

**BEFORE A BOARD OF INQUIRY  
MACKAYS TO PEKA PEKA EXPRESSWAY PROPOSAL**

**UNDER** the Resource  
Management Act 1991

**IN THE MATTER OF** applications for  
resource consents and  
a notice of requirement  
in relation to the  
MacKays to Peka Peka  
Expressway Proposal

**BY** New Zealand Transport  
Agency

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**STATEMENT OF EVIDENCE OF EMILY JANE THOMSON  
ON BEHALF OF THE KAPITI COAST DISTRICT COUNCIL**

**Planning**

**DATE: 5 October 2012**

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## 1. INTRODUCTION

- 1.1 My full name is Emily Jane Thomson. I am a Senior Policy Planner at the Kāpiti Coast District Council (**Council**). I have held this position since October 2004. My qualifications are a Bachelor of Landscape Architecture with honours, and a Bachelor of Science. I am in the process of completing a Master of Resource and Environmental Planning. I am a full member of the New Zealand Planning Institute.
- 1.2 I have nine years' experience in local government resource management. My main role is to prepare and process District Plan changes and to give advice for resource consents sought under the Kapiti Coast District Plan. Since 2004, I have written planning evidence for 10 plan changes and have been involved in the preparation or processing of 16 further plan changes.
- 1.3 Since 2005 I have been the planner responsible for alterations and advice in relation to features listed in the Heritage Register (Part I of the District Plan) particularly Heritage buildings and I am responsible for new notices of requirement and rollovers of Designations to occur as part of the District Plan review.
- 1.4 As part of my role in the District Planning team I provide advice to the Resource Consents team about Consents that have been applied for. This includes general advice about interpretation of the District Plan policies and specific advice on effects. In some cases this has led to me presenting evidence at consent hearings.
- 1.5 I prepared the Council's submissions on the Proposed Wellington Regional Policy Statement (**Proposed RPS**) and the Proposed New Zealand Coastal Policy Statement (**NZCPS**) (now operative) and presented the submissions at the hearing for the Proposed RPS and Board of Inquiry for the NZCPS. I have also attended consultation sessions and provided feedback for the review of the Wellington Regional Plans.
- 1.6 In relation to the Roads of National Significance (Wellington to Levin) I have:
- (a) provided evidence in support of the Council's submission on NZTA's request for changes to the Greater Wellington Regional Freshwater Plan in relation to the Transmission Gully Project;

- (b) provided evidence in support of the Council's submission on NZTA's resource consent applications and notices of requirement in relation to the Transmission Gully Project; and
- (c) provided advice about the MacKays to Peka Peka and Peka Peka to Ōtaki projects in relation to local issues, including urban design, landscape, statutory planning and the community outcomes.

**1.7** I was also involved in the preparation of the Council's submission on the Proposed National Policy Statement on Biodiversity (**NPS Biodiversity**).

**1.8** I was involved with the development of the Council's submission on the present notice of requirement and resource consent applications by NZTA. I am authorised by the Council to present this evidence on its behalf.

**1.9** I have read and am familiar with the Code of Conduct for Expert Witnesses in the Environment Court Practice Note 2011. I agree to comply with that Code. Other than where I state that I am relying on the advice of another person, this evidence is within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

## **2. OUTLINE OF EVIDENCE**

**2.1** My evidence will cover:

- (a) the statutory approvals that are in place for the Western Link Road and their bearing on the present process;
- (b) comments on the assessment of the MacKays to Peka Peka notice of requirement and resource consent applications (**Proposal**) under the Resource Management Act 1991 (**RMA**), to the extent required to address matters raised in the Council's submission;
- (c) a response to NZTA's planning evidence; and
- (d) a discussion of the designation and resource consent conditions proposed by NZTA, and recommended amendments and additions to those conditions.

### **3. EXECUTIVE SUMMARY**

- 3.1** The full extent of the proposed MacKays to Peka Peka Expressway (**Expressway**) is within the Kapiti Coast District.
- 3.2** The Council made a submission, supporting the applications in part and raising concerns relating to particular aspects listed below in paragraph 4.2.
- 3.3** My evidence focuses on outlining recommended amendments to conditions for the designation and resource consents that have been sought. It also provides some detail about the statutory resource management planning matters relating to the assessment of the applications.
- 3.4** I would welcome expert conferencing and the opportunity to look at the detailed drafting of conditions prior to the hearing, including on the basis of the amendments proposed in this evidence. It is my opinion that these amendments are necessary to address the issues in the Council's submission and the concerns contained in the evidence of the witnesses being called by the Council.

### **4. BACKGROUND / CONTEXT**

- 4.1** I agree with the description of the site provided in NZTA's application and evidence.
- 4.2** The Council made a submission, supporting the applications in part and raising concerns relating to:
- (a) Effects on freshwater ecology.
  - (b) Effects on terrestrial ecology.
  - (c) Groundwater.
  - (d) Hydrology and stormwater.
  - (e) Contaminated land.
  - (f) Noise and vibration.
  - (g) Urban form and design.
  - (h) Traffic effects.
  - (i) Cycleway, walkway and bridleway.
  - (j) Social effects.
  - (k) Landscape and visual effects.

- (l) Effects on Council's utilities, services and water supply.
- (m) Cultural/tangata whenua.
- (n) Statutory planning.

**4.3** The issues above are addressed in more detail in the evidence of:

- (a) Russell Death (freshwater ecology);
- (b) Shona Myers (terrestrial ecology);
- (c) Brydon Evans (groundwater),
- (d) Robert van Bentum (hydrology and stormwater);
- (e) Malcolm Hunt (noise and vibration);
- (f) Ian Munro (urban form and design);
- (g) Don Wignall (traffic);
- (h) Travis Wood (utilities);
- (i) Mary-Jane Rivers (social);
- (j) Julia Williams (landscape and visual); and
- (k) Brad Coombs (coastal environment extent).

**4.4** My evidence incorporates recommendations to alter or add conditions which are suggested in their evidence. For effects not addressed by the Council's submission and evidence, I rely on NZTA's assessment and the cultural impact assessments provided by tangata whenua.

**4.5** The Council's core concern is that the conditions proposed in the Proposal will not adequately address its adverse effects on natural and physical resources in the Kapiti Coast District.

**4.6** I note that some of the issues with these conditions, as raised in the Council's submission, have been addressed in the NZTA evidence, and I generally support the changes put forward by NZTA witnesses.

**4.7** I recommend additional conditions and further amendments to address the outstanding aspects of the Council's submission in sections 9 and 10 of my evidence.

**4.8** The remainder of my evidence will focus on responding to NZTA evidence and suggested amendments to conditions or additional conditions to address the Council's concerns.

