

Western Road substation and training facility		
Designation unique identifier	TPR-1	
Designation purpose	Substation and training facility	
Site identifier	Legal description	Lot 1 DP 55948
	Physical address	Rotowaro Road, Rotowaro
	Site name	Western Road substation and training facility
Lapse date	N/A (designation has been given effect)	
Designation hierarchy under section 177 of the Resource Management Act	Primary	
Conditions	No	
Additional information	N/A	

Hamilton to Meremere B Underground Transmission Line Cable		
Designation unique identifier	TPR-2	
Designation purpose	Underground Transmission Line Cable	
Site identifier	Legal description	Lot 2 DP 519326, Lot 4 DPS 64084
	Physical address	Puketaha Road, Puketaha
	Site name	Hamilton to Meremere B Underground Transmission Line Cable
Lapse date	N/A (designation has been given effect)	
Designation hierarchy under section 177 of the Resource Management Act	Primary	
Conditions	No	
Additional information	N/A	

Huntly Outdoor Switchyard		
Designation unique identifier	TPR-3	
Designation purpose	Outdoor Switchyard	
Site identifier	Legal description	Section 1 SO 59597, Pt Lot 1 DPS 73530
	Physical address	Te Ohaki Road, Huntly
	Site name	Huntly Outdoor Switchyard
Lapse date	N/A (designation has been given effect)	
Designation hierarchy under section 177 of the Resource Management Act	Primary	
Conditions	No	
Additional information	N/A	

Meremere Switching Station		
Designation unique identifier	TPR-4	
Designation purpose	Switching Station	
Site identifier	Legal description	Section 1 SO 59595
	Physical address	Taniwha Street, Meremere
	Site name	Meremere Switching Station
Lapse date	N/A (designation has been given effect)	
Designation hierarchy under section 177 of the Resource Management Act	Primary	
Conditions	No	
Additional information	N/A	

Te Kowhai Substation		
Designation unique identifier	TPR-5	
Designation purpose	Electricity Substation	
Site identifier	Legal description	Lot 2 Deposited Plan 71444
	Physical address	196 Bedford Road, Te Kowhai
	Site name	Te Kowhai Substation
Lapse date	N/A (designation has been given effect)	
Designation hierarchy under section 177 of the Resource Management Act	Primary	
Conditions	Yes	
Additional information	N/A	

### Conditions

#### Description of works

1. The works to give effect to the designation of the substation and the line shall be generally in accordance with the plans and information submitted by Transpower New Zealand Limited in support of the Notice Requirement and, including at the hearing, and the following plans:
  - a) Substation Site Designation Plan: 106480852/40/55
  - b) Connecting Transmission Line Route Designation Plan: 106480852/40/57

#### Outline Plan

2. For any new construction works that have not been addressed in an earlier approved Outline Plan of Works but remain within the scope of the designation, Transpower shall submit an Outline Plan of Works as required by S176A of the Resource Management Act 1991 to Council before work commences.

#### Limits to the Scope of Designation

3. The scope of activities to and works covered by the designation shall be limited in respect of the following:
  - a) The substation switchyard is to be no greater than 1 hectare in area.
  - b) No high voltage electrical substation structures are to be located outside the switchyard, other than the earth grid.

#### Height

4. The height of all the transmission towers shall be no greater than 35 metres.
5. The height of equipment and buildings within the substation switchyard shall be as followed:
  - a) Lighting and lightning poles – no greater than 16 metres,

- b) Telecommunication tower/pole – no greater than 40 metres,
- c) Line termination structure(s) – no greater than 30 metres,
- d) Except as otherwise provided, no building or equipment shall be greater than 10 metres.

#### **Transmission Tower Finish**

- 6. The structural components and conductors of all transmission towers will have a dulled grey matt finish.

#### **Substation Switchyard**

- 7. The gravel material to be placed on the base of the substation switchyard shall be of a grey colour.

#### **Landscape Mitigation**

- 8. Transpower shall satisfy all requirements in the Landscape and Visual Mitigation Plan submitted August 2004 as part of the original Outline Plan process, including the following on-going conditions:
  - a) Implementation of strategies within the approved maintenance schedule for weed and pest control
  - b) Maintenance of stock proof fencing (e.g. 7 wire post and batten fence) of all landscape areas to prevent undergrazing.
- 9. Transpower New Zealand Ltd shall report at five yearly intervals, to the Council, on the established landscaping and planting works approved as part of the original Outline Plan process and any subsequent landscaping amendments approved by the Council. The report shall describe what landscape mitigation work has occurred, any problems experienced, any remedial action as a consequence, the nature of ongoing work in progress, and the aims and objectives for the ensuing reporting period.
- 10. With the exception of the "Woodlot Planting" (as defined in the Hamilton New Point of Supply Indicative Planting Concept - September 2003 (Figure 11)), all landscape mitigation planting shall be maintained in a satisfactory manner for the duration of the designation. Once a continuous canopy has been established, this maintenance shall include replanting of any gaps created by death of or damage to trees, in order to allow a continuous canopy to re-establish. The proposed "Woodlot Planting" shall be maintained until such time as the "Infill Terrace Planting" and "Permanent Screen Planting" has become sufficiently established to replace its screening function.
- 11. The landscape mitigation plan shall be reviewed and amended as necessary by Transpower New Zealand Ltd, subject to the approval of the Council, or alternatively, every 15 years from the date of the confirmation of the designation (2004).

