

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
(Planning – Transmission Line Design and Resource Consent
Applications) for Transpower New Zealand Limited**

18 November 2011

I M Gordon & M J Slyfield

Barristers

Stout Street Chambers

Wellington

Telephone: (04) 472 9026 & 915 9277

Facsimile: (04) 472 9029

PO Box: 117, Wellington 6140

Email: ian.gordon@stoutstreet.co.nz

morgan.slyfield@stoutstreet.co.nz

INTRODUCTION

1. My full name is Lesley Ann Hopkins. I am a planning Associate with Beca Carter Hollings & Ferner Limited ("Beca").
2. My evidence relates to the planning aspects of the Transpower New Zealand Limited ("Transpower") Transmission Line Relocation Works as part of the wider New Zealand Transport Agency ("NZ Transport Agency") Transmission Gully Proposal. My evidence has been provided in two parts to assist the Board. This first part has been prepared to set out the applications for resource consent and the route selection process for the Line Relocation Works. My second statement of evidence is intended to be considered after the first statement, and after evidence from the technical specialist witnesses, and sets out my statutory assessment and my overall assessment of the effects of the Line Relocation Works.
3. I have the following qualifications and experience relevant to the evidence I shall give:
 - (a) I have a Bachelor of Planning (Honours) from the University of Auckland and a Post Graduate Diploma in Development Studies from Massey University.
 - (b) I am a member of the New Zealand Planning Institute (MNZPI).
 - (c) I have over 11 years' experience as a planner and have worked for a local authority and consultancy. In my first 4½ years in practice, I was employed as a policy analyst with the Auckland Regional Council (now part of the Auckland Council) undertaking a variety of planning tasks including policy implementation and processing consent applications for large infrastructure projects. For the past 9½ years I have been a consulting planner based in Wellington and Auckland.
 - (d) I have advised a wide range of clients, including local authorities, corporate entities and central government on various projects. In particular, I have been involved in a number of infrastructure projects requiring resource consents and designations.
 - (e) I have provided planning advice on a number of electricity transmission projects including:

- (i) Managing a site selection process and preparing a Notice of Requirement for a designation and applications for resource consents for a new 220kV switchyard at Drury;
 - (ii) Preparing applications for resource consent under the Resource Management (National Environmental Standard for Electricity Transmission Activities) Regulations 2009 ("NESETA") for the replacement of the existing Mangamaire to Masterton 110kV transmission line;
 - (iii) Preparing applications for resource consent for a new 220kV transmission line as part of the Turitea Wind Farm near Palmerston North;
 - (iv) Preparing applications for resource consents under the NESETA for the reconductoring of the Wanganui to Stratford 110kV transmission line;
 - (v) Preparing applications for resource consent and an Outline Plan for a new 220/400kV North Island Grid Upgrade substation at Whakamaru;
 - (vi) Managing a route selection study for the deviation of two 220kV transmission lines at Maramarua;
 - (vii) Managing route selection studies for new grid connections and associated transmission lines at Gore, Geraldine, Piako and Putaruru; and
 - (viii) Managing the initial route selection process for the relocation and replacement of a 40 kilometre 220kV transmission line between Wairakei and Whakamaru.
- (f) Each of the above projects has required coordination of planning and environmental assessment on the likely effects of electricity transmission projects. These considerations are shared with the Line Relocation Works.
- (g) In addition to the above, I have direct experience in the construction phase of a major infrastructure project. I am currently managing the consents and approvals for the construction of the Waterview Connection Project in Auckland. In this role I am responsible for co-ordinating consent compliance,

preparing management plans and other approvals and liaising with Auckland Council and other stakeholders. This role is directly relevant to my drafting of consent conditions for the Line Relocation Works.

4. I confirm I have read the Code of Conduct for Expert Witnesses as contained in the Environment Court Practice Note 2011, and I agree to comply with it as if this Inquiry were before the Environment Court. My qualifications as an expert are set out above. I confirm that the issues addressed in this brief of evidence are within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions I express.

