

BEFORE THE INDEPENDENT HEARINGS PANEL

Under the Resource Management Act 1991 and the Canterbury Earthquake
(Christchurch Replacement District Plan) Order 2014

In the matter of

The Proposed Christchurch Replacement District Plan – Chapter 14 (Residential Proposal - Part)

And

Transpower New Zealand Limited (Submission 832 and Further Submission 1331)

Submitter

**Statement of Evidence in Chief of Dougall Campbell for
Transpower New Zealand Limited dated 20 March 2015**

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Executive Summary

1. The National Policy Statement on Electricity Transmission 2008 (**NPSET**) requires the National Grid to be appropriately recognised in the Proposed Christchurch Replacement District Plan (**Replacement Plan**). Councils were required to implement the NPSET by 10 April 2012. The Replacement Plan must give effect to the NPSET.
2. Corridors around the National Grid are necessary to:
 - (a) Ensure the network can be efficiently operated, maintained, developed and upgraded by providing the working and access space to do this.
 - (b) Manage reverse sensitivity effects.
 - (c) Ensure sensitive activities are generally not provided for in the area directly under lines.
 - (d) Protect the safety of both the National Grid and people working or living close to it.
3. Transpower's approach to NPSET implementation is to ensure that it only seeks the minimum district plan restrictions necessary to ensure the NPSET is given effect. Under this approach, Transpower seeks different size setbacks depending on the asset type (for example whether it is on poles or towers). Activities are now considered very specifically, so that only those activities which are inappropriate are sought to be non-complying, with everything else permitted. This is the key reason why Transpower does not support restricted discretionary or discretionary activity status. Activities that could have appropriately been consented as restricted discretionary or discretionary activities have been captured within the permitted activity status, and conversely those activities not appropriately consented as restricted discretionary or discretionary activities, have been captured within the non-complying activity status.
4. Transpower considers that the provisions set out in Ms McLeod's evidence will best give effect to the requirements of the NPSET. This is because Ms McLeod's proposed provisions will allow the minimum area

necessary for the efficient and effective operation, maintenance, development and upgrading of the National Grid, will avoid sensitive and intensive underbuild, and will to a certain extent address reverse sensitivity issues.

5. The provisions Transpower seeks in Christchurch City are generally consistent with the provisions Transpower seeks elsewhere around New Zealand to give effect to the NPSET, including Western Bay of Plenty, Waimate, Hastings, and Auckland. Recently, Transpower also reduced the corridor in Waimakariri to 12m either side of the centreline, as part of a submission on the Land Use Recovery Plan (action 47).
6. The provisions are not consistent with the corridors Transpower seeks for new build. For new build, Transpower seeks a much wider and more restrictive corridor – that generally coincides with the maximum swing of the line. The corridors sought in the Replacement Plan align with the matters in policies 10 and 11 of the NPSET.

Introduction

7. My full name is Dougall James Campbell. I am the Environmental Policy and Planning Group Manager at Transpower New Zealand Limited (**Transpower**). My relevant experience, qualifications, and commitment to comply with the code of conduct are included in **Appendix A**.
8. I confirm that I am authorised to give this evidence on behalf of Transpower.

Scope of Evidence

9. My evidence will address the following:
 - (a) Transpower's approach to implementing the NPSET;
 - (b) How National Grid corridors are implemented elsewhere in New Zealand; and
 - (c) The relief sought by Transpower in relation to the Chapter 14 of the Replacement Plan.

Transpower's Approach to Transmission Yards and Corridors

10. Transmission yards¹ and corridors around transmission lines have eight important purposes for the Christchurch City:
- (a) *To ensure that sensitive activities, such as residential development, are generally not provided for near National Grid structures and lines:* Sensitive activities include the establishment of dwellings, schools and papakainga close to the Grid. The purpose of Policy 11 of the NPSET is to prevent sensitive activities such as these from being established near the National Grid.
 - (b) *To manage reverse sensitivity effects:* These effects occur when people undertake activities close to an existing line or structure. For example, National Grid lines can cause noise (especially in damp weather), reduced visual amenity, radio and television interference, perceived effects of electric and magnetic fields from the lines, and interference with landowners' business activities beneath the lines. These effects often lead to requests by neighbouring land users to impose constraints on existing lines. These complaints and constraints are reverse sensitivity effects.
 - (c) *To protect the integrity of National Grid structures:* Structures and earthworks that are too close to a line can affect the stability of that line, and contribute to electricity outages. The presence of these structures can also increase the need for, and thereby the risk associated with, mobile plant (such as cranes and excavators) and other assets. Transpower wishes to ensure that safe electrical distances are maintained so the risk of coming into contact with the lines is minimised.
 - (d) *To enable efficient and safe maintenance and operations:* National Grid yards provide a relatively clear area for line workers to gain access to the line and tower structures in order to conduct

¹ As discussed later in my evidence, Transpower's submission sought a corridor that restricts land use that is 12m either side of the centreline and 12m from the outer edge of the support structures – otherwise defined as a "yard".

operational maintenance on high voltage equipment, sometimes at great heights. The yards also limit the need for costly work-arounds (for example, bypass lines), when maintaining and operating the Grid.

