Before a Board of Inquiry

Under	the Resource Management Act 1991
In the matter of	Notices of requirement for designations and resource consent applications for the Transmission Gully Proposal
Between	**NZ Transport Agency**
	Requiring Authority and Applicant
And	**Porirua City Council**
	Local Authority and Applicant
And	**Transpower New Zealand Limited**
	Applicant

Statement of evidence of Lesley Ann Hopkins (Assessment of Effects and Statutory Analysis) for Transpower New Zealand Limited

18 November 2011

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INTRODUCTION

1. My full name is Lesley Ann Hopkins. My qualifications and experience are set out in my first statement of evidence regarding the transmission line design and resource consent applications.

2. I confirm the statement in my first statement of evidence that I have read and agree to comply with the Code of Conduct for Expert Witnesses as contained in the Environment Court Consolidated Practice Note (2011).

SCOPE OF EVIDENCE

3. In this brief of evidence I will:

   (a) Address the actual and potential effects on the environment of the Line Relocation Works, including proposed mitigation;

   (b) Address the consistency of the Line Relocation Works against the objective and policies of the National Policy Statement on Electricity Transmission ("NPSET");

   (c) Address the consistency of the Line Relocation Works with Part 2 of the Resource Management Act ("RMA");

   (d) Address matters raised in submissions that are relevant to my evidence; and

   (e) Describe the proposed conditions of consent.

SUMMARY OF EVIDENCE

4. The relocation and replacement of sections of the Paekakariki – Takapu Road A 110kV electricity transmission line ("the Line") is necessary to facilitate the construction of the NZTA Project and will be part of enabling works for the wider Transmission Gully Proposal.

5. Section 104C of the RMA requires that when considering an application for resource consent for a restricted discretionary activity, a consent authority must consider only those matters over which discretion is restricted in national environmental standards or other regulations. In this case, the NESETA is applicable and in particular, Regulation 16(4) sets out the specific matters for consideration for the applications for resource consent for the Line Relocation Works.

6. Overall, I consider, that taking into account the evidence of other experts and assessments prepared, the effects of the Line Relocation Works that are open to discretionary assessment are all able to be avoided, remedied or mitigated to an appropriate degree. Areas or sites potentially sensitive to the proposed line relocation have generally been avoided through the route selection process, thereby avoiding some effects. Many of the actual or potential effects may – and in my opinion should - be disregarded as effects that could arise from permitted line relocation works under the NESETA. In respect of the remainder, which are limited primarily to construction effects, and landscape effects, appropriate mitigation measures are proposed and included as conditions on the resource consents.

7. The most relevant objectives and policies for evaluation of any restricted discretionary activity under the NESETA are the objective and policies of the NPSET. Overall, I consider that the Line Relocation Works are supported by the objective and policies of the NPSET.

8. In terms of the overall purpose of the Act under section 5, I consider that the Line Relocation Works promotes the sustainable management of natural and physical resources, as the works provides for the on-going operation of the Line, part of the national grid which enable the community to meet its social and economic well-being, as well as their health and safety.

ACTUAL AND POTENTIAL EFFECTS OF THE LINE RELOCATION WORKS, INCLUDING PROPOSED MITIGATION

9. The following part of my evidence assesses the actual or potential effects on the environment of the Line Relocation Works. In making my assessments, I rely also on the technical assessments and evidence of other witnesses, as noted.

10. Section 104 of the RMA sets out the approach for consideration of applications for resource consent which includes any actual and potential effects on the environment of allowing the activity. Section 104C provides further direction and requires that when considering an application for a resource consent for a restricted discretionary activity, a consent authority must consider only those matters over which discretion is restricted in national environmental standards or other regulations. In this case, the NESETA is applicable and in particular,

Regulation 16(4), which sets out the specific matters for consideration for the applications for resource consent for the Line Relocation Works.

Visual and Landscape Effects

11. Under Regulation 16(4)(a)(i) of the NESETA, visual and landscape effects are a matter of discretion.

12. The actual and potential visual and landscape effects of the Line Relocation Works have been assessed in Section 7.3 of the Assessment of Effects on the Environment report ("AEE") and in the *Addendum to Technical Report 5: Assessment of Landscape and Visual Effects* prepared by Isthmus Group Limited.

13. In his evidence, **Mr Lister** assesses that the adverse effects of the Line Relocation Works on the existing environment will be relatively small in most instances, with the primary exception being the proposed bypass deviation at Wainui Saddle. The Wainui Saddle forms part of the foothill of the Tararua Ranges which are identified in the Kapiti Coast District Plan as an Outstanding Natural Landscape (ONL).