## **5. WESTERN LINK ROAD APPROVALS**

- 5.1** The Council is the requiring authority responsible for Designation D0102 “Western Link Road” (**WLR**) in the Kapiti Coast District Plan. This designation has not been given effect to, as the WLR project is on hold pending the outcome of the Expressway proposal. The WLR designation extends from Poplar Avenue in the south to Peka Peka Road in the north.
- 5.2** The WLR was intended to be a four lane road between Raumati Road and Te Moana Road and two lanes between Poplar Avenue and Raumati Road at the southern end, and two lanes between Te Moana Road and Peka Peka Road at the northern end with provision of four lanes where necessary.
- 5.3** The proposed Expressway designation has a similar alignment to the WLR, and as such would occupy much of the land included in the current WLR designation. It does however deviate from the WLR at various stages. The deviations are shown on the plan provided by NZTA to the Board of Inquiry on 28 August 2012 in response to the Board’s request for further information. The most significant deviations are at the southern end of the WLR between Poplar Avenue and Raumati Road, and north of the Waikanae River. Another deviation is at the tie-in to the existing SH1 at the northern end of the WLR.
- 5.4** The WLR provides for a very different function in that the designation is for a local arterial rather than a NZTA controlled Expressway. The WLR is designed for a lower traffic speed than the Expressway, in particular within the urban parts of the district with significant provision for walking, cycling and horse-riding. Differences in design include their respective alignment, gradients and interchange format and construction. The most significant difference is that the WLR provides for an at grade intersection with all existing and proposed roads along the route. These intersections are proposed to be either roundabouts or traffic lights. In this respect there are differences in effects they would have on the environment in terms of magnitude and, in some cases, location.
- 5.5** A map provided by NZTA in response to a request for further information (Item-1-aerial) introduces some confusion about the WLR route, as it calls one of the expressway options (Route 1) “Western Link”. This route is not consistent with the WLR designation, which is also shown on this map.

- 5.6** Prior to putting the WLR project on hold, the Council was considering construction options at the southern end of the WLR which would have avoided widening Poplar Avenue by creating a southernmost intersection at 200 Main Road South. This alternative option was preferred by the Council due to cost and avoidance of areas of ecological significance. Contrary to what could be inferred from the NZTA map, neither of the options the Council was considering for the southern entrance to the WLR went through a portion of Queen Elizabeth Park or properties in Leinster Avenue.

## **6. STATUTORY ASSESSMENT**

- 6.1** In relation to actual and potential adverse effects on the environment and the assessment Part 2 of the RMA, I am presently unable to agree with Mr Schofield's assessment. In my opinion, due to the gaps and issues in relation to particular effects (as discussed in the Council's submission and the evidence of the Council's other experts), the applications as lodged and supported by NZTA's evidence do not contain adequate assessments to make a judgement that all actual and potential effects have been adequately avoided, remedied, or mitigated. Therefore I am presently unable to agree that the Proposal as it stands achieves the purpose of the RMA.

- 6.2** I consider that an overall balancing of the proposal against Part 2 of the RMA will only be possible once the gaps and issues identified in Council's submission and evidence are resolved. This is particularly important given that:

- (a) Achieving the purpose of the RMA requires a balancing exercise in *"managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while –*
- (a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and*
  - (b) safeguarding the life-supporting capacity of air, water, soil and ecosystems; and*
  - (c) avoiding, remedying, or mitigating any adverse effects of activities on the environment"* (section 5).

- (b) In relation to matters of national importance, section 6 requires recognition and provision for the protection of:
- the natural character of the coastal environment, wetlands, and lakes and rivers and their margins (section 6(a));
  - outstanding natural features and landscapes (section 6(b));
  - areas of significant indigenous vegetation (section 6(c));
  - significant habitats of indigenous fauna (section 6(c)); and
  - historic heritage (section 6(f)).
- (c) In relation to other matters, section 7 requires particular regard be had to –
- The efficient use and development of natural and physical resources (section 7(b));
  - The maintenance and enhancement of amenity values (section 7(c));
  - Intrinsic values of ecosystems (section 7(d));
  - Maintenance and enhancement of the quality of the environment (section 7(f));
  - Any finite characteristics of natural and physical resources (section 7(g)).

**6.3** The assessment in the AEE and NZTA's evidence is based on the technical assessments. In my opinion, and relying on the evidence of the Council's other witnesses, those NZTA technical assessments do not adequately address social and traffic effects in terms of section 5, preservation of natural character of the coastal environment in section 6(a), outstanding natural features and landscapes in terms of section 6(b), or significant indigenous vegetation and habitats of indigenous fauna in section 6(c). In relation to the other matters listed in section 7 of the RMA, it is my opinion that amendments are required to conditions in order to address issues relating to those parts of section 7 identified in section 6.1 of my evidence above.

**6.4** I consider that the further assessment, amendments to conditions and further conditions proposed in this evidence would enable the project to better achieve the purpose of the RMA and more adequately address these matters. This is because the further assessment would establish how the social well-being of Kapiti communities will be adequately provided for. In addition, with my recommended changes, the conditions would provide more guidance and clearer



requirements about how the section 5 matters will be managed, the section 6 matters recognised and provided for, and about how particular regard is being given to the section 7 matters.

- 6.5** To avoid duplicating NZTA's assessment, my evidence will not set out a full assessment of the proposal against sections 104/171, 105 and 107 matters. Instead, I intend to integrate my discussion of those matters with my response to the NZTA evidence, focusing on aspects where my assessment differs from that of NZTA.

## **7. RESPONSE TO NZTA PLANNING EVIDENCE**

- 7.1** In relation to the assessment of statutory matters, I consider that Mr Schofield is generally accurate in his assessment (paragraphs 292-301 of his first statement of evidence) of the ability of the project to meet the purpose and principles of the RMA. I am of the opinion, however, that this can only occur if further assessment is undertaken in relation to social and traffic effects and greater certainty about the effects of the project is assured by more specific and stringent conditions than those proposed as part of the application. The substantive reasons for my opinion are based on in the evidence of the Council's other expert witnesses, as listed above in paragraph 4.3.

- 7.2** I generally agree with Mr Schofield in his assessment (paragraphs 261-264 of his first statement of evidence) of the relevant planning documents. Mr Schofield's evidence at paragraph 263 states that Chapter 4 of the AEE provides a brief description of the main aspects of the documents that are relevant to the project and the relevant provisions of these documents are set out in Technical Report 2 of the application.

### **Paraparaumu Town Centre provisions of the District Plan**

- 7.3** I note, however, that Technical Report 2 does not identify at section 6 that the proposed route also involves land in the Paraparaumu Town Centre zone of the Kapiti Coast District Plan (**District Plan**) and therefore the provisions of section C4 of the District Plan are relevant.
- 7.4** With regard to the Paraparaumu Town Centre zone, the provisions in the District Plan of relevance to the proposal require good multi-modal access to the town centre to be provided and the integration of the town centre with the wider district

through an efficient transport network and good east/west connectivity. These matters are addressed in the evidence for NZTA prepared by Mr Baily, and for the Council by Mr Munro and Mr Wignall. On the basis of their evidence, I am generally satisfied that the proposal is not inconsistent with the objectives and policies in the District Plan for the Paraparaumu Town Centre zone.

### **Coastal environment and related planning documents**

- 7.5** I disagree with Mr Schofield in his assessment (paragraph 377-380) that the proposal is not within the coastal environment. I refer to the evidence prepared by Mr Coombs on behalf of the Council, which concludes that the proposed route is located within the coastal environment, making the New Zealand Coastal Policy Statement 2010 (**NZCPS**), the Coastal Environment (section C9 of the District Plan) provisions of the District Plan and the Coastal Environment objectives and policies in the Proposed RPS (especially Objective 3, policies 34, 35 and 37) of relevance in the assessment of the proposal.

#### *NZCPS*

- 7.6** Despite this difference of opinion about the extent of the coastal environment, I note that the AEE contains an assessment of the proposal against Policy 13 of the NZCPS, and I support this assessment. In addition, I have assessed the project against policies 6, 11, 14, 15, 17, 21 and 22 of the NZCPS and consider that if the additions and amendments to conditions proposed in section 9 of this evidence are implemented, the Proposal will not be inconsistent with these policies of the NZCPS.