- (e) *To allow for any future potential upgrade requirements of the asset.* For example, Transpower must be able to control “non-sensitive” large scale buildings and buildings that are intensively used (regardless of scale) under the lines, as these can inhibit upgrade activities. This reflects Policy 10 of the NPSET.
 - (f) *To provide the residential, rural, commercial and industrial electricity users in the Christchurch City with a reliable and secure supply of electricity,* as outlined in the evidence of Roy Noble dated 25 November 2014 for the strategic directions chapter, and in the evidence of Roy Noble dated 20 March 2015 for the residential chapter.
 - (g) *To provide the community, Council and Transpower with the knowledge and confidence that the lines are being managed in a safe and sustainable manner.* To provide certainty as to how that management is being achieved within the NPSET framework.
 - (h) *To avoid some safety issues:* Electricity transported at high voltages can cause serious, or even fatal, injuries to people who come in close contact to lines. Corridor management is therefore of paramount importance as it goes directly to the wellbeing, health and safety of people.
11. The Replacement Plan will regulate activities for the next ten years and Transpower considers it is important to look at possible future activities even if they do not currently exist.
12. Transpower values its relationship with councils, the community and landowners and endeavours to work with them to reach the best outcome for all parties concerned. Transpower works with councils around the country prior to, and after notification of plan changes intended to give effect to the NPSET. Transpower continues to engage

with councils once operative plan provisions are in place including involvement in the resource consent process.

Transpower's Approach to Implementing NPSET throughout New Zealand

13. As stated above, councils were required to implement the NPSET through appropriately recognising the National Grid in a District Plan by 10 April 2012. Transpower's approach to implementing the NPSET across the country has been to require land use setbacks (often referred to as "yards") and subdivision rules and corridors to ensure the safe and sustainable management of the National Grid, third party activities, and landowner usage near the assets. These outcomes have been achieved through the ongoing plan change processes undertaken by many district and city councils throughout New Zealand.
14. The provisions Transpower seeks in Christchurch City are generally consistent with provisions sought elsewhere around the country, including Waimate, Central Otago, Whangarei, and Western Bay of Plenty Districts. Hearings have recently been held in Southland and Invercargill Districts and decisions released. Both Councils have introduced rules to give effect to the NPSET which are beyond challenge.
15. Transpower's approach to securing National Grid yards and corridors has been refined over time. Transpower began seeking corridor provisions in district plans in 1996 and initially sought a blanket 20 metre setback from the centreline that related to land use and/or subdivision. This setback did not delineate between sensitive and non-sensitive activities, and nor did this setback distinguish on asset type. Around 30 territorial authorities have District Plan provisions which pre-date the NPSET and restrict subdivision and/or land use within 20 metres of the National Grid.
16. Following the introduction of the NPSET in 2008, Transpower sought a much broader corridor, with land use requiring consent out to 32m either side of the centreline – non-complying activity status was sought within the 12m corridor either side of the centreline, with restricted discretionary activity status beyond that area from 12-32m.

17. At this time, little differentiation was made between zones and between sensitive and non-sensitive activities.
18. This corridor was sought by Transpower until around 2012. Few councils gave effect to the NPSET at a time when this wider more restrictive corridor was sought – Ashburton District Council is one of the few councils that includes provisions of this kind. Waimakariri District Council included a much broader corridor in its plan – out to 100m either side of the centreline. At this time, there was little consistency from one district to another about the appropriate provisions to give effect to the NPSET, despite the effects of underbuild being the same across the country.
19. In 2012 Transpower undertook a significant review of the provisions it was seeking to give effect to the NPSET. This review consisted of a number of workshops to consider the types of restrictions envisaged by policies 10 and 11, and the appropriate legal, planning and engineering responses. A review of the appropriate corridor widths was also undertaken by Transpower engineers.
20. It was considered that policy 11 was more absolute, in relation to sensitive activities, although a question remained about the type of activities that were considered sensitive for the purpose of the NPSET due to the inclusive definition. Consideration was given to whether commercial and industrial activities of a certain scale, workforce or workplace hours would be sensitive. Essentially a risk-based approach was considered, including discussions with risk experts. Ultimately, Transpower decided that it would be too difficult to make an arbitrary decision based on the scale of the workforce and number of hours. This is the reason why Transpower seeks to narrowly interpret “sensitive activities” for the purpose of policy 11 as being all activities involving:
 - (a) “residential buildings”, such as dwellings, sleep outs, retirement villages;
 - (b) “schools”, such as day care, kindergarten, primary and secondary schools (but not tertiary education); and

(c) “hospitals”, such as operations run by district health boards, and private organisations, but not medical centres.

