposed development;
- Future scenario with development;
- Mitigating treatment; and
- Conclusions.

There are several areas where the guidance differs. Examples are:

- the thresholds requiring an assessment;
- the design years;
- the extent (i.e. the boundary) of the assessment;
- the operational targets; and
- recommended sources of trip rates.

Also, as noted above, key differences between the assessments relate to the consideration of land use and transport integration and the degree of consideration required for all modes of transport, and the extent to which District Plan zoning policies should complement regional transportation policies.

### 6.2.1 Thresholds

Table 1 below summarises the thresholds for undertaking a traffic or transport assessment. With the ARTA and Vicroads, there is only one tier for assessments, whereas with the Western Australian document there are two tiers. Where impacts are considered to be “medium” a lower order assessment termed a “Transport Statement” is required, whereas for “high impact” developments a “Full Transport Assessment” is required. The thresholds in the following table relate to the definition of “high impact”.

**Table 1: Thresholds for undertaking Traffic/Transport Assessments**

	<b>Auckland (1)</b>	<b>Victoria (2)</b>	<b>Queensland (3)</b>	<b>W. Australia (4)</b>
Residential	100 dwellings	75 dwellings	Not specified	100 dwellings
Retail	1,000m <sup>2</sup>	500m <sup>2</sup> GFA (5)	Not specified	1,000/2,500m <sup>2</sup> (6)
Office	2,500m <sup>2</sup>	5,000m <sup>2</sup> GFA (5)	Not specified	5,000 m <sup>2</sup>
Industrial	5,000m <sup>2</sup>	5,000m <sup>2</sup> (5)	Not specified	10,000m <sup>2</sup>
Warehousing	10,000m <sup>2</sup>	Not specified	Not specified	Not specified
Educational Uses	Not specified	50 students	Not specified	100 students

(1) Auckland Regional Transport Authority (2006) “Integrated Transport Assessment Guidelines”

(2) Vicroads (2006) “Guidelines for Transport Impact Assessment Reports for major land use and development proposals

(3) Queensland Government, Department of Main Roads (2006) “Guidelines for Assessment of Road Impacts of Development”

(4) Western Australian Planning Commission (2006) “Transport Assessment Guidelines for Development”

(5) Other thresholds are given for mixed use: retail and commercial, and commercial and industry.

(6) 1,000m<sup>2</sup> for food retail, or shopping centres with a significant food content, or 2,500m<sup>2</sup> for non food retail

All of the Guidelines state that the thresholds are flexible, and the Authorities reserve the right to request a transport assessment for smaller developments.

### *5.2.1 Design Years*

The guidance on which years to assess is as set out in Table 2.

**Table 2: Design Years for Traffic Operation Assessment**

<b>Guideline</b>	<b>Recommended Design Year</b>
Auckland	Not specified – to be ascertained during “scoping” process
Victoria	Access to site: should operate safely and efficiently for at least 10 years after completion  Same as situation without development, where practically possible
Queensland	10 years after opening (or 10 years after opening of final stage)
Western Australia	Structure plan: Year of full development  Subdivision: 10 years after full opening of subdivision  Individual developments: year of full opening plus 10 years later (or similar)

For details of sources, see footnotes to Table 1

### 6.2.3 Extent of Assessment

The guidance on the extent of the assessment is set out at Table 3.

**Table 3: Extent of Traffic/Transport Assessments**

<b>Guideline</b>	<b>Recommended boundary of assessment</b>
Auckland	Not specified – to be ascertained during “scoping” process
Victoria	Assessment to include all intersections and mid block location where any traffic movement will be increased by more than 10%
Queensland	Impacts generally considered “insignificant” if development impact predicted to be less than +5% relative to existing daily levels
Western Australia	All sections of road with predicted increase of >100 vehicles/hour, intersections with flows on any leg or movement predicted to increase by >10% and 20% (respectively)

For details of sources, see footnotes to Table 1

### 6.2.4 Operational Targets

The Queensland Guidelines include the following on the operational performance of the local road network:

- Signalised Intersections: 0.9
- Roundabouts: 0.85
- Priority Intersections: 0.8

Targets are not set in the Auckland, Vicroads or Western Australian guidelines.

### 6.2.5 Trip Generation

This is the topic of the next paper, so we do not dwell on this issue here, other than to note the recommended sources of data.

**Table 4: Recommended Sources of Trip Rate Information**

<b>Guideline</b>	<b>Recommended Source (s)</b>
Auckland	Not specified, but to be specified in forthcoming supplementary guidance as: New Zealand Trips and Parking Database (and related Transfund Research Reports) RTA “Guide to Traffic Generating Developments” (2002) ITE “Trip Generation” (2003) TRICS database
Victoria	Not specified
Queensland	RTA “Guide to Traffic Generating Developments” (2002) ITE “Trip Generation” (2003) Main Roads, local government and consultants databases
Western Australia	South Australia Guidelines, (1987) RTA “Guide to Traffic Generating Developments” (2002) ITE “Trip Generation” (2003)

For details of sources, see footnotes to Table 1

## 7 Conclusion

This paper has considered the development of traffic and transport assessment guidelines in Australia and New Zealand.

The need for guidelines is summarised in the Vicroads document as being to:

- *“Provide transparency and certainty in the assessment of land use development proposals and analysis to be undertaken by a road authority;*
- *Promote uniformity, and ensure fairness, in the consideration of larger land use development proposals by a road authority; and*
- *Facilitate early resolution of transport and access issues through the provision of timely and quality reports that reduce (but not necessarily eliminate) the need for discussion and negotiation between road authorities and developers, or their representatives, and reduce administration and rework”.*

At face value, there appears to be significant merit in developing guidelines on how to undertake transport assessments which relate to the whole of Australia and New Zealand. This is to develop a greater consensus and understanding of what is “best practice”. Also, in some areas, such as trip rate and parking demand, there appears to be significant value in developing recognised sources of information, as while local differences may exist, these are likely to be offset by the benefits of the economies of scale. However, on a number of issues, local differences are likely to be such that generic guidelines may be counter productive. In particular, the policy and political context will differ significantly between regions/states and this will affect the perceived importance on sustainability issues and the acceptance of congestion. This means it may be unhelpful to set guidelines which may be perceived as being too rigid on these issues, such as the importance of travel by modes of transport other than private and commercial vehicles (and therefore the form and extent of the assessment of other modes) and the targets for levels of service on the adjacent road network for general traffic.

## 7 References

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