#### *District Plan*

- 7.7** As no assessment of the Coastal Environment provisions of the District Plan has been provided, I cannot agree with paragraph 265 of Mr Schofield's evidence in relation to the consistency of the project with the objectives and policies of the District Plan in relation to the Coastal Environment.
- 7.8** With regard to the Coastal Environment provisions of the District Plan, I consider that the objectives and policies of relevance to the proposal require the protection and enhancement of the natural character and amenity values of the coastal environment. While the Expressway itself has potential to not satisfy these

objectives and policies, the designation and resource consent conditions proposed by NZTA will go some way to mitigate the adverse effects on the coastal environment in general, subject to the amendments recommended in sections 9 and 10 of my evidence.

- 7.9** Accordingly, I am satisfied that the proposal overall will not be contrary to the relevant objectives and policies in the District Plan for the Coastal Environment subject to my recommendations for amendments to conditions and additional conditions in sections 9 and 10 below, and the further assessments recommended by Ms Rivers and Mr Wignall.

#### *Proposed WRPS*

- 7.10** I am currently unable to agree with paragraph 265 of Mr Schofield's evidence, as I consider that the assessment of the proposal, particularly against the Proposed Wellington Regional Policy Statement (**Proposed WRPS**), is based on technical assessments which, in my opinion, do not adequately address social effects, traffic effects or effects on outstanding natural features and landscapes.
- 7.11** I consider that further assessment is required to determine whether the proposal is consistent with the Proposed WRPS.

#### **Effects assessment**

- 7.12** I generally agree that paragraphs 151-257 of Mr Schofield's evidence provide a summary of the relevant effects of the Proposal. However, I note that the other witnesses for the Council have identified issues in their evidence where they are of the opinion that the effects may differ from, and in many cases be more severe than, those assessed in the NZTA technical reports and evidence that Mr Schofield relies on. Therefore I cannot agree with these paragraphs of Mr Schofield's evidence to the extent that they relate to the points of difference addressed by the Council's other experts.
- 7.13** In my opinion, these matters are not reasons to decline the applications, but are instead important issues that can and should be resolved through further assessment and carefully worded conditions, especially where the conditions expect issues to be resolved in the detailed design stage of the project. These

matters are addressed in the evidence of the Council's other witnesses, and changes to conditions as a result of this are included in section 9 of my evidence.

### **Proposed conditions and management plans**

**7.14** I have some concerns in relation to the specifics of how management plans are incorporated into the proposed conditions. I do not agree that the management plan-related conditions, as currently proposed by Mr Schofield, give sufficient certainty about what these plans are intended to address and to what standard. I recommend changes to some conditions relating to management plans to address these issues. With the changes I recommend, I consider that the management plans and other conditions will adequately address the effects of the project.

**7.15** In relation to paragraphs 130-140 of Mr Schofield's evidence relating to conditions, I do not agree with Mr Schofield on several points. These will be addressed in detail below with reference to the proposed conditions provided with Mr Schofield's evidence.

### **St Heliers Capital Ltd. submission**

**7.16** I note that the submission from St Heliers Capital Limited (644) (addressed in the evidence of Graham Levy) seeks to move a stormwater area away from the Kāpiti Road interchange. I agree with Mr Levy that there are practical difficulties with this approach. In addition, to Mr Levy's response, I note that Mr Munro has proposed that new accesses within one kilometre of the interchange be prohibited, and under this scenario, access to this area would need to be carefully considered.

## **8. PROPOSED CONDITIONS**

**8.1** I note that the applicant's evidence does not address all of the requests to amend the conditions for both the designation and resource consents that are included in the Council's submission.

**8.2** Although I support the general approach of NZTA's proposed conditions, I am concerned that general references to management plans and plan sets in the conditions may not provide sufficient certainty to achieve the outcomes sought by the Council. The specific wording of conditions DC.1 and G1 (which make the

regulatory link between conditions and plans) allow substantial flexibility in terms of the Proposal's final design, in that they only require construction to be in general accordance with the plan sets and management plans.

**8.3** I recognise that some flexibility is necessary, as issues tend to arise during detailed design and construction. However there has been extensive design undertaken on this project and this is indicated in the reliance on the plan sets and management plans provided with the application. Given the level of specificity in the application, I consider that the draft conditions allow too much flexibility and therefore leave too much uncertainty for the Council and the community that the design, mitigation and remediation works shown in the plan sets and management plans will occur. I consider it necessary for Council to have a role in the certification of all relevant management plans required for the project to ensure that they achieve the outcomes sought in Council's submission and supporting evidence.

**8.4** In the next sections of my evidence, I recommend various amendments to the conditions to provide certainty that the outcomes indicated in the application and AEE will in fact be implemented and will not be compromised during the construction phase.

**8.5** These amendments will likely include providing more detail in the conditions (rather than in the management plans), and ensuring that the conditions require compliance with the management plans.

**8.6** I also recommend amendments to some conditions to establish clearer requirements to provide information (especially monitoring information) to the Council throughout the process, and consequential changes to conditions that are rendered necessary by the matters raised in the Council's submission.

## **9. RECOMMENDED CHANGES TO DESIGNATION CONDITIONS**

**9.1** Changes recommended to conditions are underlined for additions and struck through for deletions. The changes are made to the version of the conditions provided to the Board of Inquiry by NZTA on 14 September 2012.

**9.2** The changes outlined below are intended to address specific issues identified in the evidence of the Council's experts.

## Management Plans – General

9.3 I recommend amending condition DC.7 as follows:

*All works shall be carried out in ~~general~~ accordance with any of the certified management plans required by these conditions. The draft management plans lodged with the Notice of Requirement that are listed below in this condition shall be updated and finalised by the contractor and submitted to the Manager for certification at least 15 working days prior to the commencement of construction of the relevant stage or stages:*

- a) Construction Noise and Vibration Management Plan*
- b) Construction Air Quality Management Plan*
- c) Construction Traffic Management Plan*
- d) Hazardous Substances Management Plan*
- e) Landscape Management Plan.*

9.4 Comment: It is important for there to be a clear requirement in the conditions stating that the certified management plans must be complied with.

## Noise and Vibration Management – Construction

9.5 I recommend amending condition DC.30 as follows:

*The Requiring Authority shall implement the noise management and mitigation measures identified in the certified CVNMP. Construction noise shall, ~~as far as practicable~~, be made to comply with the following criteria in accordance with NZ56803:1999: ...*

9.6 Comment: This change is recommended for the reasons set out in Mr Hunt's evidence.

9.7 I recommend an amendment to condition DC.30 as follows:

*The Requiring Authority shall implement ~~the noise management and mitigation measures identified in the certified CVNMP~~ a Construction Vibration and Noise Management Plan (CVNMP) throughout the entire construction period of the Project. The CVNMP shall be provided to the*

Manager for certification prior to commencement of construction of the project.

