
In the Matter of:

The Resource Management Act
1991

and

In the Matter of:

WDC Rural Plan Changes

**Statement of Evidence of
Donald John McKenzie**

TDG
Telephone: +64-9-531 5006
E-Mail: Don.McKenzie@tdg.co.nz
PO Box 2592, Shortland Street
AUCKLAND 1140

14663-2 Evidence 170904 Final.docx

4 September 2017

Statement of Evidence of Donald John McKenzie Be (Hons), CPEng(NZ), MIPENZ, IntPE, FITE

1. Introduction and Background

- 1.1 My full name is Donald John McKenzie and I am a Director and Branch Manager of the transportation consultancy firm Traffic Design Group Limited (**TDG**). I have over 25 years' professional experience in the areas of traffic engineering and transportation planning. I have read the Code of Conduct for Expert Witnesses in the Environment Court Consolidated Practice Note (2014). I agree to comply with this Code of Conduct. This evidence is within my area of expertise, except where I state I am relying on what I have been told by another person. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.
- 1.2 In July 2017 I prepared and presented expert evidence on behalf of the District Council in respect of the transportation elements of the District Council's Rural Plan Changes 85 A – D and 86 A- B. I attended the Plan Changes hearings between 3 and 5 July 2017, and provided responses to various matters of a transportation nature including consideration of the evidence and submissions made by NZ Transport Agency, Fonterra and Federated Farmers (amongst others).
- 1.3 Since the hearings I have been asked by the Whangarei District Council to provide responses to various matters raised in both the above presentations to the hearings panel as well as other matters that emerged through the course of the hearings.

2. Strategic Rural Industries Environment (SRIE)

Status Quo Existing Provisions

- 2.1 I have been asked by Council's planning team as part of its assessment of the NZTA's proposed traffic movement threshold submission to provide some commentary with regard to the existing District Plan's provisions. The current Business 4 and Business 2 provisions included in the existing District Plan seek to control the specific elements of access to activities within the wider Business zones but in my opinion the specified matters included in the current Rule 42.3.5 do not fully cover all of the particular and general matters that would be relevant to consideration of an activity.
- 2.2 In the case of the Fonterra Kauri site for example, there is a higher standard of access than is considered within the existing rule, and hence a need for a particular assessment of the way in which a higher or alternative standard of access point (or public road standard of intersection) will serve an activity.
- 2.3 I therefore do not support the current provisions as an appropriate alternative to the blanket traffic movement rule provision sought by NZTA.

Notified Provisions – No Traffic Movement Rule but Subject to Environment Engineering Standard 2010

- 2.4 The Notified Provisions of the Plan Changes effectively remove any provisions for consideration of the traffic effects and assessment of traffic effects of expansion or redevelopment at the three identified SRIE activities (Fonterra, Croft Timber Mill and Golden Bay Cement). I understand however that the provisions of the Council's Environmental Engineering Standard 2010 (**EES 2010**) would apply. In my professional opinion, the EES 2010 provides useful guidance on the design standards for property access but not to the level of consideration required for major highway intersections of the form and scale currently serving the identified activities.
- 2.5 While the scale of capacity and safety provision for the major heavy vehicle turning movements at these locations mean that the adverse effects of the current activities (and the reasonably foreseeable developments within these sites) can be accepted, the specific consideration of those locations and their access provisions would need a greater level of technical review that is anticipated within the EES 2010.

- 2.6 It is in this regard that I do not consider that primary reliance upon EES 2010 provisions would be satisfactory to achieve the desired safety and operating performance sought by WDC.

NZTA Blanket 200 vpd Traffic Movement Rule with Restricted Discretionary Activity Status

- 2.7 The New Zealand Transport Agency (NZTA) has requested a traffic volume threshold/restricted discretionary activity rule applied to the Fonterra Kauri, Croft Timber Mill and Golden Bay Cement sites within the SRIE.
- 2.8 I consider that while from a strict effects perspective, there may be some value in having a restricted discretionary trigger or threshold based on traffic volume numbers, I am aware that even without these thresholds or rules in place, the SH1 intersection serving the Fonterra Kauri and Croft Timber Mill sites has been carefully managed by NZTA including with the input of Fonterra, and is currently under consideration by NZTA as part of a strategic corridor study.
- 2.9 Entirely unrestricted growth potential without any further assessment would in my opinion lead to an adverse outcome from a “whole of transport network” perspective. I agree with the Council’s position that there should be some recognition of the strategically important activities within the SRIE and those that are in a strategically beneficial location i.e. Fonterra Kauri associated with a well-designed intersection of the site access with SH1.
- 2.10 From a transportation safety and effectiveness point of view, I would not advocate to have these strategic activities with entirely unlimited potential to do anything they wish to (from a traffic generation perspective) and so in this regard some form of traffic generation trigger (or other control mechanism either directly or indirectly) is in my opinion appropriate. I understand that there are other controls in place for these activities (such as bulk and location, height) that would in my opinion impose some degree of control over the overall scale of the buildings, activities and hence possible traffic generation and the associated external effects.
- 2.11 In considering the NZTA’s position that a specific restricted discretionary threshold should apply when the site generates an additional 200 vehicle movements per site (Fonterra, Croft Timber Mill and Golden Bay Cement) per day, and Fonterra’s response to those at the hearing and in its subsequent Memorandum of Counsel dated 28 July 2017, I am unsure as