#### **Lighting**

- 12. The illuminance of the site lighting installations shall not exceed 5 lux (lumens per square metre) spill (horizontal or vertical) of light at any window of a dwelling located on adjacent properties.
- 13. In relation to Lighting,
  - a) Subject to (b) below, the substation lighting shall be in general accordance with the Design Details for Substation Lighting submitted to Council November 2004 as part of the original Outline Plan process.

- b) For any new lighting that has not been addressed in the earlier approved Outline Plan process but remains within the scope of the designation, Transpower shall submit an Outline Plan of Works as required by S176A of the Resource Management Act to Council before work commences.

### **Noise**

14. The noise from activities within the substation site shall not exceed the following limits when measured on any boundary of this site:
  - a) 45dBA (LAeq) Monday to Friday 7:00am to 7:00pm
  - b) 45dBA (LAeq) Saturday 7:00am to 6:00pm
  - c) 35dBA (LAeq) At all other times including public holidays

Note: The above limits include a 5dBA penalty for the tonal component of noise emissions from transformers. No further adjustment for the presence of special audible characteristics is required.
15. Subject to the allowance already made in 14. For special audible characteristics, noise levels shall be measured in accordance with the requirements of 'NZS6801:2008 Measurement of Environmental sound' and assessed in accordance with the requirements of 'NZS6802:2008 Acoustics – Environmental Sound'.
16. Noise from any construction, maintenance, or demolition activity must be measured, assessed and managed in accordance with the requirements of 'NZS 6803:1999 Acoustics Construction Noise'.

### **EMF (Electromagnetic Fields)**

17. The Electromagnetic Fields (EMF) at or beyond the secure boundary of the substation site shall not exceed the International Commission on Non-Ionising Radiation Protection Guidelines, for limiting exposure to time-varying electric and magnetic fields (1Hz – 100kHz) (Health Physics, 99(6):818-836; 2010) (ICNIRP guidelines) to public reference levels of 5 kv/m for electric fields and 200  $\mu$ T for magnetic flux density at one metre above ground level under maximum normal operating conditions (i.e., when there are no faults in the transmission system).

### **EMR (Electromagnetic Radiation)**

18. Any Telecommunications facility on the site shall be operated so that it satisfies the requirements of 'NZS 2772.1: 1999 Radiofrequency fields – Maximum exposure levels – 3 kHz to 300 GHz' in respect of all areas of the site to which the public may have access.

### **Hazardous Substances**

19. Oil containment kits shall be stored on site for containment and clean up of oil spills from switchyard equipment in accordance with Transpower's 'Environmental management of existing assets (TP. SS 05.10) such that if any spill occurs, they are contained before discharging into, or contaminating any, nearby drains and waterways.
20. In relation to Hazardous Substances,
  - a) Subject to (b) below, Transpower shall comply with the Transformer Bund Design Plan and an Oil Spill Management and Contingency Plan submitted August 2004 as part of the original Outline Plan process.
  - b) For the management of hazardous substances not already addressed by the original Outline Plan of Works, where required as part of any new Outline Plan process in terms of

S176A of the Resource Management Act 1991, a new Transformer Bund Design Plan and Oil Spill Management and Contingency Plan shall be prepared and submitted to Council.

### **Roading**

21. In relation to access and on-site parking,
  - a) Subject to (b) below, vehicle entry, access and on-site parking areas shall be developed and maintained in general accordance with the Design Plans submitted August 2004 as part of the original Outline Plan process.
  - b) For the management of the vehicle entrance, access and on-site parking not already addressed by the original Outline Plan of Works, where required as part of any new Outline Plan process in terms of S176A of the Resource Management Act 1991, construction drawings for the entrance, access road and parking area shall be submitted to Council prior to the commencement of works.
22. Where required as part of any new Outline Plan process in terms of S176A of the Resource Management Act 1991, a Traffic Management Plan relating to construction works and the use of Bedford Road, Te Puroa Road and Waipa Heights Road shall be prepared and submitted to Council prior to the commencement of works. The Traffic Management Plan shall include, where relevant, the following matters:
  - a) Measures to advise users of Waipa Heights Road, Te Puroa Road and Bedford Road when heavy vehicle movements will occur along the road for construction purposes;
  - b) Notification to WDC Roothing Staff of the commencement and completion dates of construction works;
  - c) The traffic safety measures to be put in place along the route to minimise the traffic safety risks and time delays for other motorists;
  - d) The routing of construction traffic to the substation site; and
  - e) In consultation with Council, Transpower shall undertake inspections of Bedford Road before and after super heavy loads are delivered to the substation. If any damage is identified in the inspection after super heavy loads have been delivered to the substation, Transpower shall pay for the repair of road infrastructure.

### **Engineering**

23. Where required as part of any new Outline Plan process in terms of S176A of the Resource Management Act 1991, an Earthworks and Construction Management Plan will be prepared and submitted to Council prior to the commencement of works. The plan shall detail, where relevant, the following:
  - a) The proposed earthworks methodology. In particular the stripping of vegetation, overburden and soil shall be kept to a minimum and cleared areas will be limited to only those areas where works is about to commence;
  - b) Details of earthworks and silt control measures; and
  - c) Dust and noise control methodologies.
24. No construction works are to take place (except landscape planting and stock fencing), or structures placed, within the western escarpment adjacent to the Waipa River or the northern escarpment where the remnant Kahikatea stand is located.

