

Designation Schedule - Transpower New Zealand Ltd

Number	Purpose	Location
8500	Electricity transmission - electricity transmission tower site and associated overhead transmission lines...	161 Ash Street, Avondale
8501	Electricity transmission - Penrose electricity substation	19 Gavin Street, Penrose
8502	Electricity transmission - overhead electricity transmission lines ...	Gavin Street (opposite No. 19), Eilerslie to Tamaki River (Panmure Bridge), Panmure
8503	Electricity transmission - Mount Roskill electricity substation	11-39 White Swan Road, Mount Roskill
8504	Electricity transmission - overhead electricity transmission lines ...	37 Boundary Road, Avondale
8505	Electricity transmission - tower site and associated overhead lines ...	39 Haycock Avenue, Mount Roskill
8506	Electricity transmission - tower site and associated overhead lines ...	135A, 137 and 137A Barrack Road, Mount Wellington
8507	Electricity transmission - the construction, operation and maintenance of underground transmission lines ...	19 Gavin Street to 109 Golfand Drive, Pakuranga
8508	Electricity transmission - tower site and associated overhead transmission lines ...	716 Richardson Road, Mount Roskill
8509	Electricity transmission - tower site (Tower 9) and associated overhead transmission lines ...	Luke Street (adjoins State Highway 1), Otahuhu
8510	Electricity transmission - Glenbook electricity substation	Whitham Road, Glenbrook
8511	Electricity transmission - Bombay electricity substation	153 Barber Road, Bombay
8512	Electricity transmission - the construction, operation and maintenance of that part of a 400kV capable transmission line ...	231 Whitford Park Road, Whitford to the vicinity of Papparimu Road (Waikato District Council Boundary), Pokeno
8513	Electricity transmission - the operation, maintenance and upgrade of the existing Otahuhu Substation, the construction of a new 220kV substation, installation of 220kV underground cable circuits ...	1 Gridco Road and 2 Helabys Road, Otara
8514	Electricity transmission - the ongoing use, maintenance and operation of the Pakuranga Electricity Substation, the development of the substation site ...	109 Golfand Drive, Pakuranga
8515	Electricity Transmission - the construction, operation and maintenance of a transition station to connect the underground cable and overhead lines ...	16 Umbria Lane (near Brownhill Road), Whitford
8516	Electricity Transmission - the construction, operation and maintenance of a double circuit underground 220kV cable ...	143 Brownhill Road, Whitford to 109 Golfand Drive, Howick
8517	Electricity transmission - the construction, operation and maintenance of a double-circuit underground 220kV cable ...	143 Brownhill Road, Whitford to 26-28 Kaitawa Street, Otara
8518	Electricity transmission - Albany electricity substation	29 Bass Road, Albany
8519	Electricity transmission - the installation, maintenance, repair, replacement, inspection and operation of two 220kV underground electricity transmission lines ...	410 Albany Highway to State Highway 1 (Constellation Drive), Rosedale
8520	Electricity transmission - Takanini electricity substation	65 Airfield Road, Takanini
8521	Electricity transmission - the construction, operation,	261 Quarry Road, Drury

	maintenance, replacement, renewal and upgrading of a 220kV switchyard, transmission lines, and ancillary facilities	
8522	Electricity transmission - Wellsford electricity substation	69 School Road, Wellsford
8523	Electricity transmission - Silverdale electricity substation	83-91 Foundry Road, Silverdale
8524	Electricity transmission - Huapai electricity substation	108 Matua Road, Huapai
8525	Electricity transmission - Henderson electricity substation	1-12, 41-49 and 35 Lincoln Park Avenue, Massey
8526	Electricity transmission - Hepburn Road electricity substation	167-217 Hepburn Road, Glendene
8527	Electricity transmission - Rua o te Whenua telecommunications facility	600 Scenic Drive, Waiatarua
8528	<i>(Deleted)</i>	
8529	Electricity transmission - Mangere electricity substation	11, 14 and 16 Driver Road and 307 Massey Road, Mangere
8530	Electricity transmission - Hobson Street electricity substation	13-21 Hobson Street, Auckland City
8531	Electricity transmission - Wairau Road electricity substation	4A Wairau Road, Takapuna
8532	Electricity Transmission - the operation, maintenance and upgrading of underground transmission lines comprising of two 110kV cable circuits and termination structures to convey electricity between Otahuhu and Penrose	Highbrook Business Park, Highbrook
8533	Electricity transmission - Wiri electricity substation	656 Great South Road, Manukau
8534	Electricity transmission – Flat Bush Sub Precinct C	36 Tir Conaill Avenue, 125 Murphys Road, 23 Murphys Park Drive, 125B Murphys Road Flat Bush

8500 Ash Street Transmission Lines

Designation Number	8500
Requiring Authority	Transpower New Zealand Ltd
Location	161 Ash Street, Avondale
Rollover Designation	Yes
Legacy Reference	Designation F02-01, Auckland Council District Plan (Isthmus Section) 1999
Lapse Date	Given effect to (i.e. no lapse date)

Purpose

Electricity transmission - electricity transmission tower site (Tower 69) and associated overhead lines of the 220kV Henderson to Otahuhu-A transmission line.

Conditions

Cultural / Spiritual

1. 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, the New Zealand Historic Places Trust, the Auckland 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 recover archaeological features discovered before work may recommence on the exposed site.

Electric and Magnetic Fields (EMF)

2. Any new equipment shall be designed and operated to limit the electric and magnetic field exposures to 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). That is the public exposure 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 (ie, when there are no faults in the transmission system).

Radio Frequency Interference

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

Vibration

4. Vibration from all construction activities shall not exceed the limits of, and shall be measured and assessed in accordance with, German Standard DIN 4150-3 (1999-02) Structural Vibration – Effects of Vibration on Structures.

Construction and Maintenance Noise

5. All construction work shall be designed, managed and conducted to ensure that construction and maintenance noise from the site does not exceed the limits in NZS6803:1999 Acoustics–Construction Noise.

Advice Note

1. Any new works or equipment means those works which were not existing prior to the notification of the Auckland Unitary Plan.

Attachments

Schedule of Legal Descriptions

Parcel ID	
Lot 1 DP 42415	

8501 Penrose Substation

Designation Number	8501
Requiring Authority	Transpower New Zealand Ltd
Location	19 Gavin Street, Penrose
Rollover Designation	Yes
Legacy Reference	Designation F12-14, Auckland Council District Plan (Isthmus Section) 1999
Lapse Date	Given effect to (i.e. no lapse date)

Purpose

Electricity transmission - Penrose electricity substation.

Conditions

Cultural / Spiritual

1. 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, the New Zealand Historic Places Trust, the Auckland 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 recover archaeological features discovered before work may recommence on the exposed site.

Construction and Maintenance Noise

2. All construction work shall be designed, managed and conducted to ensure that construction and maintenance noise from the site does not exceed the limits in NZS6803:1999 Acoustics–Construction Noise.

3. Prior to any significant construction work taking place, including any associated significant earthworks, a noise management plan shall be prepared, with the assistance of a suitably qualified and experienced person, that sets out the management procedures in terms of section 8 and Annex E of NZS6803:1999 and the works shall be undertaken in accordance with that noise management plan.

4. The noise management plan required by the above condition 3 shall be submitted to Council's Consents Manager for approval, at least 20 working days prior to the works commencing. The Council's Consents Manager shall respond within 20 working days indicating whether approval is given or refused. Approval shall not be unreasonably withheld.

Vibration

5. Vibration from all construction activities shall not exceed the limits of, and shall be measured and assessed in accordance with, German Standard DIN 4150-3 (1999-02) Structural Vibration – Effects of Vibration on Structures.

Hazardous Substances

6. Any new part of the facility containing oil shall be designed to comply with Transpower's Oil Spill Management Policy (TPG:GS.54.0).

Electric and Magnetic Fields (EMF)

7. Any new equipment shall be designed and operated to limit the electric and magnetic field exposures at or beyond the secure boundary of the substation site to 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). That is the public exposure 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 (ie, when there are no faults in the transmission system).

Radio Frequency Interference

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

Earth Potential Rise

9. Any new substation earth grids shall be designed, built, and tested to ensure electrical safety at or beyond the designation boundary in accordance with Transpower Standard TP.DS.52.01, Issue 2, January 2005.

Light Spill

10. Any new exterior lighting shall be designed to comply with:

- a. AS/NZS 1158 Lighting for Roads and Public Spaces 2005 Part 3.1; and
- b. Transpower's guidelines and information for switchyard and grounds lighting TP.DS 40.03, and
- c. AS 4282 1997, Control of Obtrusive Effects of Outdoor Lighting.

Operational Noise

11. A noise management plan shall be submitted for any new equipment (such as transformers, fans and circuit breakers) where the noise from such equipment is likely to generate adverse noise effects for any noise sensitive land uses located in the vicinity.

Advice Note

1. Any new works or equipment means those works which were not existing prior to the notification of the Auckland Unitary Plan.

Attachments

Schedule of Legal Descriptions

Parcel ID	
Pt Lot 1 DP 14147	

8502 Pakuranga to Penrose Transmission Lines

Designation Number	8502
Requiring Authority	Transpower New Zealand Ltd
Location	Gavin Street (opposite No. 19), Ellerslie to Tamaki River (Panmure Bridge), Panmure
Rollover Designation	Yes
Legacy Reference	Designation F12-28, Auckland Council District Plan (Isthmus Section) 1999
Lapse Date	Given effect to (i.e. no lapse date)

Purpose

Electricity transmission - overhead electricity transmission lines in a corridor between Penrose Substation on Gavin Street and the Tamaki River.

Conditions

1. The Panmure Basin and publicly accessible shoreline is an Outstanding Natural Feature (Schedule 150, Panmure Basin volcano) which shall not be excavated, physically investigated, damaged or altered, other than in accordance with an outline plan of works submitted and processed in terms of section 176A of the Resource Management Act 1991. This condition shall not apply to:

a. Routine maintenance and repair of existing structures;

b. The carrying out of minor works which in the Council's opinion would not endanger, damage, destroy, or detract from the values for which the feature has been scheduled. In assessing the effect of the works proposed the Council may consult with the New Zealand Historic Places Trust, the Geological Society of New Zealand incorporated or other heritage authority with an interest in the feature.

Cultural / Spiritual

2. 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, the New Zealand Historic Places Trust, the Auckland 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 recover archaeological features discovered before work may recommence on the exposed site.

Electric and Magnetic Fields (EMF)

3. Any new equipment shall be designed and operated to limit the electric and magnetic field exposures to 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). That is the public exposure 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 (ie, when there are no faults in the transmission system).

Radio Frequency Interference

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

Vibration

5. Vibration from all construction activities shall not exceed the limits of, and shall be measured and assessed in accordance with, German Standard DIN 4150-3 (1999-02) Structural Vibration – Effects of Vibration on Structures.

Construction and Maintenance Noise

6. All construction work shall be designed, managed and conducted to ensure that construction and maintenance noise from the site does not exceed the limits in NZS6803:1999 Acoustics–Construction Noise.

Advice Note

1. Any new works or equipment means those works which were not existing prior to the notification of the Auckland Unitary Plan.

Attachments

Schedule of Legal Descriptions

Parcel ID/Appellation	
Lot 1 DP 128773	Pt Lot 1 DP 18413
Lot 1 DP 136102	Pt Lot 1 DP 18413
Lot 1 DP 145667	Pt Lot 1 DP 18413
Lot 1 DP 63060	Pt Lot 107 DP 18101
Lot 1 DP 163061	Pt Lot 162 DP 18101
Lot 1 DP 167598	Pt Lot 3 DP 1384
Lot 108 DP 18101	Pt Lot 91 DP 18101
Lot 109 DP 18101	Pt Lot 92 DP 18101
Lot 133 DP 18101	5205090
Lot 134 DP 18101	5215297
Lot 2 DP 128773	5215674
Lot 2 DP 179111	5227489
Lot 2 DP 310596	5237361
Lot 3 DP 128773	5237381
Lot 4 DP 128773	5212526
Lot 4 DP 167598	5264070
Lot 4 DP 310596	5264072
Lot 5 DP 128773	5211511
Lot 79 DP 18101	5261971
Lot 80 DP 18101	6577753
Pt Allot 17 Sec 12 SUBURBS OF Auckland	Sec 8 SO 70377
Pt Allot 35 Sec 1 Small Lots Near Village of Panmure	Sec 5 SO 70377

Pt Allot 36 Sec 1 Small Lots Near Village of Panmure	Lot 1 DP 51781
Pt Allot 5 Sec 4 Small Lots Near Village of Panmure	

8503 Mount Roskill Substation

Designation Number	8503
Requiring Authority	Transpower New Zealand Ltd
Location	11-39 White Swan Road, Mount Roskill
Rollover Designation	Yes
Legacy Reference	Designation G05-01, Auckland Council District Plan (Isthmus Section) 1999
Lapse Date	Given effect to (i.e. no lapse date)

Purpose

Electricity transmission - Mount Roskill electricity substation.

Conditions

Cultural / Spiritual

1. 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, the New Zealand Historic Places Trust, the Auckland 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 recover archaeological features discovered before work may recommence on the exposed site.

Construction and Maintenance Noise

2. All construction work shall be designed, managed and conducted to ensure that construction and maintenance noise from the site does not exceed the limits in NZS6803:1999 Acoustics–Construction Noise.
3. Prior to any significant construction work taking place, including any associated significant earthworks, a noise management plan shall be prepared, with the assistance of a suitably qualified and experienced person, that sets out the management procedures in terms of section 8 and Annex E of NZS6803:1999 and the works shall be undertaken in accordance with that noise management plan.
4. The noise management plan required by the above condition 3 shall be submitted to Council's Consents Manager for approval, at least 20 working days prior to the works commencing. The Council's Consents Manager shall respond within 20 working days indicating whether approval is given or refused. Approval shall not be unreasonably withheld.

Vibration

5. Vibration from all construction activities shall not exceed the limits of, and shall be measured and assessed in accordance with, German Standard DIN 4150-3 (1999-02) Structural Vibration – Effects of Vibration on Structures.

Hazardous Substances

6. Any new part of the facility containing oil shall be designed to comply with Transpower's Oil Spill Management Policy (TPG:GS.54.01).

Electric and Magnetic Fields (EMF)

7. Any new equipment shall be designed and operated to limit the electric and magnetic field exposures at or beyond the secure boundary of the substation site to 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). That is the public exposure 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 (ie, when there are no faults in the transmission system).

Radio Frequency Interference

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

Earth Potential Rise

9. Any new substation earth grids shall be designed, built, and tested to ensure electrical safety at or beyond the designation boundary in accordance with Transpower Standard TP.DS.52.01, Issue 2, January 2005.

Light Spill

10. Any new exterior lighting shall be designed to comply with:
a. AS/NZS 1158 Lighting for Roads and Public Spaces 2005 Part 3.1; and
b. Transpower's guidelines and information for switchyard and grounds lighting TP.DS 40.03, and
c. AS 4282 1997, Control of Obtrusive Effects of Outdoor Lighting.

Operational Noise

11. A noise management plan shall be submitted for any new equipment (such as transformers, fans and circuit breakers) where the noise from such equipment is likely to generate adverse noise effects for any noise sensitive land uses located in the vicinity.

Advice Note

1. Any new works or equipment means those works which were not existing prior to the notification of the Auckland Unitary Plan.

Attachments

Schedule of Legal Descriptions

Parcel ID	
Lot 1 DP 141985	Lot 2 DP 141985

8504 Boundary Road Transmission Lines

Designation Number	8504
Requiring Authority	Transpower New Zealand Ltd
Location	37 Boundary Road, Avondale
Rollover Designation	Yes
Legacy Reference	Designation G05-04, Auckland Council District Plan (Isthmus Section) 1999
Lapse Date	Given effect to (i.e. no lapse date)

Purpose

Electricity transmission - overhead electricity transmission lines that form part of the Hepburn to Mt Roskill-A 110kV transmission line.

Conditions

Cultural / Spiritual

1. 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, the New Zealand Historic Places Trust, the Auckland 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 recover archaeological features discovered before work may recommence on the exposed site.

Electric and Magnetic Fields (EMF)

2. Any new equipment shall be designed and operated to limit the electric and magnetic field exposures to 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). That is the public exposure 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 (ie, when there are no faults in the transmission system).

Radio Frequency Interference

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

Vibration

4. Vibration from all construction activities shall not exceed the limits of, and shall be measured and assessed in accordance with, German Standard DIN 4150-3 (1999-02) Structural Vibration – Effects of Vibration on Structures.

Construction and Maintenance Noise

5. All construction work shall be designed, managed and conducted to ensure that construction and maintenance noise from the site does not exceed the limits in NZS6803:1999 Acoustics–Construction Noise.

Advice Note

1. Any new works or equipment means those works which were not existing prior to the notification of the Auckland Unitary Plan.

Attachments**Schedule of Legal Descriptions**

Parcel ID	
Pt Lot 7 DP 43155	

8505 Haycock Avenue Overhead Electricity Transmission Lines

Designation Number	8505
Requiring Authority	Transpower New Zealand Ltd
Location	39 Haycock Avenue, Mount Roskill
Rollover Designation	Yes
Legacy Reference	Designation G05-05, Auckland Council District Plan (Isthmus Section) 1999
Lapse Date	Given effect to (i.e. no lapse date)

Purpose

Electricity transmission - tower site and associated overhead lines of the Henderson to Mt Roskill-A and Hepburn to Mt Roskill-A 110kV transmission lines.

Conditions

Cultural / Spiritual

1. 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, the New Zealand Historic Places Trust, the Auckland 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 recover archaeological features discovered before work may recommence on the exposed site.

Electric and Magnetic Fields (EMF)

2. Any new equipment shall be designed and operated to limit the electric and magnetic field exposures to 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). That is the public exposure 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 (ie, when there are no faults in the transmission system).

Radio Frequency Interference

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

Vibration

4. Vibration from all construction activities shall not exceed the limits of, and shall be measured and assessed in accordance with, German Standard DIN 4150-3 (1999-02) Structural Vibration – Effects of Vibration on Structures.

Construction and Maintenance Noise

5. All construction work shall be designed, managed and conducted to ensure that construction and maintenance noise from the site does not exceed the limits in NZS6803:1999 Acoustics–Construction Noise.

Advice Note

1. Any new works or equipment means those works which were not existing prior to the notification of the Auckland Unitary Plan.

Attachments

Schedule of Legal Descriptions

Parcel ID	
Lot 20 DP 48241	

8506 Barrack Road Overhead Electricity Transmission Lines

Designation Number	8506
Requiring Authority	Transpower New Zealand Ltd
Location	135A, 137 and 137A Barrack Road, Mt Wellington
Rollover Designation	Yes
Legacy Reference	Designation G13-13, Auckland Council District Plan (Isthmus Section) 1999
Lapse Date	Given effect to (i.e. no lapse date)

Purpose

Electricity transmission- tower site and associated overhead lines of the Otahuhu to Penrose-A and Penrose-B, and Pakuranga to Penrose A 110kV transmission lines.

Conditions

Cultural / Spiritual

1. 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, the New Zealand Historic Places Trust, the Auckland 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 recover archaeological features discovered before work may recommence on the exposed site.

Electric and Magnetic Fields (EMF)

2. Any new equipment shall be designed and operated to limit the electric and magnetic field exposures to 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). That is the public exposure 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 (ie, when there are no faults in the transmission system).

Radio Frequency Interference

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

Vibration

4. Vibration from all construction activities shall not exceed the limits of, and shall be measured and assessed in accordance with, German Standard DIN 4150-3 (1999-02) Structural Vibration – Effects of Vibration on Structures.

Construction and Maintenance Noise

5. All construction work shall be designed, managed and conducted to ensure that construction and maintenance noise from the site does not exceed the limits in NZS6803:1999 Acoustics–Construction Noise.

Advice Note

1. Any new works or equipment means those works which were not existing prior to the notification of the Auckland Unitary Plan.

Attachments**Schedule of Legal Descriptions**

Parcel ID	
Lot 1 DP 128773	Lot 2 DP 128773
Lot 3 DP 128773	Lot 4 DP 128773

8507 Pakuranga to Penrose Underground Transmission Cables

Designation Number	8507
Requiring Authority	Transpower New Zealand Ltd
Location	19 Gavin Street to 109 Golfland Drive, Pakuranga
Rollover Designation	Yes
Legacy Reference	Designation G15-10, Auckland Council District Plan (Isthmus Section) 1999; and Designation 304, Auckland Council District Plan (Central Area Section) 2005
Lapse Date	Given effect to (i.e. no lapse date)

Purpose

Electricity transmission - the construction, operation and maintenance of underground transmission lines comprising of a 220kV cable circuit to convey electricity between Pakuranga and Penrose substations.

Conditions

General

1. The designation shall lapse on the expiry of a period of 15 years after the date it is included in the District Plan in accordance with section 184(2) of the Resource Management Act 1991 (“the Act”), unless:
 - a. It is given effect to before the end of that period; or
 - b. The council determines, on an application made within 3 months before the expiry of that period, that substantial progress or effort has been made towards giving effect to the designation and is continuing to be made, and fixes a longer period for the purposes of this subsection.

Construction and maintenance noise

2. All construction work shall be designed, managed and conducted to ensure that construction and maintenance noise from the site does not exceed the limits in NZS6803:1999 Acoustics–Construction.

Tree Management

3. Except for those trees that are to be removed as part of the Works, trees in the vicinity of the Works shall be managed as follows:
 - a. All excavation work within the dripline or root zone of any tree in a Council street or Council Reserve, any scheduled tree or any tree that would otherwise be generally protected under the District Plan and is located on private land (and extends over or into the work site), shall be supervised by a Council approved arborist;
 - b. Any root or limb severance required shall be undertaken by a qualified arborist in accordance with best practice as far as practicable to provide for the long-term health and vitality or stability of the subject tree(s);
 - c. Any tree adjacent to a construction area shall be fenced off to minimise and/or avoid any damage to the rootplate area of the tree;
 - d. Where a Council-owned tree is damaged by the Works and a Council arborist assesses that remedial work is necessary, the remedial work shall be undertaken by a Council-approved arborist and the Requiring Authority shall be directly liable for all such remedial costs. Should a Council-owned tree be damaged beyond repair or destroyed then the Requiring Authority shall be directly liable for all costs relating to tree removal and

replacement planting; and

e. Where replacement planting is required to remediate the loss of a Council-owned tree, the species, location and planting of the replacement tree shall be undertaken as approved by the Council.

4. Following the completion of construction, the Requiring Authority shall provide a monitoring report to the Council that lists all trees that would otherwise be identified as 'generally protected' or 'scheduled' in the District Plan that were subject to any cutting or damage of the roots, trunk, or canopy to an extent deemed more than minor by the Council approved arborist.

Cultural/Spiritual

5. If any urupā, traditional sites, taonga (significant artefacts), or kōiwi (human remains) are exposed during site works, 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, the New Zealand Historic Places Trust, the Auckland 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 recover archaeological features discovered before work may recommence on the exposed site.

Designation Review

6. As soon as practicable following the completion of construction of the Works, the Requiring Authority shall, in consultation with the Council as the road controlling authority:

a. Review the width of the area designated for the project;

b. Identify:

i. any areas of designated land (including public reserve) that are no longer necessary for the ongoing operation, maintenance, renewal and protection of the underground cables and ancillary activities; and

ii. any areas of designated land within the legal road boundaries that are more than 2.5 metres from the centreline of the cables (excluding joint bays and associated link pits); and

c. Remove the designation over the areas identified in (b) above in accordance with section 182 of the Act and provide a plan of the final designated areas to the Council for inclusion in the District Plan; and

d. Provide as-built plans to the Council.

Operational Conditions

Magnetic Fields

7. Any new equipment shall be designed and operated to limit the magnetic field exposures to the International Commission on Non-Ionising Radiation Protection, Guidelines for limiting exposure to time varying electric, magnetic, fields (1Hz- 100kHz) (Health Physics 99(6):818-836; 2010) (ICNIRP Guidelines). That is the public exposure reference level 200 µT for magnetic flux density when measured at 1 metre above ground level directly above any cable under normal operating conditions. (ie, when there are no faults in the transmission system).

Earth Potential Rise / Induced Voltages

8. Any new works or equipment shall be designed and constructed so as not to cause existing assets of other utilities to be non-compliant with AS/NZS 4853:2012 Electrical Hazard on Metallic Pipelines.

Maintenance

9. The Requiring Authority shall:

- a. Meet its own costs associated with reviewing any proposal by the local authority to undertake roading works or activities over, or adjacent to, land designated for underground transmission lines;
- b. Meet any additional costs in respect of roading compaction, construction, renewal or maintenance that are incurred by the local authority where those additional costs are specifically caused due to the presence of the cables, or due to conditions imposed by the Requiring Authority; and
- c. Meet any additional costs where maintenance works undertaken by the Requiring Authority result in additional routine maintenance or remedial related roading costs for the local authority.

10. The Requiring Authority shall advise the Council at least 30 working days prior to commencing major programmed maintenance, renewal or replacement works (unless otherwise agreed in writing with the Road Corridor Access Team, Auckland Transport).