14. **Mr Lister** has assessed the effects of the Line Relocation Works on this ONL and has concluded that the effects through this section are to be modest in degree because: the ONL is already traversed by the existing transmission line; the selected bypass deviation is the best of the options considered and was aligned to reduce potential adverse effects; and there will be little effect on the main values of the ONL as a natural backdrop to the coastal plains. The reasons that a western alignment was selected are set out in my first statement of evidence and also covered in the evidence of **Mr Lister**, **Ms Yorke** and **Mr Fuller.**

15. In his evidence, **Mr Lister** discusses the best practice earthworks design principles that he considers should be applied to the design of tower foundations, access tracks and other land disturbance activities. I agree with Mr Lister that specific consideration should be given to visual effects during the detailed design of all tower sites and access tracks. In recognition of this, a condition is proposed requiring the design of tower foundations, access tracks and other land disturbance activities to be undertaken in accordance with the best practice earthworks design principles contained as Appendix 5G of *Addendum Technical Report 5: Landscape and Visual Effects Assessment*.

16. In his evidence, **Mr Lister** discusses the visual effects of changes to towers and identifies the towers that are likely to be more prominent following the Line Relocation Works. He has identified seven residential dwellings on six properties where the adverse effects will be moderate. These instances relate to Towers 32-33A and 40A. Landscape planting is proposed for these sites to partially mitigate the visual effects of these towers. This planting is required by proposed Condition TL9 – TL12. The effects of the Line Relocation Project on these residential buildings are discussed further in paragraphs 32-36 of my evidence.

17. As noted in the evidence of **Mr Rae**, this area is already subject to the existing transmission line, and the Line has formed part of this environment for nearly 90 years. The NESETA permits the maintenance and upgrading of the Line which could involve using taller or wider towers along the length of the Line. I am aware that Transpower has undertaken upgrades of this line as recently as 2002. I consider that the existing environment and the permitted baseline established by the NESETA are relevant considerations to the assessment of visual and landscape effects.

18. There will be visual and landscape effects from the Line Relocation Works, however, I consider that these effects will be limited to the line deviation at Wainui Saddle, future road users and residential sites near Towers 32-33A and 40A. At Wainui Saddle, the Line already traverses the ONL, the main values of the ONL are not affected, and the views from the plains tend to be too distant for the effects to be significant. In respect of future road users, I note that these visual effects would occur even if the road could be built without any Line Relocation Works. In terms of effects on individual residents, these effects have been identified by Mr Lister as "moderate" in degree and can be partially mitigated through restrictions on tower movement during detailed design, and other localised mitigation including planting. These measures are proposed as conditions on the resource consents.

Ecological Effects

19. Under Regulation 16(4)(a)(i) of the NESETA, ecological effects are a matter of discretion.

20. The actual and potential ecological effects of the Line Relocation Works have been assessed in Section 7.4 of the AEE and the *Addendum to*

Technical Report 11: Assessment of Ecological Effects prepared by Boffa Miskell Limited.

21. As set out in the evidence of **Mr Fuller**, the Line Relocation Works avoid all areas of significant indigenous vegetation and significant habitats of indigenous fauna. Of the 24 towers to be relocated, two are located in plantation pine, three in gorse scrub, and the remainder in pasture. In the opinion of **Mr Fuller**, the clearance of this vegetation will have no or negligible effects on the local ecology. I note that the NESETA permits the trimming, felling, or removal of vegetation for an existing transmission line this permitted baseline established by the NESETA is a relevant consideration to the assessment of ecological effects.

22. **Mr Fuller** has identified that twelve spans of the relocated line traverse regenerating native bush, however, this bush is low in stature and lies in gullies. None of this vegetation will need to be trimmed to provide for the Line Relocation Works and, during operation, no trimming is likely to be necessary for a number of decades.

23. **Mr Fuller** has identified that the proposed line (the conductor rather than the tower structures) traverses four Significant Natural Areas ("SNA"). While no towers or access tracks are located in these areas and no trimming of vegetation is required to achieve line clearance, it is important that the extent of these areas is confirmed and clearly communicated to the construction contractor/s prior to any works commencing. This will enable these areas to be further protected during construction. Protection mechanisms may include clearly demarcating the SNA where it is near to possible construction activities. I consider that compliance with this requirement can be achieved by way of proposed condition TL13.

24. I rely on the **Mr Fuller's** evidence, that no indigenous vegetation or habitats of indigenous fauna are affected by the Line Relocation Works. Measures are proposed to protect any areas of ecological values near to construction activities.

Effects on Historic Heritage

25. Under Regulation 16(4)(a)(ii) of the NESETA, effects on historic heritage are a matter of discretion.

26. The actual and potential effects of the Line Relocation Works on archaeological sites have been assessed in Section 7.5.1 of the AEE and the *Addendum to Technical Report 20: Assessment of Archaeological Effects* prepared by Heritage Solutions. The assessment for the Line Relocation Works has been undertaken by **Ms Mary O'Keeffe** and is covered in her evidence.

