IN THE MATTER of the
Resource Management Act
1991

AND

IN THE MATTER of Variation
12 to the Hamilton City
District Plan: Rototuna
Structure Plan

STATEMENT OF EVIDENCE OF HANNAH WINDLE
IN SUPPORT OF
NEW ZEALAND TRANSPORT AGENCY
INTRODUCTION

1.0 My name is Hannah Windle. I am employed by the NZ Transport Agency (“NZTA” or “the Agency”), where I have held the role of Transport Planner since 2008. Prior to that, I was employed by the Thames-Coromandel District Council for two years.

2.0 I hold Bachelor of Arts (Political Studies and Philosophy) and Bachelor of Commerce (Management and Economics) degrees from the University of Otago, and a Master of Environmental and Resource Planning Degree from Massey University. I am a Student Member of the NZPI. I am providing evidence in support of the NZTA’s submission in regard of the Proposed Variation 12 to the Hamilton City Council Proposed District Plan (“Variation 12”). I am authorised to give evidence in support of the Agency.

3.0 I confirm that I have read the Council officer’s report and associated supporting information. In addition, I am familiar with the Code of Conduct for expert witnesses contained in the Environment Court Practice Note and I agree to comply with it in this setting. I confirm that I have read the submissions and further submissions and considered all the material facts that I am aware of that might alter or detract from the opinions that I express. This evidence is entirely within my area of expertise unless I state otherwise.

SCOPE AND STRUCTURE OF EVIDENCE

4.0 The focus of my evidence is predominantly to assist the Commissioners in the evaluation of the effectiveness with which Variation 12 meets strategic planning objectives and policies, with particular reference to the integration of land use and transport planning. Specifically, my evidence will address the following matters:

- The NZTA’s statutory functions and responsibilities.
- The Waikato Expressway and its role as a Road of National Significance (RoNS).
- The Future Proof Growth Management Strategy.
- Summary of original and further submission points made by NZTA.
- A response to the Planning Report on Submissions and Further Submissions.
- My conclusions.

STATUTORY FUNCTIONS & RESPONSIBILITIES OF THE NZTA

The objective and functions of the NZTA

5.0 The statutory objective of the NZTA is “to undertake its functions in a way that contributes to an affordable, integrated, safe, responsive and sustainable land transport system”. 
6.0 In addition to the statutory functions, the NZTA’s functions that are relevant to Variation 12 include:

- “to manage funding of the land transport system...”
- “to assist, advise and cooperate with approved organisations”.
- “to manage the state highway, including planning, funding, design, supervision, construction and maintenance and operation in accordance with this Act and the Government Roading Powers Act 1989.”

The NZTA and activities that affect the State Highway

7.0 The NZTA is a Crown entity\(^1\), with the sole powers of control and management for all purposes of all State highways\(^2\). The NZTA is also a requiring authority and a network utility operator in terms of the Resource Management Act 1991 (“RMA”)\(^3\). Accordingly, the NZTA has an interest greater than the public generally to ensure the safe and sustainable function of the land transport network. In particular, the NZTA must promote the safe and sustainable function of the land transport system and ensure the land transport system is not adversely affected in a significant manner. In the case of Variation 12 the NZTA is concerned with the potential effects of population growth and associated residential development within the Rototuna area, on the roading network in general and the Waikato Expressway specifically.

Requirements of the GPS on land transport funding

8.0 In regard of integrated planning, the Government Policy Statement on Land Transport Funding (GPS) (2009) identifies that:

“The government is particularly concerned to see that better integration of land use, transport planning and urban design activity contribute to national economic growth and productivity. In particular, land use and transport planning processes should ensure that:

- the transport needs of future growth are considered in planning and developing the transport system
- future transport corridors are safeguarded from other development
- the long term sustainability of land transport funding is secured through ensuring that urban growth meets the costs of the infrastructural impact that such growth generates for the wider transport network
- opportunities are created for better integration within and between transport modes.”