Advice Notes

1. Any new works or equipment means those works which were not existing prior to the notification of the Auckland Unitary Plan.
2. An Authority to modify an archaeological site must be obtained from the NZHPT prior to the start of any works that will affect site R11/1664.
3. Where section 176 approvals are required by utility operators (other than the Requiring Authority) for their works within the designation the requiring authority will provide a timely response, in order to facilitate co-ordination of section 176 approvals sought by the utility operator and the Road Opening Notice process.
4. The requiring authority is reminded of its Agreement with Watercare dated 13 October 2008 in relation to existing and future pipes within the designation area.

Attachments

Schedule of Legal Descriptions

Parcel ID/Appellation	
5265363	5264070
Pt Lot 13 DP 169911	5209755
Lot 14 DP 169911	5241960
5227266	5230326
5238840	5258537
5248668	5214449
5223374	5258531
5253119	5240958
5208675	5253263
5259571	5261971
5211539	Lot 1 DP 145667
5252892	5205090
	Pt Allot 5 Sec 4 SMALL LOTS NEAR VILLAGE OF Panmure

Parcel ID/Appellation	
Lot 1 DP 67262	Lot 1 DP 51781
5256899	5212526
5209116	Pt Allot 36 Sec 1 SMALL LOTS NEAR VILLAGE OF Panmure
5257525	5233659
5207513	Pt Allot 35 Sec 1 SMALL LOTS NEAR VILLAGE OF Panmure
5260000	5237361
5220917	Lot 4 DP 128773
5242716	Lot 2 DP 128773
5224551	Lot 1 DP 128773
5255868	Lot 3 DP 128773
5235624	Lot 5 DP 128773
5255869	Pt Lot 3 DP 1384
5228367	Lot 133 DP 18101
5248672	Lot 134 DP 18101
5221723	5211511
5259728	Lot 109 DP 18101
6590969	Lot 108 DP 18101
5233271	Pt Lot 107 DP 18101
6590968	Pt Lot 162 DP 18101
6590967	Pt Lot 91 DP 18101
6590966	Pt Lot 92 DP 18101
6590965	5215297
6590964	Lot 80 DP 18101
6590963	Lot 79 DP 18101
6590962	Pt Lot 1 DP 18413
6591006	5215674
6591005	Pt Lot 1 DP 18413
6591004	5227489
6591003	Pt Lot 1 DP 18413
5238539	Pt Allot 17 Sec 12 SUBURBS OF Auckland
6591002	Sec 2 SO 70581
6591001	Sec 3 SO 70581
6652635	Sec 4 SO 70581
5264072	

8508 Richardson Road Overhead Electricity Transmission Lines

Designation Number	8508
Requiring Authority	Transpower New Zealand Ltd
Location	716 Richardson Road, Mount Roskill
Rollover Designation	Yes
Legacy Reference	Designation H07-01, Auckland Council District Plan (Isthmus Section) 1999
Lapse Date	Given effect to (i.e. no lapse date)

Purpose

Electricity transmission - tower site and associated overhead transmission lines of the Mangere to Mt Roskill A 110kV transmission line.

Conditions

Cultural / Spiritual

1. 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, the New Zealand Historic Places Trust, the Auckland 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 recover archaeological features discovered before work may recommence on the exposed site.

Electric and Magnetic Fields (EMF)

2. Any new equipment shall be designed and operated to limit the electric and magnetic field exposures to 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). That is the public exposure 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 (ie, when there are no faults in the transmission system).

Radio Frequency Interference

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

Vibration

4. Vibration from all construction activities shall not exceed the limits of, and shall be measured and assessed in accordance with, German Standard DIN 4150-3 (1999-02) Structural Vibration – Effects of Vibration on Structures.

Construction and Maintenance Noise

5. All construction work shall be designed, managed and conducted to ensure that construction and maintenance noise from the site does not exceed the limits in NZS6803:1999 Acoustics–Construction Noise.

Advice Note

1. Any new works or equipment means those works which were not existing prior to the notification of the Auckland Unitary Plan.

Attachments

Schedule of Legal Descriptions

Parcel ID	
Lot 6 DP 40357	Lot 1 DP 135028

8509 Luke Street Overhead Electricity Transmission Lines

Designation Number	8509
Requiring Authority	Transpower New Zealand Ltd
Location	Luke Street (adjoins State Highway 1), Otahuhu
Rollover Designation	Yes
Legacy Reference	Designation I14-23, Auckland Council District Plan (Isthmus Section) 1999
Lapse Date	Given effect to (i.e. no lapse date)

Purpose

Electricity transmission - tower site (Tower 9) and associated overhead transmission lines of the Henderson to Otahuhu-A 220kV transmission line.

Conditions

Cultural / Spiritual

1. 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, the New Zealand Historic Places Trust, the Auckland 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 recover archaeological features discovered before work may recommence on the exposed site.

Electric and Magnetic Fields (EMF)

2. Any new equipment shall be designed and operated to limit the electric and magnetic field exposures to 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). That is the public exposure 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 (ie, when there are no faults in the transmission system).

Radio Frequency Interference

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

Vibration

4. Vibration from all construction activities shall not exceed the limits of, and shall be measured and assessed in accordance with, German Standard DIN 4150-3 (1999-02) Structural Vibration – Effects of Vibration on Structures.

Construction and Maintenance Noise

5. All construction work shall be designed, managed and conducted to ensure that construction and maintenance noise from the site does not exceed the limits in NZS6803:1999 Acoustics–Construction Noise.

Advice Note

1. Any new works or equipment means those works which were not existing prior to the notification of the Auckland Unitary Plan.

Attachments

Schedule of Legal Descriptions

Parcel ID	
Lot 1 DP 133722	

8510 Glenbrook Electricity Substation

Designation Number	8510
Requiring Authority	Transpower New Zealand Ltd
Location	Whitham Road, Glenbrook
Rollover Designation	Yes
Legacy Reference	Designation 84, Auckland Council District Plan (Franklin Section) 2000
Lapse Date	Given effect to (i.e. no lapse date)

Purpose

Electricity transmission - Glenbrook electricity substation.

Conditions

Cultural / Spiritual

1. 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, the New Zealand Historic Places Trust, the Auckland 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 recover archaeological features discovered before work may recommence on the exposed site.

Construction and Maintenance Noise

2. All construction work shall be designed, managed and conducted to ensure that construction and maintenance noise from the site does not exceed the limits in NZS6803:1999 Acoustics–Construction Noise.

3. Prior to any significant construction work taking place, including any associated significant earthworks, a noise management plan shall be prepared, with the assistance of a suitably qualified and experienced person, that sets out the management procedures in terms of section 8 and Annex E of NZS6803:1999 and the works shall be undertaken in accordance with that noise management plan.

4. The noise management plan required by the above condition 4 shall be submitted to Council's Consents Manager for approval, at least 20 working days prior to the works commencing. The Council's Consents Manager shall respond within 20 working days indicating whether approval is given or refused. Approval shall not be unreasonably withheld.

Vibration

5. Vibration from all construction activities shall not exceed the limits of, and shall be measured and assessed in accordance with, German Standard DIN 4150-3 (1999-02) Structural Vibration – Effects of Vibration on Structures.

Hazardous Substances

6. Any new part of the facility containing oil shall be designed to comply with Transpower’s Oil Spill Management Policy (TPG:GS.54.01).

Electric and Magnetic Fields (EMF)

7. Any new equipment shall be designed and operated to limit the electric and magnetic field exposures at or beyond the secure boundary of the substation site to 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). That is the public exposure 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 (ie, when there are no faults in the transmission system).

Radio Frequency Interference

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

Earth Potential Rise

9. Any new substation earth grids shall be designed, built, and tested to ensure electrical safety at or beyond the designation boundary in accordance with Transpower Standard TP.DS.52.01, Issue 2, January 2005.

Light Spill

- 10. Any new exterior lighting shall be designed to comply with:
 - a. AS/NZS 1158 Lighting for Roads and Public Spaces 2005 Part 3.1;
 - b. Transpower’s guidelines and information for switchyard and grounds lighting TP.DS 40.03 and
 - c. AS 4282 1997, Control of Obtrusive Effects of Outdoor Lighting.

Operational Noise

11. A noise management plan shall be submitted for any new equipment (such as transformers, fans and circuit breakers) where the noise from such equipment is likely to generate adverse noise effects for any noise sensitive land uses located in the vicinity.

Advice Note

1. Any new works or equipment means those works which were not existing prior to the notification of the Auckland Unitary Plan.

Attachments

Schedule of Legal Descriptions

Parcel ID	
Lot 1 DP 139740	

8511 Bombay Electricity Substation

Designation Number	8511
Requiring Authority	Transpower New Zealand Ltd
Location	153 Barber Road, Bombay
Rollover Designation	Yes
Legacy Reference	Designation 85, Auckland Council District Plan (Franklin Section) 2000
Lapse Date	Given effect to (i.e. no lapse date)

Purpose

Electricity transmission - Bombay electricity substation, line connections and associated infrastructure.

Conditions

1. The Bombay ICT Project shall be undertaken in general accordance with the plans and information submitted within the Assessment of Environmental Effects for the Notice of Requirement reference 'Bombay Substation alteration to designation - Notice of Requirement and AEE', dated 1 March 2021.

An Outline Plan for the Bombay ICT Project shall not be required and is waived, unless there are more than minor changes to the plans and information referenced above, in which case Transpower New Zealand Ltd (Transpower) shall clearly identify these changes and Auckland Council may then require an Outline Plan be submitted in accordance with Section 176A of the RMA.

2. Any new works other than the works provided for within the Bombay ICT Project in Condition 1 above shall be addressed through an Outline Plan where required in accordance with Section 176A of the Resource Management Act 1991.

Cultural / Spiritual

3. 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, the Auckland 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 recover archaeological features discovered before work may recommence on the exposed site.

Construction and Maintenance Noise

4. All construction work shall be designed, managed and conducted to ensure that construction and maintenance noise from the site does not exceed the limits in NZS6803:1999 Acoustics—Construction Noise.

5. Prior to any significant construction work taking place, including any associated significant earthworks, a noise management plan shall be prepared, with the assistance of a suitably qualified and experienced person, that sets out the management procedures in terms of section 8 and Annex E of NZS6803:1999 and the works shall be undertaken in accordance with that noise management plan.

6. The noise management plan required by the above condition 3 shall be submitted to Council's Consents Manager for approval, at least 20 working days prior to the works commencing. The Council's Consents Manager shall respond within 20 working days indicating whether approval is given or refused. Approval shall not be unreasonably withheld.

Vibration

7. Vibration from all construction activities shall not exceed the limits of, and shall be measured and assessed in accordance with, German Standard DIN 4150-3 (1999-02) Structural Vibration – Effects of Vibration on Structures.

Hazardous Substances

8. Any new part of the facility containing oil shall be designed to comply with Transpower's Oil Spill Management Policy (TPG:GS.54.01).

Electric and Magnetic Fields (EMF)

9. Any new equipment, including the Bombay ICT Project, shall be designed and operated to limit the electric and magnetic field exposures at or beyond the secure boundary of the substation site to 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). That is the public exposure reference levels of 5 kV/m for electric fields and 200 μ T for magnetic flux density at one metre above ground level under maximum normal operating conditions (ie, when there are no faults in the transmission system).

10. Within 3 months of completing the Bombay ICT Project, Transpower shall engage a suitably qualified and experienced person to confirm compliance with the ICNIRP guidelines as evidenced by actual measurements of electric and magnetic fields in relevant locations. The report shall be submitted to Auckland Council. In the event of any non-compliance, the report shall demonstrate how compliance can be achieved and the timeline for completion.

Radio Frequency Interference

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

Earth Potential Rise

12. Any new substation earth grids shall be designed, built, and tested to ensure electrical safety at or beyond the designation boundary in accordance with Transpower Standard TP.DS.52.01, Issue 3, May 2016.

Light Spill

13. Any new exterior lighting shall be designed to comply with:
 - a. AS/NZS 1158.3.1:2020 Lighting for Roads and Public Spaces Part 3.1; and
 - b. Transpower's guidelines and information for switchyard and grounds lighting TP.DS 40.03 and
 - c. AS/NA 4282:2019, Control of Obtrusive Effects of Outdoor Lighting.

Operational Noise

14. A noise management plan shall be submitted for any new equipment (such as transformers, fans and circuit breakers) where the noise from such equipment is likely to generate adverse noise effects for any noise sensitive land uses located in the vicinity.

Landscaping and visual amenity

15. The requiring authority shall ensure that a planted landscaping strip with a minimum width of 10m is established and maintained along the eastern and southern boundaries, and part of the northern and western boundaries, of Lot 1 DP 162890 in accordance with Figure 6 – Mitigation Principles prepared by Isthmus, June 2021.
16. The landscaping shall be implemented as soon as practicable in the planting season following inclusion of the designation in the Auckland Unitary Plan.
17. The landscaping shall be maintained regularly and kept in a tidy condition, including replacement if any planting dies or becomes over mature. The replacement of any vegetation shall be no later than the next planting season (i.e. April to September) following discovery of the need for replacement.
18. Any landscaping required by Condition 15 above may be trimmed or removed where:
 - a) It is necessary in order to remove or reduce any risk to the maintenance or operational integrity of the substations; or
 - b) Future development of National Grid facilities on the site necessitates the removal of any landscaping.
19. If development of National Grid facilities on the site necessitates the removal of any landscaping (such as for new line connections), the Outline Plan submitted for these works shall address how the adverse visual effects of any landscaping removal will be avoided, remedied or mitigated.
20. A 15 m wide height restriction zone shall be maintained along the eastern and southern boundaries, and part of the northern and western boundaries, of Lot 1 DP 162890 in accordance with Figure 6 – Mitigation Principles prepared by Isthmus, June 2021. The height restriction zone extends 15 m into the site from the edge of the planted landscaping strip as shown on shown on Figure 6.
21. Within the height restriction zone, a height limit of 15 m applies to any new substation structures and buildings in accordance with this designation (i.e. any new substation structures and buildings that were not existing as at 31 May 2021). For the avoidance of doubt, this height limit does not apply to transmission lines and transmission line support structures.

Construction Traffic Management Plan

22. At least 20 working days prior to the commencement of any significant construction activities on the site, Transpower shall submit a Construction Traffic Management Plan (CTMP) to the Council for certification. The CTMP shall detail traffic management and mitigation measures for delivery of substation equipment and materials and general construction activities including, but not limited to, restricting over dimension loads and otherwise limiting heavy vehicle movements wherever practicable to outside of Bombay School peak drop off and pick up times (being 8:15 to 9 am and 2:30 to 3:15 pm Monday to Friday, excluding school and public holidays).

In relation to the delivery of over dimension loads including transformers, the CTMP shall detail traffic management and mitigation measures within the vicinity of the Bombay Substation (i.e. Barber and Papparata Roads).

Advice Note

1. Any new works or equipment means those works which were not existing prior to the notification of the Auckland Unitary Plan.
2. The requiring authority will obtain an over dimension/ overweight load permit as required from Waka Kotahi NZ Transport Authority with input from Auckland Transport.
3. Should any proposed earthworks result in the identification of any previously unknown sensitive materials (i.e. archaeological sites), the requirements of E11.6.1 Land disturbance – Regional Accidental Discovery Rule (as at 14 May 2021 or any subsequent update to this rule) of the Auckland Unitary Plan (Operative in part) shall be complied with.

Attachments

Schedule of Legal Descriptions

Parcel ID	
Lot 3 DP 439460 Lot DP 162890	

Landscape strip and height restriction area map



Figure 6 - Mitigation Principles

Scale 1:2000 @ A3
 Drawing no. SK26
 Produced by Isthmus Group Ltd.
 Basemap source: Auckland Council GIS (Deemap)

- LEGEND:**
- Proposed native low growing species & shrubs up to 2m in height
 - Proposed native tree planting
 - Existing Contours (DGM)
 - Counties Power Site (Designation 3010)
 - 10m height restriction zone

NOTE:
 This site is located within the rural - rural production zone, which anticipates buildings up to 10m high.

Isthmus.
 Building Interconnecting Transformer | Transpower New Zealand Ltd | June 2025

8512 Brownhill Road to Whakamaru Overhead Transmission Lines

Designation Number	8512
Requiring Authority	Transpower New Zealand Ltd
Location	231 Whitford Park Road, Whitford to the vicinity of Paparimu Road (Waikato District Council Boundary), Pokeno
Rollover Designation	Yes
Legacy Reference	Designation 302, Auckland Council District Plan (Manukau Section) 2002; and Designation 152, Auckland Council District Plan (Franklin Section) 2000
Lapse Date	Given effect to (i.e. no lapse date)

Purpose

Electricity transmission - the construction, operation and maintenance of that part of a 400kV capable transmission line which is within the Auckland area to convey electricity between the Brownhill Road Substation and the Whakamaru and Whakamaru North Substations in Taupo, and ancillary activities.

Conditions

Cultural / Spiritual

1. If any urupa, traditional sites, taonga (significant artefacts) or koiwi (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 tangata whenua, the New Zealand Historic Places Trust, Auckland 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.

Electric and Magnetic Fields (EMF)

2. Any new equipment shall be designed and operated to limit the electric and magnetic field exposures to 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). That is the public exposure reference levels of 5 kV/m for electric fields and 200 μ T for magnetic flux density at one metre above ground level under maximum normal operating conditions (ie, when there are no faults in the transmission system).

3. In order to reduce long term public exposure to EMFs no habitable building shall be constructed within the designated corridor for the 400-kV capable transmission line.

Earth Potential Rise / Induced Currents

4. Any new works or equipment shall be designed and constructed so as not to cause existing assets of other utilities to be non-compliant with AS/NZS 4853:2012 Electrical Hazard on Metallic Pipelines.

Radio Frequency Interference

5. All works shall be designed to comply with NZS 6869:2004 Limits & Measurement Methods of Electromagnetic Noise from High-Voltage a.c. Power Systems, 0.15 to 1000 MHz.

Operational Noise

6. The operation of the transmission line shall not emanate noise that exceeds 40 dBA Leq beyond the boundaries of the designation. Measurements shall not be undertaken during heavy rain.

7. Sound levels shall be measured and assessed in accordance with NZS 6801:2008 Acoustics - Measurement of environmental sound and NZS6802:2008 Acoustics - Assessment of Environmental Sound.

Construction and Maintenance Noise

8. All construction and maintenance work shall be designed, managed and conducted to ensure that construction and maintenance noise from the designated area does not exceed the limits in NZS6803:1999 Acoustics– Construction Noise at locations set out in section 6.2 of that standard.

9. The noise limits required by condition 8 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).

10. Prior to any significant construction work taking place, including any significant associated earthworks, a noise management plan applicable to the construction and commissioning stages shall be prepared for the whole of the line, with the assistance of a suitably qualified and experienced person. The plan shall set out the management procedures in terms of section 8 and Annex E of NZS6803:1999, and the works shall be undertaken in accordance with that noise management plan.

11. The noise management plan required by condition 10 shall be submitted to the Council's Consents Manager, at least 20 working days prior to the works commencing.

Advice Note

1. Any new works or equipment means those works which were not existing prior to the notification of the Auckland Unitary Plan.

General Advice Note

1. In relation to the ARI-PAK A towers outside of the designated area shown on the attached maps, Transpower shall use its best endeavours to establish and follow the procedures in the conditions in relation to cultural/spiritual matters, construction noise, the preparation of the construction management plan and pre-construction activities.

Attachments

Maps of the Designation

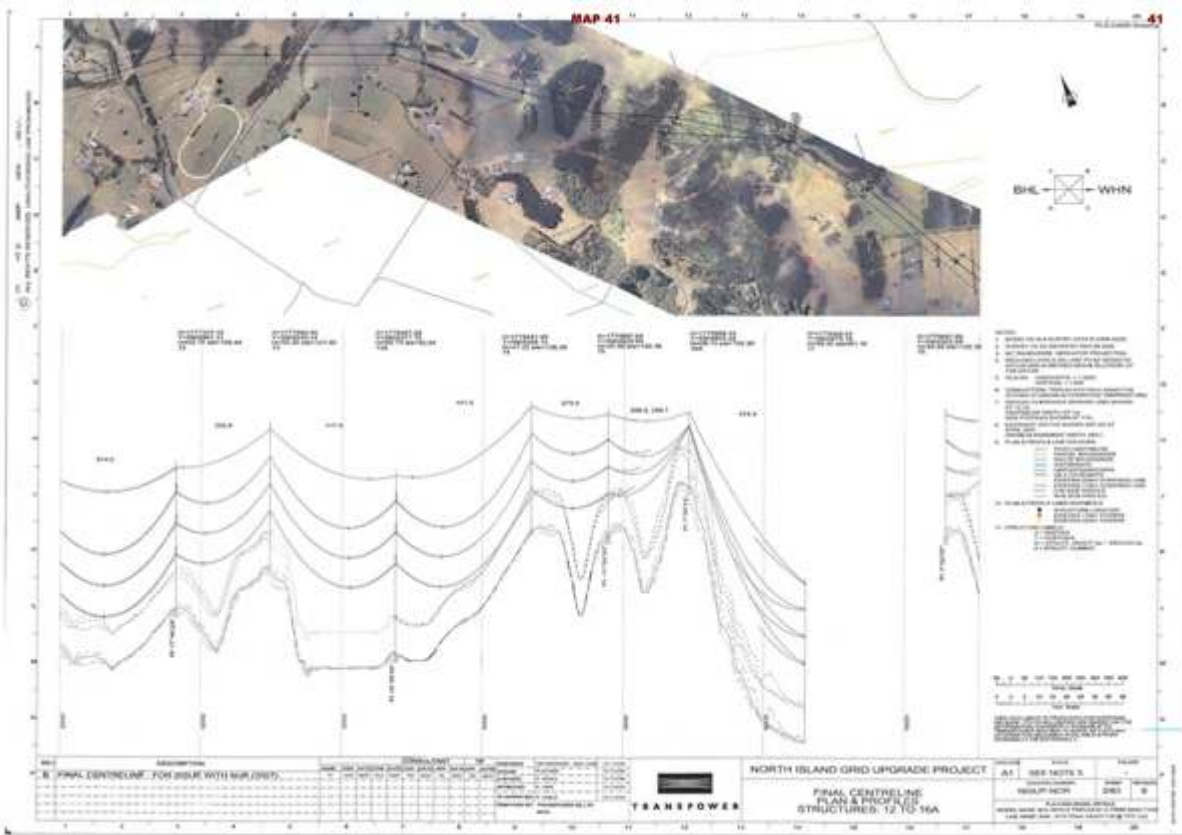
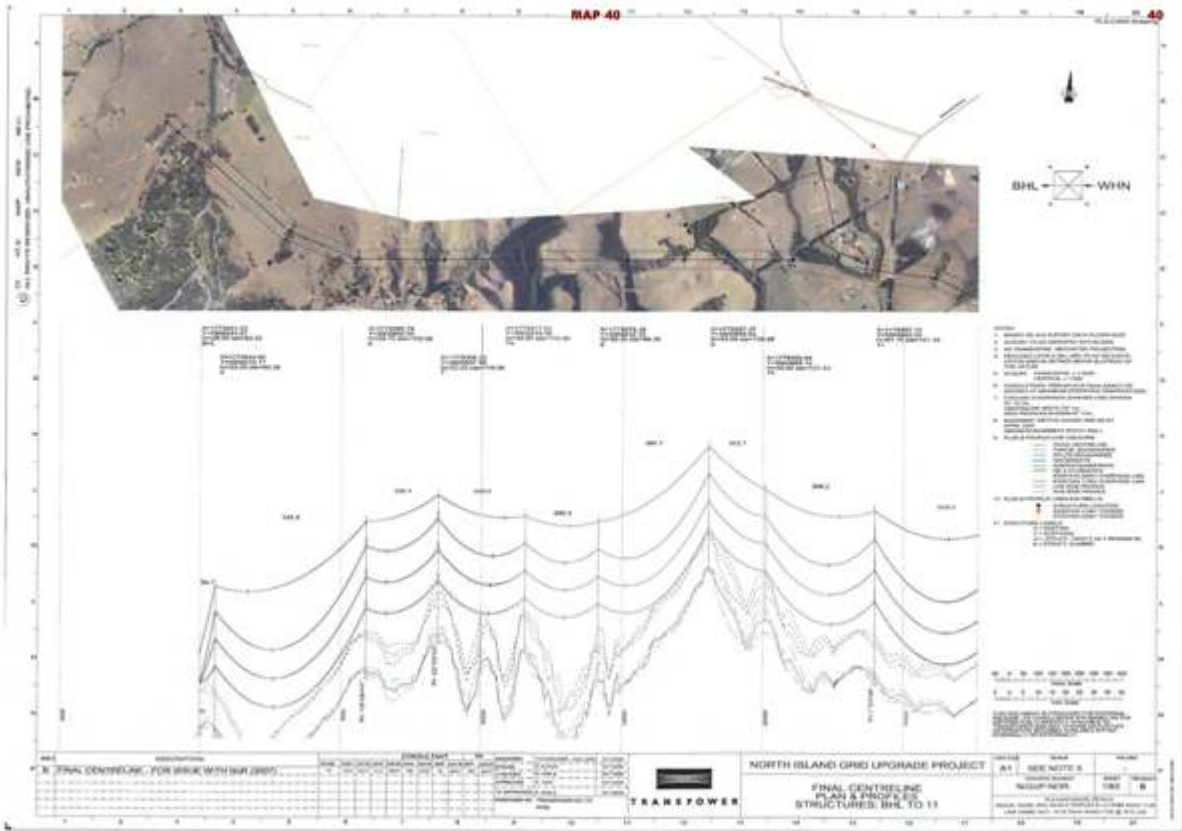