27. **Ms O'Keeffe** assesses that none of the archaeological and heritage sites from Maori occupation and subsistence and also past military presence in the area is physically affected by the Line Relocation Works.

28. An accidental discovery protocol is proposed for construction works if any archaeological sites or objects are uncovered during land disturbance activities and this is set out in proposed condition TL14, TL15A and TL15B. I consider this approach is appropriate given the general absence of recorded sites along the proposed route.

29. The actual and potential effects of the Line Relocation Works on built heritage have been assessed in Section 7.5.2 of the AEE and the *Addendum to Technical Report 19: Assessment of Built Heritage Effects* prepared by **Mr Ian Bowman** and is covered in his evidence.

30. **Mr Bowman** assesses in his evidence that the only built heritage within the vicinity of the Line Relocation Works is a WWII brick fuel tank and that the Line Relocation Works will not detract from the heritage values of the structure.

31. The evidence of **Ms O'Keeffe** and **Mr Bowman** is that no archaeological or built heritage sites are adversely affected by the Line Relocation Works.

Effects on Sensitive Land Uses

32. Under regulation 16(4)(a)(iii) of the NESETA effects on sensitive land uses are a matter for discretionary assessment. In particular, the discretion is limited to the location and height of transmission line support structures. Sensitive land uses are defined to include the use of land for a childcare facility, school, residential building or hospital.

33. Section 7.6 of the AEE sets out the effects on sensitive land uses and confirms that there are no childcare facilities, schools or hospitals within the line relocation route. There are a number of residential buildings

located in the vicinity of the existing and proposed line route; and I do not consider there are any other relevant land uses that ought to be considered sensitive.

34. The route selection process included consideration of sensitive land uses, with the outcome of avoiding identified sensitive locations including residential buildings. The effect of the Line Relocation Works on residential buildings therefore primarily relates to visual effects. As discussed in the evidence of **Mr Lister** and earlier in my evidence, the Line Relocation Works will result in the Line being more prominent for seven houses. These instances relate to Towers 32-33A and 40A. The evidence of **Mr Rae** discusses the effects on these houses and the community and identifies that the relevant considerations are:

    (a) that the area is quite sparsely population;

    (b) that the area is already subject to the existing Line;

    (c) the visual effects from the Line relocation will not give rise to a significant change in the character or feel of the community;

    (d) the Line complies with the relevant guidelines for public exposure to electric and magnetic fields.

35. I would add to these factors that despite being assessed as more prominent, the proposed locations of Towers 32A and 40A are further away from the nearest dwellings than their existing counterparts (now being approximately 240m and 110m in total from the nearest dwellings). Tower 33A maintains the same distance from the nearest residential dwelling – a distance of approximately 120m – compared with the existing Tower 33.

36. In essence, the only effects on sensitive land uses are the same effects that I have addressed above as visual or landscape effects. They are not additional to the adverse effects on landscape or visual amenity. The existing environment and the permitted baseline discussed in Paragraph 17 above are both relevant considerations, and in my opinion, the effects can be partially mitigated through restrictions on tower movement, and other localised mitigation including planting.

Earthworks, Clearance of Trees and Vegetation and Restoration of the Land

37. Under regulation 16(4)(b) of the NESETA earthworks, clearance of trees and vegetation and restoration of land are all matters for discretionary assessment.

38. Section 7.7 of the AEE sets out the effects of earthworks, clearance of trees and vegetation and restoration of the land. The evidence of **Mr Mason** provides a summary of the construction activities associated with the Line Relocation Works including the process for earthworks, clearance of trees and vegetation and restoration of the land.

39. As set out in my first statement of evidence, resource consents for earthworks are not being sought at this time, and if required, will be prepared following detailed design. However, the need for earthworks for the Line Relocation Works including tower foundation and access tracks has been presumed and taken into account in undertaking the various effects assessments. In my opinion this ensures that an appropriately extensive assessment is made at this time, without lessening the degree of assessment that must apply to any later applications.

40. The key effects likely to arise from earthworks relate to visual effects of the works and the discharge of contaminants (sediment). The visual effects of the works are discussed earlier in my evidence.

41. The discharge of sediment laden run-off from the works can be managed through the adoption of erosion and sediment control measures. In his evidence, **Mr Mason** discusses the process for installing and decommissioning erosion and sediment control for the works.