The CNVMP must describe the measures adopted to seek to meet:

Construction noise shall, as far as practicable, be made to comply with the following criteria in accordance with NZ56803:1999:

**Residential receivers**

<i>Time of week</i>	<i>Time period</i>	<i>dB LAeq(T)</i>	<i>dB LAma,</i>
<i>Weekdays</i>	<i>0630-0730</i>	<i>55</i>	<i>75</i>
	<i>0730-1800</i>	<i>70</i>	<i>85</i>
	<i>1800-2000</i>	<i>65</i>	<i>80</i>
	<i>2000-0630</i>	<i>45</i>	<i>75</i>
<i>Saturdays</i>	<i>0630-0730</i>	<i>45</i>	<i>75</i>
	<i>0730-1800</i>	<i>70</i>	<i>85</i>
	<i>1800-2000</i>	<i>45</i>	<i>75</i>
	<i>2000-0630</i>	<i>45</i>	<i>75</i>
<i>Sundays and public holidays</i>	<i>0630-0730</i>	<i>45</i>	<i>75</i>
	<i>0730-1800</i>	<i>55</i>	<i>85</i>
	<i>1800-2000</i>	<i>45</i>	<i>75</i>
	<i>2000-0630</i>	<i>45</i>	<i>75</i>

*Industrial and commercial receivers*

<i>Time period</i>	<i>dB LAeq(T)</i>
<i>0730-1800</i>	<i>70</i>
<i>1800-0730</i>	<i>75</i>

(T) means a duration between 15 minutes and 60 minutes, in accordance with NZS6803:1999.

Where the criteria set out above cannot be met, the process of Condition DC.32 shall be followed.

Where it is not practicable to achieve those criteria, alternative strategies should be described to address the effects of noise on neighbours, e.g. by arranging alternative temporary accommodation; and the Category A vibration criteria set out in Condition DC.31 below, where practicable. Where

it is not practicable to achieve those criteria, a suitably qualified expert shall be engaged to assess and manage construction vibration during the activities that exceed the Category A criteria. If predicted construction vibration exceeds the Category B criteria then construction activity should only proceed if approved by the Manager and if there is appropriate monitoring of vibration levels and effects on buildings at risk of exceeding the Category B criteria, by suitably qualified experts.

The CNVMP shall, as a minimum, address the following:

- 1) Description of the works, anticipated equipment/processes and their scheduled durations;
- 2) Hours of operation, including times and days when construction activities causing noise and/or vibration would occur;
- 3) The construction noise and vibration criteria for the project;
- 4) Identification of affected houses and other sensitive locations where noise and vibration criteria apply;
- 5) Measurements of vibration of the first instance of each high-vibration machine is to be obtained with the results employed within calculations to re-assess, as appropriate, compliance with the Proposal criteria, and build up a site-specific profile of risk contours for each type of construction operation.
- 6) Improved management of vibration risks by completing the work completed to date on defining minimum set-back distances to dwellings based on field measurement of vibration levels taken on peaty soils found in the area. The setback distances to include motorscraper machines and dump trucks.

9.8 Comment: This change is recommended for the reasons set out in Mr Hunt's evidence.

9.9 I recommend amendments to condition DC.37, as follows:

- a) At least ~~2~~ 5 working days prior to commencement of works within any construction area, the Requiring Authority shall seek to ensure that:
  - i) If night works (works between the hours of 2000h and 0630h) are proposed to be undertaken, the occupiers of properties within ~~200m~~ 100m of the construction area (including any



traffic diversions) are provided with written notification of the scheduled works, including any advice for reducing internal noise levels;

- ii) the occupiers of properties within ~~200m~~ 100m of the construction area (including any traffic diversions) are provided written notification of the scheduled works;
- iii) the occupiers of properties within 50m of the construction area are provided individual written notification of the scheduled works with the opportunity offered for discussions on a case by case basis, if requested.

b) Reasonable attempts are to be made to directly engage with the occupiers of properties within 20m of the construction area to discuss the proposed construction works.

c) Night-time construction noise at Construction Works Depots complies with the night-time limits of NZS6803:1999

**9.10** Comment: This amendment is recommended for the reasons set out in Mr Hunt's evidence.

**9.11** I recommend an additional condition, following DC.37, as follows:

Any complaints about vibration during construction or operation of the Expressway shall be assessed against (Class C) of Norwegian Standard NS 8176.E:2005) "Vibration and shock-Measurement of vibration in buildings from land-based transport and guidance to evaluation of its effect on human beings". The assessment report shall be provided to the Council and all recommended mitigation works shall be implemented within 30 days of receiving the complaint.

**9.12** Comment: This condition is recommended for the reasons set out in Mr Hunt's evidence.

### **Operational Noise and vibration effects**

**9.13** I recommend an amendment to condition DC.49, as follows:

The operation of the road shall ensure that vibration from the new road shall be no greater than the Design Criteria (Class C) of Norwegian Standard NS

8176.E:2005)” *Vibration and shock-Measurement of vibration in buildings from land-based transport and guidance to evaluation of its effect on human beings*”. The NZTA system for monitoring and maintaining the condition of State highway pavements and road surfaces ~~policy for road roughness~~ shall be applied in order to minimise the risk of operation vibration issues.

**9.14** Comment: This change is recommended for the reasons set out in Mr Hunt’s evidence.

**9.15** I recommend a new condition, following DC.50 as follows:

- a) *Prior to construction, the Requiring Authority shall arrange for a suitably qualified and experienced acoustics specialist approved by the Manager to undertake a minimum of ~~8 (eight)~~ 20 (twenty) representative measurements of ambient noise levels. Measurements shall be undertaken in accordance with the requirements of section 5.2 of NZS6806:2010.*
- b) *Following completion of the work, the NZTA shall arrange for a suitably qualified and experienced acoustics specialist approved by the Manager to undertake traffic noise monitoring at the same sites surveyed in Condition DC.50a) above, ~~within 2 to 3 years~~ 3 months and at two further intervals, no closer than 4 years apart following completion of construction of the Project. Measurements shall be undertaken in accordance with the requirements of section 5.2 of NZS6806:2010.*
- c) *The results of the noise level monitoring undertaken in accordance with Conditions DC.50a) and b) above shall be used to verify the computer noise model of the Detailed Mitigation Options. A report describing the findings of the verification shall be provided to the Manager within one month of it being completed.*

**9.16** Comment: This change is recommended for the reasons set out in Mr Hunt’s evidence.

## Network Utilities Management Plan

9.17 I recommend a new condition, following DC.52 as follows:

A copy of the NUMP shall be submitted to the Manager for certification at least 10 working days prior to the commencement of any enabling or construction works on any part of the Project. The purpose of the certification process is:

- 1.To confirm that the appropriate liaison with infrastructure providers has occurred and that their concerns have been taken into account where appropriate; and
- 2.That all other conditions relating to the NUMP have been appropriately addressed.

9.18 Comment: This condition is required to ensure utility services in the Kapiti District, which enable the Kapiti community to provide for its health and safety, will continue to function during and after works are completed. This condition is also addressed in the evidence of Mr Wood. I note that the same condition was imposed by the Board of Inquiry into the Transmission Gully proposal (condition NZTA.58).

9.19 I recommend a new condition, following DC.52 as follows:

Prior to commencement of construction, the Requiring Authority shall, as part of the NUMP, seek to ensure that the operation and maintenance of the Project does not unduly constrain access to existing and/or relocated network utilities for maintenance purposes on an ongoing basis.

9.20 Comment: This condition is required to ensure utility services in the Kapiti District, which enable the Kapiti community to provide for its health and safety, will continue to function during and after works are completed. I note that the same condition was imposed by the Board of Inquiry into the Transmission Gully proposal (condition NZTA.61).

9.21 I recommend a new condition, following DC.52 as follows:

The Requiring Authority shall ensure that the construction and operation of the Project and any enabling works do not adversely impact on the safe and

efficient operation, and planned upgrading, of network utilities. This includes providing a 3 m wide water and wastewater corridor, by easement or vested in Council, within the proposed utility service corridor along the Expressway.