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\(^1\) Section 94 LTMA.
\(^2\) Section 93(2) LTMA.
\(^3\) Section 61 GRPA.
\(^4\) Section 167 RMA.
Hence an integrated planning approach requires that land use and transport outcomes are considered together, and seeks to make the best use of existing infrastructure investments.

**THE WAIKATO EXPRESSWAY AS A ROAD OF NATIONAL SIGNIFICANCE**

9.0 The Waikato Expressway Road of National Significance (RoNS) represents a key section of State Highway ("SH") 1 generally between Auckland and Cambridge. SH 1 is New Zealand’s principal arterial route running the length of the North and South Islands. It links the cities of Auckland and Hamilton through to Wellington, as well as providing a key transport route between the Ports of Auckland and Tauranga and the inland Port at Hamilton. It forms the main connection to/from the Auckland International Airport providing access for tourists to other parts of New Zealand. These links are of high importance in sustaining the economic development of New Zealand as a whole, and the Upper North Island in particular.

10.0 The existing alignment of SH 1 throughout the area to be bypassed by the Waikato Expressway is experiencing increasing volumes of traffic between Auckland and Cambridge with a consequent decline in the levels of service experienced. The completion of the Expressway between the Bombay Hills to the south of Cambridge is aimed at addressing this decline. The sections of the Expressway already under construction or remaining to be constructed represent an investment estimated in excess of $2.2billion from the National Land Transport Fund.

11.0 In 2008, NZTA concluded the Waikato Expressway Strategic Evaluation, aimed at assessing the full impacts of completing the Waikato Expressway. The study included evaluation of the economic contribution of the Expressway, and identified the following expected wider economic outcomes:

- Improve international trade by providing quicker and more reliable connections between the Waikato and neighbouring regions to the Ports of Auckland, Port of Tauranga and Auckland International Airport. It will also help to improve the perception overseas visitors have of New Zealand and the tourism experience;
- Reduce business costs, which may allow businesses to trade over a wider area, opening markets up to more competition. Greater competition is likely to result in greater choice, reduced prices and improved service levels; and
- Make the Waikato Region more attractive to international flows of finance, people and other resources.

12.0 The GPS (2009) introduced the concept of Roads of National Significance (RoNS), with the intent that the seven roads identified will be the focus of investment to achieve
economic growth and productivity. The Waikato Expressway (State Highway 1) is listed as one of the seven initial RoNS.

13.0 The GPS (2009) also states that planning for the future development of the land transport network should reflect the national importance of the RoNS. This has been recognised in regard of the Waikato Expressway through the provisions included in the Proposed Regional Policy Statement ("PRPS") and Waikato Regional Land Transport Strategy 2011-2041 ("RLTS"). Those documents are set at a policy level, hence it is appropriate and necessary that territorial authorities should seek to amend their district plans to assist in implementing policy, as is the case with Variation 12.

14.0 In implementing the Waikato Expressway, the NZTA has identified the following objectives:

- Enhance inter regional and national economic growth and productivity;
- Improve journey time reliability and relieve congestion through the main urban centres along SH1;
- Improve safety and reduce crashes on regional arterials including SH1;
- Focus freight movement onto SH1 rather than upgrade alternative routes; and
- Provide improved local network operation and opportunities for improved urban design, travel choice and community connectivity within the major urban areas bypassed by the expressway.

15.0 These objectives are shared by Hamilton City Council as demonstrated in a number of Council documents. The importance of the Waikato Expressway is strongly reflected in both Future Proof and Access Hamilton, the Integrated Transport Strategy for the City.

Expressway Alignment

16.0 A wide range of alternative routes were investigated prior to the designation being finalised. The final expressway designation offers the best overall solution in terms of:

- The safe and efficient movement of regional and inter-regional traffic.
- Access from SH1 into Hamilton City.
- The balance between construction cost and road user benefits.
- The minimisation of adverse social, cultural and environmental effects.