42. The risk of encountering land which has contaminants during earthworks activities is discussed in Section 7.7.1 of the AEE and in *Addendum to Technical Report 16A: Land Contamination assessment. Contamination.* **Ms Maize's** evidence is that only the construction of Tower 25A is likely to encounter soil with elevated levels of contaminants. This relates to previous DDT usage in the vicinity but investigations for the Transmission Gully Proposal show that it is present in levels below human health guideline values. Measures can

be adopted to minimise the potential effects of these contaminants including minimising earthworks.

43. The removal of trees and vegetation will be required to gain access to tower locations and establish construction platforms for the towers. As set out earlier in my evidence, this will not involve the removal of significant indigenous vegetation. However, the works will involve the removal of gorse dominated scrub and plantation pine. In his evidence, **Mr Mason** describes the vegetation clearance for towers and access tracks and the focus on minimising the extent of vegetation clearance that will be a key factor during detailed design and construction management.

44. In his evidence, **Mr Mason** describes the site reinstatement activities to restore the land during and following construction, including restoration of natural contours where possible, and reestablishment of vegetation.

45. In summary, to the extent that it is possible to assess the effects of earthworks and vegetation clearance in advance of detailed design, my assessment is:

45.1 that there will be no adverse effects relating to vegetation clearance;

45.2 that sedimentation and erosion effects from earthworks can be avoided through appropriate detailed design and standard construction management controls;

45.3 that landscape and visual effects from earthworks can be avoided, and if not avoided, then mitigated (through detailed design to minimise the scale of earthworks, and planting in appropriate instances) and remedied (through recontouring and revegetating of some earthworks areas following construction).

Effects and Timing of Construction

46. Under regulation 16(4)(c) of the NESETA, the effects and timing of construction are a matter for discretionary assessment.

47. In his evidence **Mr Mason** describes the key activities and effects associated with the construction of the Line Relocation Works. The effects are :

(a) Sedimentation run-off from freshly disturbed soils,

(b) Batter (cut slope) stability;

(c) Visual impact of large benched areas;

(d) Disposal of excavated soil material tailings on site;

(e) Disposal of groundwater from excavations;

(f) Noise from helicopters (if used);

(g) Stock disturbance and farm operation disturbance;

(h) Disruption to other parties' access ways; and

(i) Terrain or vegetation damage from ground pulling conductors, or dismantling towers.

48. These activities and effects are typical of other transmission line projects that I have been involved in. I note that the NESETA provides for the operation, maintenance, upgrading, or removal of an existing transmission line and the typical effects associated with these activities are anticipated under the NESETA. Section 4.2 of the AEE provides an assessment of the key activities against the NESETA.

49. In his evidence, **Mr Mason** discusses the sequence of construction and the construction traffic that is likely to be generated by the Line Relocation Works. The volume of construction traffic for a permitted line relocation under the NESETA would be similar to that anticipated for the Line Relocation Works.

50. **Mr Mason's** evidence is that there are management measures that can be adopted during the design and construction process to minimise all construction-related effects.

51. The preparation and implementation of the Construction Environmental Management Plan ("CEMP") as set out in Section 8.1 of the AEE would be the principal tool for managing such effects. For a project of this scale and nature, I consider this approach is appropriate. This management plan is required to be prepared and implemented under proposed condition TL16 and as a minimum should address the matters set out in condition TL17.

52. The development of a CEMP provides for the coordinated management and implementation of different measures responding to the particular

conditions of the area where work is being undertaken. It is able to take into account further knowledge and understanding gained through the detailed design process. I consider this approach would mitigate the construction effects of the Line Relocation Works.

53. I would expect that the CEMP is prepared by Transpower with input from the appointed construction contractor and would be prepared prior to construction commencing. Involvement of the contractor is critical to ensure that the chosen construction methodology is incorporated into the CEMP and to increase contractor awareness of the CEMP requirements. As outlined in the evidence of **Mr Mason**, some of the heavy machinery and vehicles used for construction have the potential to generate noise. I consider if noise levels do not exceed those specified in NZS 6803:1999 Acoustic – Construction Noise, the noise effects would be acceptable. This approach is consistent with the permitted activity noise standards for construction activities under Regulation 37 of the NESETA.

54. In terms of vibration, as outlined in the evidence of Mr Mason, some of the construction activities have the potential to cause vibration for limited durations. It is proposed that all construction activities be undertaken to comply with an internationally recognised vibration standard. I consider compliance with this standard would appropriately avoid, remedy or mitigate the potential vibration effects. This approach is consistent with the permitted activities vibration standard for construction activity under Regulation 37 of the NESETA. Compliance with this standard is proposed to be imposed by way of condition TL24.

Electric and Magnetic Fields

55. I note that electric and magnetic fields ("EMF") associated with the operation of the Line are not a matter for discretion under regulation 16 of the NESETA. However, the Line Relocation Works are required to comply with permitted EMF standards in Regulation 10.