**9.22** Comment: This condition is required to ensure utility services in the Kapiti District, which enable the Kapiti community to provide for its health and safety, will continue to function during and after works are completed. I note that a similar condition was imposed by the Board of Inquiry into the Transmission Gully proposal (condition NZTA.63).

**9.23** I recommend a new condition, following DC.52 as follows:

The Requiring Authority shall give reasonable notice and make reasonable endeavours to:

(a) Liaise with all relevant network utility operators in relation to any part of the works within the designation where their infrastructure may be affected; and

(b) Make reasonable and relevant changes requested by such network utility operators, to the relevant design plans and methodologies, to ensure that access to, maintenance and the operation of all network utility infrastructure within the designated area is not adversely affected.

**9.24** Comment: This condition is required to improve certainty for network utility providers, including the Council, in the Kapiti District.

## **Stormwater**

**9.25** I recommend changes to condition DC.54 as follows:

The final operational designation area shall fully incorporate the areas of offset storage, ecological offset and wetland treatment (with the exception of offset storage area 6A) to ensure that these treatment and mitigation works will continue to function and be able to be maintained on an on-going basis by the consent holder.

**9.26** Comment: These changes are as recommended in the evidence of Mr Van Bentum and Ms Myers.

## Landscape Management Plan

9.27 I recommend changes to condition DC.54 as follows:

- a) *The Requiring Authority shall revise and finalise the Landscape Management Plan (LMP) for the Project.*
- b) *The purpose of the LMP is to outline the methods and measures to be implemented during the construction phase and for a defined period thereafter to avoid, remedy and mitigate adverse effects of the permanent works on landscape amenity. The LMP shall document the permanent mitigation measures, as well as ~~the~~ the necessary monitoring and management required to successfully implement those measures during the construction phase and the transition to the operational phase of the Expressway.*
- c) *The LMP shall be prepared in consultation with:*
  - *Te Ati Awa ki Whakarongotai and Takamore Trust;*
  - *Te Rūnanga O Toa Rangātira Inc, where the works are within or directly affect Queen Elizabeth Park;*
  - *the Greater Wellington Regional Council where works are within or directly adjacent to Queen Elizabeth Park or Waikanae River corridor;*
  - *As relevant, Friends of Queen Elizabeth Park, Friends of Wharemauku Stream, Friends of Waikanae River; and the Council.**This consultation shall commence at least ~~30~~ 60 working days prior to submission of the finalised LMP to the Council. Any comments and inputs received from the parties listed above shall be clearly documented, along with clear explanation of where any comments have not been incorporated and the reasons why.*
- d) *The LMP shall provide information on how the following outcomes will be achieved:*
  - i) *The integration of the Project's permanent works, including earthworked areas, structures and noise attenuation measures, into the surrounding landscape and topography, including the restoration of dune landforms, including but not limited to the restoration of areas used for temporary works and construction yards, and reinstatement of appropriate locally sourced indigenous vegetation;*

- ii) *The mitigation of the visual effects of the Expressway on properties in the immediate vicinity through landscape works, generally within land acquired for the Project (but also including on private properties, where appropriate, and where the relevant owner consents);*
- iii) *The retention or relocation of significant existing trees, or their replacement of their retention or relocation is not practicable;*
- iv) *The retention of areas of regenerating indigenous vegetation;*
- v) *The proposed maintenance of plantings, including the replacement of unsuccessful plantings to achieve for minimum canopy cover of 80% at the time of final completion plus a survival rate of 90% of the original density and species before works are handed over to NZTA to maintain; and*
- vi) *Coordination of landscape works with ecology works, including those required for stream diversion and permanent stormwater control ponds and how proposed ecological planting and landscape planting will be differentiated and managed;*
- vii) *demonstrate that the design principles in the ULDF have been adhered to in the development of the design including (but not limited to) principles for noise walls, boundary walls and structures (including bridges, underpasses and associated retaining walls) which are identified in the ULDF as being in highly sensitive locations.*

**9.28** *Comment:* These changes are as recommended in the evidence of Ms Williams and Ms Myers.

**9.29** I recommend changes to condition DC.57 as follows:

*The LMP shall include details of landscape design, including the following matters:*

- a) *Identification of vegetation to be retained, including retention of as many as practicable significant trees and areas of regenerating indigenous vegetation;*
- b) *Protection measures for vegetation to be retained, and make good planting along cleared edges;*

- c) *Proposed planting including plant species, plant/grass mixes, spacing/densities, sizes (at the time of planting) and layout and planting methods including trials;*
- d) *Planting programme - the staging of planting in relation to the construction programme which shall, as far as practicable, include provision for planting within each planting season following completion of works in each stage of the Project;*
- e) *Detailed specifications relating to (but not limited to) the following:*
  - i. *Vegetation protection (for desirable vegetation to be retained);*
  - ii. *Weed control and clearance;*
  - iii. *Pest animal management;*
  - iv. *Ground preparation;*
  - v. *Mulching; and*
  - vi. *Plant supply and planting, including hydroseeding and grassing – which shall require:*
    - 1. *Any planting to reflect the natural plant associations of the area;*
    - 2. *Where practicable, the use of mixes of plant which are of a suitable richness and diversity to encourage self-sustainability once established; and*
    - 3. *Any native plants to, so far as practicable, be genetically sourced from the relevant Ecological District;*
- f) *A maintenance regime including the control of pest animals (including possums, rabbits and hares) and pest plants, monitoring and reporting requirements, which is to apply for ~~two~~ five years (for terrestrial) and ~~four~~ five years (for wetland and riparian vegetation) following that planting being undertaken. A review period for the success of the plantings is to apply for 10 years following the planting being undertaken:*
- g) *Landscape treatment for noise barriers;*
- h) *Landscape treatment for pedestrian and cycle facilities;*
- i) *Consideration of:*
  - *The landscape character of the area;*
  - *The integration of the works into the natural environment, including streams; and Crime Prevention Through Environmental Design (CPTED) principles in urban areas.*

**9.30** Comment: This change is recommended for the reasons set out in Ms Myers' and Ms Williams' evidence. The need to ensure that the planting survives is also supported by Mr Coombs' evidence in terms of the harsher growing conditions present in the coastal environment.

**9.31** I note that the evidence of Mr Baily on behalf of NZTA recommends a condition for a Landscape and Urban Design Management Plan, which I support.

**9.32** I recommend an additional condition, following the condition proposed by Mr Baily in relation to the preparation of a Landscape and Urban Design Management Plan, as follows:

*The Requiring Authority must submit contract documentation for landscape and urban design finishing works to the Manager for certification at least 60 working days prior to the work being sent out to tender.*

**9.33** Comment: This condition is as recommended in the evidence of Ms Williams.

**9.34** I recommend an additional condition, following DC.59, as follows:

*All finished earthworks addressed in the LMP must be inspected by the Manager at the following stages:*

- (i) Prior to the placement of the planting substrate; and*
- (ii) Upon completion of planting (at practical completion).*

*The Requiring Authority must obtain sign off from the Manager that the finished earthworks are in accordance with that proposed in the LMP upon completion of planting.*

**9.35** Comment: This condition is as recommended in the evidence of Ms Williams.

### **Traffic and Transport effects**

**9.36** I recommend amending condition DC.X3 as follows:

*The NZTA shall prepare in collaboration with KCDC a Network Integration Plan (NIP) for the Project or relevant Project phases, to demonstrate how the Project integrates with the existing local road network and with future improvements planned by KCDC. The NIP shall include details of proposed*