SCOPE OF EVIDENCE

5. The NZ Transport Agency is proposing to construct, operate and maintain a 27km section of state highway from Linden to MacKays Crossing. Parts of Transpower's existing Paekakariki – Takapu Road A ("PKK-TKR A") 110kV electricity transmission line between MacKays Crossing and the Pautahanui Substation ("the Line") need to be relocated to enable the state highway project to proceed. Transpower is therefore applying for resource consents for the necessary relocations of the relevant parts of the Line ("the Line Relocation Works").
6. I have been involved with the Line Relocation Works since October 2010 when Beca was engaged by the NZ Transport Agency to investigate the relocation of the Line as part of the Transmission Gully Proposal. My role has been the coordination of the various inputs and preparation of documentation to guide the investigation of a line route and subsequently preparing the applications for resource consents for the Line Relocation Works. I was the lead author of the Assessment of Effects on the Environment report ("AEE") submitted in support of the applications for resource consents for the Line Relocation Works.
7. My responsibilities have included:
 - (a) Identifying and managing the mapping of key environmental, social, cultural and engineering constraints and opportunities within the area to inform the identification of possible routes for the Line;

- (b) Developing, in collaboration with other specialists, the methodology for assessing potential line routes;
 - (c) Facilitating multi-disciplinary workshops to confirm the key constraints and opportunities, identify and assess route options, confirm the line route, determine the potential effects of the Line and identify appropriate mitigation; and
 - (d) Preparing the applications for resource consents and the assessment of effects on the environment for the Line Relocation Works.
8. In this brief of evidence I will:
- (a) Provide an overview of the national framework under the Resource Management Act 1991 ("RMA") for electricity transmission activities and how it applies to the Line Relocation Works;
 - (b) Provide a description of the applications for resource consents sought together with their relevant status; and
 - (c) Describe the route selection process for the Line and consultation undertaken with affected landowners.
9. This first statement of evidence is designed to be considered prior to the evidence of the technical specialist witnesses. My second statement of evidence assesses the effects of the Line Relocation Works (as explained by those technical specialists) under the relevant provisions of the RMA, and planning documents. My second statement also describes the resource consent conditions proposed.

SUMMARY OF EVIDENCE

10. A national framework has been established to manage the effects of the electricity transmission network under the RMA. This framework is comprised of the National Policy Statement on Electricity Transmission ("NPSET") and the NESETA and recognises that the electricity transmission network is a matter of national significance.
11. The Line Relocation Works require resource consents under the NESETA. These resource consents relate to the alteration, relocation and

replacement of sections of the PKK-TKR A transmission line located between Tower 1 at MacKays Crossing and Tower 49A at the Pauatahanui Substation on SH58. The relocation and replacement of towers does not comply with Regulation 14 (Permitted Activities) or Regulation 15 (Controlled Activities) of the NESETA. Land use consents are being sought for the relocation of 6 towers within the Kapiti District and for the relocation of 18 towers within Porirua City in accordance with Regulation 16(1)(a) and 16(1)(b) of the NESETA. These activities are a restricted discretionary activity, with the matters for discretion set out in Regulation 16(4).

12. I have identified that additional resource consents may be required for other components of the Line Relocation Works which are still subject to detailed design. These may include resource consents required under the NESETA, the relevant regional plan rules and the NES on Contaminants in Soil. It is my opinion that, if further resource consents are required, that these will need to be sought and obtained before the Line Relocation Works proceed.
13. It is my opinion that the Line Relocation Works are the result of a robust route selection process to identify the most appropriate route, taking into account all relevant factors. Through the Wainui Saddle area, the route selection process balances ecological, landscape and engineering considerations.