56. The electric field strength and magnetic flux density of the relocated transmission line has been modelled and is set out in Section 7.10 and Appendix C of the AEE. The modelling has been undertaken in accordance with the requirements set out in Regulation 10 of the NESETA.

57. In her evidence, **Ms Yorke** confirms that the values for EMF are well within the guideline levels published by the International Commission on Non-Ionising Radiation Protection ("ICNIRP") for public exposure for 50Hz alternating current.

58. The levels for the line are below the ICNIRP guideline levels and comply with the permitted activity EMF requirements and conditions stipulated in Regulation 10 of the NESETA. Compliance with the ICNIRP guideline levels is proposed to be enforced by way of condition TL31.

SUMMARY OF EFFECTS

59. The Line Relocation Works will result in no adverse effects in relation to several of the matters of discretion in Regulation 16(4) of the NESETA. In particular:

    59.1 there will be no adverse ecological effects arising from the Line Relocation Works as these effects have been avoided through the route selection process or will be avoided through the conditions of consent; and

    59.2 there will be no adverse effects on historic heritage as all known heritage sites have been avoided through the route selection process.

60. Also, there will be no adverse EMF effects, with the Line complying with the relevant standards in Regulation 10 of the NESETA.

61. The Line Relocation Works will inevitably give rise to effects from construction works. Many of the effects, including noise and vibration, will be avoided through the adoption of good construction practice. Of the effects that cannot be avoided, many of these are no different than would arise from transmission line relocation and replacement permitted under the NESETA. Where the effects of construction cannot be avoided and they exceed the permitted baseline established by the NESETA, they are to be controlled and managed, and thereby mitigated through the CEMP.

62. There will be landscape and visual and associated effects from the Line Relocation Works, however, these effects will be limited to the line deviation at Wainui Saddle, future road users and residential sites near Towers 32A, 33A and 40A. In respect of the landscape and visual

effects of the line deviation at Wainui Saddle, the transmission line already traverses the ONL, the main values of the ONL are not affected, and the views from the plains tend to be too distant for the effects to be significant. In respect of future road users, the Line is part of the existing environment and therefore the Transmission Gully Proposal would always have resulted in road users experiencing some effects from the Line. These effects would occur even if the road could be built without any Line Relocation Works. In terms of effects on individual residents, there are seven properties that which are adversely affected by the Line Relocation work. These effects are only "moderate" in degree and can be partially mitigated through restrictions on tower movement, and other localised mitigation including planting. These measures are proposed as conditions on the resource consents.

63. Overall, I consider, that taking into account the evidence of other experts and assessments prepared, the effects of the Line Relocation Works that are open to discretionary assessment are all able to be avoided, remedied or mitigated to an appropriate degree. Areas or sites potentially sensitive to the proposed line relocation have generally been avoided through the route selection process, thereby avoiding some effects. Many of the actual or potential effects may – and in my opinion should - be disregarded as effects that could arise from permitted line relocation works under the NESETA. In respect of the remainder, which are limited primarily to construction effects, and landscape effects, appropriate mitigation measures are proposed and included as conditions on the resource consents.

ASSESSMENT OF THE LINE RELOCATION WORKS AGAINST THE OBJECTIVE AND POLICIES OF THE NPSET

64. In my view, one of the consequences of restricted discretionary activity status is that its restricted nature provides some guidance for the identification of the particular objectives and policies that may be relevant to the assessment. Specifically, where discretion has been restricted to particular matters, the only objectives and policies that are able to aid the assessment are those objectives and policies that relate to the same matters as discretion has been restricted to, or which cast some light on Part 2 matters more generally.

65. Also, in light of the conclusion above that any actual and potential adverse effects of the Line Relocation Works will be limited to

construction matters and landscape/visual matters, it is appropriate in my view to focus consideration of objectives and policies on those objectives or policies that relate to those particular subjects.

66. I also consider that the most relevant objectives and policies for evaluation of any restricted discretionary activity under the NESETA will be the objective and policies of the NPSET. Regional and District Plans are required to give effect to that objective and those policies. In my evaluation this indicates that the provisions of the NPSET are the primary source for policy guidance relevant to the Line Relocation Works.

67. Section 9.2 of the AEE provides an assessment of the Line Relocation Works against the objective and relevant policies of the NPSET.

68. The only objective of the NPSET is:

To recognise the national significance of the electricity transmission network by facilitating the operation, maintenance and upgrade of the existing transmission network and the establishment of new transmission resources to meet the needs of present and future generations, while:

- *managing the adverse environmental effects of the network; and*
- *managing the adverse effects of other activities on the network.*

69. In my opinion, the Line Relocation Works are consistent with this objective in that they relocate the essential existing line in a manner that avoids, remedies or mitigates adverse effects, while providing for the on-going operation of the Line following construction of the Transmission Gully Proposal. As covered in the previous section of my evidence, the adverse environmental effects of the works have been avoided, remedied or mitigated.