### **Archaeological**

25. If any urupa, traditional sites, taonga (significant artefacts), koiwi (human remains), or other archaeological sites are exposed during site works then the following procedures shall apply:
- a) Immediately it becomes apparent that an urupa, traditional site, taonga, koiwi or other archaeological site has been exposed, all site works in the immediate vicinity shall cease.
  - b) The site supervisor shall immediately secure the area in a way that ensures that any artefacts or remains are not further disturbed.
  - c) The site supervisor shall notify tangata whenua, including Turangawaewae Trust Board and Waikato Raupatu Lands Trust, Heritage New Zealand Pouhere Taonga, Department of Conservation, Council, and, in the case of human remains, the NZ Police, that an archaeological or traditional site has been exposed so that appropriate action can be taken. This includes such persons being given reasonable time as determined by Heritage New Zealand Pouhere Taonga to record and recover archaeological features discovered before work may recommence on the site.

#### **Recovery of Costs**

26. Pursuant to section 36 of the Resource Management Act 1991, the actual and reasonable costs incurred by Council in monitoring conditions of this designation shall be paid by Transpower New Zealand Ltd.

Te Kowhai Deviation A 220kV high voltage transmission line		
Designation unique identifier	TPR-6	
Designation purpose	Transmission Line	
Site identifier	Legal description	Allot 48A Waipa Parish, Allot 48B Waipa Parish, Section 1 SO Plan 383836, Lot 1 DP 12498, Lot 1, 3 DP 343406, Lot 11-12 DPS 62333, Lot 2 DP 343406, Lot 3-4 DP 338018, Part Bedford Road
	Physical address	Waipa Heights Road
	Site name	Te Kowhai Deviation A 220kV high voltage transmission line
Lapse date	N/A (designation has been given effect)	
Designation hierarchy under section 177 of the Resource Management Act	Primary	
Conditions	Yes	
Additional information	N/A	

### Conditions

#### Description of works

1. The works to give effect to the designation of the substation and the line shall be generally in accordance with the plans and information submitted by Transpower New Zealand Limited in support of the Notice Requirement and, including at the hearing, and the following plans:
  - a) Substation Site Designation Plan: 106480852/40/55
  - b) Connecting Transmission Line Route Designation Plan: 106480852/40/57

#### Outline Plan

2. For any new construction works that have not been addressed in an earlier approved Outline Plan of Works but remain within the scope of the designation, Transpower shall submit an Outline Plan of Works as required by S176A of the Resource Management Act 1991 to Council before work commences.

#### Limits to the Scope of Designation

3. The scope of activities to and works covered by the designation shall be limited in respect of the following:
  - a) The substation switchyard is to be no greater than 1 hectare in area.
  - b) No high voltage electrical substation structures are to be located outside the switchyard, other than the earth grid.

Height

4. The height of all the transmission towers shall be no greater than 35 metres.
5. The height of equipment and buildings within the substation switchyard shall be as followed:
  - a) Lighting and lightning poles – no greater than 16 metres,
  - b) Telecommunication tower/pole – no greater than 40 metres,
  - c) Line termination structure(s) – no greater than 30 metres,
  - d) Except as otherwise provided, no building or equipment shall be greater than 10 metres.

#### **Transmission Tower Finish**

6. The structural components and conductors of all transmission towers will have a dulled grey matt finish.

#### **Substation Switchyard**

7. The gravel material to be placed on the base of the substation switchyard shall be of a grey colour.

#### **Landscape Mitigation**

8. Transpower shall satisfy all requirements in the Landscape and Visual Mitigation Plan submitted August 2004 as part of the original Outline Plan process, including the following on-going conditions:
  - a) Implementation of strategies within the approved maintenance schedule for weed and pest control
  - b) Maintenance of stock proof fencing (e.g. 7 wire post and batten fence) of all landscape areas to prevent undergrazing.
9. Transpower New Zealand Ltd shall report at five yearly intervals, to the Council, on the established landscaping and planting works approved as part of the original Outline Plan process and any subsequent landscaping amendments approved by the Council. The report shall describe what landscape mitigation work has occurred, any problems experienced, any remedial action as a consequence, the nature of ongoing work in progress, and the aims and objectives for the ensuing reporting period.
10. With the exception of the "Woodlot Planting" (as defined in the Hamilton New Point of Supply Indicative Planting Concept - September 2003 (Figure 11)), all landscape mitigation planting shall be maintained in a satisfactory manner for the duration of the designation. Once a continuous canopy has been established, this maintenance shall include replanting of any gaps created by death of or damage to trees, in order to allow a continuous canopy to re-establish. The proposed "Woodlot Planting" shall be maintained until such time as the "Infill Terrace Planting" and "Permanent Screen Planting" has become sufficiently established to replace its screening function.
11. The landscape mitigation plan shall be reviewed and amended as necessary by Transpower New Zealand Ltd, subject to the approval of the Council, or alternatively, every 15 years from the date of the confirmation of the designation (2004).