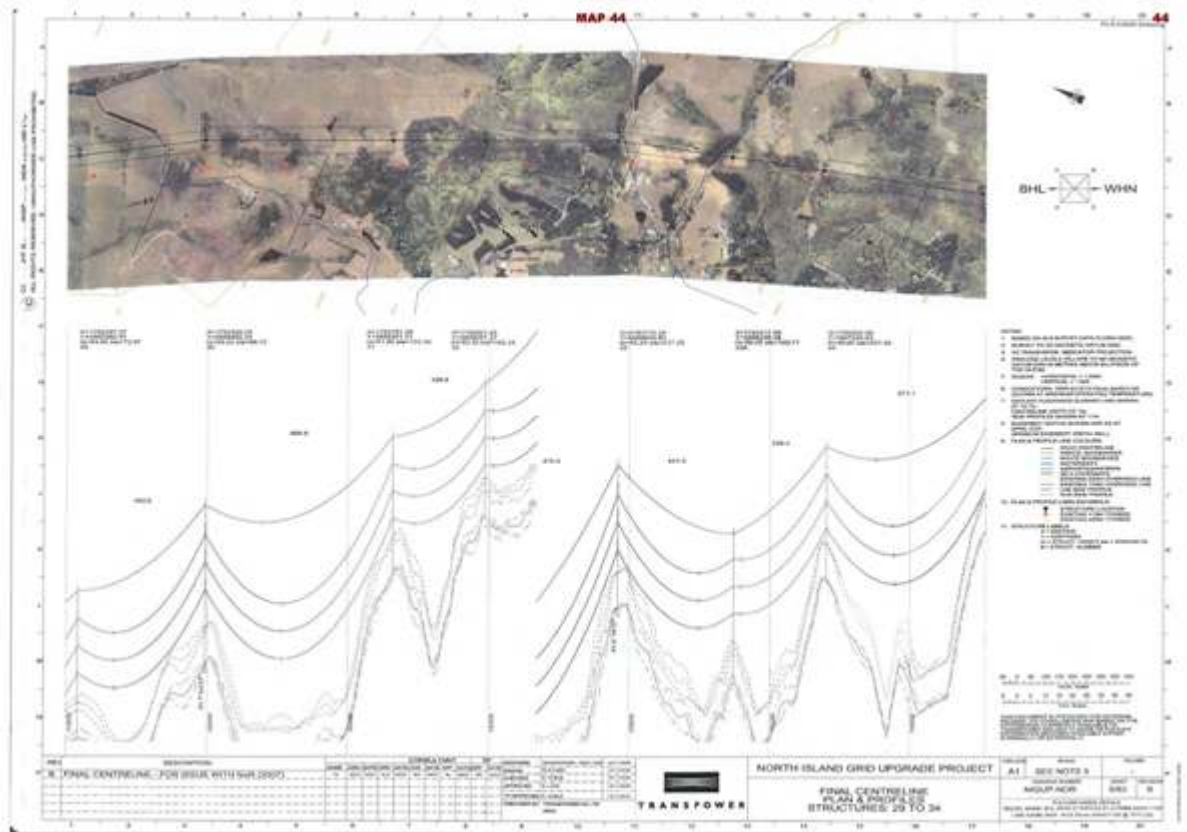




SET 8

MAP	PLAN DESCRIPTION	PAGE
OVERHEAD LINE SECTION: Route Sections 1-3, Towers 6-33		
Map 40	Final Centreline Plan & Profiles, Structures: BHL to 11, NIGUP-NOR, sheet 1/63, revision B	40
Map 41	Final Centreline Plan & Profiles, Structures: 12 to 16A, NIGUP-NOR, sheet 2/63, revision B	41
Map 42	Final Centreline Plan & Profiles, Structures: 16B to 23, NIGUP-NOR, sheet 3/63, revision B	42
Map 43	Final Centreline Plan & Profiles, Structures: 23 to 29, NIGUP-NOR, sheet 4/63, revision B	43
Map 44	Final Centreline Plan & Profiles, Structures: 29 to 34, NIGUP-NOR, sheet 5/63, revision B	44



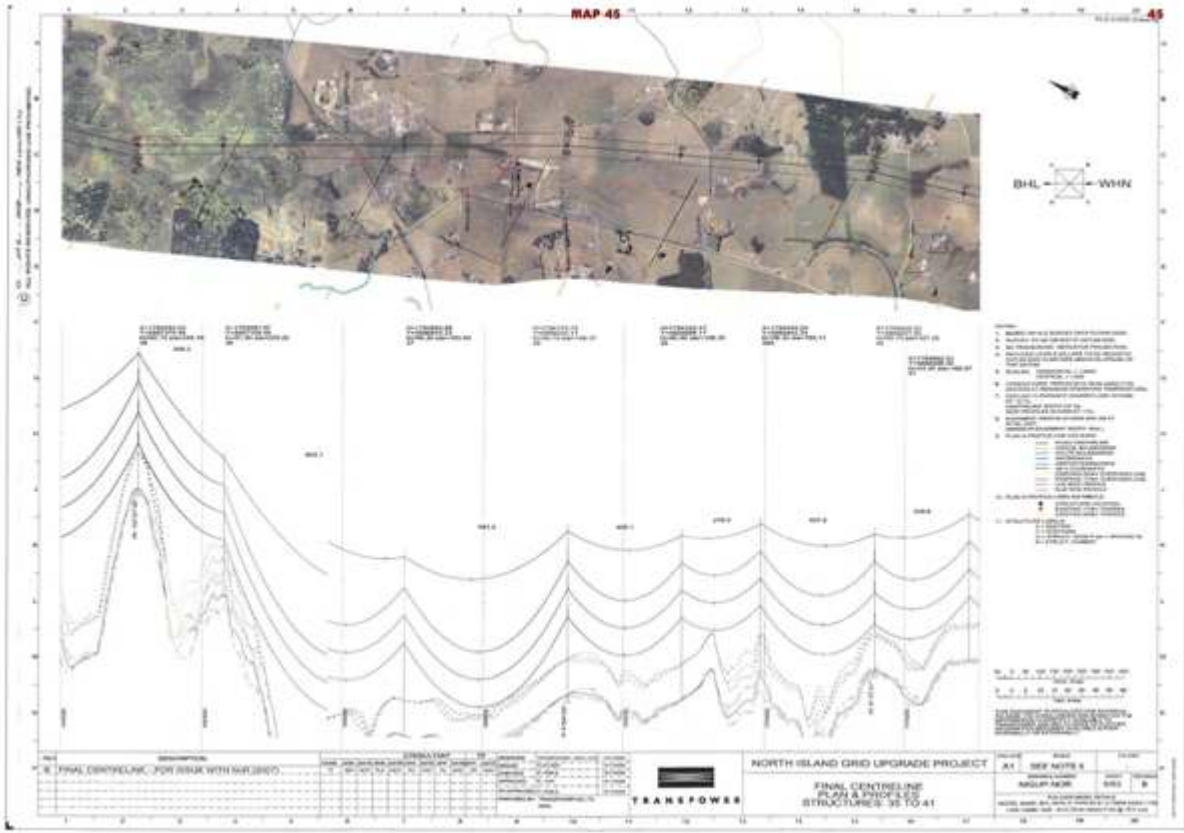
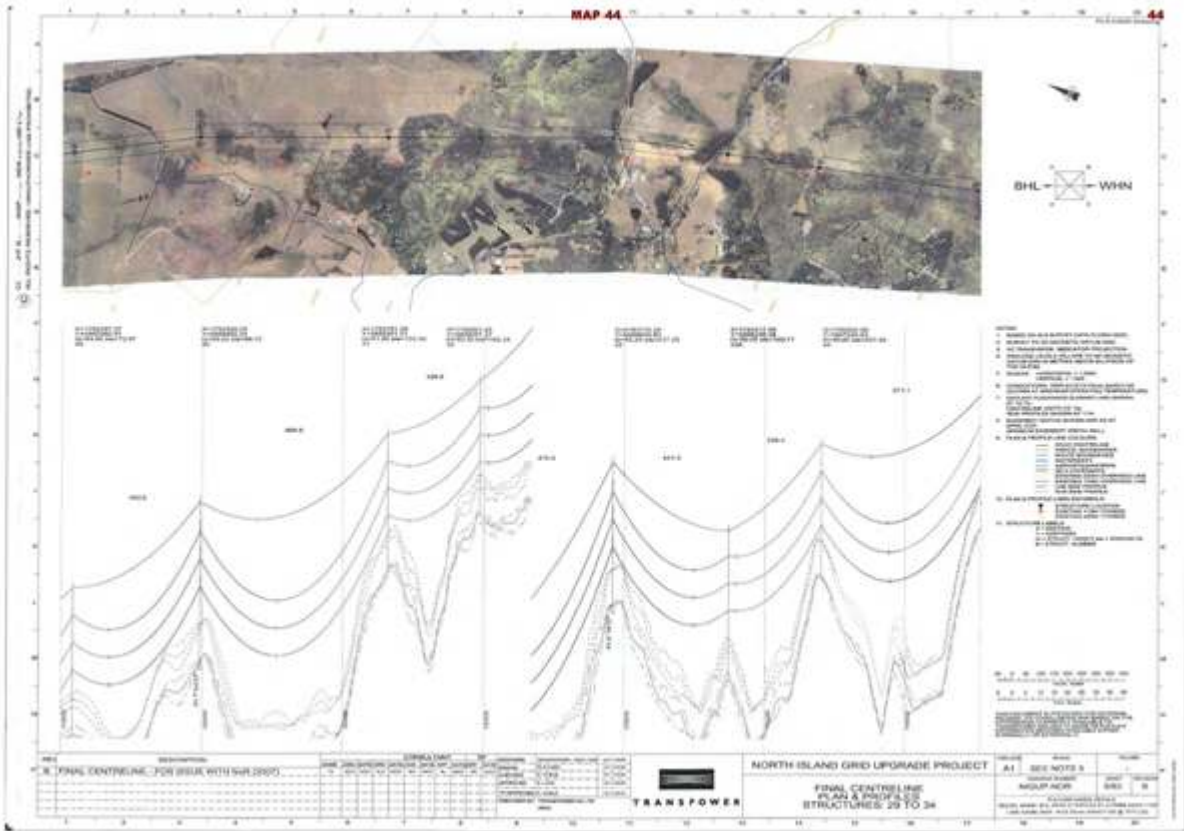


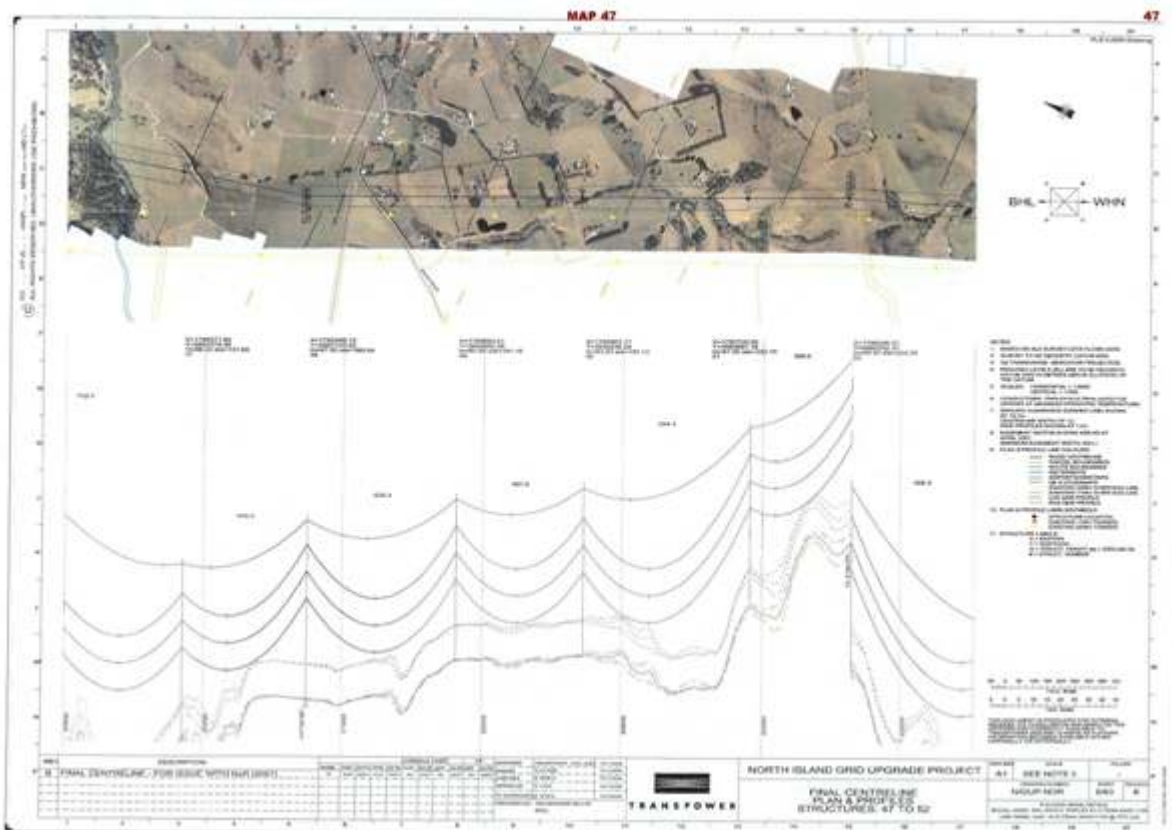
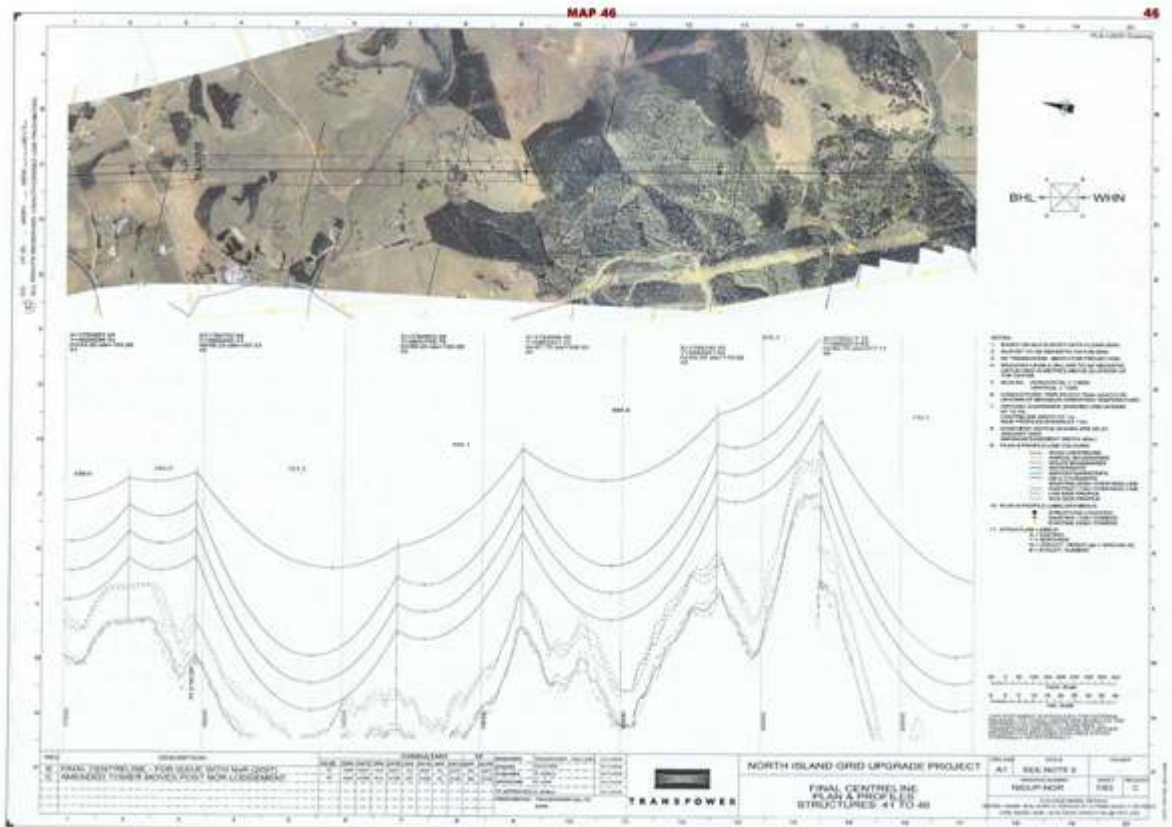
SET 9

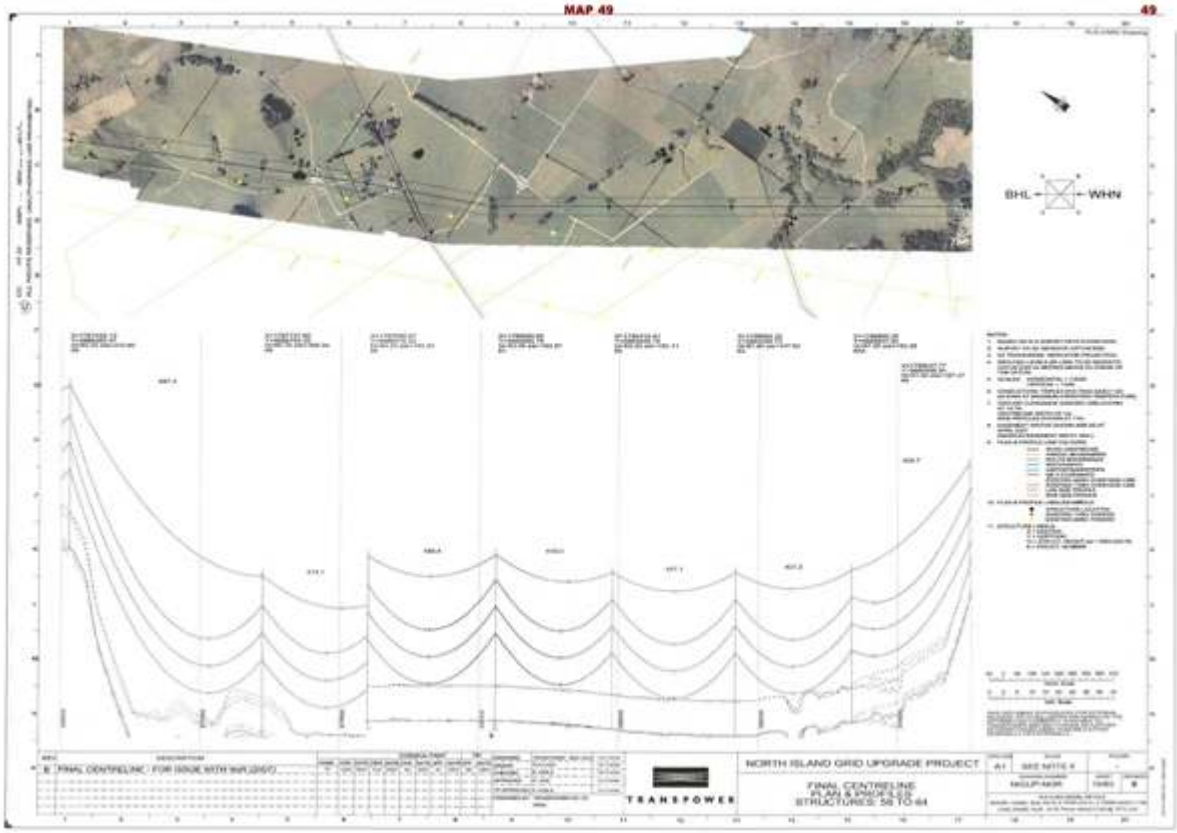
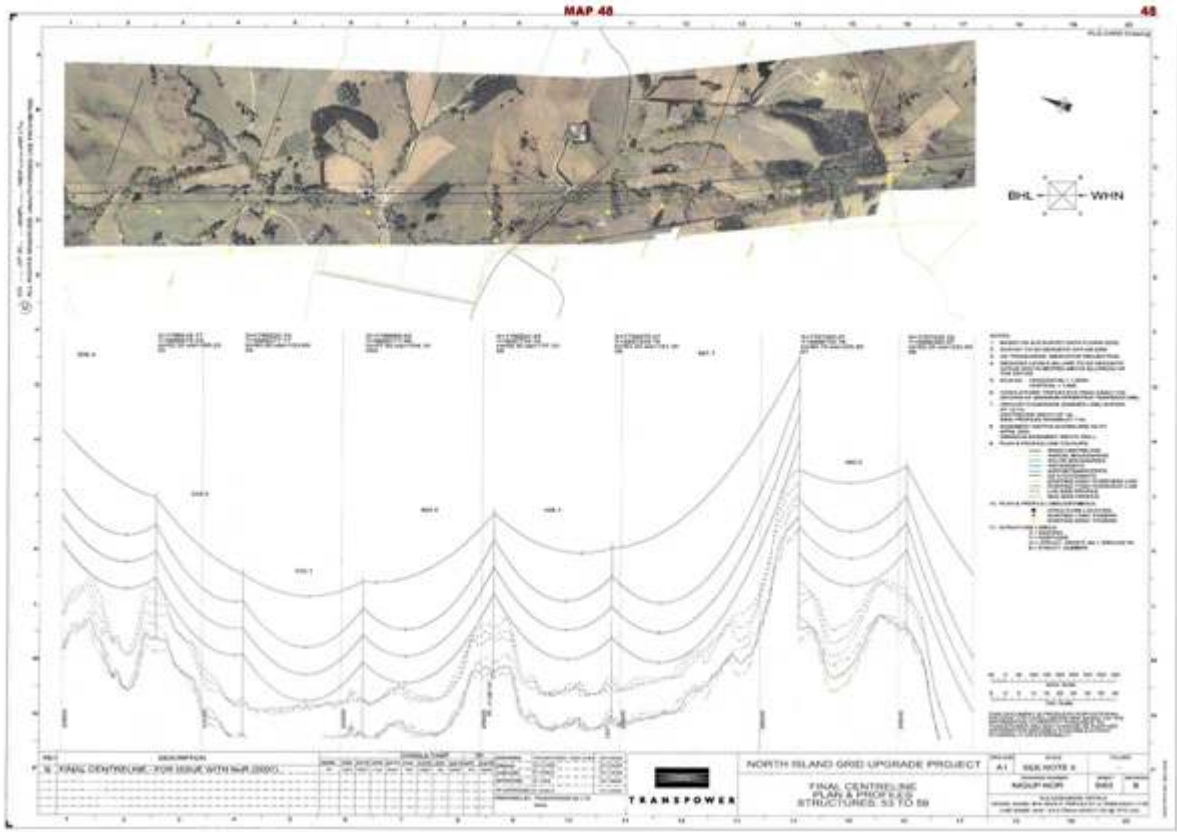
MAP	PLAN DESCRIPTION	PAGE
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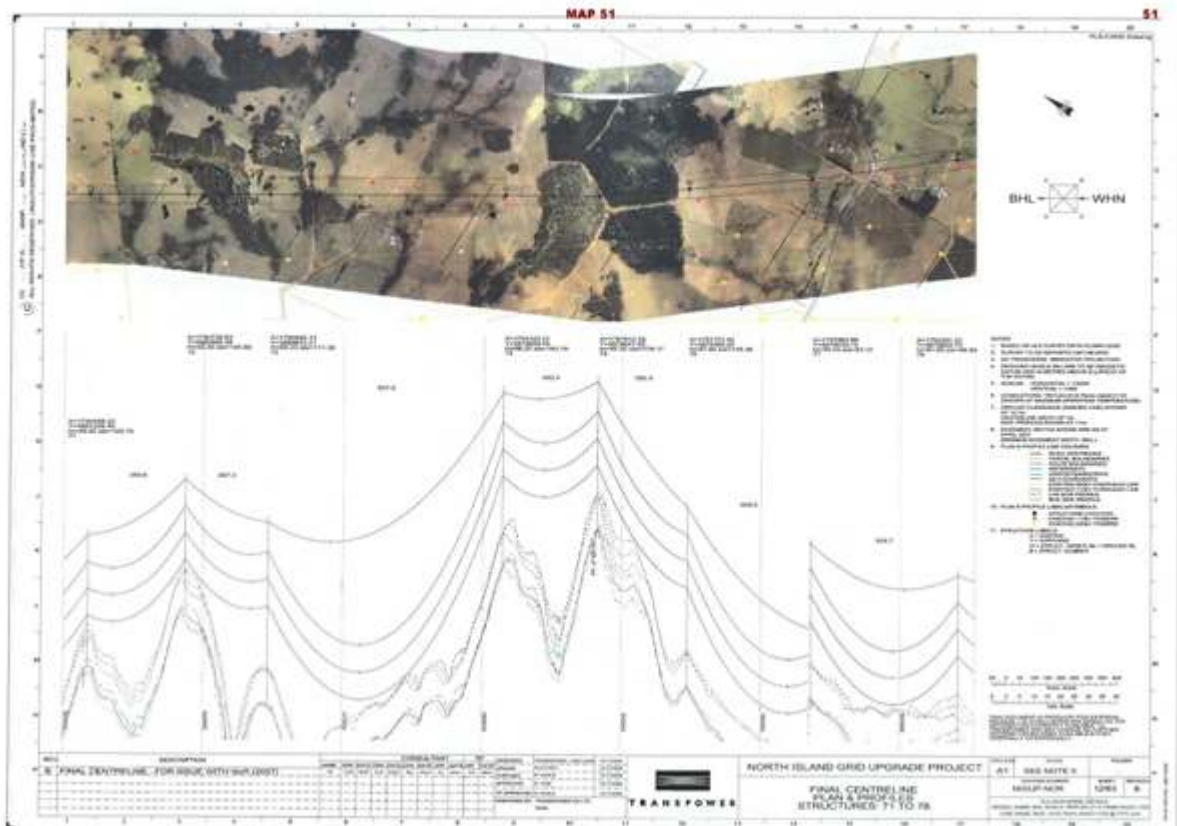
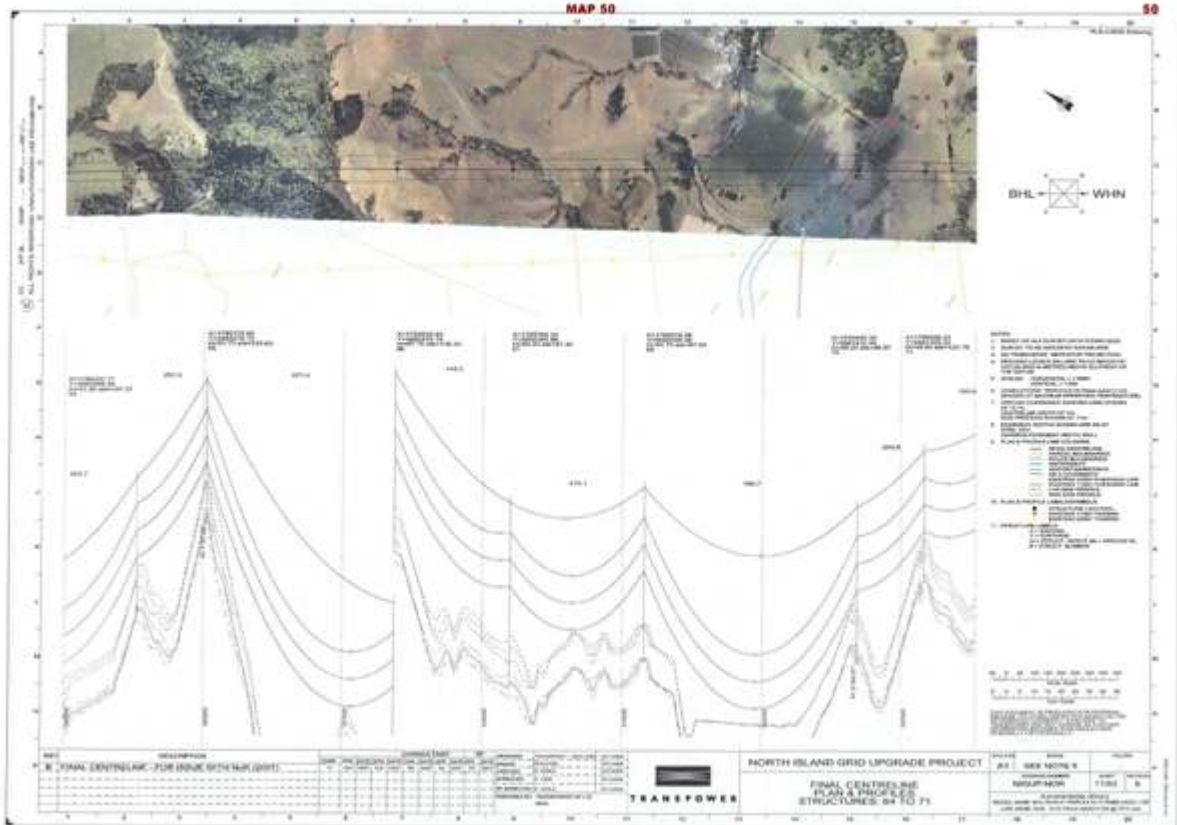
OVERHEAD LINE SECTION: Route Sections 4-6, Towers 33A-81