70. The NPSET contains 14 policies to achieve the above objective, with the relevant policies outlined and assessed in Section 9.2 of the AEE. Policy 1 requires decision makers to recognise and provide for national, regional and local benefits of electricity transmission. In my opinion, the Line Relocation Works are supported by Policy 1 as the Works provide for the continued operation of the Line whilst facilitating the construction of the Transmission Gully Proposal. Without the Line

Relocation Works, the existing line and its associated regional and local benefits cannot be preserved if the proposed new state highway proceeds.

71. Policies 2 to 9 in the NPSET are relevant to the Line Relocation Works and relate to managing the environmental effects of transmission. These policies recognise that transmission activities have technical and operational requirements which impose some constraints in managing adverse effects. The policies also recognise that transmission activities should avoid areas or other activities which are potentially sensitive to the presence of a transmission line, such as residential areas and outstanding landscapes.

72. Policy 2 requires that in achieving the purpose of the Act, decision-makers must recognise and provide for the effective operation, maintenance, upgrading and development of the electricity transmission network. The proposed relocation of parts of the Line is part of the maintenance and upgrading of this Line. In my opinion, the Line Relocation Works are supported by Policy 2 of the NPSET.

73. Policy 3 of the NPSET requires decision-makers to consider the likely constraints imposed on the technical and operational requirements of the network by any measures to avoid, remedy or mitigate adverse environmental effects. In her evidence, **Ms Yorke** sets out the technical and operational requirements that have contributed to the selection of the proposed line route and tower locations. These requirements have been particularly important for the section of the Line through the Wainui Saddle, where technical and operations requirements have meant that an alternative line route is necessary. In my opinion, these considerations are directly relevant to the application of Policy 3 of the NPSET.

74. Policy 4 of the NPSET requires decision-makers to have regard to adverse effects that have been avoided, remedied or mitigated through the route, site and method selection process when considering environmental effects of new or upgraded infrastructure. My first statement of evidence addressed the route selection process for the Line Relocation Works. Through this process, many potential adverse effects of the works have been avoided, remedied or mitigated. In my opinion, the Line Relocation Works, as a product of this robust route selection process are supported by Policy 4 of the NPSET.

75. Policy 5 of the NPSET requires that when considering the environmental effects of transmission activities decision-makers must enable the reasonable operational, maintenance and minor upgrade requirements of established electricity transmission assets. I do not consider this policy to be of particular relevance to the Line Relocation Works. It simply recognises that the ongoing operation of transmission lines will involve maintenance and upgrade works.

76. Policy 6 of the NPSET states that upgrades of infrastructure should be used as an opportunity to reduce existing adverse effects of transmission including such effects on sensitive activities. The route selection process for the line relocation has sought to reduce existing adverse effects. This included consideration of the proximity of the Line to residential buildings. Where it is identified that adverse effects cannot be avoided, mitigation has been proposed. I consider that the design of the Line Relocation Works has maximised the opportunity to reduce existing adverse effects, and therefore the Works are supported by Policy 6 of the NPSET.

77. I do not consider Policy 7 to be relevant to the Line Relocation Works as the area is rural rather than urban.

78. Policy 8 of the NPSET states that in rural environments, the planning and development of the transmission system should seek to avoid adverse effects on outstanding natural landscapes, areas of high natural character and areas of high recreational value and amenity and existing sensitive activities. As set out in my first statement of evidence, the selection of a Line route through the Wainui Saddle area had to balance the consideration of significant ecological, landscape and engineering considerations. The western alignment was selected as it avoided the more significant landscape and ecological effects associated with the need to create access and towers in areas of significant native vegetation. As covered in my effects assessment, it is not expected that the Line Relocation Works will have any effects on areas of high natural character or high recreational value; and to the extent that it has some moderate effects on a small number of existing houses, the route selection process has sought to avoid those where possible. Overall, I consider that planning and development of the Works to this point in time is supported by Policy 8 of the NPSET.

79. Overall, I consider that the Line Relocation Works are supported by the objective and policies of the NPSET as the potential adverse environmental effects have been avoided, remedied or mitigated as part of the route selection process, through preliminary design, with appropriate conditions of consent. The Line Relocation Works provide for the on-going operation and maintenance of the Line following construction of the Transmission Gully Proposal.

CONSISTENCY OF THE LINE RELOCATION WORKS WITH PART 2 OF THE RESOURCE MANAGEMENT ACT (RMA)

80. The purpose and principles of the RMA are set out in Part 2. There are a number of matters that are of relevance to the Line Relocation Works and these are set out in Section 9.1 of the AEE.