17.0 Four routes were examined from Lake Road to Gordonton Road. The current designation option was selected as it offers the shortest route and the least cultural and ecological impacts. This is discussed in detail in the Notice of Requirement: Hamilton Bypass, 15th November 2001 document prepared by Opus International Consultants Limited on behalf of Transit New Zealand (NZTA).
Design of the Hamilton Section

18.0 The design of the 4-lane Hamilton Section of the Waikato Expressway has not yet been finalised which makes it impossible to know the final alignment of the road within the current designation.

THE FUTURE PROOF GROWTH MANAGEMENT STRATEGY

19.0 The NZTA recognises the importance of Future Proof as a key strategy to enable integrated planning outcomes to be achieved in the area covered by the strategy, and has previously expressed support for the strategy.

20.0 In particular, Future Proof includes principles that aim to avoid development along the Waikato Expressway corridor that could constrain or compromise the efficiency of that corridor.

21.0 A guiding principle of the Strategy is the provision of affordable and sustainable infrastructure. This includes the protection of existing and future infrastructure and transport corridors, including the Waikato Expressway, from development that could constrain or compromise the efficiency of infrastructure and transport corridor operation.

22.0 The Strategy also recognises that development can adversely affect the efficient and effective functioning of infrastructure. For example, increasing population density and increasing spread of urban areas increases traffic congestion.

23.0 As Council is a partner in the Strategy, these principles must be considered in the development of the Rototuna Structure Plan, especially in regards to proposed residential development to the East of the Expressway. I recognise that a number of the Future Proof principles may not be mutually compatible in all situations, and that a balance must be achieved between them in making decisions.

SUMMARY OF THE NZTA’S SUBMISSION AND FURTHER SUBMISSION

24.0 In the main, the NZTA’s submission (dated 13th October 2010) sought the retention of Variation 12 as it promotes:

- an integrated approach to land use and transportation planning consistent with Council’s functions under s31(1)(a) and s31(1)(b) of the RMA, and the purpose of the LTMA (s3), and
- a strategic approach to land use management, consistent with implementation of the Future Proof growth strategy.
25.0 The Agency has made a number of other Submissions and Further Submissions in relation to Variation 12 to the Proposed District Plan. I will not provide specific comment on these as NZTA accepts the reporting officer’s recommendations in respect to these matters.

26.0 A key issue identified in NZTA’s submission was the location of residential land to the east of the Waikato Expressway. The NZTA recognises that the location of the structure plan area across the Expressway designation occurred for a variety of (historic) reasons however this has the potential to introduce severance issues and contribute to urban sprawl.

27.0 In its submission, the NZTA requested that Council reconsider the structure plan with regards to this area and make amendments necessary to mitigate the risks of urban sprawl and community severance. Recommended measures were:

- limiting the minimum lot size to the east of the Expressway so that the area remains rural or rural residential in nature - a minimum lot size of 5000 metres squared was proposed, and
- ensuring adequate connectivity for pedestrians and cyclists is provided so that people do not attempt to cross the Expressway.

28.0 The NZTA further submitted on a number of submissions. Of direct relevance to the above points, the Agency opposed the submission of Rototuna Holdings Limited that sought to remove the minimum 1000 metre square lot size (along the Waikato Expressway boundary), submitting that it would unnecessarily constrain development.

29.0 The Agency requested that Council reject this submission and make amendments necessary to mitigate the risks of reverse sensitivity and community severance for properties adjoining, and situated to the east of the Expressway.

30.0 The Agency also opposed the submission of Kirkdale Investments Limited that sought a 10m setback from the Waikato Expressway for retirement villages.

31.0 The NZTA requested that Council reject this submission and implement a setback of 35m from the designation boundary to avoid reverse sensitivity effects.

32.0 The NZTA further submitted to support in part the submission of Cycle Action Waikato. The submitter believes the inclusion of a section of residential area to the north which will be outside of the Expressway when it is constructed seems illogical. They are of the opinion that when the Waikato Expressway is built it will become a barrier limiting options of walking, cycling and the mobility of the impaired to properly access adjacent schools, shops and community services.
33.0 The Agency requested that Council accepts this submission and reconsiders the structure plan with regards to this area and makes amendments necessary to mitigate the risks of reverse sensitivity and community severance.