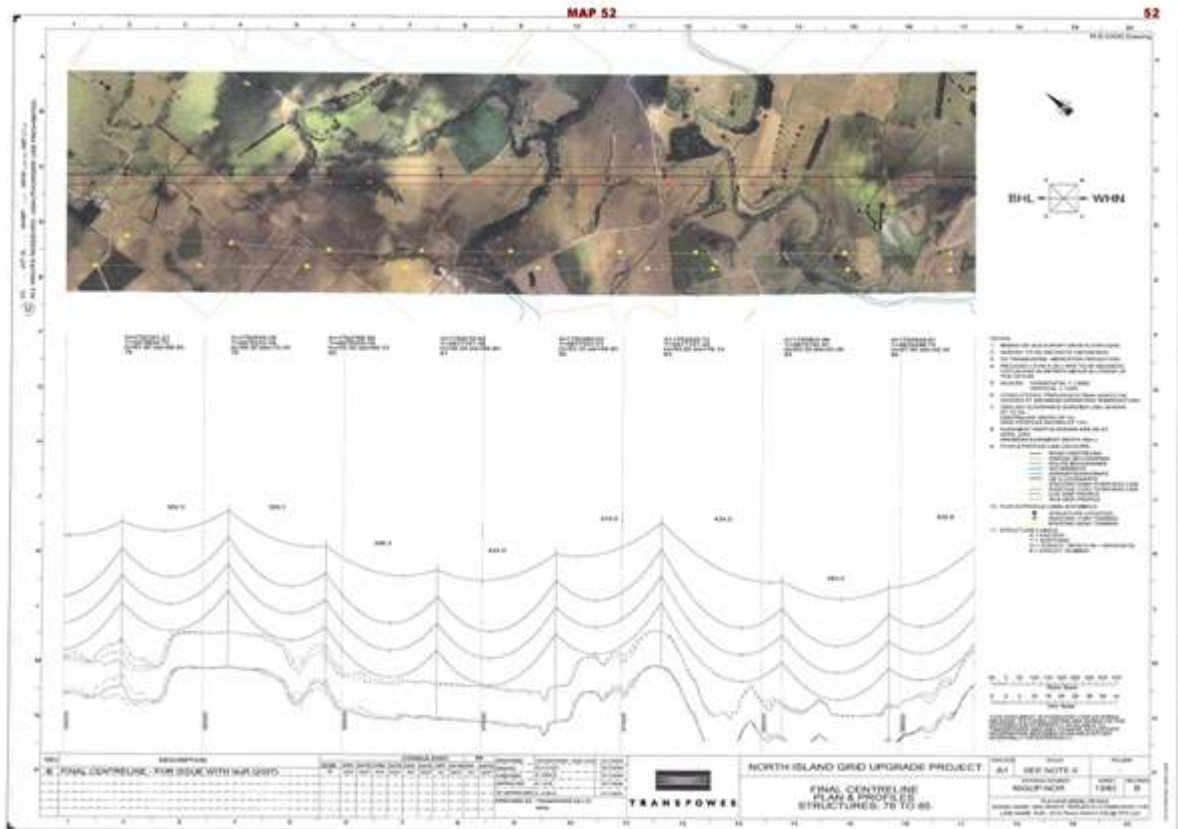
Map 44	Final Centreline Plan & Profiles, Structures: 29 to 34, NIGUP-NOR, sheet 5/63, revision B	44
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Schedule of Legal Descriptions

Parcel ID/Appellation	
PARCEL ID	FULL APPELLATION
5143646	Lot 2 DP 153991
5212061	Road
5228134	Road
5143439	Pt Lot 1 Deeds Plan 218
5098134	Lot 4 DP 127133
5215293	Road
4692558	Lot 1 DP 204853
4914430	Lot 2 DP 135571
5214773	Road
4918171	Lot 1 DP 127091

4928333	Pt Lot 1 DP 11430
5192382	Pt Allot 129 Parish Of Hunua
4961220	Lot 1 DP 62602
5215321	Road
6653637	Lot 1 DP 209513
5061621	Lot 8 DP 163302
5193205	Pt Allot 96 Parish Of Opaheke
4741701	Pt Allot 138 Parish Of Otau
4827852	Pt Allot 145 Parish Of Hunua
4785175	Pt Allot 203 Parish Of Opaheke
4912412	Pt Allot 92 Parish Of Hunua
5056266	Lot 3 DP 169254
6951990	Lot 2 DP 383851
5235233	Road
7356344	Lot 2 DP 447178
4744364	Pt Lot 1 DP 73462
7587884	Lot 1 DP 479367
7587886	Lot 3 DP 479367
7050667	Lot 2 DP 391823
5018258	Allot 147 Parish Of Hunua
4938134	Lot 1 DP 103034
4821911	Pt Allot 52 Parish Of Hunua
4712216	Lot 2 DP 127133
4712217	Lot 5 DP 127133
4739837	Pt Lot 2 DP 10040
4759028	Lot 3 DP 140864
5207236	Road
5208904	Road
4760624	Lot 9 DP 138548
5213027	Road

5265327	Hydro
7488209	Lot 2 DP 468301
7408071	Sec 2 SO 455870
5047815	Lot 2 DP 140864
7632064	Lot 3 DP 483655
7345646	Lot 2 DP 444182
4801232	Lot 1 DP 135571
4803110	Lot 5 DP 135571
4814252	Lot 2 DP 153296
4814253	Lot 2 DP 203599
4789484	Lot 3 DP 203599
4805783	Pt Lot 2 DP 77813
5185681	Lot 7 DP 120523
4859395	Lot 6 DP 120523
6666211	Lot 2 DP 328163
4755097	Lot 8 DP 7824
5200628	Pt Allot 24 Parish Of Wairoa
5128535	Pt Lot 1 DP 14602
4744541	Lot 1 DP 127133
6613340	Lot 4 DP 314889
5004212	Lot 9 DP 7824
5217037	Road
5195893	Lot 1 DP 146072
5102734	Lot 2 DP 209513
5077504	Lot 3 DP 11430
4726690	Lot 6 DP 135571
5239649	Road
6870065	Lot 1 DP 370403
4870472	Pt Allot 2 Parish Of Wairoa
5225789	Road

5232658	Road
5201869	Lot 3 DP 142381
6652024	Lot 2 DP 325254
7559418	Lot 156 DP 478191
4938154	Lot 1 DP 111461
5020073	Lot 2 DP 141886
7345645	Lot 1 DP 444182
4833386	Lot 1 DP 154672
4746598	Sec 1 SO 64526
5191154	Lot 1 DP 176537
4946679	Pt Allot 126 Parish Of Opaheke
5227558	Road
7528598	Lot 1 DP 473936
4938162	Lot 3 DP 146072
5212735	Road
6809304	Lot 1 DP 142829
4832855	Lot 5 DP 80796
5203387	Lot 1 DP 142381
5151463	Lot 2 DP 90235
6974957	Lot 2 DP 390056
4969236	Lot 3 DP 127133
4769751	Lot 6 DP 127134
5239030	Road
5090227	Allot 114 Parish Of Otau
5265199	Hydro
7628982	Lot 2 DP 487059
7192990	Lot 1 DP 421355
5266523	Hydro
5181355	Lot 2 DP 120924
4909332	Lot 1 DP 98276

5110641	Pt Allot 87 Parish Of Hunua
5039654	Pt Allot 88 Parish Of Hunua
6974958	Lot 3 DP 390056
7305580	Lot 2 DP 430006
5216214	Road
7257632	Lot 1 DP 429956
4771739	Lot 10 DP 7824
4799544	Lot 4 DP 169254
4811801	Lot 2 DP 182315
5236508	Road
4919989	Allot 135 Parish Of Otau
5217346	Road
5186153	Lot 2 DP 127091
7321380	Lot 2 DP 441619
4794052	Pt Allot 234 Parish Of Hunua
4764166	Lot 1 DP 120924
5156794	Lot 11 DP 7824
7587885	Lot 2 DP 479367
7587887	Lot 4 DP 479367
5003195	Pt Allot 21 Parish Of Wairoa
4798141	Lot 1 DP 157302
5213437	Road
4791902	Lot 3 DP 120523
5064832	Lot 3 DP 149875
7632071	Lot 10 DP 483655
7383679	Lot 2 DP 442622
7383678	Lot 1 DP 442622
7628983	Lot 1 DP 487059
7559419	Lot 155 DP 478191
4747274	Lot 2 DP 192322

5155131	Lot 2 DP 98276
5071381	Lot 1 DP 203599
7114265	Lot 2 DP 409706
6870066	Lot 2 DP 370403
7448800	Lot 1 DP 438734
7585024	Lot 17 DP 480857
7625540	Lot 52 DP 487212
5217146	Road
4811766	Lot 1 DP 84999
5198088	Lot 8 DP 200484
5068800	Lot 4 DP 105171
5068796	Allot 50D Parish Of Hunua
4760999	Lot 1 DP 153991

8513 Otahuhu Electricity Substation

Designation Number	8513
Requiring Authority	Transpower New Zealand Ltd
Location	1 Gridco Road and 2 Helabys Road, Otara
Rollover Designation	Yes
Legacy Reference	Manukau 297, Auckland Council District Plan (Manukau Section) 2002
Lapse Date	Given effect to (i.e. no lapse date)

Description

Electricity transmission - the operation, maintenance and upgrade of the existing Otahuhu Substation, the construction of a new 220kV substation, installation of 220kV underground cable circuits, and associated works as part of the upper North Island Grid Upgrade Project, works associated with other upgrade projects, and ancillary activities.

The nature of the works is described more particularly in Part IV (excluding section 12 in relation to suggested conditions), and also in Parts II and X of the Notices of Requirement Documentation (dated April 2007).

Conditions

Cultural / Spiritual

1. 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, the New Zealand Historic Places Trust, the 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 recover archaeological features discovered before work may recommence on the exposed site.

Electric and Magnetic Fields (EMF)

2. Any new equipment shall be designed and operated to limit the electric and magnetic field exposures at or beyond the secure boundary of the substation site to 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). That is the public exposure reference levels of $k\ m$ for electric fields and $200\ \mu T$ for magnetic flux density at one metre above ground level under maximum normal operating conditions (ie, when there are no faults in the transmission system).

Radio Frequency Interference

3. All works shall be designed to comply with NZS 6869:2004 Limits and Measurement Methods of Electromagnetic Noise from High-Voltage a.c. Power Systems, 0.15 to 1000 MHz.

Earth Potential Rise

4. Substation earth grids shall be designed, built, and tested to ensure electrical safety at or beyond

the designation boundary in accordance with Transpower Standard TP.DS.52.01, Issue 2, January 2005.

Light Spill

5. Any new exterior lighting shall be designed to comply with:

- a. AS/NZS 1158 Lighting for Roads and Public Spaces 2005 Part 3.1;
- b. Transpower's guidelines and information for switchyard and grounds lighting TP.DS 40.03, and
- c. AS 4282 1997, Control of Obtrusive Effects of Outdoor Lighting

Operational Noise

6. Any new works or equipment (such as transformers, fans and circuit breakers) required as part of the Upper North Island Grid Upgrade Project shall be designed and operated to ensure that the following noise limits shall not be exceeded:

a. Works or Within the boundary of any Business Zone site or any Open Space Zone outside of the designation:

All times 55 dBA L₁₀; and

b. At or within the boundary of any residentially zoned site outside of the designated area:

i. All days 7 am to 10 pm 50 dBA L₁₀;

ii. All nights 10 pm to 7 am 40 dBA L₁₀; and

iii. All nights 10 pm to 7 am 70 dBA L_{max}

7. Sound levels shall be assessed in accordance with NZS 6801:2008 Acoustics - Measurement of environmental sound and NZS6802:2008 Acoustics - Assessment of Environmental Sound.

8. A design report shall be provided to the satisfaction of the council prior to the installation of any new noise generating substation equipment that demonstrates compliance with these limits.

9. Within one month of installation, the new equipment shall be assessed at source for its sound power level using EN60076-10:2001-05 Power Transformers Part 10 Determination of Sound Levels. Sound levels shall then be predicted at the designation boundary. Monitoring and prediction shall be undertaken by a suitably qualified and experienced person within one month of the commissioning of any new equipment. The results of the noise monitoring shall be made available to the Council upon request.

10. Transpower shall review the noise levels and report to council at the time of each designation roll-over on progress that has been made to reduce noise levels progressively as a result of any necessary replacement of transformers.

Advice note:

1. The existing noise levels at the Otahuhu Substation (except for construction and maintenance works) have been predicted as 52 dBA L₁₀ at Nos 8, 12 and 16 Waipapa Crescent. These sound levels contain special audible characteristics and an assessment using NZS6802:2008 would cause any performance standard to be reduced by 5 dB.

Vibration

11. Vibration from all construction activities shall not exceed the limits of, and shall be measured and assessed in accordance with, German Standard DIN 4150-3 (1999-02) Structural Vibration – Effects of Vibration on Structures.

Hazardous Substances

12. Any new part of the facility containing oil shall be designed to comply with Transpower's Oil Spill

Management Policy (TPG:GS.54.01).

Construction Management Plan (CMP)

13. At least 30 days prior to commencement of any construction activity on the site, Transpower shall submit a construction management plan to the Council's Consents Officer. The Council's Consents Officer shall respond within 20 working days indicating whether approval is given or refused.

Approval shall not be unreasonably withheld. The construction management plan shall detail:

- a. The proposed earthworks methodology;
- b. Storage and reuse of topsoil;
- c. On-site and off-site disposal of soil;
- d. Silt and dust control;
- e. Traffic management for delivery of substation equipment and materials (excluding transformers) and general construction activities;
- f. Temporary equipment storage;
- g. Site security and lighting;
- h. Procedures for temporary storage and handling of hazardous substances, including insulation oil;
- i. Compliance with designation conditions, including (where applicable) for:
 - i. Noise;
 - ii. Hours of operation;
 - iii. Accidental discovery protocol;
 - iv. Protection of known archaeological sites;
- j. Community information and liaison (including local marae); and
- k. Procedure for managing the accidental discovery of archaeological sites or sites of significance to āori, including contractor training prior to commencement of work.

Construction and Maintenance Noise

14. All construction work shall be designed, managed and conducted to ensure that construction and maintenance noise from the site does not exceed the limits in NZS6803:1999 Acoustics–Construction Noise.

15. Prior to any significant construction work taking place, including any associated significant earthworks, a noise management plan shall be prepared, with the assistance of a suitably qualified and experienced person, that sets out the management procedures in terms of section 8 and Annex E of NZS6803:1999 and the works shall be undertaken in accordance with that noise management plan.

16. The noise management plan required by condition 15 shall be submitted to Council's Consents Manager for approval, at least 20 working days prior to the works commencing. The Council's Consents Manager shall respond within 20 working days indicating whether approval is given or refused. Approval shall not be unreasonably withheld.

Advice note:

Any new works or equipment means those works which were not existing prior to the notification of the Proposed Auckland Unitary Plan.

Attachments

Schedule of Legal Descriptions

Parcel ID	
Lot 1 DP 204791	Sec 7 SO 406586

8514 Pakuranga Electricity Substation

Designation Number	8514
Requiring Authority	Transpower New Zealand Ltd
Location	109 Golfland Drive, Pakuranga
Rollover Designation	Yes
Legacy Reference	Designation 298, Auckland Council District Plan (Manukau Section) 2002
Lapse Date	Given effect to (i.e. no lapse date)

Purpose

Electricity transmission - the ongoing use, maintenance and operation of the Pakuranga Electricity Substation, the development of the substation site as part of the upper North Island Grid Upgrade Project and associated works, and works associated with other upgrade projects, and ancillary activities.

The nature of the works is described more particularly in Part III (excluding section 12 in relation to suggested conditions), and also in Parts II and X of the Notices of Requirement Documentation (dated April 2007).

Conditions

Cultural / Spiritual

1. 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, the New Zealand Historic Places Trust, the 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 recover archaeological features discovered before work may recommence on the exposed site.

Landscaping

2. A visual mitigation and ecological planting plan shall be prepared for the site and submitted at least two months prior to construction of works associated with the Upper North Island Grid Upgrade Project to Council's Manager-Resource Consents and Compliance, for approval/certification. The Manager-Resource Consents and Compliance shall respond within 20 working days indicating whether approval is given or refused. Approval shall not be unreasonably withheld. The plan shall be in general accordance with the landscape mitigation concept plan being Map 1 of Appendix V and shall consist of:
 - a. Planting around the south and west sides of the substation site;
 - b. Planting native plants indigenous to the locality on the terrace on the south and west sides of the substation site adjacent to the substation platform, to connect with and extend restoration of the headwaters of the Pakuranga Creek, and including species such as kahikatea, tōtara, kānuka and cabbage trees, and such other species as are common to the locality;
 - c. A description of the name (including botanical), numbers, location, spacing and size of the plant species to be used in mitigation and ecological planting;

d. Provided that suitable sources are available, all indigenous plants shall be propagated from a local, naturally occurring, source.

3. Once approved, the visual mitigation and ecological planting plan required under condition 3 may be altered or updated at any time with the approval of the Manager–Resource Consents and Compliance. The Manager shall not unreasonably withhold his or her approval, in particular for any changes to the plan required as a result of expansion of facilities within the substation site, irrespective of whether the extent of landscaping is reduced as a result of that expansion.

4. Transpower shall implement the visual mitigation and ecological planting plan within the first planting season following completion of bulk earthworks on the site; and shall thereafter maintain the planting to the satisfaction of the Council’s Manager–Resource Consents and Compliance.

Electric and Magnetic Fields (EMF)

5. Any new equipment shall be designed and operated to limit the electric and magnetic field exposures at or beyond the secure boundary of the substation site to 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). That is the public exposure 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 (ie, when there are no faults in the transmission system).

Radio Frequency Interference

6. All works shall be designed to comply with NZS 6869:2004 Limits and Measurement Methods of Electromagnetic Noise from High-Voltage a.c. Power Systems, 0.15 to 1000 MHz.

Earth Potential Rise

7. Substation earth grids shall be designed, built, and tested to ensure electrical safety at or beyond the designation boundary in accordance with Transpower Standard TP.DS.52.01, Issue 2, January 2005.

Light Spill

8. Any new exterior lighting shall be designed to comply with:

- a. AS/NZS 1158 Lighting for Roads and Public Spaces 2005 Part 3.1;
- b. Transpower’s guidelines and information for switchyard and grounds lighting TP.DS 40.03 and
- c. AS 4282 1997, Control of Obtrusive Effects of Outdoor Lighting.

Operational Noise

9. All activities within the designation (except for construction and maintenance) shall be designed and operated to ensure that the following noise limits shall not be exceeded at or within the boundary of any residentially zoned site:

- a. All days 7.00 am to 10 pm 45 dBA L10;
- b. All nights 10 pm to 7 am 35 dBA L10; and
- c. All nights 10 pm to 7 am 70 dBA Lmax.

10. Sound levels shall be measured and assessed in accordance with NZS 6801:2008 Acoustics - Measurement of environmental sound and NZS6802:2008 Acoustics - Assessment of Environmental Sound.

11. Sound monitoring shall be undertaken by a suitably qualified and experienced person within one month of the commissioning of any new transformer. The results of the noise monitoring shall be

made available to the Council upon request.

Hazardous Substances

12. Any new part of the facility containing oil shall be designed to comply with Transpower's Oil Spill Management Policy (TPG:GS.54.01).

Construction and Maintenance Noise

13. All construction work shall be designed, managed and conducted to ensure that construction and maintenance noise from the site does not exceed the limits in NZS6803:1999 Acoustics—Construction Noise.

14. Prior to any significant construction work taking place, including any associated significant earthworks, a noise management plan shall be prepared, with the assistance of a suitably qualified and experienced person, that sets out the management procedures in terms of section 8 and Annex E of NZS6803:1999; and the works shall be undertaken in accordance with that noise management plan.

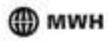
15. The noise management plan required by condition 20 shall be submitted to Council's Consents Manager for approval, at least 20 working days prior to the works commencing. The Council's Consents Manager shall respond within 20 working days indicating whether approval is given or refused. Approval shall not be unreasonably withheld.

Advice Note

Any new works or equipment means those works which were not existing prior to the notification of the Auckland Unitary Plan.