21. By narrowly interpreting policy 11, Transpower is relying on policy 10 to restrict inappropriate activities of a commercial and industrial nature. The issue of underbuild of this kind are quite real, as will be discussed in evidence for subsequent chapters of the Replacement Plan.
22. Transpower’s approach to interpreting policy 10 also required careful consideration. Transpower considered the types of activities that would occur on the lines over their life, and the types of activities that compromised the ability to operate, maintain, upgrade and develop the lines. Various engineers from a safety, development and operational perspective were involved in considering the corridors, and the types of activities that could compromise Transpower’s activities. A number of site visits took place facilitated by Horticulture New Zealand in various locations around the country, and by a business organisation in Auckland. These site visits were attended by planning and engineering staff.
23. Subsequent to this review, Transpower moved to a zone based approach to addressing non-sensitive activities. This approach recognises lines that are already compromised (such as existing underbuilt areas) and provides a generally permissive regime for non-sensitive activities in those areas, but also allows sporadic underbuild that can be worked around in rural areas – such as the odd hay barn. Transpower would still rather this type of building was located elsewhere, but has difficulty seeking planning restrictions based on policy 10 of the NPSET. Greenfield areas provide a greater opportunity to have activities designed around the line, so as to avoid compromising Transpower’s activities a more restrictive approach is taken in those areas.
24. A more enabling rule set was developed, and is consistent with the provisions sought by Transpower in the Replacement Plan. The provisions have remained largely settled since this time, although at a

detailed level stakeholder submitters sometimes raise matters that had not previously been considered².

25. From a land use perspective, Transpower now seeks, and has sought in the Replacement Plan, – a 12 metre setback either side of the centreline where sensitive activities would be non-complying. There are exceptions in areas that are already compromised by underbuild in order to enable activities that typically exist with residential activities, such as garden sheds, carports and garages. In greenfield residential areas, Transpower expects that development is designed taking the lines into account – greenspace, backyards or roads are better placed in the National Grid yard, rather than buildings that can compromise Transpower's activities.
26. The proposed transmission corridor does not fully address such matters as amenity and reverse sensitivity, and consequently further consideration is necessary of urban design, integrated management and prudent avoidance. This can be achieved at the subdivision stage.
27. I accept that the provisions Transpower initially sought to give effect to the NPSET were too restrictive. Over the last 2-3 years, Transpower has been reducing the provisions it has sought by providing updated provisions in evidence, or at an appeal stage where there is an appeal. This is to ensure consistency with the provisions that were considered appropriate following our review. A recent example of efforts to bring older provisions in line with the refined approach was in relation to the Waimakariri District Plan where Transpower made a submission on the Land Use Recovery Plan to reduce the corridor around the National Grid to 12m either side of the centreline³.

² A recent example of a new issue being raised was the fact that the rule set enabled a fence to be setback 5m from a National Grid support structure, but the earthworks provisions would likely have triggered the need for resource consent. Tweaks to the provisions were worked through with Federated Farmers who raised this issue in the context of the proposed Waipa District Plan.

³ There was no opportunity to seek non-complying activity status through this process but our understanding is that the provisions will be revisited during the wider district plan review.

Corridors sought by Transpower for new build

28. The corridors Transpower seeks to give effect to the NPSET are different from the corridors Transpower would seek for new build. For new build Transpower seeks a clear corridor, that generally coincides with maximum swing of the relevant line – as this is the area where the effects of, and on, Transpower’s assets are greatest. Corridors for recent new build include:
- (a) Brownhill – Whakamaru North - The corridor width is 50 metres wide along the line, but is wider where additional width is needed (for example in the South Waikato District it is 130 metres minimum);
 - (b) Wairakei - Whakamaru C – The corridor width is 50 metres wide along the line, but is wider where additional width is needed;
 - (c) Gore Hard Tee – The corridor width is 50 metres wide along the line and 69 metres wide for the tee area; and
 - (d) Paraparaumu Tee – The corridor width is 90 metres wide along the line.
29. Transpower seeks a corridor that is clear of buildings and structures (other than fences) and restrict all earthworks unless Transpower agrees. Such a restrictive approach is not considered appropriate for the corridors that are required to implement the NPSET – those corridors are the minimum Transpower requires, and are a compromise position.

Corridors sought by distribution companies

30. I understand that Orion has sought corridors be included in the Replacement Plan around some of its assets. I am not in a position to determine the appropriate corridor, if any, around distribution assets. The reason for Transpower lodging a further submission in opposition to the corridor provisions sought by Orion is that the changes suggested by Orion go further than anticipated by the NPSET and impose a greater level of regulation on landowners. As discussed in my evidence, Transpower has carefully worked through the corridors

required by the NPSET, it also carefully works through the appropriate corridors for new build. These corridors vary by zone, asset type, and whether they are new build or existing lines.