*physical works at the interface between the State highway and the local road network and shall address such matters as pedestrian, cycleway design detail (including pathway widths, lighting standards, and standards for the crossing of local roads and under-bridge amenity / quality), lane configuration, traffic signal co-ordination and operational strategies, signage, and provision for bus stops and access to properties.*

*In addition, the NIP will address:...*

*h) Arrangements to prohibit new vehicular access on an on-going basis to properties within that part of the local road network controlled by the Requiring Authority within 1km of an on/off ramp.*

*i) The location and design and timing triggers for implementation of the future road links at Leinster Avenue, Ferndale Road and Ngarara Road prior to the completion of construction of the Expressway.*

**9.37** *Comment:* This change is recommended for the reasons set out in Mr Munro's evidence.

**9.38** I recommend an additional condition following DC.6 as follows:

*The requiring authority shall, in consultation with Nga Manu Nature Reserve operators, as part of the detailed design for the Expressway, provide a road connection to Nga Manu Nature Reserve which is suitable to serve as a future local connector route between the Waikanae North Development Zone and the Ngarara Zone the suitability of the route shall be certified by the Council at least 30 working days prior to construction.*

**9.39** *Comment:* This change is recommended for the reasons set out in Mr Munro's evidence.

**9.40** I recommend an additional condition following DC.6 as follows:

*The requiring authority shall undertake a safety audit, taking account of CPTED principles, carried out by suitably qualified independent assessor, for the proposed pedestrian/ cycle route along the expressway corridor and the pedestrian/cycle paths under or over the expressway. The results of this assessment and the resulting recommended designs of CWB works shall be*

provided to the Council for certification at least 15 days prior to construction of the CWB route commencing and all the recommended works shall be completed prior to the Expressway becoming operational. The QEP section of the pedestrian/cycle route shall be designed, assessed and certified prior to operation of the Expressway but construction can be completed within two years of the Expressway becoming operational.

**9.41** Comment: This change is recommended for the reasons set out in Mr Munro's evidence.

**9.42** I recommend an amendment to condition DC.6 as follows:

*The two pedestrian/cycle bridges and associated accesses referred to in condition DC.5 shall be constructed and completed by the time the Expressway is fully operational. The design and location of the overbridges shall be developed in consultation with the Council, and shall include their integration into local road and pedestrian networks including the construction of any necessary approach structures and connecting links.*

**9.43** Comment: This change is recommended for the reasons set out in Mr Munro's evidence.

**9.44** I recommend an amendment to condition DC.17 as follows:

- a) *The draft Construction Traffic Management Plan (CTMP) submitted with the application (dated xxxx 2012) shall be updated, finalized and submitted to the manager for certification, at least 15 days prior to commencement of construction of the project.*
- b) *The certified CTMP shall confirm the procedures, requirements and standards necessary for managing the traffic effects during construction of the project so that safe, adequate and convenient facilities for local movements by all transport modes (pedestrian, cycle, vehicle) are maintained throughout the construction period.*

**9.45** Comment: This change is recommended for the reasons set out in Mr Wignall's evidence.

**9.46** I recommend an additional condition to follow to DC.1 as follows:

The requiring authority shall make the following amendments to the layout and design of the expressway as shown in the plan sets as follows:

- (a) Te Moana Road interchange shall use a signal control
- (b) Milne Drive/ Te Roto Drive and Arawhata Road shall have traffic signals installed as part of the project.
- (c) The design of Mazengarb Road bridge shall maximise sightlines around the Mazengarb Road curve; align to the underlying rolling dune landform and integrate with landscaping.

The suitability of final design (including signal phasing) to achieve a safe and efficient local road network suitable for all travel modes (including walking and cycling) shall be provided to the Council for certification at least 30 days prior to construction.

**9.47** Comment: This change is recommended for the reasons set out in Mr Wignall's and Mr Munro's evidence.

#### **Traffic effects monitoring**

**9.48** I recommend an additional condition to follow DC 25 as follows:

The requiring authority shall develop and implement a thorough monitoring programme for operational traffic effects, which shall be certified by the Council prior to construction being completed. The purpose of the monitoring is to assess, during the first 10 years of the operation of the expressway, whether further works are required on the local network to address traffic generated by the expressway at interchanges. The triggers (for example intersection levels of service) for implementing works shall be included in the programme.

**9.49** Comment: This change is recommended for the reasons set out in Mr Wignall's evidence.

## Signage and wayfinding

9.50 I recommend an additional condition to follow to DC 25 as follows:

The requiring authority shall, in consultation with the Council, develop signage that clearly identifies the access to the town centres of Paraparaumu and Waikanae, Paraparaumu Airport as well as tourist attractions in the District. The signage shall be located and designed to provide certainty to expressway users that easy access to and from centres and attractions is possible. The final wording, appearance and placement of wayfinding signs shall be provided to the Council for certification and all wayfinding signage shall be in place prior to the expressway becoming operational.

9.51 Comment: This change is recommended for the reasons set out in Mr Wignall's and Mr Munro's evidence.

9.52 I recommend an additional condition following DC.24 as follows:

The requiring authority shall ensure that the Otaihanga construction yard shall be designed and layout, including any fencing, so that it does not impede access to the efficient operation of any existing activities on the landfill site including waste management, dog training and car club activities.

9.53 Comment: This change is recommended for the reasons set out in Mr Wignall's evidence.

## Social effects

9.54 I recommend an additional condition, following DC.14, as follows:

The requiring authority shall undertake a social impact assessment, which considers the following potential operational and construction effects:

- a) severance,
- b) connectivity,
- c) noise,
- d) vibration,
- e) dust.

- f) visual amenity and disruption.
- g) the ability of vulnerable groups to use the Kapiti Road and Te Moana Road interchanges safely and confidently.
- h) ability to access services.
- i) heavy vehicle movements in relation to activity nodes including:
  - schools;
  - sports venues;
  - Paraparaumu Town Centre (Coastlands, Community Centre, Aquatic Centre, Library, Civic Buildings); and
  - Waikanae Town Centre and effects on human health.

The assessment shall be undertaken for the entire route to determine the key indicators of social wellbeing which are potentially adversely affected by the project. A social monitoring and adaptive management package will then use these indicators to monitor social wellbeing, and require action to be taken when pre-agreed thresholds of effect are reached.

**9.55** Comment: This addition is recommended for the reasons set out in Ms Rivers' evidence.

## **10. RECOMMENDED CHANGES TO RESOURCE CONSENT CONDITIONS**

**10.1** Changes recommended to conditions are underlined for additions and struck through for deletions. The changes are made to the version of the conditions provided to the Board of Inquiry by NZTA on 14 September 2012.

**10.2** The changes outlined below are intended to address specific issues identified in the evidence of the Council's experts.

**10.3** I recommend an amendment to condition G.19, as follows:

*The management of key environmental effects associated with the construction phase of the project shall be detailed within the environmental management plans that are included in the appendices to the CEMP (draft plans were submitted with the applications). The finalised management plans shall be submitted to the Manager for certification at least 15 working days before the commencement of construction. Works shall not commence until the consent holder has received the Manager's written certification for the management plan(s). The CEMP shall identify how the management*

plans have been integrated with each other to manage effects including ecological effects.

- 10.4** Comment: This change is recommended for the reasons set out in Ms Myers' evidence.