34.0 The NZTA further submitted in support of the submission made by Laurence and Katrina Day who requested that land on the north side of the Waikato Expressway should be zoned to allow subdivision down to a minimum lot size of 5000 metres$, which would provide a buffer of semi-rural development on the city boundary. The submitters also requested larger lots/setbacks adjacent to the Expressway.

RESPONSE TO THE PLANNING REPORT ON SUBMISSIONS AND FURTHER SUBMISSIONS (“the Planning Report”)

35.0 The planning report contains a thorough assessment of the submissions and further submissions received by Council. This assessment need not be repeated here, as it is generally supported in most parts. There are however a limited number of areas where I do not agree with the conclusions drawn and recommendations made in the planning report, in regard of the NZTA’s submission and further submission. These are:

(a) the appropriateness of 1000 metre$ minimum lot sizes adjacent to, and to the east of the Expressway, and

(b) the adequacy of 15m setbacks for development adjacent to the Waikato Expressway.

Minimum lot sizes adjacent to, and to the east of the Waikato Expressway

36.0 The NZTA has considered the effectiveness of the proposed 1000 metre square lot size in terms of the objectives sought by Council and the NZTA in the HCC Proposed District Plan, the Rototuna Structure Plan, Access Hamilton Integrated Transport Strategy and in the development of the Waikato Expressway. It is my opinion that there is insufficient evidence to justify Council allowing 1000 m$ minimum lots adjacent to, and to the East of the Expressway.

37.0 In its submission, the NZTA requested that lots situated to the East of the Waikato Expressway should be 5000 m$ as a minimum. The intention behind having a 5,000 m$ minimum is:

a) To create a clear delineation between intensive residential development to the West of the Expressway, and rural land to the East.

38.0 Council has identified the opportunity to clearly define the urban boundary of the City with the construction of the Hamilton section of the Waikato Expressway, and this is set out in the Network Action Plan that forms part of the Access Hamilton Integrated Transport Strategy (p43). Planning for intensive residential development past this
point is in direct contradiction to the direction signalled in the Access Hamilton Strategy and has the potential to set a precedent in terms of continued urban sprawl. If this type of development is able to straddle the Expressway in this location, it may increase pressure for it to occur elsewhere and potentially degrade the efficient and safe functioning of State Highway 1.

39.0 A clear urban boundary around Hamilton will enable the City to achieve its intensification targets (as outlined in Future Proof) and limit urban sprawl into productive rural areas. Urban boundaries also contribute to the efficient use of existing infrastructure and limit the need for further infrastructure provision. Currently the Hamilton urban limit proposed in the Future Proof growth strategy is shown in the Proposed Waikato Regional Policy Statement (pRPS) only as indicative, with a proposed method that relies on review of the Hamilton City Plan for implementation. At this time, there remain a number of risks associated with the due processes for both pRPS and the District Plan review, which could affect the ability of Hamilton City Council to enforce an urban limit. It is therefore important to avoid giving the development community a signal that “urban” development is acceptable to the east of the Waikato Expressway.

40.0 Ideally, the NZTA would like to see the land to the east of the Expressway retained as rural, however it is recognised that this area has historically been earmarked for future development, therefore, at the very least it should be limited to rural-residential style development (with a 5000m square minimum lot size consistent with similar areas of peri-urban rural residential development on the Hamilton periphery).

41.0 Regarding the alignment of the Expressway through this area, NZTA notes that the designation went through a comprehensive identification process that thoroughly investigated options and alternatives. Ecologically, culturally and economically the current alignment was decided on and the decision upheld by the Environment Court.