to the technical basis for this scale of trigger. I understand from the questioning of NZTA's technical witness Mr Newsome during the hearings in July 2017, that the basis of selecting the 200 vpd threshold was what was ordinarily adopted in other District Plans. I do not consider this to be a sound basis for the selection of such thresholds or traffic generating triggers.

- 2.12 Depending on the specific nature of activities this could be as low as 10 – 15 vehicle movements per hour (if the site was operating over 16 hours per day which would not be uncommon or the Fonterra site). At this level (one traffic movement every five to six minutes) there would be a very limited basis from either a safety or efficiency point of view for any possible upgrading or improvement.
- 2.13 In an ideal situation, there should be an appropriate/comparable level of assessment for the scale of the anticipated effect, however even at 200 movements per day (one vehicle every four or five minutes) the NZTA's recommended threshold may result in an elevated level and complexity of assessment for a relatively minor additional traffic volume. Any assessment should also be aligned with the nature of the transport environment into which the generated traffic is leading. That is, the SH1 intersection at Fonterra's Kauri site would be quite easily able to accommodate the additional 200vpd, whereas the Portland Road/SH1 intersection through which the Golden Bay Cement site's activity would travel – the 200vpd might create more of an adverse effect.
- 2.14 The threshold/trigger would allow NZTA the ability to be brought into a consultative process in which they might otherwise not be involved. I am aware that based on past involvement between NZTA and Fonterra in relation to the form and performance of the Kauri intersection, both parties would likely be engaged in discussion or consultation if there was an issue even below additional 200vpd and outside of a specific resource consenting issue. NZTA would most likely be involved (under the exercise of NZTA's non-RMA powers) but there could be a situation where that relationship is not as strong (e.g. Golden Bay Cement or Croft Timer Mill) and the District Plan/RMA approach would allow the road controlling authority an avenue to address a potential risk of safety or poor performance.
- 2.15 If the restricted discretionary activity trigger (as generally proposed by NZTA) was accompanied by a requirement for a specifically focussed traffic assessment to be provided with the application and framed around the effect of the added traffic generation at the

specific location (e.g. Portland Road/SH1, SH1 Kauri intersection) this would in my opinion be what NZTA is concerned with and the basis of their recommendation.

2.16 In summary, I consider that

- (i) there is value in the SRIE traffic volume rule structure that requires assessment on a case-by-case basis, and
- (ii) the level of assessment (i.e. including traffic modelling for higher levels of traffic generation, but qualitative assessment for lower levels of extra traffic volume or at locations of higher traffic-carrying capacity) should be considered in a case-by-case manner, and
- (iii) the suggested traffic movement threshold rule for the specified activities within the SRIE should apply equally to “activities directly associated with or ancillary to the zoned primary activity” and “activities not directly associated with or ancillary to the zoned primary activity.” In my opinion, the concerns of Mr Newsome (for NZTA) and to which I have referred previously, relate to increased traffic generation and its effects on the wider transport network irrespective of the source of these movements and effects.

2.17 I have considered the recommended wording for Option 5 included in Mr Badham’s report as an appropriate means to address:

- (i) the definition and assessment of the “additional” traffic movements particularly with respect to what might be “existing” traffic movements, and
- (ii) how the restricted discretionary rule might apply to the situation where one of the SRIE sites had already been granted consent for an activity or activities that generated 200 additional traffic movements.

2.18 I agree with him that the recommended wording would address these concerns and help to clarify the interpretation and assessments required in those situations.

2.19 Mr Badham has also sought to simplify the matters of discretion under this proposed rule to two matters firstly *“the effects on the transport network”* and second, *“design and location of access”*. I agree that these are appropriate assessment matters from a transportation effects consideration point of view and support the view of Mr Badham that they would provide a suitably clear direction to plan users as to what matters should be considered.