#### **Lighting**

12. The illuminance of the site lighting installations shall not exceed 5 lux (lumens per square metre) spill (horizontal or vertical) of light at any window of a dwelling located on adjacent properties.
13. In relation to Lighting,

- a) Subject to (b) below, the substation lighting shall be in general accordance with the Design Details for Substation Lighting submitted November 2004 to Council as part of the original Outline Plan process.
- b) For any new lighting that has not been addressed in the earlier approved Outline Plan process but remains within the scope of the designation, Transpower shall submit an Outline Plan of Works as required by S176A of the Resource Management Act to Council before work commences.

### **Noise**

14. The noise from activities within the substation site shall not exceed the following limits when measured on any boundary of this site:
  - a) 45dBA (LAeq) Monday to Friday 7:00am to 7:00pm
  - b) 45dBA (LAeq) Saturday 7:00am to 6:00pm
  - c) 35dBA (LAeq) At all other times including public holidays

Note: The above limits include a 5dBA penalty for the tonal component of noise emissions from transformers. No further adjustment for the presence of special audible characteristics is required.
15. Subject to the allowance already made in 14. For special audible characteristics, noise levels shall be measured in accordance with the requirements of 'NZS6801:2008 Measurement of Environmental sound' and assessed in accordance with the requirements of 'NZS6802:2008 Acoustics – Environmental Sound'.
16. Noise from any construction, maintenance, or demolition activity must be measured, assessed and managed in accordance with the requirements of 'NZS 6803:1999 Acoustics Construction Noise'.

### **EMF (Electromagnetic Fields)**

17. The Electromagnetic Fields (EMF) at or beyond the secure boundary of the substation site shall not exceed the International Commission on Non-Ionising Radiation Protection Guidelines, for limiting exposure to time-varying electric and magnetic fields (1Hz – 100kHz) (Health Physics, 99(6):818-836; 2010) (ICNIRP guidelines) to public reference levels of 5 kv/m for electric fields and 200  $\mu$ T for magnetic flux density at one metre above ground level under maximum normal operating conditions (i.e., when there are no faults in the transmission system).

### **EMR (Electromagnetic Radiation)**

18. Any Telecommunications facility on the site shall be operated so that it satisfies the requirements of 'NZS 2772.1: 1999 Radiofrequency fields – Maximum exposure levels – 3 kHz to 300 GHz' in respect of all areas of the site to which the public may have access.

### **Hazardous Substances**

19. Oil containment kits shall be stored on site for containment and clean up of oil spills from switchyard equipment in accordance with Transpower's 'Environmental management of existing assets (TP. SS 05.10) such that if any spill occurs, they are contained before discharging into, or contaminating any, nearby drains and waterways.
20. In relation to Hazardous Substances,
  - a) Subject to (b) below, Transpower shall comply with the Transformer Bund Design Plan and an Oil Spill Management and Contingency Plan submitted August 2004 as part of the original Outline Plan process.

- b) For the management of hazardous substances not already addressed by the original Outline Plan of Works, where required as part of any new Outline Plan process in terms of S176A of the Resource Management Act 1991, a new Transformer Bund Design Plan and Oil Spill Management and Contingency Plan shall be prepared and submitted to Council.

### **Roading**

- 21. In relation to access and on-site parking,
  - a) Subject to (b) below, vehicle entry, access and on-site parking areas shall be developed and maintained in general accordance with the Design Plans submitted August 2004 as part of the original Outline Plan process.
  - b) For the management of the vehicle entrance, access and on-site parking not already addressed by the original Outline Plan of Works, where required as part of any new Outline Plan process in terms of S176A of the Resource Management Act 1991, construction drawings for the entrance, access road and parking area shall be submitted to Council prior to the commencement of works.
- 22. Where required as part of any new Outline Plan process in terms of S176A of the Resource Management Act 1991, a Traffic Management Plan relating to construction works and the use of Bedford Road, Te Puroa Road and Waipa Heights Road shall be prepared and submitted to Council prior to the commencement of works. The Traffic Management Plan shall include, where relevant, the following matters:
  - a) Measures to advise users of Waipa Heights Road, Te Puroa Road and Bedford Road when heavy vehicle movements will occur along the road for construction purposes;
  - b) Notification to WDC Roothing Staff of the commencement and completion dates of construction works;
  - c) The traffic safety measures to be put in place along the route to minimise the traffic safety risks and time delays for other motorists;
  - d) The routing of construction traffic to the substation site; and
  - e) In consultation with Council, Transpower shall undertake inspections of Bedford Road before and after super heavy loads are delivered to the substation. If any damage is identified in the inspection after super heavy loads have been delivered to the substation, Transpower shall pay for the repair of road infrastructure.

### **Engineering**

- 23. Where required as part of any new Outline Plan process in terms of S176A of the Resource Management Act 1991, an Earthworks and Construction Management Plan will be prepared and submitted to Council prior to the commencement of works. The plan shall detail, where relevant, the following:
  - a) The proposed earthworks methodology. In particular the stripping of vegetation, overburden and soil shall be kept to a minimum and cleared areas will be limited to only those areas where works is about to commence;
  - b) Details of earthworks and silt control measures; and
  - c) Dust and noise control methodologies.
- 24. No construction works are to take place (except landscape planting and stock fencing), or structures placed, within the western escarpment adjacent to the Waipa River or the northern escarpment where the remnant Kahikatea stand is located.