Section 6 – Matters of National Importance

81. A number of matters of national importance as set out in section 6 of the RMA are relevant to the Line Relocation Works. By avoiding rivers, wetlands, lakes and their margins, the Line Relocation Works would not impact upon the natural character of waterbodies (section 6(a)).

82. As covered in the evidence of **Mr Lister**, the only relevant outstanding feature or landscape in terms of the meaning under section 6(b), are the foothills of the Tararua Ranges which are identified in the Kapiti Coast District Plan as Outstanding Landscape. Mr Lister has confirmed that he considers the proposed deviation by the Wainui Saddle appropriate because the ONL is already traversed by the existing transmission line, the selected route is the best of the options considered and was aligned to reduce potential adverse effects, and the degree of adverse landscape effects will be moderate in degree.

83. As covered in the evidence of **Mr Fuller**, the proposed line route avoids all areas of significant indigenous vegetation and significant habitats of indigenous fauna (section 6(c)). Specifically, the western deviation at the Wainui Saddle was selected to avoid the area of significant vegetation located to the east. The Line Relocation Works will also not affect public access to rivers (section 6(d)).

84. As covered in the evidence of **Ms Pomare**, the Transmission Gully Proposal (including the Line Relocation Works) recognise and provide for the relationship of Maori and their culture and traditions with their

ancestral lands, water, sites, waahi tapu and other taonga (section 6(e)). There are also no protected customary rights that would be affected by the Line Relocation Works (section 6(g)).

85. As covered in the evidence of **Ms O'Keeffe** and **Mr Bowman**, historic heritage has been protected by avoiding all known heritage site (Section 6(f)).

Section 7 – Other Matters

86. "Other matters" under section 7 are also relevant to the Line Relocation Works. The exercise of kaitiakitanga has been recognised by engagement during the route selection process and specific consideration of the cultural impact statements prepared on behalf of Ngati Toa. A proposed accidental discovery protocol which incorporates the matters identified in a Memorandum of Understanding between Transpower and Ngati Toa will ensure that regard to the exercise of kiatiakitanga and the ethic of stwardship (section 7(aa)) is maintained.

87. I consider that the Line Relocation Works are consistent with section 7(b) because they are relocating and replacing sections of the existing transmission line. During route selection, particular consideration was given to minimising the extent of the line to be relocated and thereby making efficient use of the existing line. For this reason, an option to completely replace the Line, along a new route further away from the Transmission Gully Proposal was discarded during preliminary design.

88. **Mr Lister** has addressed landscape and visual effects in his evidence and identifies the measures have been taken to avoid or reduce potential adverse effects from the Line Relocation Works. In some instances he also identifies that there will be positive visual effects. In his evidence Mr Rae has addressed the effects of the Line Relocation Works on the character and feel of the community and he considers that they will not result in a significant change for these communities. Given the existing line's long-standing presence, and the effects that the existing line has on amenity values, I consider that the Line Relocation Works satisfy the requirement that particular regard is had to the maintenance and enhancement of amenity values (section 7(c)).

89. As stated in the evidence of **Mr Fuller**, the Line Relocation Works avoid all identified significant natural areas. Where gorse dominated scrub or

plantation pine is proposed to be cleared or modified, these areas will be minimised and vegetation reinstated in some areas following construction. I consider that this approach is consistent with section 7(d) in not adversely affecting the intrinsic values of ecosystems.

90. Regard has been had to the quality of the environment through the route selection process. I consider that this process, along with the mitigation and construction management measures proposed, would maintain the quality of the environment (section 7(f)).

Section 8 – Treaty of Waitangi

91. The principles of the Treaty of Waitangi have been taken into account in the route selection process and the preparation of the resource consent applications (section 8). In particular, consultation has been undertaken with Tangata whenua to better understand and respond to the matters of particular interest. I consider that adequate and appropriate account has been taken of the Treaty principles.

Sustainable Management and Section 5

92. In terms of the overall purpose of the Act under section 5, I consider that the Line Relocation Works promotes the sustainable management of natural and physical resources, as the works provide for the on-going operation of the Line, part of the national grid which enable the community to meet its social and economic well-being, as well as their health and safety. The relocation and replacement of the line enables the objectives of the Transmission Gully Proposal as set out in the evidence of **Mr Nicolson** (for the NZ transport Agency) to be realised.

93. Overall, I consider that the Line Relocation Works meets the purpose and principles of the Act under Part 2.

RESPONSE TO SUBMISSIONS

94. The following section of my evidence responds to planning matters raised in submissions. There are two submissions that relate directly to planning matters for the Line Relocation Works.