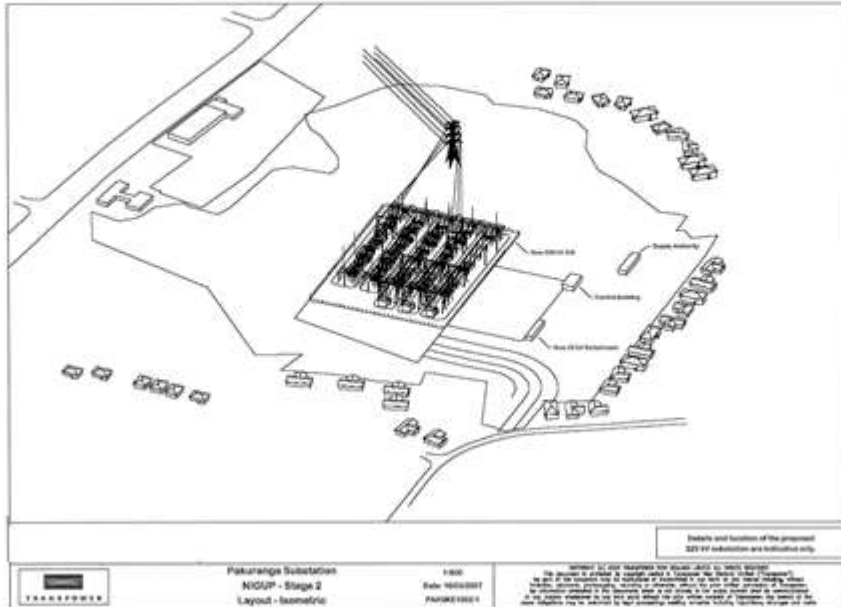
Attachments

Pakuranga Substation NIGUP Stage 2 Layout Isometric



Transpower NZ Ltd
North Island Grid Upgrade Project
Pakuranga Substation

Figure 4: Likely Future Development at the Pakuranga Substation



Pakuranga Substation NIGUP - Stage 2 Layout - Isometric		Scale: 1:100 PAURANGI 10001	Details and location of the proposed 220 kV substation are indicated only.
TRANSPOWER			

Date: Feb 2006
Page Number: 2006

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Map 1 of Appendix v of the Board of Inquiry Decision

INDEX OF MAPS AND PLANS REFERRED TO IN PROPOSED DESIGNATION CONDITIONS		SET 1
MAP	PLAN DESCRIPTION	PAGE
PAKURANGA SUBSTATION CONDITIONS		
Map 1	Landscaping mitigation coverage plan (Map Book 6, Section 2)	1



Schedule of Legal Descriptions

Parcel ID	
Pt Lot 1 DP 143331	Lot 2 DP 167430
Lot 146 DP 168165	Lot 77 DP 168324
Lot 81 DP 168324	Lot 82 DP 168324

8515 Brownhill Road Electricity Substation

Designation Number	8515
Requiring Authority	Transpower New Zealand Ltd
Location	16 Umbria Lane (near Brownhill Road), Whitford
Rollover Designation	Yes
Legacy Reference	Designation 299, Auckland Council District Plan (Manukau Section) 2002
Lapse Date	Given effect to (i.e. no lapse date)

Purpose

Electricity transmission- the construction, operation and maintenance of a transition station to connect the underground cable and overhead lines section of the upper North Island Grid Upgrade Project, including Tower 5 of the overhead line and additional support structures, and parts of the underground cables connecting with Pakuranga and Otahuhu Substations. Other works included in the designation on a staged basis are a 220 kV Gas-Insulated Switchgear (GIS) switching station and a 400kV GIS substation and associated works as part of the upper North Island Grid Upgrade Project, and ancillary activities.

The nature of the works is described more particularly in Part V (excluding section 13 in relation to suggested conditions), and also in Parts II and X, of the Notices of Requirement Documentation (dated April 2007).

Conditions

Cultural / Spiritual

1. 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, the New Zealand Historic Places Trust, the 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 recover archaeological features discovered before work may recommence on the exposed site.

Electric and Magnetic Fields (EMF)

2. Any equipment shall be designed and operated to limit the electric and magnetic field exposures at or beyond the secure boundary to 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;) (ICNIRP Guidelines). That is the public exposure 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 (ie, when there are no faults in the transmission system).

Radio Frequency Interference

3. All works shall be designed to comply with NZS 6869:2004 Limits and Measurement Methods of Electromagnetic Noise from High-Voltage a.c. Power Systems, 0.15 to 1000 MHz.

Earth Potential Rise

4. Substation earth grids shall be designed, built, and tested to ensure electrical safety at or beyond the designation boundary in accordance with Transpower Standard TP.DS.52.01, Issue 2, January 2005.

Light Spill

5. Any exterior lighting shall be designed to comply with Transpower's guidelines and information for switchyard and grounds lighting TP.DS 40.03.

Operational noise

6. All activities within the site (except for construction and maintenance) shall be designed and operated to ensure that the following noise limits shall not be exceeded beyond the boundary of the designation:

- a. All days 7 am to 10 pm 55 dBA L_{10} ;
- b. All nights 10 pm to 7 am 45 dBA L_{10} ; and
- c. All nights 10 pm to 7 am 75 dBA L_{max} ;

Except that any standby generators may operate at a noise level not exceeding 55 dBA L_{10} at all times, measured within the notional boundary of any dwelling. Reliance on this limit should not exceed more than one successive night time period (10 pm to 7 am). Standby generators shall only be operated for maintenance purposes between the hours of 7 am to 10 pm.

7. All activities within the site (except for construction and maintenance) shall be designed and operated to ensure that the following noise limits shall not be exceeded within the notional boundary of any dwelling existing at the date of lodgement of the Notice of Requirement:

- a. All days 7 am to 10 pm 45 dBA L_{10} ;
- b. All nights 10 pm to 7 am 35 dBA L_{10} ; and
- c. All nights 10 pm to 7 am 65 dBA L_{max} .

8. Sound levels shall be measured and assessed in accordance with NZS 6801:2008 Acoustics - Measurement of environmental sound and NZS6802:2008 Acoustics - Assessment of Environmental Sound.

9. Sound monitoring shall be undertaken by a suitably qualified and experienced person within one month of the commissioning of any new transformer. The results of the noise monitoring shall be made available to the council upon request.

Vibration

10. Vibration from all construction activities shall not exceed the limits of, and shall be measured and assessed in accordance with, German Standard DIN 4150-3 (1999-02) Structural Vibration – Effects of Vibration on Structures.

Hazardous Substances

11. Any new part of the facility containing oil shall be designed to comply with Transpower's Oil Spill Management Policy (TPG:GS.54.01).

Visual Mitigation and Revegetation Plan

12. A visual mitigation and revegetation planting plan shall be prepared for the site and submitted at least two months prior to the commencement of initial construction on-site to Council's Manager–

Resource Consents and Compliance for approval/certification. The Manager, Resource Consents and Compliance shall respond within 20 working days indicating whether approval is given or refused. Such approval shall not be unreasonably withheld. The plan shall be in general accordance with the landscape mitigation concept plan (Map 3 of Appendix V) and shall consist of:

- a. Excess cut and topsoil from the construction site shall be contoured to increase the height of the spur east of the substation platform and improve the growing conditions for screen planting proposed for this spur;
- b. Fast-growing trees typical of rural landscapes shall be planted on the spur, with the intention of reducing visibility of the substation site from the east;
- c. Native revegetation planting shall be carried out on lower slopes of the spur. This planting shall be similar in type to that undertaken in the rural residential subdivision on the opposite side of Brownhill Road. It shall be planted to the property boundary adjacent to the Turanga Creek. The intention of this planting is to provide longer-term screening and ecological and amenity benefit;
- d. Native revegetation planting will be carried out on the spur north-west of the substation platform to provide partial screening from the Regis Park area. Species shall include kānuka, tōtara and rewarewa;
- e. Native revegetation planting shall be carried out in the valley south-west of the substation site. The intention of this planting is to provide ecological and amenity benefits;
- f. A description of the name (including botanical), numbers, location, spacing and size of the plant species to be used in mitigation and ecological planting; and
- g. As far as practicable, all indigenous plants shall be propagated from a local, naturally occurring source.

13. Once approved, the visual mitigation and revegetation planting plan required under condition 15 may be altered or updated at any time with the approval of the Manager–Resource Consents and Compliance. The Manager shall not unreasonably withhold his or her approval, and in particular for any changes to the plan required as a result of expansion of facilities within the substation site, irrespective of whether the extent of landscaping is reduced as a result of that expansion.

14. Transpower shall implement the visual mitigation and revegetation planting plan within the first planting season following completion of bulk earthworks and shall thereafter maintain the planting to the satisfaction of Council’s Manager–Resource Consents and Compliance.

Construction Management Plan (CMP)

15. At least 30 days prior to commencement of any construction activity on the site, Transpower shall submit a construction management plan to the Council’s Consents Officer. The Council’s Consents Officer shall respond within 20 working days indicating whether approval is given or refused.

Approval shall not be unreasonably withheld. The construction management plan shall detail:

- a. The proposed earthworks methodology;
- b. Storage and reuse of topsoil;
- c. On-site and off-site disposal of soil;
- d. Silt and dust control;
- e. Traffic management for delivery of substation equipment and materials (excluding transformers) and general construction activities;
- f. Temporary equipment storage;
- g. Site security and lighting;
- h. Procedures for temporary storage and handling of hazardous substances, including insulation oil;
- i. Compliance with designation conditions, including (where applicable) for:
 - i. Noise;
 - ii. Hours of operation;

- iii. Accidental discovery protocol;
- iv. Protection of known archaeological sites;
- j. Community information and liaison (including local marae); and
- k. Procedure for managing the accidental discovery of archaeological sites or sites of significance to āori, including contractor training prior to commencement of work.

Construction and Maintenance Noise

16. All construction work shall be designed, managed and conducted to ensure that construction and maintenance noise from the site does not exceed the limits in NZS6803:1999 Acoustics–Construction Noise.

17. Prior to any significant construction work taking place, including any associated significant earthworks, a noise management plan shall be prepared, with the assistance of a suitably qualified and experienced person, that sets out the management procedures in terms of section 8 and Annex E of NZS6803:1999; and the works shall be undertaken in accordance with that noise management plan.

18. The noise management plan required by condition 17 shall be submitted to Council’s Consents Officer for approval, at least 20 working days prior to the works commencing. The Council’s Consents Officer shall respond within 20 working days indicating whether approval is given or refused. Approval shall not be unreasonably withheld.

Traffic Management Plan (TMP)

19. A traffic management plan (TMP) shall be prepared in relation to the transformer transportation from the port of arrival to the substation site, after consultation with:

- a. The relevant road-controlling authorities;
- b. New Zealand Transport Agency (NZTA);
- c. New Zealand Police; and
- d. key stakeholders identified by the organisations listed above in (a)–(c).

20. The TMP shall be submitted to the Council and NZTA for approval at least one month prior to transformer transportation to the substation site. The Council and NZTA shall respond within 20 working days indicating whether approval is given or refused (such approval shall not be unreasonably withheld). The TMP shall contain a method statement specifying the route and providing full details of:

- a. Deviations to avoid low over-bridges;
- b. Temporary bridge strengthening (where required);
- c. Road closures or other temporary traffic control measures required; and
- d. Contingency plans, should the transporter have mechanical problems.

Brownhill Road Upgrade

21. After installation of the cables, Transpower shall after consultation with council upgrade the surface of Brownhill Road to the entrance to the substation site to meet council’s minimum design standards for rural roads as defined in their Engineering Quality Standard R16–Rural Road “Minimum Standard”.

Advice note

1. Any new works or equipment means those works which were not existing prior to the notification of the Auckland Unitary Plan.

Attachments

Map 2-3 of Appendix V of the Board of Inquiry

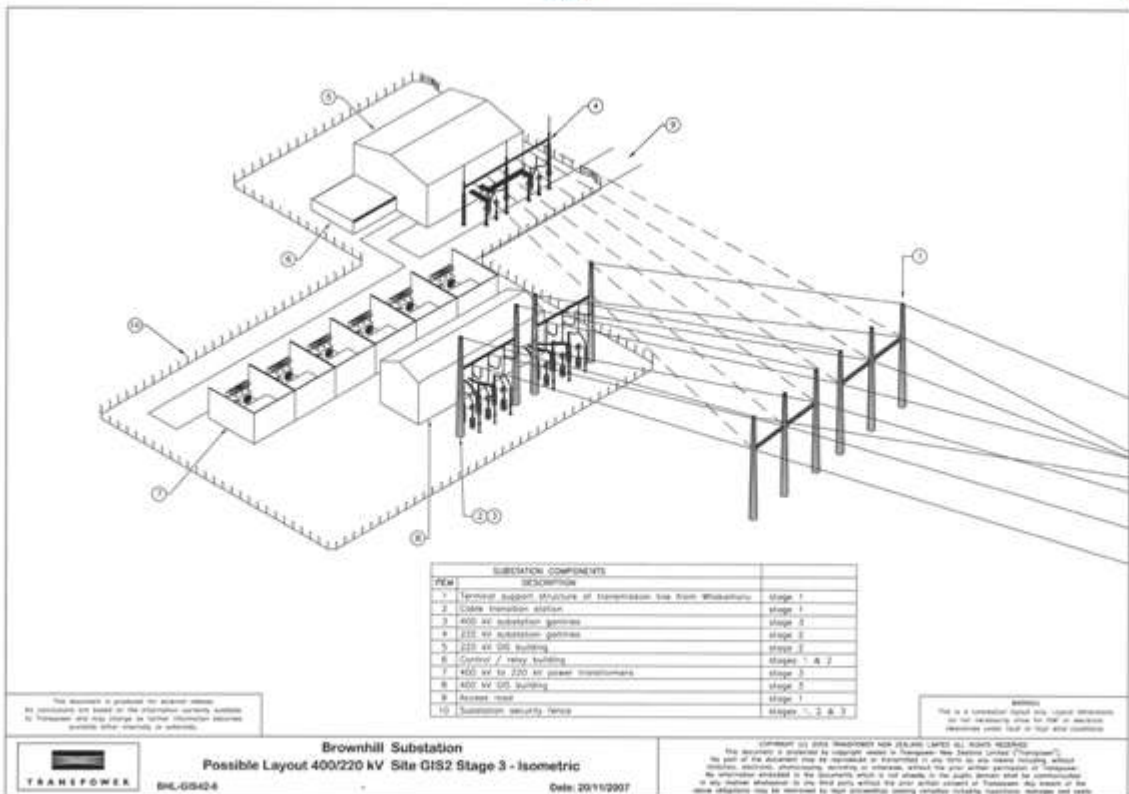
INDEX OF MAPS AND PLANS REFERRED TO IN PROPOSED DESIGNATION CONDITIONS

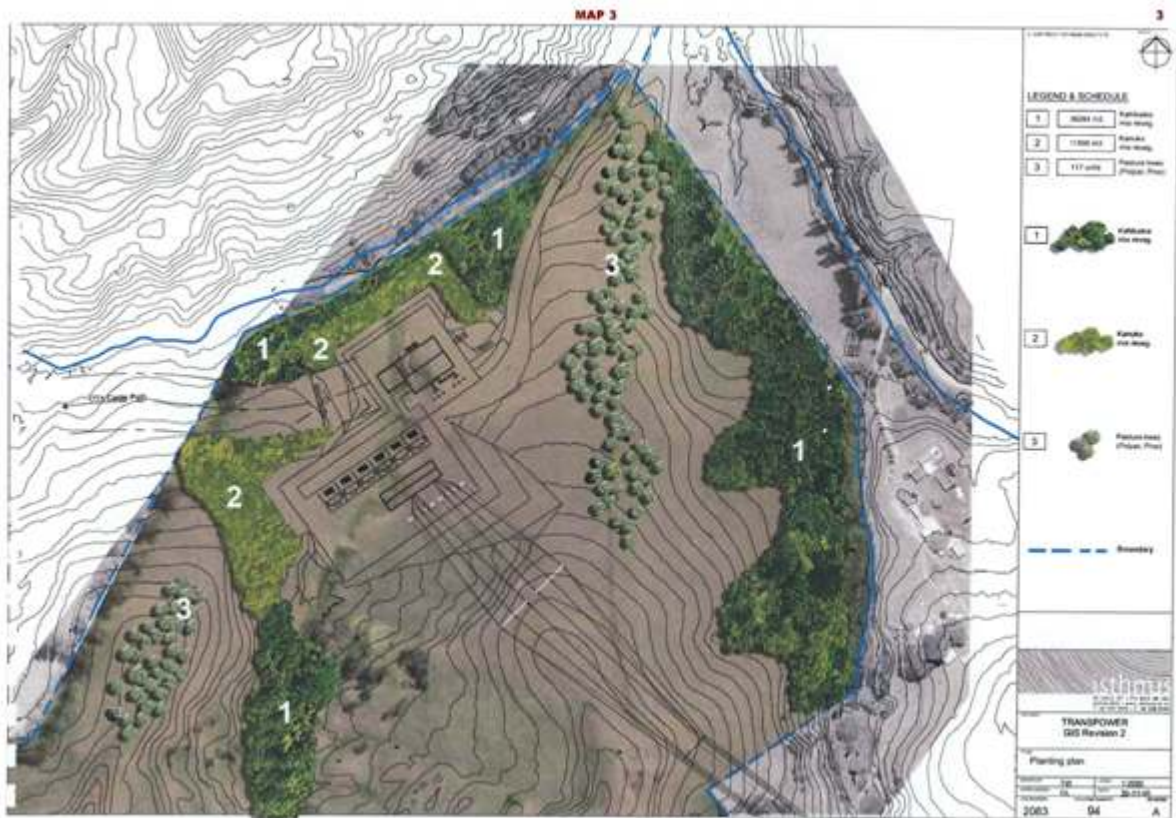
SET 2

MAP	PLAN DESCRIPTION	PAGE
BROWNHILL SUBSTATION CONDITIONS		
Map 2	Brownhill Substation, Possible Layout 400/220kV Site GIS2, Stage 3 - Isometric, Date 20/11/2007	2
Map 3	Landscape mitigation concept plan (Map Book 6, Section 3)	3

MAP 2

2





Schedule of Legal Descriptions

Parcel ID	
Lot 1 DP 209513	Lot 3 DP 325254

8516 Brownhill Road to Pakuranga Underground Electricity Transmission Cables

Designation Number	8516
Requiring Authority	Transpower New Zealand Ltd
Location	143 Brownhill Road, Whitford to 109 Golfland Drive, Howick
Rollover Designation	Yes
Legacy Reference	Designation 300, Auckland Council District Plan (Manukau Section) 2002
Lapse Date	Given effect to (i.e. no lapse date)

Purpose

Electricity transmission- the construction, operation and maintenance of a double circuit underground 220kV cable as part of the upper North Island Grid Upgrade Project, to convey electricity between the Pakuranga Substation and the substation site at Brownhill Road, and ancillary activities.

The nature of the work is described more particularly in Part VI (excluding section 12 in relation to suggested conditions), and also in Parts II and X of the Notices of Requirement Documentation (dated April 2007).

Conditions

Cultural / Spiritual

1. 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, the New Zealand Historic Places Trust, the 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 recover archaeological features discovered before work may recommence on the exposed site.

Magnetic Fields (MF)

2. Any new equipment shall be designed and operated to limit the magnetic field exposures to the International Commission on Non-Ionising Radiation Protection, Guidelines for limiting exposure to time varying electric, magnetic, fields (1Hz- 100kHz) (Health Physic 99(6):818-836; 2010) (ICNIRP Guidelines). That is the public exposure reference level of 200 μ T for magnetic flux density when measured at 1 metre above ground level directly above any cable under normal operating conditions. (ie, when there are no faults in the transmission system).

3. In order to reduce long-term public exposure to MFs no habitable buildings shall be constructed within the designation corridor for the underground cable.

Radio Frequency Interference

4. All works shall be designed to comply with NZS 6869:2004 Limits and Measurement Methods of Electromagnetic Noise from High-Voltage a.c. Power Systems, 0.15 to 1000 MHz.

Earth Potential Rise / Induced Voltages

5. Any new works or equipment shall be designed and constructed so as not to cause existing assets of other utilities to be non-compliant with AS/NZS 4853:2012 Electrical Hazard on Metallic Pipelines.

Construction and maintenance noise

6. All construction work shall be designed, managed and conducted to ensure that construction and

maintenance noise from the site does not exceed the limits in NZS6803:1999 Acoustics–Construction Noise.

7. Prior to any significant construction work taking place, a noise management plan shall be prepared with the assistance of a suitably qualified and experienced person, that sets out the management procedures in terms of section 8 and Annex E of NZS6803:1999; and the works shall be undertaken in accordance with that noise management plan (other than emergency works).

8. The noise management plan required by condition 7 shall be submitted to Council's Consents Manager for approval, at least 20 working days prior to the works commencing. The Council's Consents Manager shall respond within 20 working days indicating whether approval is given or refused. Approval shall not be unreasonably withheld.

Advice note

1. Any new works or equipment means those works which were not existing prior to the notification of the Auckland Unitary Plan.

Attachments

Schedule of Legal Descriptions

Parcel ID/Appellation	
Sec 1 SO 68292	5260679
Pt Lot 12 DP 169911	5260590
5219998	5260581
Lot 2 DP 189283	5261354
Lot 1 DP 312445 DP 316651 (Unit Titles)	5260593
Lot 182 DP 180655	5263074
Lot 182 DP 180654	5260594
5260962	5263077
Lot 3 DP 192219	5263075
5261289	6603043
5261291	Lot 1 DP 197985
5264569	Lot 29 DP 374495
5264087	Lot 471 DP 207703
5264572	Lot 472 DP 207703
6720378	Lot 2 DP 97587
5260907	Lot 6 DP 179398
5260911	Lot 2 DP 203233
5260678	Pt Lot 1 DP 64803
5260676	5252243
5260681	5237375
5260683	5215085
5260687	5247732

5261005	5222800
5233051	5252256
5251023	5226902
5236295	5257232
5260181	5227265
5236298	Allot 269 Parish of Pakuranga
5260292	5215085
5248198	5260198
5236292	5220420
5260304	5259600
5260397	5237201
Lot 1001 DP 192648	5217143
5260832	5258742
5260575	5217143
Lot 1 DP 209513	Lot 3 DP 147128
Lot 1 DP 175870	Lot 1 DP 177925

8517 Brownhill Road to Otahuhu Underground Electricity Transmission Cables

Designation Number	8517
Requiring Authority	Transpower New Zealand Ltd
Location	143 Brownhill Road, Whitford to 26-28 Kaitawa Street, Otara
Rollover Designation	Yes
Legacy Reference	Designation 301, Auckland Council District Plan (Manukau Section) 2002
Lapse Date	1 March 2025

Purpose

Electricity transmission - the construction, operation and maintenance of a double-circuit underground 220kV cable as part of the upper North Island Grid Upgrade Project, to convey electricity between the Otahuhu Substation and the substation site at Brownhill Road, and ancillary activities.

The nature of the work is described more particularly in Part VII (excluding section 12 in relation to suggested conditions), and also in Parts II and X of the Notices of Requirement Documentation (dated April 2007).

Conditions

Documents

1. The initial works to give effect to the designation of the Brownhill to Otahuhu underground cable shall be generally in accordance with Maps 24-30 of Appendix V (see attachments).

Magnetic Fields (MF)

2. Any new works or equipment shall be designed and operated to limit the magnetic field exposures to the International Commission on Non-Ionising Radiation Protection, Guidelines for limiting exposure to time varying electric, magnetic, fields (1Hz- 100kHz) (Health Physic 99(6):818-836: 2010) (ICNIRP Guidelines). That is the public exposure reference level of 200 μ T for magnetic flux density when measured at 1 metre above ground level directly above any cable under normal operating conditions. (ie, when there are no faults in the transmission system).

3. In order to reduce long-term public exposure to MFs, no habitable buildings shall be constructed within the designated corridor for the underground cable.

Radio frequency

4. All works shall be designed to comply with NZS 6869:2004 Limits and Measurement Methods of Electromagnetic Noise from High-Voltage a.c. Power Systems, 0.15 to 1000 MHz.

Earth potential rise / induced voltages

5. The works shall be designed and constructed to comply with regulations 58, 60, 69 and 87 of the Electricity Regulations 1997 as in force at the date of confirmation of the designation.

6. Any works or equipment shall be designed and constructed so as not to cause existing assets of other utilities to be non-compliant with AS/NZS 4853: 2012 – Electrical Hazard on Metallic Pipelines.

Existing utilities

7. Transpower shall liaise with all relevant utility operators during the detailed design and subsequent construction processes prior to undertaking any work pursuant to this designation and shall ensure that:

- a. it is aware of the location of all utility services existing at the time of construction in or adjacent to the designation; if necessary, exploratory excavation shall be undertaken;
- b. to the greatest extent practicable, all utility services existing at 28 May 2007 (being the date the Notice of Requirement was lodged) located in or adjacent to the designation are protected from any activity associated with the Upper North Island Grid Upgrade Project which may interfere with the proper functioning of the services;
- c. if it is not practicable to avoid a reduction in the level of service in accordance with (b) above, or if services are otherwise damaged, all utility services existing at 28 May 2007 located in or adjacent to the designation are repaired or relocated at Transpower's expense, to the reasonable satisfaction of the affected utility operator; and
- d. reasonable access to existing utility services located in or adjacent to the designation are able to be accessed during construction.

8. Nothing in condition 7(c) requires Transpower to:

- a. provide compensation to any affected utility operator for indirect costs, such as for delays and inconvenience caused; and
- b. put the owner of the utility services in a better position than if the Upper North Island Grid Upgrade Project had not been proposed or installed.

Archaeology: known sites R11/2333 and R11/2384

9. Before any works are carried out associated with the Upper North Island Upgrade Project, Transpower shall make any minor adjustments to the location of the cable trench within the corridor to ensure that the sites R11/2333 and R11/2384 are not damaged by construction of the cable trench.

Advice note:

This condition is subject to any conditions of any archaeological authority granted under the Historic Places Act 1993.