### **Archaeological**

25. If any urupa, traditional sites, taonga (significant artefacts), koiwi (human remains), or other archaeological sites are exposed during site works then the following procedures shall apply:
- a) Immediately it becomes apparent that an urupa, traditional site, taonga, koiwi or other archaeological site has been exposed, all site works in the immediate vicinity shall cease.
  - b) The site supervisor shall immediately secure the area in a way that ensures that any artefacts or remains are not further disturbed.
  - c) The site supervisor shall notify tangata whenua, including Turangawaewae Trust Board and Waikato Raupatu Lands Trust, Heritage New Zealand Pouhere Taonga, Department of Conservation, Council, and, in the case of human remains, the NZ Police, that an archaeological or traditional site has been exposed so that appropriate action can be taken. This includes such persons being given reasonable time as determined by Heritage New Zealand Pouhere Taonga to record and recover archaeological features discovered before work may recommence on the site.

### **Recovery of Costs**

26. Pursuant to section 36 of the Resource Management Act 1991, the actual and reasonable costs incurred by Council in monitoring conditions of this designation shall be paid by Transpower New Zealand Ltd.

Ohinewai Switching Station		
Designation unique identifier	TPR-7	
Designation purpose	Electricity Switching Station	
Site identifier	Legal description	Lot 3-4 DP 459363
	Physical address	480 Storey Road, Waiterimu
	Site name	Ohinewai Switching Station
Lapse date	N/A (designation has been given effect)	
Designation hierarchy under section 177 of the Resource Management Act	Primary	
Conditions	Yes	
Additional information	N/A	

### Conditions

#### Description of works

1. The works to give effect to the designation of the switching station, transmission lines and ancillary facilities shall be generally in accordance with the plans and information submitted by Transpower New Zealand Limited in support of the Notice Requirement and Alteration Designation lodged on the 25 March 2013

#### Outline Plan

2. For any new construction works that have not been addressed in an earlier approved Outline Plan of Works but remain within the scope of the designation, Transpower shall submit an Outline Plan of Works as required by S176A of the Resource Management Act 1991 to Council before work commences.

#### Limits to the Scope of Designation

3. No works shall occur within 50 metres of the designation boundary with the exception of the following:
  - a) The existing transmission lines;
  - b) The access road described in the NOR;
  - c) Landscape planting; and
  - d) Upgrading in accordance with the designated purpose.

#### Height

4. The maximum height of the new transmission towers shall be as identified in the Notice of Requirement (T305A = 49 metres; T634A = 28 metres; T633A = 52 metres), allowing for minor adjustments to height as an outcome of detail engineering design (with 5% tolerance).
5. The maximum height of buildings and structures shall be as identified in the NOR, allowing for minor adjustments to height as an outcome of detailed engineering design.

#### Landscape Mitigation

6. Transpower shall satisfy all requirements in the Landscape and Visual Mitigation Plan prepared by Boffa Miskell Ltd, dated July 2007, submitted as part of the original Outline Plan process, including the following on-going conditions:
  - a) Implementation of strategies within the approved maintenance schedule for fertilisation, irrigation, weed and pest control;
  - b) Maintenance of stock proof fencing (e.g. 7 wire post and batten fence) of all landscape areas to prevent undergrazing.
7. All landscape mitigation planting shall be maintained in a satisfactory manner for the duration of the designation. Once a continuous row and/or canopy has been established, this maintenance shall include replanting of any gaps created by death or damage of trees, in order to allow a continuous row and/or canopy to re-establish.
8. The Landscape Mitigation Plan shall be reviewed and amended as necessary by Transpower New Zealand Ltd and submitted to the Council, every 5 years (or sooner if considered by Transpower to be desirable) from the date the original Plan is submitted under Condition 6.

### **Lighting**

9. The illuminance of the site lighting installations should not exceed: 5 lux (lumens per square metre) spill (horizontal or vertical) of light at any window of any existing dwellings located on adjacent properties.
  - a) Subject to (b) below, the switching station and site lighting shall be in general accordance with the Design Details prepared by Beca, dated May 2007, submitted to Council as part of the original Outline Plan process.
  - b) For any new lighting that has not been addressed in the earlier approved Outline Plan process but remains within the scope of the designation, Transpower shall submit an Outline Plan of Works as required by S176A of the Resource Management Act to Council before work commences.

Advice Note: 6.2.1 A mechanism/system to enable full illumination of the switchyard platform to occur gradually/progressively over a period of between 2-5 minutes is recommended to prevent the potential for startling stock when emergency lighting is turned on.

### **Noise**

10. Noise from any construction, maintenance, or demolition activity must be measured, assessed and managed in accordance with the requirements of 'NZS 6803:1999 Acoustics Construction Noise'.
11. The noise from activities within the switching station site shall not exceed the following limits when measured on the site boundary:
  - a) 50dBA (LAeq) Monday to Friday 7:00am to 7:00pm
  - b) 50dBA (LAeq) Saturday 7:00am to 6:00pm
  - c) 40dBA (LAeq) At all other times including Public Holidays
12. Noise levels shall be measured in accordance with the requirements of 'NZS6801:2008 Measurement of Environmental sound' and assessed in accordance with the requirements of 'NZS6802:2008 Acoustics – Environmental Sound'.