42.0 The Planners’ report outlines that Council need to have higher densities throughout the Rototuna Structure Plan area in order to achieve the densities outlined in Future Proof. The Agency believes that there is enough scope to achieve these throughout the areas dedicated for further development as the density targets contained in Future Proof are an average. Council can cater for a range of living styles in a managed way through providing an area for rural-residential style living, whilst keeping intensive residential development to the west of the Expressway.
43.0 The proposed Regional Policy Statement for Waikato also specifically references the adoption of the Future Proof land use pattern in Policy 6.13, and the identification of urban limits by Councils in consultation with the NZTA.

44.0 The Planners’ report fails to address the issue of an urban boundary in considering the request for a larger minimum lot size; rather it focuses only on the lot size needed to incorporate mitigation measures for potential reverse sensitivity effects from the Expressway. In my opinion, this is an oversight of a critical issue that Council has previously identified as important in both Future Proof and Access Hamilton.

b) Limit community severance and trip generation between the Rototuna Suburban Centre and development to the east of the Expressway.

45.0 The land to the east of the Expressway is approximately 59 hectares thus having the potential to be divided into over 500 individual lots with the current proposed lot size. Assuming that the average household generates 10 vehicle movements per day, there is the potential for around 5000 vehicle movements per day across the Expressway. By limiting development to lot sizes with a 5000 m² minimum, this number is significantly reduced to around 100 individual lots, and 1000 vehicle movements per day.

46.0 The section 32 report contains no analysis of the impact on trip lengths, vehicle-kilometres travelled or accessibility (to amenities) for this part of the community. Given that the remainder of the structure plan area has been specifically designed to have high levels of connectivity for a wide range of transport modes, the section to the east of the Expressway would be highly anomalous in having limited connectivity. This risks making that part of the community less resilient to changes such as oil price rises. While avoiding development would be preferable, limiting development to 5000 m² lots will mitigate this to some extent.

Setbacks for development adjoining the Waikato Expressway

47.0 Considering the adequacy of 15m setbacks for development adjacent to the Waikato Expressway, it is my opinion that these are insufficient to protect future residents from potential reverse sensitivity effects associated with the construction and use of the Waikato Expressway.

48.0 The Planners’ report notes that in determining the 15m setback consideration of the necessity for adequate buffering from the Expressway carriageway to the residential zone adjoining the Expressway, along with an analysis of noise conditions within the
Waikato Expressway designation was had. Along with Appendix 5D of the Transit Policy Planning Manual, where there are greater than 25,000 vehicles per day, a buffer area of 40 metres from the carriageway edge to the first row of housing is required. This work determined a separation distance of 34.5m from the edge of the national carriageway to the edge of the designation boundary. As the Expressway has not been through the final design stage, the final location of the carriageway has yet to be determined. Accordingly Council has taken a precautionary approach and determined a 15 metre setback for lots within the General Residential Zone. When the proposed 15 metre residential setback is added to the 34.5m carriageway distance, a total of 49.5 metres is calculated.

49.0 The report concludes that as the designation is a known entity, and that noise mitigation has been factored into the designation for the section that transects a known urban environment, any physical separation has the potential to be in excess of the required 40m as set out in the PPM. As such there is no need to further extend the proposed 15m setback.

50.0 I do not support this conclusion as the key factor in determining the actual distances that residential development will be from the carriageway is its final design, and this has not been completed. There has been no process to optimise the geometry of the Expressway within the designation boundary so it is impossible at this point to determine how close to the designation boundary the road will go.

51.0 In the interest of maintaining amenity for the future residents of the area, and avoiding the potential for reverse sensitivity effects, it is prudent and advisable that Council take a precautionary approach and implement an adequate setback from the designation boundary for new development. To assume that 15m will be an adequate setback distance for future development adjacent to the Expressway is equivalent to predetermination of design and neither responsible nor advisable.

52.0 Council identifies the aim of achieving high levels of residential amenity as a part of quality urban design in a number of strategies, including the Proposed District Plan (relevant sections attached as Appendix 2), CityScope, and the principles of the Rototuna Structure Plan itself. In my opinion, implementing a 15m setback for residential development from the Waikato Expressway will not achieve this.