95. **Submission No. 23** (Kapiti Coast District Council) supports the applications subject to conditions relating to a range of matters. Those relevant to the Line Relocation Works focus primarily on visual effects

and include a submission that information on access roads should have been included as part of the current applications.

96. As noted in my first statement of evidence, the detailed design of access tracks has not yet been undertaken. I have been advised that such detailed design is not possible at this stage of the consenting, and in my experience this is usual for a project of this type. It would be unusual to attempt to proceed to detailed design, including such details as micro-siting of towers, and designing individual cuts and batters for earthworks, until the primary approvals for the Lines Relocations are confirmed. This is particularly so where the detailed design for the Line Relocation Works has to relate and respond to the detailed design for the proposed state highway development. Once confirmed during detailed design and where required, resource consents will be obtained for earthworks associated with access tracks.

97. Section 3.4.5 of the AEE describes the likely access tracks including the location and length of these tracks. Further, Section 3.5.3 of the AEE describes how access tracks will be constructed. As set out earlier in my evidence, in the assessment of effects of the Line Relocation Works access tracks have been taken into account, to the extent that 'typical' access tracks have been presumed. In their evidence, both **Mr Lister** and **Mr Fuller** confirm that they have considered access tracks when reaching a conclusion regarding the visual and ecological effects of the Line Relocation Works. **Mr Mason** also discusses the preparation of access tracks in his evidence. I am satisfied that the assessment of effects has given adequate consideration at this stage to the potential effects of access tracks for the Line Relocation Works, and that further assessment will occur, where appropriate, should subsequent applications for resource consents be required.

98. **Submission No. 43** (Director General of Conservation (Department of Conservation)) raises concern that there are some activities for which resource consents have not been sought at this stage, and as such, the effects of these activities on freshwater habitats and species have not been assessed. For the Line Relocation Works these resource consents relate to the construction of culverts and earthworks.

99. The reasons for not seeking these resource consents at this stage are set out in my first statement of evidence and in response to Submission No. 23 above.

100. I note that Section 6.2.4 of *Addendum to Technical Report 11: Assessment of Ecological Effects* discusses the effects of potential stream crossings associated with the Line Relocation Works and concludes that the use of temporary culverts for construction will have little or no ecological effect on freshwater habitat and is unlikely to affect fish passage. This Technical report also assesses the potential for sediment discharge to streams from construction of towers and access tracks. The risk of significant effects from construction was assessed as low due to the modest scale of earthworks. This is supported by the Evidence of **Mr Fuller.** I consider that the risk of sediment discharge can be managed through the adoption of appropriate erosion and sediment control measures.

PROPOSED CONDITIONS OF RESOURCE CONSENT

101. Section 8 and Appendix D of the AEE, set out the proposed conditions of resource consent. I was responsible for the drafting of these proposed conditions, with advice from the relevant technical specialists.

102. In response to matters raised in submissions, and on-going conferencing with Council officers, amendments to these conditions are proposed. I understand that a revised set of conditions will be appended to Transpower's legal submissions.

103. Transpower's proposed conditions for the resource consents relate to the matters of control under Regulation 16(4) of the NESETA. Whilst not addressing matters for discretion, conditions are also proposed for electric and magnetic fields and noise and vibration and these mirror the permitted activity conditions for these matters set out in Regulations 10 and 37 of the NESETA.

104. Condition TL8 relates to the location and height of the transmission line support structures. This condition recognises that Transpower requires some flexibility to site towers during the detailed design process but also that the effects of the towers may be specific to a particular location. A general 20 metre zone was selected for the majority of towers. Where specific visual or engineering effects have been identified, as at tower locations set out in Condition TL8 (b) through (e), the tolerances have been reduced in discussion with Transpower engineers and the landscape and visual experts.

105. These tolerances allow for micro-siting of towers that will take into account a range of factors including mitigation opportunities, site-specific topography or geotechnical constraints, and structural engineering. Mr Mason's evidence is that a key consideration is to minimise the scale of earthworks wherever possible. If the final designed location is beyond the specified tolerances, then the resource consents will either need to be altered or new consent sought. This will allow the change in any effects to be considered. In my opinion, this an appropriate mechanism to deal with the siting of the towers during detailed design.

106. Condition TL8(f) was developed in discussion with Transpower engineers and recognises that the height of the towers is relative to electrical clearance requirements. Therefore, the condition provides that if the tower is moved such that the base of the tower is lower (or conversely, higher) than of that currently proposed, the relative height of the tower will need to remain the same.

107. I consider that the proposed conditions are appropriate, and adequate to avoid, remedy or mitigate the potential adverse effects on the environment resulting from the Line Relocation Works.

Lesley Ann Hopkins
18 November 2011