### **Earthworks and Engineering**

13. Where required as part of any new Outline Plan process in terms of S176A of the Resource Management Act 1991, an Earthworks and Construction Management Plan shall be prepared and submitted to the Council prior to the commencement of works. The plan shall include, where relevant, but not be limited to, the following:
  - a) The proposed earthworks and silt control methodology;
  - b) Detail the material (imported material shall be clean fill only), source, use, disposal and treatment;
  - c) Proposed depth of fill, volume, cross sections and final contours;
  - d) Detail silt control and stormwater management proposed during construction; and
  - e) Detail dust and noise control methodologies.
14. A geotechnical completion report shall be submitted to Council for the earthworks carried out, unless deemed unnecessary by the council due to the scale and nature of the work. This report shall include, where relevant, but not be limited to, the following details:
  - a) A final contour plan;
  - b) A fill excavated or placed on the site shall be clearly indicate on a site plan. All fill shall either be certified as being suitable for development or otherwise identified as unsuitable by a chartered professional engineer;
  - c) The depth of the fill and/or cut;
  - d) Include cross sections of the original slope and the slope of the fill material; and
  - e) Provide evidence that a minimum of 1.5 factor of safety is obtained on all cut and fill slopes.

### **Stormwater Management**

15. In relation to Stormwater Management,
  - a) Subject to (b) below, a Stormwater management for the site shall be in general accordance with the Stormwater Management Plan prepared by Beca, dated August 2007, submitted as part of the original Included in the plan are ongoing requirements to ensure runoff be maintained to greenfield rates to mitigate the impact of peak events on downstream infrastructure.
  - b) For stormwater management not already addressed by the original Outline Plan of Works, where required as part of any new Outline Plan process in terms of S176A of the Resource Management Act 1991, a Stormwater Management Plan shall be prepared by a suitably qualified person and submitted to the Council prior to the commencement of works. The plan shall include, where relevant, but not be limited to, the following:
    - a. A site plan showing all existing flow paths and proposed drainage works;
    - b. Drainage works to allow land drainage from the switchyard and also from the proposed road, to be collected and discharged appropriately; and
    - c. Design plans for the works need to include:
      - i) Diameters, length and gradients of any pipes, flumes and culverts;
      - ii) Collection and disposal point details including erosion prevention at any disposal outlets:

iii) Calculations to support the sizes selected. Calculations should be on the total catchment area, which may include areas outside the property boundaries of the designated site. And consideration may need to be given to temporary drainage provisions during construction that enlarge some culvert catchment areas.

16. Where required as part of any new Outline Plan process, as-built plans showing the land drainage works and any secondary flowpaths shall be submitted to Council prior to the commencement of works.

#### **Archaeological**

17. If any urupa, traditional site, taonga (significant artefacts), koiwi (human remains), or other archaeological sites are exposed during site works then the following procedures shall apply:
- a) Immediately it becomes apparent that an urupa, traditional site, taonga, koiwi or other archaeological site has been exposed, all site works in the immediate vicinity shall cease;
  - b) The site supervisor shall immediately secure the area in a way that ensures that any artefacts or remains are not further disturbed; and
  - c) The site supervisor shall notify tangata whenua, including Nga Muka Development Trust, the Department of Conservation, the Council, and, in the case of human remains, the NZ Police, that an archaeological or traditional site has been exposed so that appropriate action can be taken. This includes such persons being given reasonable time as determined by New Zealand Pouhere Taonga record and recover archaeological features discovered before work may recommence on the site.

#### **Roading & Traffic**

18. Where required as part of any new Outline Plan process in terms of S176A of the Resource Management Act 1991, a Traffic Management Plan relating to works to be carried out in the road reserve (localised intersection widening) and the use of Storey Road shall be prepared and submitted to the Council prior to the commencement of works. The Traffic Management Plan shall include, where relevant, but not be limited to, the following matters:
- a) Notification to the Council of the commencement and completion dates of construction works;
  - b) The traffic safety measures to be put in place along the route to minimise the traffic safety risks and time delays for other motorists;
  - c) Evidence of consultation undertaken with Council with regard to any overweight or oversize loads; and
  - d) A Traffic Route Plan indicating the route to be used for accessing the site (from the south) as indicated on the application.

#### **Waikato District Council Legal Road (unformed)**

19. Any activities or the designation from Transpower will not prevent the Council from constructing and maintaining a public road over the alignment of the existing paper road.
20. If, in the event that any dust that might arise from the Council road is of concern to Transpower or its operations, then that Transpower will seal the section of road at its cost.
21. Should Transpower wish to install any services across or under the existing paper road corridor, it has obtained written approval from the Council (approval which will not be

unreasonably withheld) to cross the road, and that it agree to the location and depth of such services with Council prior to their construction.

22. Should the Council choose to construct a road at some stage in the future, and any services installed within the road corridor need to be relocated or shifted as a consequence of the road construction, then the cost of any relocation of services thereof shall be 100% borne by Transpower.

#### **EMR (Electromagnetic Radiation)**

23. Radio frequency emissions from the telecommunications installation shall comply with 'NZS2772: Part I: 1999 Radiofrequency fields – Maximum exposure levels – 3 kHz to 300 GHz' (Radio Frequency Fields).

#### **EMF (Electromagnetic Fields)**

24. The Electromagnetic Fields (EMF) exposure at or beyond the secure boundary of the substation site shall not exceed the International Commission on Non-Ionising Radiation Protection Guidelines, for limiting exposure to time-varying electric and magnetic fields (1Hz – 100kHz) (Health Physics, 99(6):818-836; 2010) (ICNIRP guidelines) to public reference levels of 5 kv/m for electric fields and 200 µT for magnetic flux density at one metre above ground level under maximum normal operating conditions (i.e., when there are no faults in the transmission system).