53.0 It is also appropriate to consider that under Section 74 of the RMA territorial authorities are required to have regard to the district plans of adjacent territorial authorities. This requirement is an expression of the need for integrated management of the effects of activities across territorial boundaries.
The designation for the Hamilton section of the Waikato Expressway effectively demarcates the territorial boundary between Hamilton City and the Waikato District on the eastern side of the City. With this in mind and in the context of Section 74 of the RMA there is a clear need to consider the potential differences in planning provisions.

Within the Waikato District, the land adjoining the Hamilton Section of the Waikato Expressway is zoned rural. In the rural zone the Waikato District Plan requires a 25m building setback from an expressway, or the proposed Waikato Expressway.

The NZTA has an outstanding appeal to the Environment Court in relation to certain aspects of the Proposed Waikato District Plan. One of the appeal points relates to building setbacks from the Waikato Expressway. More specifically the relief the NZTA is seeking is an increase of the building setbacks from 25m to 35m.

At the time of writing this evidence, NZTA’s appeal on the Waikato District Plan has not been resolved in its entirety. However my understanding is that the NZTA and Waikato District Council are in agreement in regards to increasing the building setback to 35m and no other parties have expressed concern in regard to the proposed increase.

Regardless of whether the building setbacks in the Waikato District remain at 25m or increase, there would be a disparity between building setbacks on the same stretch of the Expressway depending on whether a site is located within the City or within the Waikato District.

Disparity on its own is not an environmental effect. However in my opinion the potential disparity in building setbacks could give rise to appreciable change in amenity from the perspective of a road user travelling between areas with varying setbacks.

In my opinion, the change in amenity could further be emphasised by the significant increase in building density that will be located within the City boundaries when compared to the Waikato District. This would be most obvious along the portion of the Expressway, approximately 2km in length, which would have urban development on both sides of the corridor, within the vicinity of Kay Road and Horsham Downs Road.

In my opinion, and speaking in general terms, areas of higher density in closer proximity to major roading corridors are typically subject to poorer levels of amenity when compared to areas of lower density where buildings are situated further away from a given corridor.

The potential for experiencing an appreciable change in amenity is likely to be reduced through consistency in building setbacks between Waikato District and
Hamilton City. Therefore in my opinion, it would be prudent to increase the building setback from the Waikato Expressway within the Rototuna Structure Plan area from 15m to 35m.

CONCLUSIONS

63.0 Overall, Variation 12 represents a significant step towards implementing an integrated planning framework for the Rototuna Area.

64.0 However, in regard of setbacks for development adjacent to the Waikato Expressway, and minimum lot sizes to the East of the Expressway, I recommend that Council make amendments to Variation 12 in the interests of more fully meeting the strategic direction of the Proposed RPS, Future Proof, the Hamilton Urban Growth Strategy, Access Hamilton, the GPS and the purpose of the RMA. These are:

- Increasing the minimum lot size for development to the East of the Waikato Expressway, with a starting point of not less than 5000 metres squared, and
- Implementing a setback of 35m from the designation boundary for development adjoining the Waikato Expressway.

Signed by: Hannah Windle

Date: Friday 4th November, 2011
Appendix 1 - Map of the Hamilton Section of the Waikato Expressway

NOTES:
• Overbridges carry traffic over the Expressway
• Underbridges carry traffic under the Expressway
• This plan is indicative only and subject to review by NZTA
• More detailed plans are available on request.

OCTOBER 2010

Approximate scale
Appendix 2 – Relevant District Plan Provisions

Hamilton Proposed District Plan Provisions
A significant resource management issue for Hamilton which the District Plan identifies and seeks to address is:

• Maintaining and enhancing amenity during city growth and intensification.