APPLICATION OF THE NPSET AND NESETA TO THE LINE RELOCATION WORKS

14. The Government has approved the NPSET and the NESETA. The national framework established by these documents recognises:
 - (a) the national benefits of transmission;
 - (b) the environmental effects of the electricity transmission network;
 - (c) the adverse effects of third parties on the electricity transmission network; and
 - (d) the need for efficient operation and maintenance of the existing network.
15. The NPSET was gazetted on 13 March 2008. It is a statement from central government to recognise that operation, maintenance,

development and upgrading of the electricity transmission network is a matter of national significance as the efficient transmission of electricity plays a vital role in the well-being of New Zealand, its people and the environment. The NPSET provides a high-level framework that gives guidance across New Zealand for the management and future planning of the national grid. It sets out the objective and policies to enable the management of the effects of the electricity transmission network under the RMA. I assess the Line Relocation Works against the objective and relevant policies of the NPSET in my second statement of evidence.

16. The NPSET is intended to guide decision makers in the determination of applications for resource consents. It is a relevant consideration to be weighed along with other considerations in achieving the sustainable management purpose of the RMA (ie. Part 2 of the RMA). As set out in the preamble to the NPSET, it is not meant to be a substitute for, or prevail over, the RMA's statutory purpose or the statutory tests already in existence. I address the consistency with Part 2 of the RMA in my second statement of evidence.
17. The NPSET requires local authorities to give effect to its provisions in plans made under the RMA by initiating a plan change or review by April 2012. As at the date of preparing this statement, reviews are underway by Kapiti Coast District Council and Porirua City Council, but the outcomes of those reviews are not yet known. It is my understanding that, where an inconsistency exists between the objective and policies of NPSET and those contained in plans prior to a plan change or review, the NPSET provisions should be applied. This is set out in Section 55 of the RMA.
18. The NESETA was gazetted on 14 December 2009 and came into effect on 14 January 2010. The NESETA addresses the objective and policies of the NPSET, in relation to the existing transmission network. The NESETA sets out a national framework of permissions and consent requirements for activities on existing electricity transmission lines. Activities include the operation, maintenance and upgrading of existing lines. Section 4.2.1 of the AEE confirms that the PKK-TKR A 110kV transmission line is an existing transmission line using the definition provided in the NESETA.
19. In general terms, if an activity in relation to the existing transmission network is subject to the NESETA, then the provisions of the NESETA

displace the district plan rules that would otherwise apply to that activity. Regulation 4(1) sets out the activities which are covered by the NESETA and Regulation 4(2) lists the activities that the NESETA does not apply to. If the NESETA does not apply to a proposed activity, then the relevant district or regional plan rules will continue to apply.

20. There are two activities that are likely to form part of the Line Relocation Works to which the NESETA does not apply. These are the construction and use of culverts to access the transmission line, and earthworks (to the extent that they are covered by a regional rule). I address the resource consents that may be required for these activities in Paragraph 37 of my evidence.

OVERVIEW OF THE RESOURCE CONSENTS SOUGHT

21. In this section of my evidence I outline the evaluation of resource consent requirements for the Line Relocation Works and set out the applications for resource consents sought at this time.
22. A two staged consenting approach has been adopted due to the timing of availability of information about particular activities in sufficient detail to meet the requirements of section 88 of the RMA. At this time the broad design parameters of the line relocation are known. This information enables an assessment of environmental effects of the relocated line itself. I anticipate that additional resource consents will be required for aspects of the Line Relocation Works and that these can be confirmed and lodged following detailed design. I set out the likely additional consents in the next section of my evidence.
23. Section 4.2 of the AEE provides an assessment of the Line Relocation Works against the NESETA. The assessment is based on the preliminary design of the line and the typical activities associated with relocating a tower as set out in Section 3.4 of the AEE. The anticipated construction activities associated with relocating the line are discussed in more detail in the evidence of **Mr Mason**.
24. The NESETA applies to the operation, maintenance, upgrading, relocation, or removal of an existing transmission line.¹ The Line

¹ Regulation 4(1), NESETA.