#### **Signs**

25. Any signs placed at the site entrance shall comply with the signage provisions of the Waikato District Plan.

#### **Hazardous Substances**

26. On site oil containment kits shall be stored on site for containment and cleanup of oil spills from switchyard equipment in accordance with Transpower's Environmental management of existing assets (TP.SS 05.10) such that if any spill occurs that they be contained before discharging into or contaminating any nearby drains and waterways.

#### **Recovery of Costs**

27. Pursuant to section 36 of the Resource Management Act 1991, the actual and reasonable costs incurred by the Council in monitoring conditions of this designation shall be paid by Transpower New Zealand Ltd.

Brownhill Road to Whakamaru North 400kV Capable Overhead Transmission Line		
Designation unique identifier	TPR-8	
Designation purpose	Transmission Line	
Site identifier		
	Physical address	Brownhill Road to Whakamaru North Overhead Transmission Line – Refer planning maps
	Site name	400kV Capable - Brownhill Road to Whakamaru North Overhead Transmission Line
Lapse date	N/A (designation has been given effect)	
Designation hierarchy under section 177 of the Resource Management Act	Primary	
Conditions	Yes	
Additional information	N/A	

## Conditions

### General

1. For any new construction works that have not been addressed in an earlier approved Outline Plan of Works but remain within the scope of the designation, Transpower shall submit an Outline Plan of Works as required by S176A of the Resource Management Act 1991 to Council before work commences.
2. Tower heights and locations, except in relation to towers 88 and 89, shall be generally in accordance with the plans and profiles, except that:
  - a) Tower height can exceed that shown on the plans and profiles by up to three metres;
  - b) Where tower locations are moved in accordance with (d) and (e) below, tower heights can exceed those in the plans and profiles by up to five metres;
  - c) No tower shall exceed 70 metres in height;
  - d) Tower sites may be moved up to five metres laterally;
  - e) Tower sites may be moved up to 40 metres along the alignment.
3. Tower heights and locations for towers 88 and 89 shall be in accordance with Map 53 in Appendix V, Set 10, of the Decision. Towers 88 and 89 shall not be relocated, except with the prior written consent of the affected landowners and holders of the affected mineral rights. The heights of towers 88 and 89 can exceed that shown on the plans and profiles by up to three metres.
4. The operation and maintenance of towers 88 and 89 and the overhead transmission line, shall be undertaken in such a manner as to not unreasonably hinder or preclude the use and development of land legally described as Part Allotment 57 Parish of Maramarua and Lot 3

DPS 1453 (unique identifiers SA5A/133 and SA58C/221) (Maxwell Block) for open pit mining operations that incorporate the following agreed restrictions:

- a) The top of any open pit batter slope does not extend inside a circle with a radius of 45 metres from the centre peg of tower 88 and 52 metres from the centre peg of tower 89;
  - b) An overall maximum batter slope of no greater than 1.6 metre horizontal to 1.0 metre vertical;
  - c) A minimum of 12.7 metres clearance of ground level from the overhead transmission line at maximum operating temperature;
  - d) A minimum of six metres clearance of any plant or equipment from the overhead transmission line at maximum operating temperature; and
  - e) No buildings shall be constructed within the designated corridor for the overhead transmission line.
5. If any urupā, traditional sites, taonga (significant artefacts) or kōiwi (human remains) are exposed during site works, then the following procedures shall apply:
- a) Works in the immediate vicinity of the site that has been exposed shall cease;
  - b) The site supervisor shall immediately secure the area in a way that ensures that any remains or artefacts are untouched;
  - c) The site supervisor shall notify representatives of relevant tāngata whenua, Heritage New Zealand Pouhere Taonga Council and, in the case of human remains, the New Zealand Police; and
  - d) The notification in c) above shall allow such persons being given a reasonable time to record and resolve archaeological features discovered before work may recommence.

#### **EMF (Electromagnetic Fields)**

6. The Electromagnetic Fields (EMF) exposure at or beyond the secure boundary of the substation site shall not exceed the International Commission on Non-Ionising Radiation Protection Guidelines, for limiting exposure to time-varying electric and magnetic fields (1Hz – 100kHz) (Health Physics, 99(6):818-836; 2010) (ICNIRP guidelines) to public reference levels of 5 kv/m for electric fields and 200 µT for magnetic flux density at one metre above ground level under maximum normal operating conditions (i.e., when there are no faults in the transmission system).
7. In order to reduce long-term public exposure to EMFs no habitable building shall be constructed within the designated corridor for the transmission line.

#### **Earth potential rise / induced currents**

8. Any new works or equipment shall be designed and constructed to comply with the Electricity Safety Regulations 2010.
9. Any new works or equipment shall be designed and constructed so as not to cause existing assets of other utilities to be noncompliant with AS/NZS 4853:2012 – Electrical Hazard on Metallic Pipelines.”

#### **Radio frequency interference**

10. Any new works or equipment shall be designed to comply with NZS 6869:2004 Limits & Measurement Methods of Electromagnetic Noise from High-Voltage ac. Power Systems, 0.15 to 1000 MHz.