### **Erosion and Sediment Control Management Plan**

- 10.5** I recommend the following change to G.27:

*The consent holder shall finalise, submit and implement through the CEMP, and Erosion and Sediment Control Management Plan (ESCP) to be submitted to the Manager for certification at least 15 working days prior to works commencing in accordance with Condition E.1. The purpose of the ESCP is to describe the methods and practices to be implemented to minimize the effects of sediment generation and yield on the aquatic receiving environments associated with the Project. In addition, the ESCP shall:*

- a) *Outline the principles that the ESCP shall seek to adhere to:*
- b) *Be developed in accordance with the objectives outlined in NZTA's Environmental Plan, including:*
- c) *Ensuring construction and maintenance activities avoid, remedy or mitigate effects of soil erosion, sediment run-off and sediment deposition to achieve no greater than 20% change in visual clarity to any receiving waterbody during works and no greater than 20% increase in deposited sediment at the conclusion of all works.*
- d) *Identify areas susceptible to erosion and sediment deposition and implement erosion and sediment control measures appropriate to each situation with particular emphasis on high-risk areas, including El Rancho/Takamore Trust Wetland, Raumati Wetland (between Poplar Avenue and Raumati Road), and the Otaihanga Wetland (adjacent to Otaihanga Landfill).*
- e) *Provide for mulch or hydro-seeding to be used on the larger cut sand slopes to minimize erosion of the slopes and sediment loss to catchments.*
- f) *Use bio-engineering and low-impact design practices where practicable.*

- 10.6 Comment: This change is recommended for the reasons set out in Mr van Bentum's, and Associate Professor Death's evidence.

### **Groundwater (Level) Management Plan**

- 10.7 I recommend changes to G.29 as follows:

*The consent holder shall finalise, submit and implement through the CEMP, the Groundwater (Level) Management Plan (GMP) to be submitted to the Manager for certification at least 15 working days prior to works commencing. The purpose of the management plan is to address the minimum standards, outline the best practicable options for groundwater management and procedures to minimize the effects on groundwater levels. Base level monthly monitoring shall be undertaken commencing at least one year prior to construction commencing in order to set critical thresholds to trigger mitigation actions, and to design effective mitigation methodologies.*

*The GMP shall be finalized in consultation with Te Ati Awa ki Whakarongotai and Takamore Trust.*

*The GWMP shall include information regarding:*

- i. the hydrological regime of each high-value wetland, including the standing water levels of wetlands prior to construction commencing;*
- ii. the schedule of groundwater monitoring bores identifying piezometer depth, screen length and geological unit;*
- iii. the locations of groundwater monitoring bores shown on plans;*
- iv. the locations of monitoring stations on the Wharemauku Stream and Drain 5;*
- v. regular gauging of Waimeha Stream and monitoring of groundwater levels in nearby piezometer 2010/BH07 and mitigation options should effects be of a significant magnitude and/or extended duration;*
- vi. monitoring frequency during construction and for at least 3 years following completion;*
- vii. monitoring methods including the role of Te Ati Awa ki Whakarongotai and Takamore Trust;*
- viii. reporting requirements;*
- ix. alert and action programmes;*
- x. response management; and*

- xi. consistency with the EMP, particularly details of how hydrological effects on wetlands will be monitored and avoided; and*
- xii. review procedures, including how input from KCDC will be incorporated into the monitoring programme.*

**10.8** Comment: This change is recommended for the reasons set out in Mr van Bentum's and Ms Myers' evidence.

**10.9** I recommend an additional condition to follow Condition G.33 as follows:

The requiring authority shall undertake surface and shallow ground water monitoring in in the vicinity of the Otaihangā Landfill including:

- a) surface water runoff at sites (to be determined in consultation with the Council) downstream of the Expressway alignment to ensure construction activities do not materially alter overall surface water quality draining from the site;*
- b) shallow groundwater sampling from the two bores (BH306 and BH307) located near the toe of the landfill to determine representative effects on groundwater quality in the absence of a strong vertical hydraulic gradient. Samples should be analysed for a representative range of cations, anions, nutrients and (dissolved) metals.*

Monitoring shall commence at least 2 years in advance of construction to provide a reliable baseline to determine any post-construction effects and continue for a period of at least two years following construction.

If sampling indicates any significant departure from the baseline (particularly parameter concentrations approaching relevant guideline values or consent limits) which can be attributed to Expressway construction, provision should be made to provide additional treatment to surface runoff or shallow groundwater throughflow before exiting the landfill site.

**10.10** Comment: These changes are recommended for the reasons set out in Mr Hughes' evidence.



## Ecological Management Plan

10.11 I recommend changes to condition G.34 as follows:

- a) *The consent holder shall finalise, submit and implement through the CEMP, the Ecological Management Plan (EMP). The EMP shall be submitted to the Manager for certification at least 15 working days prior to works commencing. The purpose of the Plan is to outline the ecological management programme to protect, reduce and remediate impacts on the environment during the construction phase of the Project. This EMP shall also document the permanent mitigation measures, such as restoration planting, and the mechanisms by which to develop relevant mitigation and restoration plans for terrestrial and freshwater habitat.*
- b) *The EMP shall be finalized in consultation with Te Ati Awa ki Whakarongotai and Takamore Trust.*
- c) *The EMP shall detail the monitoring to be undertaken pre-construction, during construction and post-construction as outlined below in Condition G.38-G.40. The EMP shall detail the role that Te Ati Awa ki Whakarongotai and Takamore Trust will have observing monitoring.*
- d) *The EMP shall provide information on how the following outcomes will be achieved:*
  - i. *Avoid and minimise loss of valued vegetation and habitats;*
  - ii. *Avoid and minimise construction effects on freshwater and the marine environments;*
  - iii. *Avoid and minimise effects on identified wetlands resulting from hydrological changes to water tables;*
  - iv. *Avoid and minimise effects on fish during stream works;*
  - v. *Avoid and minimise disturbance to nationally threatened or at-risk birds (as listed by the most up to date Department of Conservation threat classification lists) ~~during breeding periods;~~*
  - vi. *Re-establish affected lizard habitat and minimize lizard mortality resulting from construction of the Project and include an indigenous lizard management plan for the Project;*
  - vii. *Carry out monitoring in a manner that will confirm that adverse effects are as predicted; any exceedance is identified; and appropriate actions are undertaken to rectify;*

- viii. *Ensures that mitigation requirements are undertaken and monitored to ensure success is achieved; and*
- ix. *Carry out monitoring in a manner that confirms that mitigation meets objectives.*
- x. *Ensure that the North Island fernbird population is not adversely affected by construction or operation of the Project and provide for the protection and restoration of the habitat for the species, including pest control;*
- xi. *The monitoring of culverts and fish passages by Te Ati Awa ki Whakarongotai and Takamore Trust during construction.*
- xii. *Ensure that in the event of additional vegetation or habitat loss outside of the Project footprint, mitigation calculations are consistent with the Environmental Compensation Ratios outlined in the EMP.*
- xiii. *Freshwater habitat monitoring during construction with continuous turbidity meters (water clarity) and quorer sampling (deposited sediment) upstream and downstream of any activities affecting waterbodies.*

**10.12** *Comment:* These changes are recommended for the reasons set out in Ms Myers' and Associate Professor Death's evidence.