31. I have some experience in other district plan contexts with distribution companies seeking district plan provisions to protect their assets, but none are the same. Unison and PowerCo have sought provisions that raise awareness of the need for landowners and occupiers to comply with NZECP34 (for example, Plan Change 36 in Wanganui). While I understand Northpower in Whangarei sought a relatively permissive regime which involves compliance with specific requirements, but not necessarily a consent trigger. My understanding is that Northpower had a particular concern about vegetation under its lines. The majority of the distribution companies have not sought any corridor provisions that I have been aware of.

Summary of relief sought by Transpower in relation to the Replacement Plan

32. Transpower's submission seeks inclusion of National Grid yard (and use) rules that are the minimum to allow Transpower to effectively and efficiently carry out its work and for the safety, health and wellbeing of the Christchurch community.
33. The changes proposed by Transpower reflect Transpower's refined approach to NPSET implementation as the most effective means of giving effect to the NPSET. Particularly the NPSET's objective of managing the adverse effects of the network, and managing the adverse effects of other activities on the network, and provision as permitted activities for certain activities which do not compromise the ongoing operation, maintenance, development and upgrade of the National Grid.
34. The issue is in attaining the appropriate balance in order to serve the interests of all parties and give effect to the NPSET in the most effective and efficient manner. For the reasons set out above, Transpower requests that the Proposed Plan include the provisions appended to **Ms McLeod's** evidence – either the more complex, but more enabling provisions or the alternative simpler rule.

Conclusions

35. The National Grid is critical to the social and economic wellbeing of the Christchurch City and our nation generally. The NPSET requires that the National Grid be recognised in the Replacement Plan. It is imperative that Transpower is able to operate and maintain its transmission infrastructure in order to enable a sustainable, secure and reliable electricity supply. Preventing sensitive and incompatible activities from establishing under the transmission lines will assist the National Grid to meet the needs of electricity consumers now and into the future, and do so in a manner that considers the environment and communities.
36. The National Grid corridors Transpower seeks in Christchurch are generally consistent with provisions sought elsewhere around the country, and have been carefully developed and reviewed following a range of site visits and consideration of the NPSET requirements.



Dougall Campbell
20 March 2015

Appendix A – Relevant Experience and Qualifications

1. I am the Environmental Policy and Planning Group Manager at Transpower. My Group's responsibilities include:
 - (a) Strategic planning. This planning is achieved through the development and implementation of Transpower's approach to the NPSET at a national level and local level.
 - (b) Delivering Transpower's policy approach on environmental regulations, legislation and council planning documents.
 - (c) Ensuring the on-going and future protection of Transpower's network.
 - (d) Ensuring that all environmental approvals are obtained for Transpower's physical works.
 - (e) Managing third party interactions to ensure that Transpower's interests are appropriately maintained.

2. I have been employed by Transpower for ten years, and during this time I have had experience working in various roles; including:
 - (a) As a Grid Programme Delivery Specialist. This role involved developing a lessons learned and continuous improvement strategy and process for Grid Projects.
 - (b) As the Environmental Planning and Stakeholder Manager on the Alliance Management Team of the Transpower Alliance. I was responsible for the environmental planning, strategy and policies, and processes to deliver and monitor all of the necessary environmental approvals for the 400kV capable overhead line section of the North Island Grid Upgrade Project (**NIGUP**). This line traverses 185km from Whakamaru (North Taupo) to Brownhill Road (South Auckland).
 - (c) Carrying out stakeholder relationship responsibilities of the Transpower Alliance, ensuring that key stakeholders are informed, risks are identified and reputations are enhanced.

- (d) As a Senior Environmental Planner/Environmental Project Manager for NIGUP. My responsibilities included developing strategy for consenting major projects, managing the environmental consortium appointed to deliver NIGUP, through to the final Notices of Requirement, managing the resource consent documentation and the Board of Inquiry process.
 - (e) Providing planning advice to support the implementation of Transpower's Grid Vision investigations and its System Integration investigations.
3. I have a Bachelor of Regional Planning Degree and a Diploma in Business Studies from Massey University. I have 19 years' experience working as an environmental planner and I am a member (Grad Plus) of the New Zealand Planning Institute.
4. I confirm I have read the 'Code of Conduct for Expert Witnesses contained in the Environment Court Consolidated Practice Note 2014. As I am employed by Transpower, I acknowledge I am not independent; however I have sought to comply with the Code of Conduct. In particular, unless I state otherwise, this evidence is within my sphere of expertise and I have not omitted to consider material facts known to me that might alter or detract from the opinions I express.