4.1 Future Urban Areas
Introduction and Issues
The Council is keen to ensure that the development of these areas occurs in an economic, and sustainable manner. The District Plan is concerned with the management of the effects of activities that currently occur in these areas. It is also concerned to ensure that the key environmental and amenity resources of the area are not destroyed or compromised as the land progresses towards its future urban use.

Objective 4.1.1 Development in Future Urban Areas
Ensure that the activities carried out in the future urban area do not generate adverse environmental effects and or compromise future urban use.

Policies

e) Enable urban development in rural areas where it is consistent with the overall framework for future urban development, does not adversely impact on uses on adjoining properties, and satisfactory provision can be made for road access and infrastructural services.

Objective 4.1.2 Sustainable New Growth
To ensure that development in the areas identified for new growth is carried out in a manner that meets the community’s needs and avoids, remedies or mitigates adverse environmental effects.

Policies

b) Identify the key infrastructural, community, cultural and environmental opportunities and constraints for each new growth area and ensure that these are reflected in the development of each area.

4.2 Transportation and Accessibility
Introduction and Issues
An accessible city is one in which land uses and transport networks are integrated to enhance people’s accessibility through a city, while minimising effects of transport on amenity values and the environment.

• High speeds and traffic volumes can have adverse effects on the amenity values of living and business environments. Residential areas, local shopping centres, and cultural, recreational and leisure venues are places with high levels of expected amenity. They are generally places with lower noise levels, high pedestrian usage, and high proportions of landscaping and open space. Vehicles can create nuisances
such as vibration, fumes, noise, and safety issues which conflict with these levels of amenity.

**Objective 4.2.4 Impacts of the Transport Network**

To minimise the adverse effects generated by transport network uses on the natural and physical environment, amenity values and public safety.

**Policies**

a) Differentiate road functions to minimise adverse effects of through-traffic on safety, noise, cyclists, pedestrians and amenity values.

Roads and their activities impact on the environment directly and indirectly. Direct effects on people and environment include emissions to air, noise, vibration, and the pollution of stormwater from contaminants washed off roads. Road uses can adversely affect amenity values, personal safety and privacy.

### 4.4 Subdivision and Development of Land

**Introduction and Issues**

- Subdivision has implications on both the economic utilisation of land and the management of environmental effects. Unless control is exercised over the intensity and form of subdivision in the City, it can generate undesirable outcomes for the environment and on the ability of effects to be managed and amenity levels to be protected.
- If subdivision and infrastructure are not co-ordinated, then the effective mitigation of environmental effects and the provision of opportunities will be compromised.

**Objective 4.4.2 Environmental Impacts of Subdivision and Development**

To ensure that any subdivision and development of land is carried out in a manner which reflects the physical constraints on its use and development and avoids, remedies or mitigates any adverse effects on the environment.

**Policies**

f) Minimise any detrimental effects on the safety and efficiency of the transport network and on the amenity values of surrounding communities due to increased traffic movements arising from subdivision and development of land.

### 7.4 Noise

**Introduction and Issues**

Noise is recognised as both a health and environmental issue. It can impact on health causing annoyance, sleep interference, stress and the disruption of concentration. Noise can also impact on the amenity of individual properties and the wider city.

- Noise from transport can have an adverse effect on the amenity values of residents living close to the source. Road traffic noise affects a large proportion of the
community. Traffic noise is an increasing noise nuisance due to the growing number of vehicles on the roads.

**Objective 7.4.3 Transport Noise**
To protect residential activities from the adverse effects of transport noise.

**Policies**
a) Minimise the potential effects of traffic noise on adjacent residential development from the operation of new arterial roads.

c) Ensure that new residential development adjacent to an existing arterial road and any habitable rooms above the first floor of residential developments adjacent to a new arterial road provide sufficient acoustic treatment to protect their residential noise environment.

**Rototuna Structure Plan Objectives and Policies**

**Objective 6.2A.6 Residential**
Development of compact, well designed, energy efficient and functional residential developments with high levels of amenity.

**Policies**
d) Ensure development is designed to avoid adverse noise effects occurring between residential units or from non-residential activities.