### **Ecological Monitoring – General**

**10.13** Changes to condition G.38 are recommended as follows:

*Monitoring shall be carried out in accordance with EMP as required by Condition G.34 in order to:*

- a) *collect baseline information on vegetation, wetlands, freshwater and marine ecology and fernbird on a quarterly basis for 1 year prior to construction work starting;*
- b) *collect ecological information on vegetation, wetlands, freshwater and marine ecology and fernbird on a quarterly basis during construction work;*
- c) *collect ecological information on vegetation, wetlands, freshwater and marine ecology, and fernbird on a quarterly basis for a minimum of 2 years post construction works completion.*

**10.14** Comment: These changes are recommended for the reasons set out in Ms Myers' evidence.

### **Ecological mitigation**

**10.15** Changes to condition G.39 are recommended as follows:

*All ecological monitoring required under the EMP shall be managed by a suitably qualified and experienced ecologist.*

*The results of all monitoring carried out pursuant to the EMP shall be:*

- a) available for inspection during normal office hours where such data is available;*
- b) provided to Te Ati Awa ki Whakarongotai and Takamore Trust;*
- c) independently peer reviewed*
- d) submitted to the Manager at quarterly intervals for certification that the appropriate monitoring has been undertaken;*
- e) submitted to the Director-General of Conservation and KCDC for information; and*
- f) summarized and submitted as part of the annual report required under Condition G.14.*

**10.16** Comment: These changes are recommended for the reasons set out in Ms Myers' evidence.

**10.17** Changes to condition G.41 are recommended as follows:

*In order to minimize the extent of effects on any area of natural vegetation and on habitats of indigenous flora and fauna located within the designation, the Consent Holder shall engage a suitably qualified ecologist to prepare detailed maps identifying all those areas listed in (c) and (d) below and other habitats not identified as high value, including areas of wetland, with information on their relative values and protection requirements and how these areas will be legally protected and (eg covenanted) in perpetuity. The maps shall be completed as part of detailed design and shall inform:...*

**10.18** Comment: These changes are recommended for the reasons set out in Ms Myers' evidence.

**10.19** Changes to condition G.42 are recommended to require at least double the area of revegetation currently proposed in order to mitigate the adverse effects on wetland and indigenous forest and shrubland ecosystem types. This change is recommended for the reasons outlined in Ms Myers' evidence.

**10.20** Changes to condition G.43 are recommended as follows:

*The mechanisms to achieve ongoing protection of the above mitigation areas shall be set out within the EMP and shall as a minimum cover:...*

- e) *The control of deer, goats, pigs, ~~and~~ weeds, mustelids, rats, feral cats and possums to levels that are necessary to achieve the conditions imposed on the relevant designation and associated consents, and to prevent significant loss of existing natural values;...*

**10.21** Comment: These changes are recommended for the reasons set out in Ms Myers' evidence.

### **Riparian Management**

**10.22** I recommend the following amendments to Condition WS.8 (formerly WS.5):

*The consent holder shall prepare and implement a revegetation and mitigation strategy for the stream modifications and structures authorised by this consent. The strategy shall be submitted to the Manager for certification at least 15 working days prior to any Work commencing. The revegetation and mitigation strategy shall include, but not be limited to:*

- a) *The quantum in total of stream mitigation required (at least 5.25km), the target SEV scores of the final enhancements and a plan of the location and lengths of waterways to be enhanced. Ensuring that construction stream diversions and realignments, flood storage areas, stormwater treatment wetlands will be rehabilitated separately to the SEV offset mitigation requirements;*
- b) *The development of Stream Rehabilitation Guidelines to detail the methods to restore of riparian habitats and reinstate the natural characteristics of streams;*
- c) *Riparian buffers with an average width of at least 20m.*

**10.23** Comment: These changes are recommended for the reasons set out in Ms Myers' evidence.

## Stream works

**10.24** Changes to condition SW.1 are recommended as follows:

*Operational stormwater discharge from the Expressway shall meet the following performance criteria:*

- a) All Expressway stormwater to be discharged to the following high quality water courses: Waikanae River, Waimeha Stream, Ngarara Creek and Kakariki Stream; shall be treated before discharge to the receiving environment by way of a two train system comprising swales followed by a constructed wetland. For all other catchments, treatment shall be provided via either wetland swales (holding water all year round) or grass swales followed by constructed wetlands). The design and construction requirements for the treatment devices shall be as set out in ~~in accordance with the~~ NZTA publication Stormwater Treatment Standard for State Highway infrastructure, 2010, or equivalent industry standard methods.
- b) *The peak rate of stormwater discharge from the Expressway at any point shall not exceed 80% (urban areas) or 100% (rural areas) of the pre Expressway peak discharge from the same footprint, in each of the 50%, 10% and 1% AEP critical duration storm events.*

**10.25** Comment: These changes are recommended for the reasons set out in Mr van Bentum's evidence.

**10.26** Changes to condition SW.2 are recommended as follows:

*The effects of the Expressway embankment, water crossing and stormwater discharge on flood risk shall be addressed in the following manner:*

- a) *Any loss of flood plain storage due to the fill embankment shall be offset by:*
  - i. *provision of equivalent alternative flood storage volume; or*
  - ii. *attenuating runoff; or*
  - iii. ~~*removing downstream constraints; or*~~
  - iv. *a combination of the above.*
- b) Scour and erosion risks associated with peak design stormwater discharges shall be mitigated by attenuating flow velocities in swales

and wetlands and providing rip-rap protection for culverts and outlets at bridges.

- c) Flood risk shall be assessed against the 1% AEP storm, with climate change to 2090 (mid range) estimated.
- d) Culvert and bridge waterway crossings shall be designed so that any increase in flood risk in the 1% AEP storm is either contained within the designation, or is localized within the flood plan, minor, and no more than 50m above existing flood levels.
- e) The combined effects of filling, waterway crossings and Expressway stormwater discharge shall be assessed through the use of hydrological and hydraulic modeling undertaken once final design is completed and in such a way to ensure:
  - i. KCDC's stormwater requirements and associated accepted best practice, in particular the Stormwater Management Strategy and policy of on-site hydraulic neutrality are adhered to;
  - ii. That the flow of stormwater and ground water from the hills to the coast (east-west) is not impeded; and
  - iii. That the natural flows in wetlands are not impeded.

**10.27** Comment: These changes are recommended for the reasons set out in Mr van Bentum's evidence.

**10.28** I recommend an additional condition, following SW.2, as follows:

All new, relocated or renovated open channel drains shall be constructed to resemble natural streams within natural stream beds, riparian planting and refuges.

**10.29** Comment: This condition is recommended for the reasons set out in Mr van Bentum's evidence.

## **11. CONCLUSION/RECOMMENDATIONS**

**11.1** In conclusion, I consider that many of the issues of concern to the Council can be resolved by additional conditions, or amendments to the proposed conditions, based on the recommendations of the Council's expert witnesses. For other matters not raised in the Council's submission I rely on NZTA's evidence and assessments and those of tangata whenua in relation to cultural matters.

**11.2** In relation to social effects and traffic effects in the vicinity of the Kapiti Road (levels of service), as there is insufficient information at this time to assess these effects (relying on the evidence of Mr Wignall and Ms Rivers), I am unable to reach a firm conclusion about whether or not the proposed expressway will achieve the purpose of the RMA. I support Mr Wignall's and Ms Rivers' recommendation for further assessment and modelling to be undertaken to enable an overall conclusion to be reached.

**11.3** Subject to further assessment being provided to appropriately address the outstanding matters raised in the Council's evidence, and subject to the amendments to conditions that I have recommended above, I expect I may be able to conclude that the project meets the purpose of the RMA overall.



Emily Thomson  
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Kāpiti Coast District Council  
5 October 2012