Construction Management Plan (CMP)

10. At least 30 working days prior to commencing any construction activity along the designated underground cable route, Transpower shall submit a Construction Management (CMP) to the Council for approval. The Council's Consents Manager shall respond within 20 working days indicating whether approval is given or Transpower's intended approach to:

- a. The proposed construction methodology;
- b. Storage and reuse and top soil, including stockpiling areas;
- c. On-site and off-site disposal of soil;
- d. Silt and dust control, during earthwork stages;
- e. Groundwater and stormwater management, treatment and disposal;
- f. Traffic/property access management;
- g. Contaminated land management procedures;
- h. Construction hours;
- i. Existing network utilities protocols and guidelines;
- j. Access and utilities management;
- k. Subject to other specific conditions, cultural protocols and archaeological requirements;
- l. Land stability management and water quality and sediment controls;
- m. Vegetation disturbance/removal and replacement;
- n. Management of construction activities;
- o. Contractor training, including health and safety;

- p. The intended construction programme, including staging if appropriate;
- q. Management of construction noise;
- r. Community information and liaison;
- s. Temporary activities and equipment storage in specified areas;
- t. Contractor car parking in specified areas;
- u. Security and lighting during construction; and
- v. Situations where the proposed cable depth could differ from the 1500 mm shown on Map 6 or 7 of Appendix V (see attachments), including likely reasons for differing depth and means of resolving any issues arising from that depth.

11. In preparing the CMP in accordance with condition 10, the following minimum requirements shall be met:

- a. Quality soil shall be reused, where appropriate, and suitable stockpiling areas shall be identified;
- b. Spoil which is not reused, where appropriate, and suitable stockpiling areas shall be identified;
- c. Dust on-site shall be minimised to ensure that there is no dust nuisance off-site as a result of the works. Such minimisation could include spraying with water or covering of areas;
- d. Clean stormwater shall be directed away from bare or earthworked areas and sediment laden runoff shall be properly controlled and managed to minimise any discharge of sediments into watercourses;
- e. As far as practicable, disturbance to riparian areas and stream banks and beds shall be minimised during construction;
- f. Measures for testing and removing any contaminated land along the route shall be developed;
- g. Liaison with existing utility providers with underground services within the designated route shall be undertaken;
- h. Adequate measures shall be implemented so as to avoid land slope failure;
- i. When construction is taking place within the dripline of any tree over two metres in height to be retained on a public road or other public or private land, a qualified arborist shall be engaged to advise on the best method of root pruning and for continuing long-term avoidance of root interference with the cable;
- j. Site contractors shall have available at all working times, at an accessible place along the cable route, copies of all designation and consent conditions, the approved Construction Management Plan and the Draft Protocols entitled Transpower Grid Upgrade Project Protocol for Dealing with Kōiwi or Taonga Unearthed During Construction and the Discovery of Sites of Significance, Wāhi Tapu, Heritage Sites and Archaeological Sites (or updated document). Transpower shall ensure that the contractors understand the designation conditions and consent conditions;
- k. Transpower shall notify the Council in writing at least 10 working days before commencing works (including a separate notification for works commencing in Turanga Creek, Mangemangeroa Stream and Otara Creek), and shall notify the Councils that works have been completed within 10 working days following completion of the works;
- l. Parties adjacent to the route shall be notified prior to commencement of works and shall be regularly updated;
- m. Temporary activities, such as equipment storage shall be undertaken in suitably located areas (ie, not within 20 metres of a watercourse);
- n. Contractor car parking shall be suitably located, so as not to prevent property access; and
- o. Work sites shall be secure and illuminated to restrict access as appropriate.

12. In preparing the CMP in accordance with condition 10, Housing New Zealand Corporation shall be consulted.

Advice note:

Where the CMP requires Transpower to give notice to the Council, that notice can be given

progressively, as stages of the work are complete.

Construction hours

13. Construction hours shall be as follows:

- a. Monday to Friday: 7am to 6pm;
- b. Saturday: 8am to 1pm; and
- c. Sundays and public holidays: No work.

Except where work is necessary outside the specified days or hours for the following purposes:

- i. Where work is required to be planned to be carried out at low-traffic times, for example, excavation across busy roads, or cable installation;
- ii. Delivery of large equipment;
- iii. Emergencies;
- iv. Securing of the site or removing a traffic hazard;
- v. Cable jointing in self-contained enclosures; or
- vi. Where the distance between the work and the nearest residence is 100 metres or more and all other conditions are met.

Construction and Maintenance Noise

14. All construction work shall be designed, managed and conducted to ensure that construction and maintenance noise from the site does not exceed the limits in NZS6803:1999 Acoustics—Construction Noise.

15. Prior to any significant construction work taking place, a noise management plan shall be prepared, with the assistance of a suitably qualified and experienced person, that sets out the management procedures in terms of section 8 and Annex E of NZS6803:1999, and the works shall be undertaken in accordance with that noise management plan (other than emergency works).

16. The noise management plan required by condition 15 shall be submitted to the Council's Consents Manager for approval, at least 20 working days prior to the works commencing. The Council's Consents Manager shall respond within 20 working days indicating whether approval is given or refused. Approval shall not be unreasonably withheld.

Advice note:

The noise management plan required by condition 15 can be incorporated into, and be part of the construction management plan required by condition 10.

Vibration

17. Vibration from all construction activities shall not exceed the limits of, and shall be measured and assessed in accordance with, German Standard DIN 4150-3 (1999-02) Structural Vibration – Effects of Vibration on Structures.

Traffic / roading

18. Transpower shall prepare a Traffic Management Plan (TMP) which is generally consistent with NZTA's Code of Practice for Temporary Traffic Management (COPTTM).

19. The TMP shall be submitted to the Council's Consents Manager for approval at least 20 working days prior to commencement of underground cable construction after consultation with:

- a. The Council;
- b. The following key stakeholders:
 - i. Emergency services (including police);

- ii. Bus operators;
- iii. Schools;
- iv. Housing New Zealand Corporation;
- c. Any additional key stakeholders identified by the Council.

20. The council shall respond within 20 working days indicating whether approval is given or refused. Approval shall not be unreasonably withheld.

21. The TMP prepared by Transpower shall recognise that the paramount purpose of roads is the free passage of the public and its vehicles.

22. The TMP prepared by Transpower shall address and provide details of proposed works and/or mitigation measures relating to the following matters:

- a. The likely routes for heavy construction-related traffic;
- b. Details of any necessary road closures, diversions, or deviations which are likely to be required during construction activities, including the likely date, time and duration of such actions. As far as practicable, any necessary temporary road closures should be effected during off-peak periods;
- c. Where diversions or deviations are required, information and recommendations shall be provided by a suitably qualified and experienced traffic engineer of the traffic volumes and capacities of alternative routes, and the likely consequent effects in terms of safety and convenience. The traffic engineer shall ensure that recommended alternative routes are reasonably convenient and capable of safely accommodating diverted or deviated traffic. Transpower shall act on the recommendations of the traffic engineer in relation to alternative routes. Where traffic modelling related to specific intersections is required, the results of the modelling shall be included (see conditions 23 to 25);
- d. Details of the signage intended to advise motorists, residents, stakeholders, and other road users of any road closures, diversions and delays, including examples of signage for diversion routes. Such signage shall be sufficiently clear to enable easy understanding by the general public, and installed at appropriate locations at least seven days in advance of such road closures, diversions and delays. Such signage shall include the use of trailer-mounted electronic signs near the most affected roads;
- e. Details of methods of proposed information dissemination regarding construction activities and associated traffic effects. These details shall include information regarding likely timing and duration of works, alternative routes, access to properties, and any alterations to public transport services. Methods of information dissemination shall include, but not be limited to, public notices in newspapers, radio announcements, signage, information packages, and direct contact with affected properties along those routes;
- f. Inclusion of a communications plan setting out the method of consultation and liaison with key stakeholders and affected parties regarding likely timing and duration of works, alternative routes, access to properties and any alterations to public transport services;
- g. Details of prior consultation or community liaison undertaken with affected residents, key stakeholders, schools, 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;
- h. Details of any measures for the purposes of mitigating adverse traffic effects of construction traffic, including safety matters, relating to cyclists, pedestrians, mobility impaired persons, and school children;
- i. Where the cable is proposed to be installed across major intersections and/or arterial roads carrying higher traffic volumes (such as Ti Rakau Drive, Te Irirangi Drive, Chapel Road, Springs Road, East Tamaki Road), three months prior to the commencement of construction an assessment shall be carried out by a suitably qualified and experienced traffic engineer of:
 - i. The traffic volumes using such intersections or roads;

- ii. The likely levels of delays and disruptions which may be experienced as a result of cable construction; and
- iii. Identification of locations where such installation works must be carried out in the most timely manner practicable (including where reasonably practicable, the use of alternative methods of installation other than trenching), so as to minimise delays or inconvenience to road users;
- j. Following consultation with public transport providers, details of proposed alternative temporary changes to public transport services during the construction period including but not limited to any route diversions, timetable adjustments, temporary bus stops, and methods of communicating such matters to public transport users.

23. Following consultation with the Boards and/or principals of Sir Edmund Hillary College and Sancta Maria College (and any schools subsequently established with accesses and/or egresses adjacent to the underground cable route), Transpower shall ensure, as far as practicable, that works avoid school terms so as to minimise disruption to normal school activities. Details of relevant periods shall be included in the TMP.

24. Following consultation with the New Zealand Fire Service, details shall be provided in the TMP of proposed alternative access to and egress from the fire station located at 341 East Tamaki Road.

25. Transpower shall carry out traffic modelling at the intersections of Johnstones Road/Springs Road/East Tamaki Road and Chapel Road/Accent Drive/Stancombe Road to assess the impact of the construction works on intersection capacity prior to completing the Construction Management Plan and the Traffic Management Plan as required by condition 20, and incorporate any necessary specific provisions in the CMP.

Advice note:

The traffic management plan required by condition 18 can be incorporated into, and be part of, the construction management plan required by condition 10.

Continuation of access

26. Transpower shall at all times ensure that access to any property temporarily severed by construction is maintained at a level that will enable, as far as practicable, normal operations on the property to continue.

Parking

27. Following consultation with residents, businesses and other directly affected persons, Transpower shall ensure that adequate temporary alternative car parking is provided for residents, businesses and other directly affected persons along or adjacent to the cable route, in the event that construction activity prevents or hinders usual parking. Such arrangements are to be made and advised to affected parties at least five working days prior to the commencement of the work that causes the effect.

Remediation of property, roads and footpaths

28. Other than as provided in condition 29, Transpower shall:

- a. within 10 working days of completion of construction on any land, reinstate any private or public land and property (excluding works in road reserves) as far as practicable to its pre-existing state. Such remediation shall include fences, gardens (excluding trees and grass) and other surface equipment or materials; and
- b. as soon as practicable after the completion of construction, re-grass areas that were previously grassed.

29. As soon as practicable after the completion of construction, Transpower shall repair any damage

to public carriageways and footpaths (and associated road components) resulting from the impacts of construction. Such repair may involve short-term maintenance to allow for settling and consolidation of carriageways prior to final repair.

Cultural/Spiritual

30. If any urupā, traditional sites, taonga (significant artefacts), or kōiwi (human remains) are exposed during site works, 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, the New Zealand Historic Places Trust, the Auckland 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 recover archaeological features discovered before work may recommence on the exposed site.

Future roading

31. Cable installed in the vicinity of:

- a. The Redoubt Road extension between Regis Lane and Ormiston Road (as shown on maps 49-50, Manukau City Council Operative District Plan 2002 (see attachments); and
- b. The possible future road connection between the Scenic Drive and Brownhill Road (as shown on Map 31 of Appendix V (see attachments)); shall be buried to a depth that does not prevent construction of those roads due to the presence of the cables, in the locations shown on those plans, in the future.

Advice note

1. Any new works or equipment means those works which were not existing prior to the notification of the Auckland Unitary Plan.

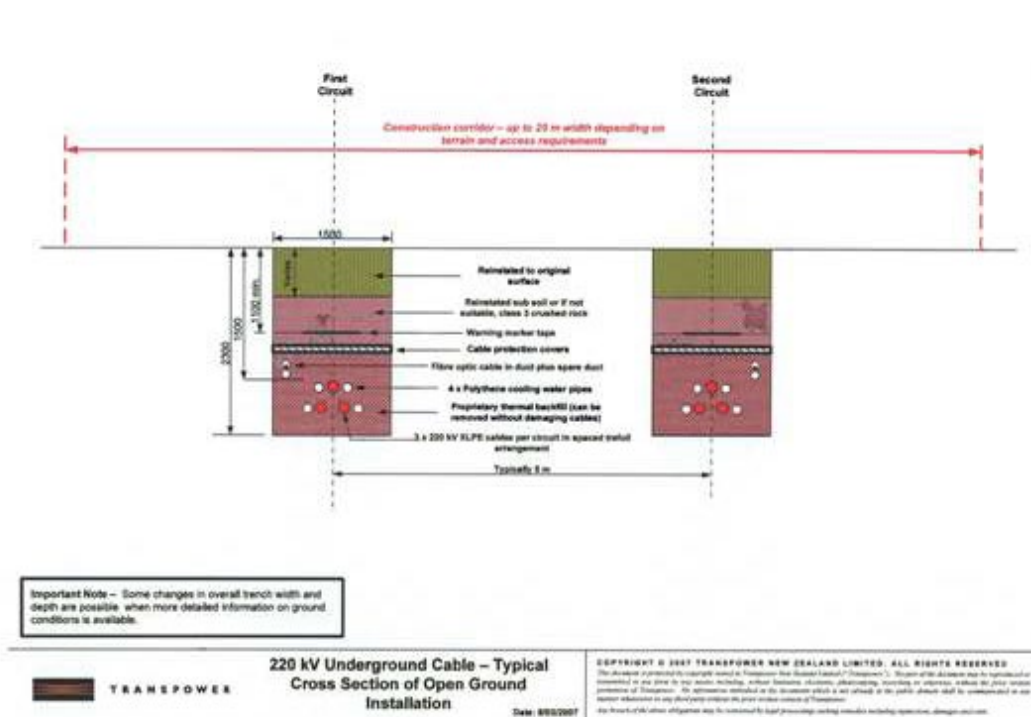
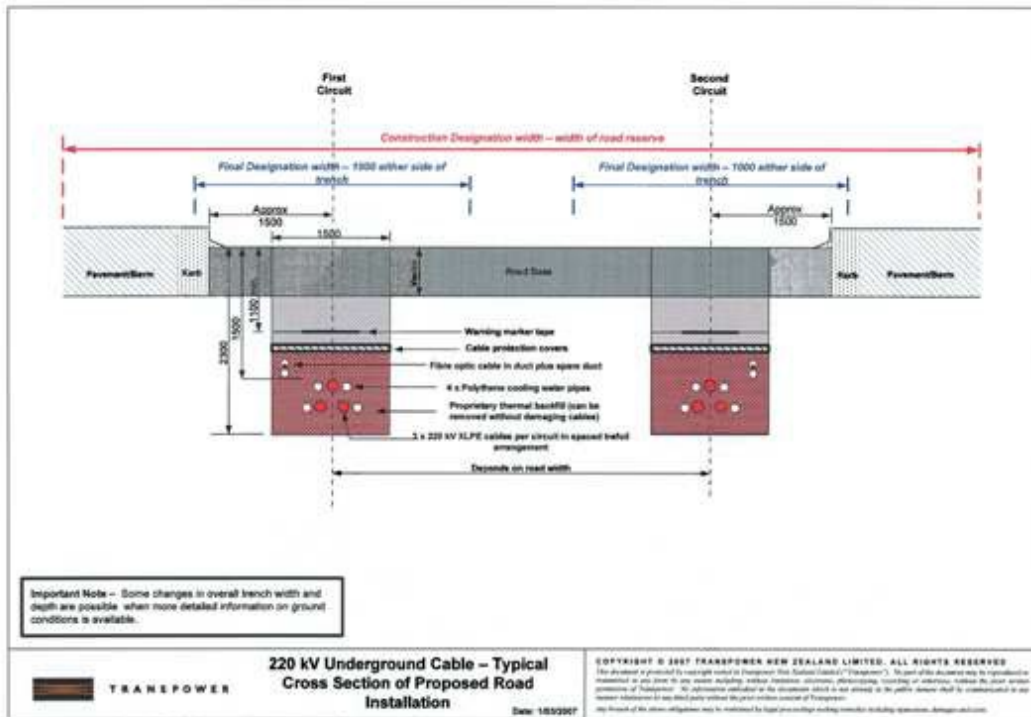
Attachments

Maps from Appendix V of the Board of Inquiry

INDEX OF MAPS AND PLANS REFERRED TO IN PROPOSED DESIGNATION CONDITIONS

SET 4

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Map 7	220kV Underground Cable - Typical Cross Section of Open Ground Installation	7



INDEX OF MAPS AND PLANS REFERRED TO IN PROPOSED DESIGNATION CONDITIONS

SET 6

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Map 25	Brownhill to Otahuhu Parcel Ownership Map 1 of 6, 4 June 2008	25
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Map 31	Kent Subdivision, Drainage & Water Supply Plan - 2, Manukau City Council, issued 07/08/06	31











MAP 28

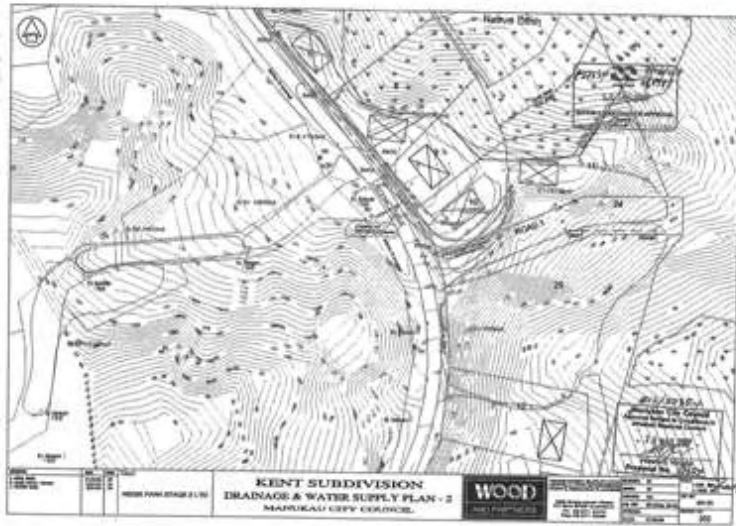
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MAP 30

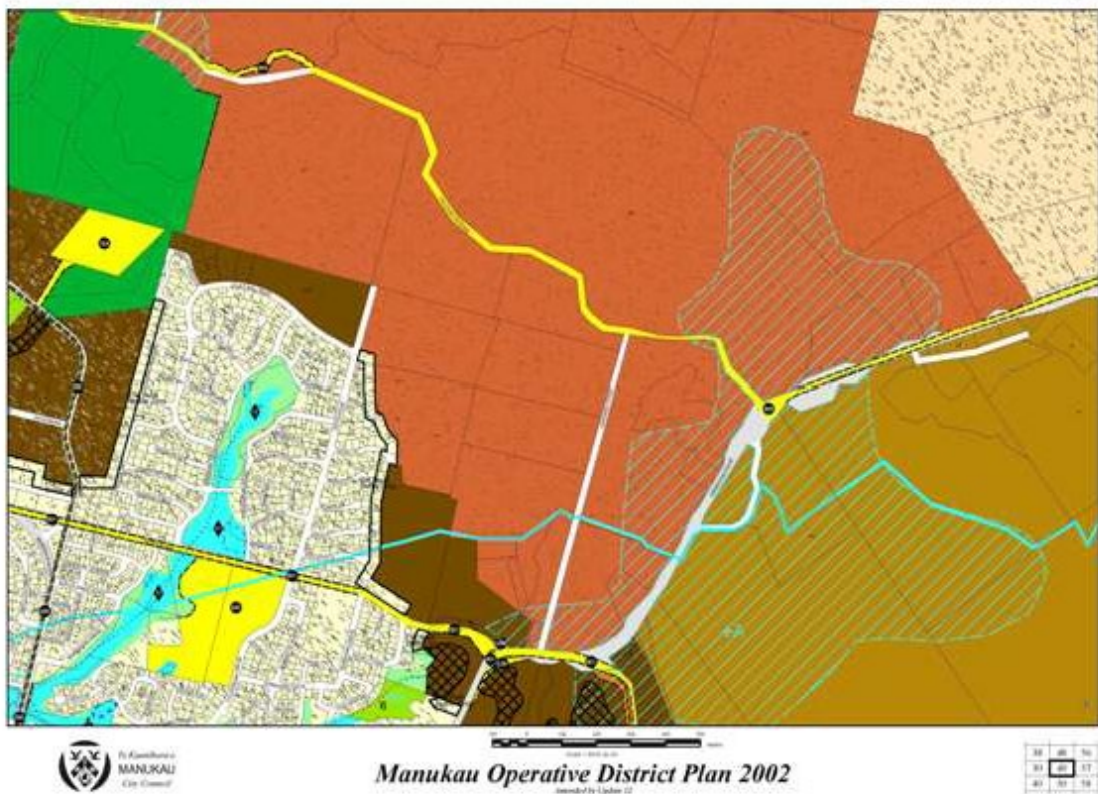
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MAP 31

31

Maps 49-50, Manukau City Council Operative District Plan 2002



Manukau Operative District Plan 2002



DOCUMENTATION FOR DISTRICT PLAN MAP 49

Amended by Update 11

Designations

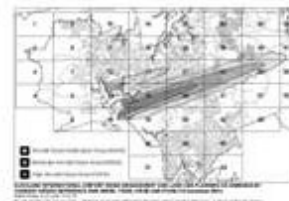
ID No.	Also on Map	Description of Designation	Underlying Zone	Requiring Authority
38		Road Widening - (See Diagram 2 in Appendix A8 of the Planning Map) Varying Widths	Flat Bush Countrywide Transition	Manukau City Council
39		Watercare Services Ltd. Water Supply Purposes - Reservoir and associated structures	Public Open Space 2	Watercare Services Ltd
40, 41, 42, 43, 44	25, 26, 27, 28, 29, 30, 31, 32	Gas Transmission Purposes - Reservoir - East Tamaki Gas Pipeline	Various	Vector Gas Ltd
45		Jeffs Road School site for Year Levels 1-10 and Early Childhood Centre	Flat Bush Residential 2	Minister of Education
46, 47, 48	37, 38, 39, 40, 41, 42, 43, 44	Broomfield Substation to Pakuranga Substation Underground Electricity Cable	Various	Transpower
49		Broomfield Substation to Oranui Substation Underground Electricity Cable	Various	Transpower

Proposed Road Widening

Also on Map	Road Name	Description of Affected Properties	Depth of Land Required for Road Widening Purposes
38, 40, 41	Murphy Road	West side - Lot 2 DP123377 to Lot 1 CP102549 inclusive East side - Lot 2 CP347543 to Lot 2 DP54210 inclusive	3.04m

Stormwater Management Areas

ID No.	Also on Map	Description of Affected Properties	Underlying Zone
50	40, 41, 42, 43, 44	All Properties identified as Stormwater Management Area (outlined blue on relevant planning maps)	Refer to Rule 9.6.3.2





Manukau Operative District Plan 2002



Manukau Operative District Plan 2002



DOCUMENTATION FOR DISTRICT PLAN MAP 50

Amended by Update 11

Designations

ID No.	Also on Map	Description of Designation	Underlying Zone	Requiring Authority
41, 42, 43, 44, 51, 52, 56, 58, 59, 67, 75, 76, 81, 84		Airborne Aerodrome Protection Measures Properties shown on this Planning Map may be subject to controls outlined in Designation 204. Refer to Appendix 8 of the Planning Maps and Schedule 5A.	Various	Airborne Report Ltd
39, 38, 39, 40, 41, 49, 51, 52		Gas Transmission Purpose Motewera - East Tamaki Gas Pipeline	Various	Vector Gas Ltd
58		Brownhill Substation	Whitford Rural A	Transpower
28, 29, 48		Brownhill Substation to Otahuhu Substation Underground Electricity Cables	Various	Transpower

Proposed Road Widening

Also on Map	Road Name	Description of Affected Properties	Depth of Land Required for Road Widening Purposes
48	Omission Road	North side - Allotment 318 Parish of Puketarua to Lot 8 DP153124 to Lot 8 DP154522 inclusive South side - Lot 1 DP153124 to Lot 1 DP153348 inclusive	4.6km
38, 40, 48	Murphy's Road	West side - Lot 2 DP-123277 to Lot 1 DP153348 inclusive East side - Lot 2 DP147643 to Lot 2 DP154210 inclusive	3.8km

Stormwater Management Areas

ID No.	Also on Map	Description of Affected Properties	Underlying Zone
39, 40, 41, 49, 50, 51		All Properties identified as Stormwater Management Area (shaded blue on relevant planning maps)	Refer to Rule 9.8.3.2



Schedule of Legal Descriptions

Parcel ID / Appellation

Lot 38 DP 122457	5214767
Lot 39 DP 122457	5258386
5213395	Lot 1 DP 205294
Lot 44 DP 122457	5226343
Lot 45 DP 122457	Lot 26 DP 615
5220406	Lot 28 DP 317068
5229707	Sec 3 SO 70224
5234114	5212610
5234115	5218779
5242071	5263414
5245483	6755102
5247685	6868736
5253250	6868737
5211477	Sec 2 SO 70224
5253250	5263413
5243048	6576298
5209287	Lot 2 DP 348822
5217576	Lot 5 DP 348822
5235744	6755102
5245975	5247056
5259209	5237233
Lot 185 DP 50993	5218750
Allot 355 Parish of Pakuranga	Lot 1 DP 370733
5099005	5263064
5267324	5208695
Lot 279 DP 50344	5225858
5206109	5244805
5215068	Sec 1 SO 68877
5248339	Lot 1 DP 168092
5228620	5208692
5250436	5208693
5237621	5216198
5256686	5257455
5208934	5257462
5245707	5259600
5210416	7060314
Lot 500 DP 436444	Lot 2 DP 182255
Reclaimed Crown Foreshore Survey Office Plan 47238	Lot 3 DP 348822

8518 Albany Substation

Designation Number	8518
Requiring Authority	Transpower New Zealand Ltd
Location	29 Bass Road, Albany
Rollover Designation	Yes
Legacy Reference	Designation 85, Auckland Council District Plan (North Shore Section) 2002
Lapse Date	Given effect to (i.e. no lapse date)

Purpose

Electricity transmission - Albany electricity substation.