Traffic Movement Rule with Controlled Activity Status

- 2.20 I have also been asked by the Council's planning team to also consider the possibility of modifying the NZTA request by introducing a controlled activity status (rather than restricted discretionary) resulting in consent required to be granted but subject to conditions. I consider that this approach applying to the three identified operations would be appropriate from a transportation point of view, especially in the case of the current activities of Fonterra, Croft Timber Mill and Golden Bay Cement which can provide a valuable baseline of traffic data and location access/intersection performance.
- 2.21 In the case of other not directly related activities, I consider that the controlled activity status is not appropriate as the imposition of conditions may not be entirely sufficient to address potential effects of an entirely new activity with different effects to those already demonstrated by current activities at these sites.
- 2.22 If the controlled activity approach was preferred by the Commissioners I would recommend the matters for control could usefully be modelled on the existing District Plan's Business 2 Environment Rules (Rule 40.3.5) namely:
- (i) Parking, loading and manoeuvring requirements;
 - (ii) Need for acceleration and deceleration lanes;
 - (iii) Location of activity;
 - (iv) Type, frequency and timing of traffic;
 - (v) Access design, number and location of vehicle crossings;
 - (vi) Safety of pedestrians;
 - (vii) Traffic safety and visibility;
 - (viii) Effects on the amenity of the locality;
 - (ix) Effects of dust;
 - (x) Need for forming or upgrading roads in the vicinity of the site; and
 - (xi) Need for traffic control, including signs, signals and traffic islands.

3. Rural Production Environment (RPE)

- 3.1 The Federated Farmers New Zealand (**FFNZ**) submission and presentation to the Hearings Panel raised concern with respect to a proposed restriction (less permissive activity status) for sensitive activities within a certain setback distance from unsealed roads within the RPE.
- 3.2 I consider that identifying key routes within the RPE that could be subject to current or future logging activity (or other higher than average traffic volumes associated with normal rural production activities) and hence generating a potential for additional dust generation would be problematic. It would be difficult for any person or group to say that any road within the RPE that is currently not subject to forestry or logging or any other elevated level of traffic activity would not change at some stage in the future.
- 3.3 While in the case of rural forestry activities, the planting/harvesting cycle is likely to be beyond the life of the current District Plan, the identification and scheduling of specific roads would in my opinion be somewhat problematic.
- 3.4 In my assessment of the FFNZ submission there are potentially three elements that would need assessment at a District Plan or resource consent level:
- the activity status that is triggered by the proposed rule,
 - the distance from the road (100m currently) and
 - the traffic volume trigger (at present the volume is 0vpd i.e. rule applies to any road irrespective of its traffic volume and with FFNZ proposing a higher threshold of 30vpd).
- 3.5 Based on my consideration of the transportation engineering principles involved in applying what the FFNZ submission would seek, the above requirements would need to be assessed for each application against a traffic volume trigger that would require an assessment (and hence cost and resource on the part of applicants) of the traffic volume and perhaps also some projection/estimate of what future volumes might be.
- 3.6 In my professional view, the adoption of the 100m distance as a means of avoiding and/or mitigating adverse effects on sensitive activities (mostly residential in nature) arising from heavy transport movement along an unsealed road should ideally have some sort of science related to it. However, I am not aware of any specific assessment or research available that points to the 100m distance as being specifically relevant to avoiding the adverse effects.

In this regard, I accept that the 100m is a reasonable point within which an assessment of the potential effects should be undertaken.

- 3.7 In the RPE areas where this rule would apply I expect that the consideration of the 30vpd traffic volume threshold would most likely require some degree of specific recording or measurement. If that is to be the case I would suggest that the time and resources required to provide the traffic count to justify that an application fell alongside a road with fewer than 30vpd along it would better be allocated to perhaps providing some assessment information more directly related to the current and future traffic environments.
- 3.8 It is my professional opinion that the rule triggering a discretionary activity status is retained within the RPE without a traffic volume threshold, and that the rule be accompanied by an Information Requirement (or similar) stating that the consent be accompanied by a transport assessment statement setting out the current and predicted transport environments/traffic volumes along the road and the likelihood of changes to the nature, scale and intensity of land uses and their traffic generating potential within the catchment served by the road.

4. Rural Urban Expansion Environment (RUEE)

- 4.1 Many of the same responses to the above discussion within the SRIE (around the use of a restricted discretionary activity threshold for specific transport assessments), and I consider the key matter would be the extent of other consent requirements for an activity that leads to 200vpd generated by for example childcare and education facilities, hospitals, health care facilities and retirement villages. I understand that commercial activities (apart from home occupations) would be subject to a non-complying activity consent status in the RUEE.

4.2 In this regard, most of the activities to which the traffic generation threshold might apply would also be subject to a greater level of assessment and consent requirement would be covered via the non-complying activity status and a much greater level of accompanying traffic assessment that would be the case under (say) a restricted discretionary activity assessment.

Don McKenzie
TDG

4 September 2017