### **Operational Noise**

11. The operation of the transmission line shall not emanate a noise that exceeds a limit of 40 dBA Leq beyond the boundaries of the designation. Measurements shall not be undertaken during heavy rain.
12. Sound levels shall be measured and assessed in accordance with NZS6801:2008 Acoustics – Measurement of Environmental Sound and NZS6802:2008 Acoustics – Environmental noise.

### **Construction Management Plan**

13. Where required as part of any new Outline Plan process in terms of S176A of the Resource Management Act 1991, Transpower shall submit a construction management plan to the Council prior to the commencement of works. The construction management plan shall outline, where relevant, Transpower's intended approach to:
  - a) Land stability management and sediment controls;
  - b) Storage and reuse of topsoil;
  - c) Management and disposal of spoil;
  - d) Groundwater and stormwater management, treatment and disposal;
  - e) Silt and dust control, during earthwork stages;
  - f) Traffic/access management;
  - g) Temporary activities and equipment storage in specified areas;
  - h) Security and lighting during construction;
  - i) Contaminated land management procedures;
  - j) Construction noise, dust and vibration;
  - k) Hours of work;
  - l) Existing network utilities' protocols and guidelines.
  - m) Subject to other specific conditions, cultural protocols and archaeological requirements;
  - n) Vegetation clearance, disposal and restoration;
  - o) The intended construction programme (including staging if appropriate);
  - p) Protocols and procedures for road controlling authorities and rail operators where the line crosses that infrastructure;
  - q) Community information and liaison;
  - r) Contractor training; and
  - s) Generic contents of Site Works Plans (SWPs).

Nothing in the condition allows the Council, or any other party, to require more onerous controls than contained in the designation conditions.

### **Construction and Maintenance Noise**

14. Noise from any construction, maintenance, or demolition activity must be measured, assessed and managed in accordance with the requirements of 'NZS 6803:1999 Acoustics Construction Noise'.
15. The noise limits required by condition 14. shall not apply to emergency work required to re-establish continuity of supply, urgently required to prevent loss of life or other personal injury or

commissioning works, but all practicable steps shall be undertaken to control noise and to avoid adverse noise effects particularly at times when the stricter noise limits apply (eg, at night time).

16. Prior to any construction work beyond that contemplated by any prior Outline Plan of Works taking place, including any earthworks, a noise management plan shall be prepared, with the assistance of a suitably qualified and experienced person and the works shall be undertaken in accordance with that noise management plan.
17. The noise management plan required by condition 16. shall be submitted to the Council at least 20 working days prior to the works commencing.

**Vibration, Traffic Management Plan for road crossings and local roads, construction entranceways off public roads**

18. Vibration from all construction activities shall not exceed the limits of, and shall be measured in accordance with, German Standard DIN 4150-3 (1999-02) Structural Vibration – Effects of Vibration on Structures.
19. Where required as part of any new Outline Plan process in terms of S176A of the Resource Management Act 1991, a Traffic Management Plan relating to construction works shall be prepared and submitted to Council prior to the commencement of works.
20. The Traffic Management Plan prepared by Transpower shall recognise that the paramount purpose of roads is the free passage of the public and its vehicles.
21. The Traffic Management Plan shall, where relevant, address and provide details of proposed road crossing works and general use of local roads by heavy vehicles and/or mitigation measures relating to:
  - a) The broad staging of the works, areas of activity and the nature and extent of traffic management;
  - b) Locations of entranceways;
  - c) Description of existing traffic;
  - d) Proposed traffic management methods, including layout diagrams for temporary traffic management, and proposed speed restrictions;
  - e) In relation to road crossing works, details of the installation of any protection measures including, but not limited to, hurdles for subsequent line construction purposes;
  - f) Details of any necessary temporary road closures, diversions, or deviations which are likely to be required during road crossing activities, including the likely date, time, and duration of such matters (any necessary temporary road closures should be effected during off-peak periods unless this is impracticable or would have adverse impacts on adjacent properties);
  - g) Where diversions or deviations are required, information shall be provided by a suitably qualified and experienced traffic engineer of the traffic volumes and capacities of alternative routes, to ensure that such routes are both convenient and capable of safely accommodating any such diverted or deviated traffic;
  - h) Details of the proposed signage to advise motorists, residents, stakeholders, and other road users of any road closures, diversions and delays, such signage to be sufficiently clear to be capable of ready understanding by the general public and installed at appropriate locations at least seven days in advance of such road closures, diversions and delays;

- i) Details of methods of proposed information dissemination regarding construction activities and associated traffic effects, including but not limited to public notices in newspapers, radio announcements, information packages and direct contact with affected persons. (Such information dissemination, and the chosen method of dissemination is to be proportional to the impact);
- j) Details of prior consultation or community liaison undertaken with affected residents, stakeholders, public transport providers, emergency services or representative groups regarding proposed road closures, diversions and delays, and any measures agreed with such groups to address any adverse effects or inconvenience that may arise; and
- k) Identification of any measures for the purposes of mitigating adverse traffic effects of construction traffic, including safety matters (such speed restrictions and signage), relating to cyclists, pedestrians, disabled persons, and schoolchildren.

Advice Note: If temporary road closure is required, additional time may be necessary to allow the Road Controlling Authority to complete the consultation and give the public notices required under section 342 and schedule 10 of the Local Government Act 1974.

- 22. Transpower shall repair any damage to entranceways and public roads in the vicinity of those entranceways resulting from impacts of its construction traffic.