Relocation Works involve the removal and relocation or replacement of sections of the Line, which includes the replacement of towers.

25. Of the 50 existing towers located along this section of the Line; 25 towers are to be replaced with 24 towers in new locations, and 10 of the towers adjacent to new towers require strengthening works. The components of the towers that are being removed will not be re-assembled to form the new towers. However, the removal of towers, and their replacement with towers in new locations, falls within the meaning of "relocation" as that term is used in the NESETA. The electrical and physical considerations that have resulted in the proposed tower locations and a more detailed summary of the changes required to the Line are set out in **Ms Yorke's** evidence.
26. All but one of the relocated towers will increase in height, with 19 of the towers increasing by more than 15% of their current height. These height increases are greater than those provided for as permitted and controlled activities under the NESETA². The reasons for these height increases are set out in the evidence of **Ms Yorke** and are the result of the electrical safe distance requirements as set out in the NZ code of practice³.
27. Regulation 14(5) of the NESETA permits tower footprints to be widened by up to 25% of their current width (including by being replaced with another tower). The tower footprint is the outline of the land occupied by a tower, formed by drawing straight lines between the outermost edges of the tower at ground level.
28. For the Line Relocation Works, the final footprint for each tower is dependent on the conditions encountered at each towers site and the type of tower. The tower footprints are likely to range between 7.5 metres for a suspension tower and 10 metres for a strain tower. Until site specific investigations including geotechnical investigations are undertaken, I have taken a conservative approach and assumed that all of the relocated towers will exceed the permitted allowance for widening of tower footprints set out in Regulation 14(5).

² See Regulations 14(3) and 15, NESETA.

³ NZECP 34:2001 New Zealand Electrical Code of Practise for Electrical Safe Distances.

29. To provide for the motorway alignment, the 24 relocated towers are moving distances of between 10m (Tower 33A) and 319m (Tower 10A) from their existing locations. Under Regulations 14(6) and 15(1)(c) of the NESETA, it is, respectively, permitted and controlled to relocate a suspension tower by 3.5m and 9m and permitted and controlled to relocate a strain tower by 4.8m and 12m. None of the relocated towers is within these permitted or controlled envelopes.
30. As the relocation and replacement of towers does not comply with Regulation 14 (Permitted Activities) or Regulation 15 (Controlled Activities) it is therefore a restricted discretionary activity in accordance with Regulation 16(1)(a) and 16(1)(b) of the NESETA.
31. Land use consents for these restricted discretionary activities are being sought for the relocation of 6 towers within the Kapiti District and for the relocation of 18 towers within Porirua City.
32. The matters for discretion for the relocation of these towers are set out in Regulation 16(4) and are:
- "(a) the location and height of the transmission line support structures in relation to—*
- (i) visual, landscape, and ecological effects; and*
- (ii) the effects on historic heritage; and*
- (iii) the effects on sensitive land uses; and*
- (b) earthworks, clearance of trees and vegetation, and restoration of the land; and*
- (c) the effects and timing of construction works."*
33. The matters for discretion have guided the assessment of effects set out in Section 7 of the AEE and the proposed conditions of consent as set out in Section 8 and Appendix D of the AEE. I address each of these matters of discretion in the section of my second statement of evidence that details the actual and potential effects.

RESOURCE CONSENTS REQUIRED FOLLOWING DETAILED DESIGN

34. Some of the specific design details associated with constructing the Line Relocation Works are not known at this stage as detailed design has yet

to be undertaken. If the Transmission Gully Proposal Notices of Requirement are confirmed, then further detailed design for the Transmission Gully Proposal, including civil design, will occur; and Transpower will be able to undertake detailed design of the Line Relocation Works, which will include confirming access track requirements and tower foundation designs.