Conditions

Cultural / Spiritual

1. 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, the New Zealand Historic Places Trust, the Auckland 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 recover archaeological features discovered before work may recommence on the exposed site.

Construction and Maintenance Noise

2. All construction work shall be designed, managed and conducted to ensure that construction and maintenance noise from the site does not exceed the limits in NZS6803:1999 Acoustics–Construction Noise.

3. Prior to any significant construction work taking place, including any associated significant earthworks, a noise management plan shall be prepared, with the assistance of a suitably qualified and experienced person, that sets out the management procedures in terms of section 8 and Annex E of NZS6803:1999 and the works shall be undertaken in accordance with that noise management plan.

4. The noise management plan required by the above condition 3 shall be submitted to Council's Consents Manager for approval, at least 20 working days prior to the works commencing. The Council's Consents Manager shall respond within 20 working days indicating whether approval is given or refused. Approval shall not be unreasonably withheld.

Hazardous Substances

5. Any new part of the facility containing oil shall be designed to comply with Transpower's Oil Spill Management Policy (TPG:GS.54.01).

Electric and Magnetic Fields (EMF)

6. Any new equipment shall be designed and operated to limit the electric and magnetic field exposures at or beyond the secure boundary of the substation site to 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). That is the public exposure 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 (ie, when there are no faults in the transmission system).

Radio Frequency Interference

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

Earth Potential Rise

8. Any new substation earth grids shall be designed, built, and tested to ensure electrical safety at or beyond the designation boundary in accordance with Transpower Standard TP.DS.52.01, Issue 2, January 2005.

Light Spill

9. Any new exterior lighting shall be designed to comply with:
- a. AS/NZS 1158 Lighting for Roads and Public Spaces 2005 Part 3.1;
 - b. Transpower's guidelines and information for switchyard and grounds lighting TP.DS 40.03 and
 - c. AS 4282 1997, Control of Obtrusive Effects of Outdoor Lighting.

Operational Noise

10. A noise management plan shall be submitted for any new equipment (such as transformers, fans and circuit breakers) where the noise from such equipment is likely to generate adverse noise effects for any noise sensitive land uses located in the vicinity.

Advice Note

1. Any new works or equipment means those works which were not existing prior to the notification of the Auckland Unitary Plan.

Attachments

Schedule of Legal Descriptions

Parcel ID	
Lot 1 DP 135027	Lot 2 DP 135027
Lot 3 DP 135027	

8519 North Shore Underground Electricity Transmission Cables

Designation Number	8519
Requiring Authority	Transpower New Zealand Ltd
Location	410 Albany Highway to State Highway 1 (Constellation Drive), Rosedale
Rollover Designation	Yes
Legacy Reference	Designation 179A, Auckland Council District Plan (North Shore Section) 2002
Lapse Date	Given effect to (i.e. no lapse date)

Purpose

Electricity transmission - the installation, maintenance, repair, replacement, inspection and operation of two 220kV underground electricity transmission lines (two cable circuits comprising six single core cables) and associated telecommunication cables and the minor in/above ground structures associated therewith.

Conditions

General Conditions

1. Any equipment shall be designed and operated to limit the magnetic field exposures to the International Commission on Non-Ionising Radiation Protection, Guidelines for limiting exposure to time varying electric, magnetic, fields (1Hz- 100kHz) (Health Physics 99(6):818-836; 2010) (ICNIRP Guidelines). That is the public exposure reference level of 200 μ T for magnetic flux density at 1 metre above ground level directly above any cable under normal operating conditions (ie, when there are no faults in the transmission system).

Construction and Maintenance Noise

2. All construction work shall be designed, managed and conducted to ensure that construction and maintenance noise from the site does not exceed the limits in NZS6803:1999 Acoustics–Construction Noise.

Construction Noise

3. During construction, New Zealand Noise Standard 6803 NZS: 1999 Acoustics -Construction Noise shall be complied with.

4. Transpower New Zealand Ltd and its contractors shall, in addition to complying with all other construction related conditions, take all reasonable steps to prevent or mitigate any nuisance or damage to adjacent properties during construction.

Cultural/Spiritual

5. If any urupā, traditional sites, taonga (significant artefacts), or kōiwi (human remains) are exposed during site works, the following procedures shall apply:

- Works in the immediate vicinity of the site that has been exposed shall cease;
- The site supervisor shall immediately secure the area in a way that ensures that any remains or artefacts are untouched;
- The site supervisor shall notify representatives of relevant tāngata whenua, the New Zealand Historic Places Trust, the Auckland 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 recover archaeological features discovered before work may recommence on the exposed site.

6. Transpower New Zealand Ltd shall immediately advise local kaumatua and the New Zealand Historic Places Trust and cease working in the affected area until all necessary authority required by the New Zealand Historic Places Trust is obtained.

Monitoring

7. Within six (6) months of the commencement of operation of any 220kV underground line, Transpower New Zealand Ltd shall supply to Council the results of a magnetic field survey that measures and appropriately illustrates the combined effect of the existing overhead and new underground lines, such field strength measurements to be taken at one metre above ground level and at intervals of not less than 400m or more than 800m along the length of the corridor (excluding roads). The Council may, depending on the significance of the results compared with recognised acceptable thresholds (see e.g., condition 5), require a repeat of the survey at a future date to be agreed by the parties.

8. That provision be made for the removal of existing trees located in the corridor directly affected by the proposed location of the cable trenches, and that any replacement planting that may be required be determined by consultation and agreement between Transpower New Zealand Ltd and Council.

Advice Note

1. To assist Council with any telephone inquiries the Requiring Authority should advise the Council's Call-Centre before any work is commenced. The call centre may be contacted on phone number (09) 301 0101.

2. Any new works or equipment means those works which were not existing prior to the notification of the Proposed Auckland Unitary Plan.

Attachments

Schedule of Legal Descriptions

Parcel ID/Appellation
Pt Lot 1 DP 19750
Sec 1 SO 390576
ALBANY HIGHWAY
Lot 152 DP 156385
STANFORD STREET
Lot 153 DP 156385
Lot 152 DP 162064
VANDERBILT PARADE
Lot 153 DP 162064

Oteha Stream
Lot 300 DP 194881
Lot 202 DP 174290
Lot 300 DP 196382
Lot 303 DP 196381
Sec 1 SO 64438
BUSH ROAD
Pt Lot 452 Parish of Paremoremo
Alexandra Stream
Lot 106 DP 182287
Lot 106 DP 182284
KRISTIN LANE
Lot 107 DP 182282
Lot 2 DP 204886
Lot 4 DP 191979
Lot 101 DP 180879
Lot 1 DP 202139
ROSEDALE ROAD
Lot 75 DP 174612
Sec 1 SO 68325
JACK HINTON DRIVE
Pt Lot 1 DP 174315
Sec 1 SO 68566
PAUL MATTHEWS ROAD
Sec 2 SO 68566
Lot 102 DP 183218
Pt Lot 1 DP 98275
Lot 1 DP 46899

8520 Takanini Electricity Substation

Designation Number	8520
Requiring Authority	Transpower New Zealand Ltd
Location	65 Airfield Road, Takanini
Rollover Designation	Yes
Legacy Reference	Designation 40, Auckland Council District Plan (Papakura Section) 1999
Lapse Date	Given effect to (i.e. no lapse date)

Purpose

Electricity transmission - Takanini electricity substation.

Conditions

Cultural / Spiritual

1. 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, the New Zealand Historic Places Trust, the Auckland 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 recover archaeological features discovered before work may recommence on the exposed site.

Construction and Maintenance Noise

2. All construction work shall be designed, managed and conducted to ensure that construction and maintenance noise from the site does not exceed the limits in NZS6803:1999 Acoustics–Construction Noise.

3. Prior to any significant construction work taking place, including any associated significant earthworks, a noise management plan shall be prepared, with the assistance of a suitably qualified and experienced person, that sets out the management procedures in terms of section 8 and Annex E of NZS6803:1999 and the works shall be undertaken in accordance with that noise management plan.

4. The noise management plan required by the above condition 3 shall be submitted to Council's Consents Manager for approval, at least 20 working days prior to the works commencing. The Council's Consents Manager shall respond within 20 working days indicating whether approval is given or refused. Approval shall not be unreasonably withheld.

Hazardous Substances

5. Any new part of the facility containing oil shall be designed to comply with Transpower's Oil Spill Management Policy (TPG:GS.54.01).

Electric and Magnetic Fields (EMF)

6. Any new equipment shall be designed and operated to limit the electric and magnetic field exposures at or beyond the secure boundary of the substation site to 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). That is the public exposure 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 (ie, when there are no faults in the transmission system).

Radio Frequency Interference

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

Earth Potential Rise

8. Any new substation earth grids shall be designed, built, and tested to ensure electrical safety at or beyond the designation boundary in accordance with Transpower Standard TP.DS.52.01, Issue 2, January 2005.

Light Spill

9. Any new exterior lighting shall be designed to comply with:
- a. AS/NZS 1158 Lighting for Roads and Public Spaces 2005 Part 3.1;
 - b. Transpower's guidelines and information for switchyard and grounds lighting TP.DS 40.03 and
 - c. AS 4282 1997, Control of Obtrusive Effects of Outdoor Lighting.

Operational Noise

10. A noise management plan shall be submitted for any new equipment (such as transformers, fans and circuit breakers) where the noise from such equipment is likely to generate adverse effects for any noise sensitive land uses located in the vicinity.

Advice Note

1. Any new works or equipment means those works which were not existing prior to the notification of the Auckland Unitary Plan.

Attachments

Schedule of Legal Descriptions

Parcel ID	
Lot 1 DP 135030	Lot 1 DP 466602

8521 Drury Substation

Designation Number	8521
Requiring Authority	Transpower New Zealand Ltd
Location	261 Quarry Road, Drury
Rollover Designation	Yes
Legacy Reference	Designation 45, Auckland Council District Plan (Papakura Rural Section) 1999
Lapse Date	Given effect to (i.e. no lapse date)

Purpose

Electricity transmission - the construction, operation, maintenance, replacement, renewal and upgrading of a substation up to and including 220kV, transmission lines, and ancillary facilities.

Conditions

Electric and Magnetic Fields

1. Any new equipment shall be designed and operated to limit the electric and magnetic field exposures at or beyond the secure boundary of the substation site to 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). That is the 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 (ie, when there are no faults in the transmission system).
2. The site shall be designed and operated to limit public exposure to electric and magnetic fields, in accordance with the recommendations in Section 1 of the World Health Organisation monograph, Environmental Health Criteria No. 238 Extremely low frequency fields June 2007.

Advice Note: Policy 9 of the National Policy Statement on Electricity Transmission refers to both the ICNIRP guidelines and the WHO monograph.

Landscaping

3. Landscaping must proceed in general accordance with the Proposed Vegetation Management Plan, drawing number A18112 006 Rev B drawn by Boffa Miskell Ltd and contained within their report entitled Assessment of Landscape and Visual Effects dated 21 December 2018.
4. All landscaping must be maintained in a healthy condition in order to give effect to the Landscaping Plan for the duration of the designation. Once a continuous row and/or canopy has been established, this maintenance shall include the replanting of any gaps created by the death or damage of trees, in order to allow continuous row and/or canopy to re-establish.

Lighting

5. All exterior on-site lighting shall be positioned and directed downwards within the site, away from adjacent properties, existing dwellings and public roads so as to minimise the level of spill light and glare.

Site Management

6. Stock proof fencing will be provided to exclude stock from all water bodies shown on the Landscaping Plan (figure 4) drawn by Boffa Miskell Ltd and contained within their report entitled Landscape and Visual Effects Assessment dated September 2008, should the site be used for grazing.

Electrical Interference

7. The switchyard shall be operated, managed and controlled so that there is no additional electrical interference with television or radio reception at any existing residence as a consequence of the construction and operation of the switchyard.

Operational Noise of the Substation

8. The substation shall be operated in such a manner so that the noise level measured at the boundaries of any land contained in the Business – Light Industry Zone shall not exceed the following limits:

	L _{eq} Levels	L _{max}
Monday – Sunday 7am – 8pm	65 dBA	-
Monday – Sunday 8pm – 7am	65 dBA	75 dBA

- a. The noise levels shall be measured and assessed in accordance with the requirements of NZS 6801:2008 Acoustics – Measurement of Environmental Sound and NZS 6802:2008 Acoustics – Environmental Noise.
- b. The noise shall be measured by a sound level meter complying with the International Standard IEC 651(1979): Sound Level Meters, Type 1.
- c. Should the above standards be superseded then the most up to date standards shall apply.

9. The substation shall be operated in such a manner so that the noise level measured at the interface with any residential zone shall not exceed the following limits:

	L _{eq} Levels	L _{max}
Monday – Sunday 7am – 8pm	55 dBA	-
Monday – Sunday 8pm – 7am	45 dBA	75 dBA

- a. The noise levels shall be measured and assessed in accordance with the requirements of NZS 6801:2008 Acoustics – Measurement of Environmental Sound and NZS 6802:2008 Acoustics – Environmental Noise.
- b. The noise shall be measured by a sound level meter complying with the International Standard IEC 651(1979): Sound Level Meters, Type 1.
- c. Should the above standards be superseded then the most up to date standards shall apply.

10. Circuit breaker maintenance noise shall not exceed 75 dBA L_{max} at the boundaries of any land contained in the Business – Light Industry Zone at all times.

Signage

11. No advertising signs shall be placed on any structure, wall or fence within the site (directional and safety signs are exempted).

Earth Potential Rise or Induced Voltage Hazards

12. The requiring authority shall ensure that any earth potential rise or induced voltage hazards caused by the switchyard comply with the NZ Electrical Code of Practice 35 and shall not adversely affect the operation of existing infrastructure.

Construction Noise

13. The requiring authority must comply with the noise standards set out in NZS 6803:1999 Acoustics – Construction Noise at all times while any construction works are being carried out on site.

Cultural / Spiritual

14. If any urupā, traditional sites, taonga (significant artefacts), kōiwi (human remains) or other archaeological sites 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 such a way that ensures that any artefacts or remains are untouched; and
- c. The site supervisor shall notify tāngata whenua, the New Zealand Historic Places Trust, the Department of Conservation, the Auckland 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 recover archaeological features discovered before work may recommence on the exposed site.

15. That the requiring authority consult with the Kaitiaki Unit (Te Roopu Kaitiaki O Papakura) in regard to the proposed creation of a wetland and riparian planting to mitigate the diversion of one of the springs on the site.

Advice note

1. Any new works or equipment means those works which were not existing prior to the notification of the Auckland Unitary Plan.

Attachments

Proposed Vegetation Management Plan, Drawing Number A18112_006, Rev B

8522 Wellsford Electricity Substation

Designation Number	8522
Requiring Authority	Transpower New Zealand Ltd
Location	69 School Road, Wellsford
Rollover Designation	Yes
Legacy Reference	Designation 940, Auckland Council District Plan (Rodney Section) 2011
Lapse Date	Given effect to (i.e. no lapse date)

Purpose

Electricity transmission - Wellsford electricity substation.

Conditions

1. That any extension of substation equipment (not otherwise being a permitted activity) beyond the existing substation footprint, as identified in the attachments is first authorised by way of an alteration of the designation in accordance with section 181 of the Resource Management Act 1991 (or any future equivalent Provision). Until such time as there is an extension to the substation footprint by way of an alteration of the designation, the additional area will be retained as a buffer.

Cultural / Spiritual

2. 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, the New Zealand Historic Places Trust, the Auckland 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 recover archaeological features discovered before work may recommence on the exposed site.

Construction and Maintenance Noise

3. All construction work shall be designed, managed and conducted to ensure that construction and maintenance noise from the site does not exceed the limits in NZS6803:1999 Acoustics–Construction Noise.

4. Prior to any significant construction work taking place, including any associated significant earthworks, a noise management plan shall be prepared, with the assistance of a suitably qualified and experienced person, that sets out the management procedures in terms of section 8 and Annex E of NZS6803:1999 and the works shall be undertaken in accordance with that noise management plan.

5. The noise management plan required by the above condition 4 shall be submitted to Council's Consents Manager for approval, at least 20 working days prior to the works commencing. The

Council's Consents Manager shall respond within 20 working days indicating whether approval is given or refused. Approval shall not be unreasonably withheld.

Hazardous Substances

6. Any new part of the facility containing oil shall be designed to comply with Transpower's Oil Spill Management Policy (TPG:GS.54.01).

Electric and Magnetic Fields (EMF)

7. Any new equipment shall be designed and operated to limit the electric and magnetic field exposures at or beyond the secure boundary of the substation site to 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). That is the public exposure 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 (ie, when there are no faults in the transmission system).

Radio Frequency Interference

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

Earth Potential Rise

9. Any new substation earth grids shall be designed, built, and tested to ensure electrical safety at or beyond the designation boundary in accordance with Transpower Standard TP.DS.52.01, Issue 2, January 2005.

Light Spill

10. Any new exterior lighting shall be designed to comply with:

- a. AS/NZS 1158 Lighting for Roads and Public Spaces 2005 Part 3.1;
- b. Transpower's guidelines and information for switchyard and grounds lighting TP.DS 40.03 and
- c. AS 4282 1997, Control of Obtrusive Effects of Outdoor Lighting.

Operational Noise

11. A noise management plan shall be submitted for any new equipment (such as transformers, fans and circuit breakers) where the noise from such equipment is likely to generate adverse noise effects for any noise sensitive land uses located in the vicinity.

Advice Note

1. Any new works or equipment means those works which were not existing prior to the notification of the Auckland Unitary Plan.

Attachments

Existing Substation Footprint and Buffer Area

Path: I:\Spatial\GIS\Projects\p17068_Wellsford_Designation\MXD\Wellsford Substation_v2.mxd



TRANSPOWER
Prepared by: Geospatial & Drawings

Wellsford Substation Designation: Buffer Areas



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Date: 12/09/2017 Drawn By: daz26/a

Legend

-  Buffer Area
-  Existing Substation Footprint

Schedule of Legal Descriptions

Parcel ID	
Pt Allott 288 Parish of Oruawharo	Pt Allott 285 Parish of Oruawharo

8523 Silverdale Electricity Substation

Designation Number	8523
Requiring Authority	Transpower New Zealand Ltd
Location	83-91 Foundry Road, Silverdale
Rollover Designation	Yes
Legacy Reference	Designation 941, Auckland Council District Plan (Rodney Section) 2011
Lapse Date	Given effect to (i.e. lapse date)

Purpose

Electricity transmission - Silverdale electricity substation.

Conditions

Cultural / Spiritual

1. 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, the New Zealand Historic Places Trust, the Auckland 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 recover archaeological features discovered before work may recommence on the exposed site.

Construction and Maintenance Noise

2. All construction work shall be designed, managed and conducted to ensure that construction and maintenance noise from the site does not exceed the limits in NZS6803:1999 Acoustics–Construction Noise.

3. Prior to any significant construction work taking place, including any associated significant earthworks, a noise management plan shall be prepared, with the assistance of a suitably qualified and experienced person, that sets out the management procedures in terms of section 8 and Annex E of NZS6803:1999 and the works shall be undertaken in accordance with that noise management plan.

4. The noise management plan required by the above condition 3 shall be submitted to Council's Consents Manager for approval, at least 20 working days prior to the works commencing. The Council's Consents Manager shall respond within 20 working days indicating whether approval is given or refused. Approval shall not be unreasonably withheld.

Hazardous Substances

5. Any new part of the facility containing oil shall be designed to comply with Transpower's Oil Spill Management Policy (TPG:GS.54.01).

Electric and Magnetic Fields (EMF)

6. Any new equipment shall be designed and operated to limit the electric and magnetic field exposures at or beyond the secure boundary of the substation site to 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). That is the public exposure 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 (ie, when there are no faults in the transmission system).

Radio Frequency Interference

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

Earth Potential Rise

8. Any new substation earth grids shall be designed, built, and tested to ensure electrical safety at or beyond the designation boundary in accordance with Transpower Standard TP.DS.52.01, Issue 2, January 2005.

Light Spill

9. Any new exterior lighting shall be designed to comply with:
- a. AS/NZS 1158 Lighting for Roads and Public Spaces 2005 Part 3.1;
 - b. Transpower’s guidelines and information for switchyard and grounds lighting TP.DS 40.03 and
 - c. AS 4282 1997, Control of Obtrusive Effects of Outdoor Lighting.

Operational Noise

10. A noise management plan shall be submitted for any new equipment (such as transformers, fans and circuit breakers) where the noise from such equipment is likely to generate adverse noise effects for any noise sensitive land uses located in the vicinity.

Advice Note

1. Any new works or equipment means those works which were not existing prior to the notification of the Auckland Unitary Plan.

Attachments

Schedule of Legal Descriptions

Parcel ID	
Lot 6 DP 60254	

8524 Huapai Electricity Substation

Designation Number	8524
Requiring Authority	Transpower New Zealand Ltd
Location	108 Matua Road, Huapai
Rollover Designation	Yes
Legacy Reference	Designation 942, Auckland Council District Plan (Rodney Section) 2011
Lapse Date	Given effect to (i.e. no lapse date)

Purpose

Electricity transmission - Huapai electricity sub-switching station.

Conditions

General

1. The purpose of the designation is to provide for a substation at Huapai.

Height

2. The maximum height of equipment within the switching station will be as follows:

- a. Circuits 5 - 7 metres;
- b. High level bus conductors 9 metres;
- c. Transmission Pole 18.5 metres;
- d. Control Room 4.5 metres; and
- e. Telecommunication Pole 23 metres;

The Height of the two existing towers within the designated area (see figure 1 attachment) will not be altered as a result of the switching station.

Yards

3. The switching station equipment (including the security fence) is to be sited a minimum of 5 metres from all boundaries of the designated site.

Site Coverage

4. The switching station footprint (demarcated by the security fence) is not to exceed an area of 5650m². This footprint will include all switching station structures except for the earthgrid, which is underground and the 18.5 metre transmission pole securing conductors on the 110kV line.

Security Fence

5. A security fence is to be maintained around the substation. Warning signs are to be placed on this fence and a sign identifying the site as being owned by Transpower New Zealand Ltd (Transpower) is to be maintained at the site entrance. The sign at the site entrance shall comply with the Council's signs bylaw.

Landscape Mitigation

6. Planting

- a. The site will be planted in locations shown in the outline landscape plan (Figure 2 Dwg W00022/01 (see attachments)).
- b. A detailed landscape plan will be submitted for approval by Council as part of the outline plan of works.
required by section 176A of the Resource Management Act 1991.
- c. The planting will be completed within the first planting season after the construction of the switching station and shall be maintained (including the replacement of any diseased specimen or failed plantings) in accordance with the approved Plan.
- d. Landscaping shall be retained and maintained for the duration of the switching station.

7. Colours of Structures

- a. The 18.5 metre transmission pole and the 23 metre telecommunications pole are to be painted and maintained as a dark green colour to blend in with the background hills.
- b. The control room and tubular buswork (7m and 9m components) excluding couplings will be a similar colour.
- c. Final colours to be approved by the Manager Resource Consents and Compliance, Auckland Council.
- d. The drop wires and other flexible equipment are to be non-reflective with a matt finish.
- e. The galvanised steel supports are to have a matt or weathered finish.
- f. The switching yard gravel is to be a dark grey colour.

Performance Standards

Lighting

8. The site shall not be illuminated at night except during emergency works or other maintenance work requiring out of hours activity (eg programmed outage). 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 an adjacent household unit.