35. During detailed design, further assessment will be undertaken to determine whether additional resource consents are required. Any resource consents required will have to be sought and obtained before the Line Relocation Works proceed. In my experience, this is acceptable practice for a transmission line project of this scale.
36. Based on the information currently available, I expect that resource consents may be required for:
 - 36.1 culverts (depending on their location) and earthworks (depending on their volume, length and location), in accordance with regional plans; and
 - 36.2 earthworks, in accordance with Regulation 33 of the NESETA.
37. The likely triggers for these resource consents are set out in Section 1.2.2 and 4.2.8 of the AEE.
38. I also note that since lodging the applications for resource consents, the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011 have been gazetted. The NES will come into effect on 1 January 2012 and will need to be assessed where relevant.
39. I expect that any future applications for resource consents can be dealt with through the traditional council consenting process.

THE ROUTE SELECTION PROCESS

40. A route selection process was undertaken to identify the most appropriate route for the relocated line. The methodology involved a systematic process of information collection and analysis in determining an area of interest, broad line routes for further evaluation, a systematic assessment of routes, and a refinement of the route into an alignment.

Appendix A of the AEE provides a summary of the route selection process.

41. The route selection process started with the identification and mapping of constraints and opportunities within the area that could influence the identification of possible alignments. These constraints and opportunities were discussed at a series of workshops attended by key NZ Transport Agency and Transpower technical experts. The features identified during this process were subject to more detailed assessment by the relevant experts including further desktop reviews and site visits.
42. This assessment process identified that the Wainui Saddle contained a number of overlapping ecological, landscape and engineering constraints. Following a more detailed assessment it was determined that locating the towers and the proposed road in the narrow gully was not feasible. In her evidence, **Ms Yorke** sets out engineering considerations that lead to this conclusion. During the assessment process, two alternative alignments for this section of the Line were identified. These were an eastern alignment or a western alignment which bypassed the Wainui Saddle. The landscape, ecological, engineering difficulty, cost and land ownership effects of both alignments were considered.
43. The eastern alignment had positive aspects including that it involved no road crossings within the Saddle, required smaller changes in angle for the line, and was less prominent from viewpoints north of the gully. However these positive aspects were outweighed by the greater landscape and ecological effects associated with the need to create access and tower platforms in heavily vegetated areas, and engineering difficulties relating to the steepness of the terrain. A key reason for not favouring this alignment was that relocating the transmission line within this area would conflict with the work done to date on the Transmission Gully Proposal to try to avoid (and preserve) these steep, heavily vegetated slopes. On balance, the western alignment was considered more favourable given the absence of vegetation and the likelihood of easier access and easier terrain to work with.
44. With the selection of the western alignment as the preferred route through the Wainui Saddle, the overall line route was confirmed as the route that generally follows the existing line to about Tower 8, then bypasses the Wainui Saddle along the Western Ridge and reconnects to

the existing Gully Route at about Tower 13. It then generally follows the existing line along the eastern side of the proposed highway to about Tower 27 and then generally follows the existing line to the Pauatahanui Substation.

45. Following confirmation of this route, transmission line engineers identified possible tower locations. These locations were identified based on topographical features, span lengths, towers angles and the proximity of the motorway alignment. The tower locations were refined with input from technical experts and informed by consultation with landowners.
46. In my opinion, there has been adequate consideration of line routes, with a robust and thorough methodology.

CONSULTATION WITH AFFECTED LANDOWNERS

47. Discussions with landowners for the Line Relocation Works formed part of the more extensive engagement undertaken for the Transmission Gully Proposal as covered in the evidence of **Mr Nicolson** for the NZ Transport Agency. A summary of the consultation undertaken specific to the Line Relocation works is set out in Section 6.4 of the AEE. The discussions with landowners were led by The Property Group Ltd, who were commissioned by NZTA to undertake property matters for the Transmission Gully Proposal. These meetings were attended by Transpower's engineering, planning and property representatives. I was not present at the landowner discussions, however my colleague, Mr Nathan Baker an Associate Planner at Beca, was present at a number of these discussions and has summarised these for the AEE.



Lesley Ann Hopkins
18 November 2011