Noise

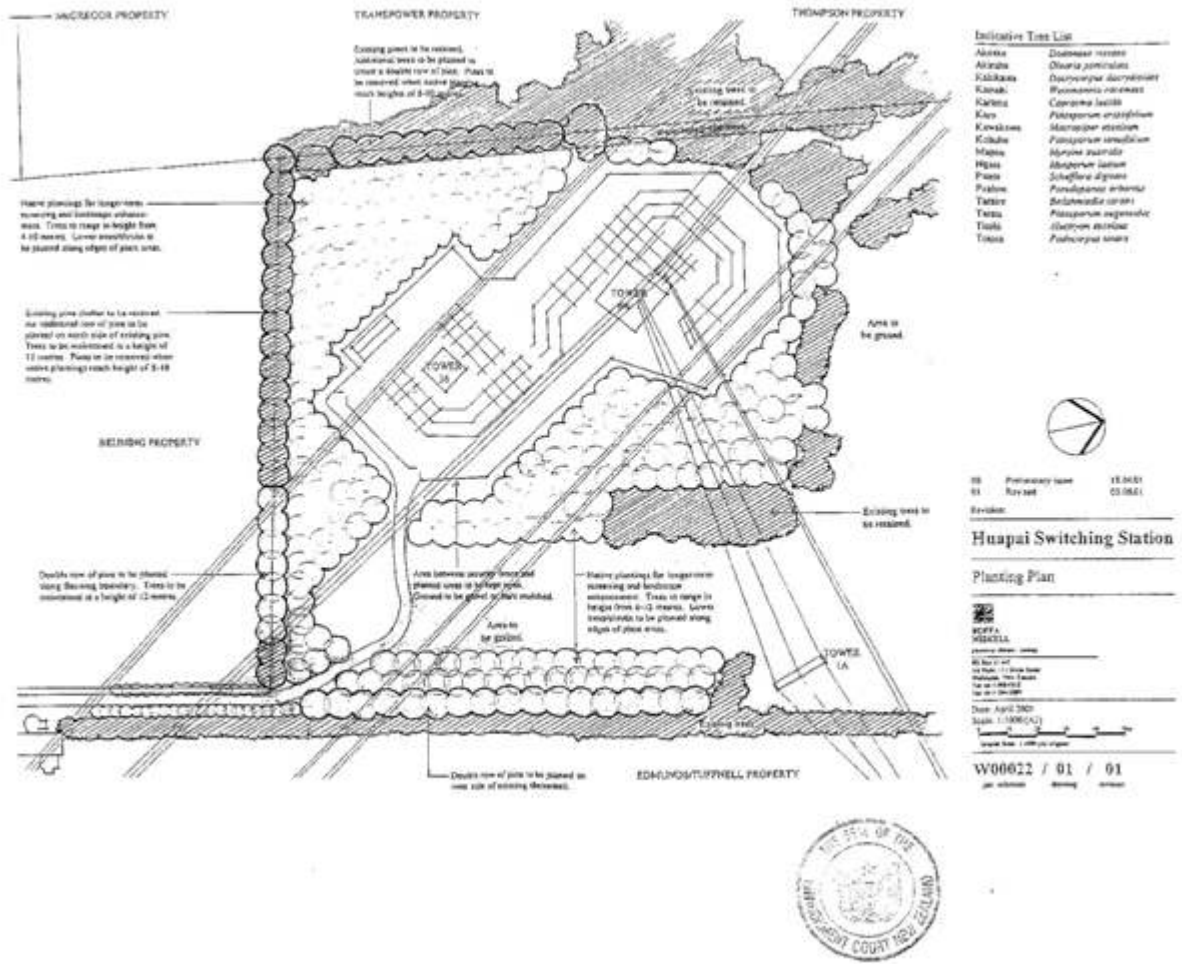
9. The noise level generated by the switching station shall comply at all times with the following noise levels. All activities on the site shall be conducted so as to ensure the following noise limits are not exceeded at any point within the notional boundary of any dwelling:
 - a. Monday to Saturday 7am — 6pm 50dBA L_{10} ;
 - b. At all other times including Public Holidays 45dBA L_{10} ; and
 - c. Monday to Sunday 6pm — 7am 70dBA L_{max}

Notional Boundary is defined as a line 20 metres from the façade of any dwelling or the legal boundary where the boundary is closer than 20 metres to the dwelling. Sound levels shall be measured in accordance with the requirements of NZS 6801:2008 Acoustics – Measurement of Environmental Sound and NZS 6802:2008 Acoustics – Environmental Noise except that all measurements shall be carried out within the notional boundary of any dwelling as defined above.

EMF and EMR

10. Any new equipment shall be designed and operated to limit the electric and magnetic field exposures at or beyond the secure boundary of the substation site to 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). That is the public exposure reference levels of $k\ m$ for electric fields and 200 μT for magnetic flux density at one metre above ground level under maximum normal operating conditions (ie, when there are no faults in the transmission system).

Figure 2 - Dwg W00022/01



Schedule of Legal Descriptions

Parcel ID	
Lot 3 DP 148022	

8525 Henderson Electricity Substation

Designation Number	8525
Requiring Authority	Transpower New Zealand Ltd
Location	1-12, 41-47 and 35 Lincoln Park Avenue, Massey
Rollover Designation	Yes
Legacy Reference	Designation TP1, Auckland Council District Plan (Waitakere Section) 2003
Lapse Date	Given effect to (i.e. no lapse date)

Purpose

Electricity transmission - Henderson electricity substation.

Conditions

1. Appropriate sedimentation and erosion control measures shall be employed for any earthworks on the designated site.
2. Work which affects the exterior of the group of three buildings located near the site entrance, described in the Heritage Schedule as CH1 1173, shall be limited to repairs, maintenance and works such as security lighting, alarms and cameras which are required for security purposes. Such work may be carried out without an outline plan of works.

Cultural / Spiritual

3. 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, the New Zealand Historic Places Trust, the Auckland 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 recover archaeological features discovered before work may recommence on the exposed site.

Construction and Maintenance Noise

4. All construction work shall be designed, managed and conducted to ensure that construction and maintenance noise from the site does not exceed the limits in NZS6803:1999 Acoustics–Construction Noise.
5. Prior to any significant construction work taking place, including any associated significant earthworks, a noise management plan shall be prepared, with the assistance of a suitably qualified and experienced person, that sets out the management procedures in terms of section 8 and Annex E of NZS6803:1999 and the works shall be undertaken in accordance with that noise management plan.

6. The noise management plan required by the above condition 5 shall be submitted to Council's Consents Manager for approval, at least 20 working days prior to the works commencing. The Council's Consents Manager shall respond within 20 working days indicating whether approval is given or refused. Approval shall not be unreasonably withheld.

Hazardous Substances

7. Any new part of the facility containing oil shall be designed to comply with Transpower's Oil Spill Management Policy (TPG:GS.54.01).

Electric and Magnetic Fields (EMF)

8. Any new equipment shall be designed and operated to limit the electric and magnetic field exposures at or beyond the secure boundary of the substation site to 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). That is the 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 (ie, when there are no faults in the transmission system).

Radio Frequency Interference

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

Earth Potential Rise

10. Any new substation earth grids shall be designed, built, and tested to ensure electrical safety at or beyond the designation boundary in accordance with Transpower Standard TP.DS.52.01, Issue 2, January 2005.

Light Spill

11. Any new exterior lighting shall be designed to comply with:
- a. AS/NZS 1158 Lighting for Roads and Public Spaces 2005 Part 3.1;
 - b. Transpower's guidelines and information for switchyard and grounds lighting TP.DS 40.03 and
 - c. AS 4282 1997, Control of Obtrusive Effects of Outdoor Lighting.

Operational Noise

12. A noise management plan shall be submitted for any new equipment (such as transformers, fans and circuit breakers) where the noise from such equipment is likely to generate adverse noise effects for any noise sensitive land uses located in the vicinity.

Advice Note

1. Any new works or equipment means those works which were not existing prior to the notification of the Auckland Unitary Plan.

Attachments

Schedule of Legal Descriptions

Parcel ID

Lot 1 DP 146083	Pt Lot 10 DP 29329
Lot 10 DP 106455	Lot 2 DP 60157
Lot 1 DP 60157	Lot 4 DP 60157
Lot 3 DP 60157	Lot 1 DP 164563
Lot 9 DP 106455	

8526 Hepburn Road Electricity Substation

Designation Number	8526
Requiring Authority	Transpower New Zealand Ltd
Location	167-217 Hepburn Road, Glendene
Rollover Designation	Yes
Legacy Reference	Designation TP2, Auckland Council District Plan (Waitakere Section) 2003
Lapse Date	Given effect to (i.e. no lapse date)

Purpose

Electricity transmission - Hepburn road electricity substation.

Conditions

1. Appropriate sedimentation and erosion control measures shall be employed for any earthworks on the designated site.

Cultural / Spiritual

2. 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, the New Zealand Historic Places Trust, the Auckland 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 recover archaeological features discovered before work may recommence on the exposed site.

Construction and Maintenance Noise

3. All construction work shall be designed, managed and conducted to ensure that construction and maintenance noise from the site does not exceed the limits in NZS6803:1999 Acoustics–Construction Noise.

4. Prior to any significant construction work taking place, including any associated significant earthworks, a noise management plan shall be prepared, with the assistance of a suitably qualified and experienced person, that sets out the management procedures in terms of section 8 and Annex E of NZS6803:1999 and the works shall be undertaken in accordance with that noise management plan.

5. The noise management plan required by the above condition 4 shall be submitted to Council's Consents Manager for approval, at least 20 working days prior to the works commencing. The Council's Consents Manager shall respond within 20 working days indicating whether approval is given or refused. Approval shall not be unreasonably withheld.

Vibration

6. Vibration from all construction activities shall not exceed the limits of, and shall be measured and

assessed in accordance with, German Standard DIN 4150-3 (1999-02) Structural Vibration – Effects of Vibration on Structures.

Hazardous Substances

7. Any new part of the facility containing oil shall be designed to comply with Transpower's Oil Spill Management Policy (TPG:GS.54.01), Issue 3, December 2011.

Electric and Magnetic Fields (EMF)

8. Any new equipment shall be designed and operated to limit the electric and magnetic field exposures at or beyond the secure boundary of the substation site to 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). That is the public exposure 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 (ie, when there are no faults in the transmission system).

Radio Frequency Interference

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

Earth Potential Rise

10. Any new substation earth grids shall be designed, built, and tested to ensure electrical safety at or beyond the designation boundary in accordance with Transpower Standard TP.DS.52.01, Issue 2, January 2005.

Light Spill

11. Any new exterior lighting shall be designed to comply with:

- a. AS/NZS 1158 Lighting for Roads and Public Spaces 2005 Part 3.1;
- b. Transpower's guidelines and information for switchyard and grounds lighting TP.DS 40.03 and
- c. AS 4282 1997, Control of Obtrusive Effects of Outdoor Lighting.

Operational Noise

12. A noise management plan shall be submitted for any new equipment (such as transformers, fans and circuit breakers) where the noise from such equipment is likely to generate adverse noise effects for any noise sensitive land uses located in the vicinity.

Advice Note

1. Any new works or equipment means those works which were not existing prior to the notification of the Auckland Unitary Plan.

Attachments

Schedule of Legal Descriptions

Parcel ID	
Lot 1 DP 139739	

8527 Rua o te Whenua Telecommunications Facility

Designation Number	8527
Requiring Authority	Transpower New Zealand Ltd
Location	600 Scenic Drive, Waiatarua
Rollover Designation	Yes
Legacy Reference	Designation TP3, Auckland Council District Plan (Waitakere Section) 2003
Lapse Date	Given effect to (i.e. no lapse date)

Purpose

Electricity transmission - Rua o te Whenua telecommunications facility.

Conditions

1. Appropriate sedimentation and erosion control measures shall be employed for any earthworks on the designated site.
2. This designation affects a site which is the subject of an earlier designation (referenced in the condition below) and the following conditions apply to any development on the site.
 - a. All development on the site shall be within the “defined development area” as defined in Designation 101: Airways Corporation of New Zealand Ltd: Communication facility;
 - b. The maximum height of any development on the site shall be not more than 25 metres above ground level;
 - c. Development which is additional to that on the site as at 1 February 2000 (which included a tower structure, three “slim-line” masts, the Airways Corporation equipment building and the Transpower repeater building) shall be limited to:
 - i. The replacement of the existing tower structure with another facility, provided that when the new facility is completed and commissioned, the existing tower is decommissioned and demolished;
 - ii. Antennae attached to the existing tower or new tower (provided that these do not exceed the overall height limit);
 - iii. Up to four additional “slim-line” masts of similar design to the three existing masts;
 - iv. Accessory buildings with a maximum height of 4.5 metres; and
 - v. The extension of the site access road.
 - d. Native vegetation alteration (including removal) shall be restricted to:
 - i. Removal of vegetation from within the “defined development area”; and
 - ii. Removal or pruning of any vegetation which compromises the operation of the facility.

Attachments

Schedule of Legal Descriptions

Parcel ID	
Lot 1 DP 137549	

8529 Mangere Electricity Substation

Designation Number	8529
Requiring Authority	Transpower New Zealand Ltd
Location	11, 14 and 16 Driver Road and 307 Massey Road, Mangere
Rollover Designation	No
Legacy Reference	N/A
Lapse Date	Given effect to (i.e. no lapse date)

Purpose

Electricity transmission – Mangere electricity substation.

Conditions

Cultural / Spiritual

1. 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, the New Zealand Historic Places Trust, the Auckland 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 recover archaeological features discovered before work may recommence on the exposed site.

Construction and maintenance noise

2. All construction and maintenance work shall be designed, managed and conducted to ensure that construction and maintenance noise from the site does not exceed the limits in NZS6803:1999 Acoustics–Construction Noise at locations set out in section 6.2 of that standard.

3. Prior to any significant construction work taking place, including any associated significant earthworks, a noise management plan shall be prepared, with the assistance of a suitably qualified and experienced person, that sets out the management procedures in terms of section 8 and Annex E of NZS6803:1999 and the works shall be undertaken in accordance with that noise management plan.

4. The noise management plan required by the above condition 3 shall be submitted to Council's Consents Manager for approval, at least 20 working days prior to the works commencing. The Council's Consents Manager shall respond within 20 working days indicating whether approval is given or refused. Approval shall not be unreasonably withheld.

Vibration

5. Vibration from all construction activities shall not exceed the limits of, and shall be measured and assessed in accordance with, German Standard DIN 4150-3 (1999-02) Structural Vibration – Effects of Vibration on Structures.

Hazardous substances

6 Any new part of the facility containing oil shall be designed to comply with Transpower's Oil Spill Management Policy (TP: GS.54.01), Issue 3, December 2011.

Electric and Magnetic Fields (EMF)

7. Any new works or equipment shall be designed and operated to limit the electric and magnetic field exposures at or beyond the secure boundary of the substation site to 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). That is the public exposure reference levels of 5 kV/m for electric fields and $200 \text{ }\mu\text{T}$ for magnetic flux density at one metre above ground level under maximum normal operating conditions (ie, when there are no faults in the transmission system).

Radio Frequency Interference

8. Any new works or equipment shall comply with NZS 6869:2004 Limits and Measurement Methods of Electromagnetic Noise from High-Voltage a.c. Power Systems, 0.15 to 1000 MHz.

Earth Potential Rise

9. Any new substation earth grids shall be designed, built, and tested to ensure electrical safety at or beyond the designation boundary in accordance with Transpower Standard Design of Substation Earthing TP.DS.52.01, Issue 2, January 2005.

Light spill

10. All exterior lighting shall comply with:

- a. AS/NZS 1158 Lighting for Roads and Public Spaces 2005 Part 3.1; and
- b. Transpower's Guidelines and Information for Switchyard and Grounds Lighting, TP DS 40.03, Issue 1, April 2012; and
- c. AS 4282 1997, Control of Obtrusive Effects of Outdoor Lighting.

Operational Noise

11. A noise management plan shall be submitted for any new equipment (such as transformers, fans and circuit breakers) where noise from such equipment is likely to generate adverse noise effects for any noise sensitive land uses located in the vicinity. .

Outline Plan of Works

12. At the time of submitting an Outline Plan of Works to the Auckland Council Transpower will provide the following:

- a. An Erosion and Sediment Control Plan for any earthworks that exceed 500m^2 and/or 250m^3 ;
- b. A Construction Management Plan; and
- c. An arboricultural report where any future works will occur within the dripline of any tree and/or any tree trimming is proposed.

Advice note

1. Any new works or equipment means those works which were not existing prior to the notification of the Auckland Unitary Plan.

Attachments

Schedule of Legal Descriptions

Parcel ID/Appellation	
Lot 1 DP 143110	Lot 4 DP 21796
Lot 5 DP 21796	

8530 Hobson Street Electricity Substation

Designation Number	8530
Requiring Authority	Transpower New Zealand Ltd
Location	13-21 Hobson Street, Auckland City
Rollover Designation	No
Legacy Reference	N/A
Lapse Date	Given effect to (i.e. no lapse date)

Purpose

Electricity transmission – Hobson Street electricity substation.

Conditions

Cultural / Spiritual

1. 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, the New Zealand Historic Places Trust, the Auckland 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 recover archaeological features discovered before work may recommence on the exposed site.

Construction and maintenance noise

2. All construction and maintenance work shall be designed, managed and conducted to ensure that construction and maintenance noise from the site does not exceed the limits in NZS6803:1999 Acoustics–Construction Noise at locations set out in section 6.2 of that standard.

3. Prior to any significant construction work taking place, including any associated significant earthworks, a noise management plan shall be prepared, with the assistance of a suitably qualified and experienced person, that sets out the management procedures in terms of section 8 and Annex E of NZS6803:1999 and the works shall be undertaken in accordance with that noise management plan.

4. The noise management plan required by the above condition 3 shall be submitted to Council's Consents Manager for approval, at least 20 working days prior to the works commencing. The Council's Consents Manager shall respond within 20 working days indicating whether approval is given or refused. Approval shall not be unreasonably withheld.

Vibration

5. Vibration from all construction activities shall not exceed the limits of, and shall be measured and assessed in accordance with, German Standard DIN 4150-3 (1999-02) Structural Vibration – Effects

of Vibration on Structures.

Hazardous substances

6. Any new part of the facility containing oil shall be designed to comply with Transpower's Oil Spill Management Policy (TP: GS.54.01), Issue 3, December 2011.

Electric and Magnetic Fields (EMF)

7. Any new works or equipment shall be designed and operated to limit the electric and magnetic field exposures at or beyond the secure boundary of the substation site to 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). That is the public exposure reference levels of $k \text{ m}$ for electric fields and $200 \mu\text{T}$ for magnetic flux density at one metre above ground level under maximum normal operating conditions (ie, when there are no faults in the transmission system).

Radio Frequency Interference

8. Any new works or equipment shall comply with NZS 6869:2004 Limits and Measurement Methods of Electromagnetic Noise from High-Voltage a.c. Power Systems, 0.15 to 1000 MHz.

Earth Potential Rise

9. Any new substation earth grids shall be designed, built, and tested to ensure electrical safety at or beyond the designation boundary in accordance with Transpower Standard Design of Substation Earthing TP.DS.52.01, Issue 2, January 2005.

Light spill

10. All exterior lighting shall comply with:

- a. AS/NZS 1158 Lighting for Roads and Public Spaces 2005 Part 3.1; and
- b. Transpower's Guidelines and Information for Switchyard and Grounds Lighting, TP DS 40.03, Issue 1, April 2012; and
- c. AS 4282 1997, Control of Obtrusive Effects of Outdoor Lighting.

Operational Noise

11. A noise management plan shall be submitted for any new equipment (such as transformers, fans and circuit breakers) that is likely to generate noise audible at the designation site boundary.

Outline Plan of Works

12. At the time of submitting an Outline Plan of Works to the Auckland Council Transpower will provide the following:

- a. An Erosion and Sediment Control Plan for any earthworks that exceed 500m^2 and/or 250m^3 ;
- b. A Construction Management Plan; and
- c. An arboricultural report where any future works will occur within the dripline of any tree and/or any tree trimming is proposed.

Advice note

1. Any new works or equipment means those works which were not existing prior to the notification of the Auckland Unitary Plan.

Attachments

Schedule of Legal Descriptions

Parcel ID	
Lot 1 DP91179	

8531 Wairau Road Electricity Substation

Designation Number	8531
Requiring Authority	Transpower New Zealand Ltd
Location	4A Wairau Road, Takapuna
Rollover Designation	No
Legacy Reference	N/A
Lapse Date	Given effect to (i.e. no lapse date)

Purpose

Electricity transmission – Wairau Road electricity substation.

Conditions

Cultural / Spiritual

1. 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, the New Zealand Historic Places Trust, the Auckland 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 recover archaeological features discovered before work may recommence on the exposed site.

Construction and maintenance noise

2. All construction and maintenance work shall be designed, managed and conducted to ensure that construction and maintenance noise from the site does not exceed the limits in NZS6803:1999 Acoustics–Construction Noise at locations set out in section 6.2 of that standard.
3. Prior to any significant construction work taking place, including any associated significant earthworks, a noise management plan shall be prepared, with the assistance of a suitably qualified and experienced person, that sets out the management procedures in terms of section 8 and Annex E of NZS6803:1999 and the works shall be undertaken in accordance with that noise management plan.
4. The noise management plan required by the above condition 3 shall be submitted to Council's Consents Manager for approval, at least 20 working days prior to the works commencing. The Council's Consents Manager shall respond within 20 working days indicating whether approval is given or refused. Approval shall not be unreasonably withheld.

Vibration

5. Vibration from all construction activities shall not exceed the limits of, and shall be measured and assessed in accordance with, German Standard DIN 4150-3 (1999-02) Structural Vibration – Effects of Vibration on Structures.

Hazardous substances

6. Any new part of the facility containing oil shall be designed to comply with Transpower's Oil Spill Management Policy (TP: GS.54.01), Issue 3, December 2011.

Electric and Magnetic Fields (EMF)

7. Any new works or equipment shall be designed and operated to limit the electric and magnetic field exposures at or beyond the secure boundary of the substation site to 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). That is the public exposure 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 (ie, when there are no faults in the transmission system).

Radio Frequency Interference

8. Any new works or equipment shall comply with NZS 6869:2004 Limits and Measurement Methods of Electromagnetic Noise from High-Voltage a.c. Power Systems, 0.15 to 1000 MHz.

Earth Potential Rise

9. Any new substation earth grids shall be designed, built, and tested to ensure electrical safety at or beyond the designation boundary in accordance with Transpower Standard Design of Substation Earthing TP.DS.52.01, Issue 2, January 2005.

Light spill

10. All exterior lighting shall comply with:

- a. AS/NZS 1158 Lighting for Roads and Public Spaces 2005 Part 3.1; and
- b. Transpower's Guidelines and Information for Switchyard and Grounds Lighting, TP DS 40.03, Issue 1, April 2012; and
- c. AS 4282 1997, Control of Obtrusive Effects of Outdoor Lighting.

Operational Noise

11. A noise management plan shall be submitted for any new equipment (such as transformers, fans and circuit breakers) that is likely to generate adverse noise effects for any noise sensitive land uses in the vicinity.

Outline Plan of Works

12. At the time of submitting an Outline Plan of Works to the Auckland Council Transpower will provide the following:

- a. An Erosion and Sediment Control Plan for any earthworks that exceed 500m² and/or 250m³;
- b. A Construction Management Plan; and
- c. An arboricultural report where any future works will occur within the dripline of any tree and/or any tree trimming is proposed.

Advice note

1. Any new works or equipment means those works which were not existing prior to the notification of the Auckland Unitary Plan.

Attachments

Schedule of Legal Descriptions

Parcel ID	
Allotment 563 Parish of Takapuna.	

8532 Highbrook Business Park Underground Electricity Transmission Cable

Designation Number	8532
Requiring Authority	Transpower New Zealand Ltd
Location	Highbrook Business Park
Rollover Designation	No
Legacy Reference	N/A
Lapse Date	Given effect to (i.e. no lapse date)

Purpose

Electricity Transmission – the operation, maintenance and upgrading of underground transmission lines comprising of two 110kV cable circuits and termination structures to convey electricity between Otahuhu and Penrose.

Conditions

Cultural / Spiritual

1. 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, the New Zealand Historic Places Trust, the Auckland 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 recover archaeological features discovered before work may recommence on the exposed site.

Electric and Magnetic Fields (EMF)

2. Any new works or equipment shall be designed and operated to limit the magnetic field exposures to 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). That is the public reference levels of 200 µT for magnetic flux density when measured at one metre above ground level under maximum normal operating conditions (ie, when there are no faults in the transmission system).

Radio frequency interference

3. Any new works or equipment shall comply with NZS 6869:2004 Limits and Measurement Methods of Electromagnetic Noise from High-Voltage a.c. Power Systems, 0.15 to 1000 MHz.

Operational noise

4. A noise management plan shall be submitted for any new equipment (such as transformers, fans and circuit breakers) that is likely to generate noise audible at the designation site boundary.
5. Sound levels shall be measured and assessed in accordance with NZS 6801:2008 Acoustics - Measurement of environmental sound and NZS6802:2008 Acoustics - Assessment of Environmental

Sound.

Construction and maintenance noise

6. All construction and maintenance work shall be designed, managed and conducted to ensure that construction and maintenance noise from the site does not exceed the limits in NZS6803:1999 Acoustics–Construction Noise.

7. Prior to any significant construction work taking place, including any associated significant earthworks, a noise management plan shall be prepared, with the assistance of a suitably qualified and experienced person, that sets out the management procedures in terms of section 8 and Annex E of NZS6803:1999 and the works shall be undertaken in accordance with that noise management plan.

8. The noise management plan required by the above condition 7 shall be submitted to Council's Consents Manager for approval, at least 20 working days prior to the works commencing. The Council's Consents Manager shall respond within 20 working days indicating whether approval is given or refused. Approval shall not be unreasonably withheld.

Existing Utilities

9. The Requiring Authority shall consult and liaise with all utility operators whose activities or interests may be affected by proposed construction or maintenance works prior to undertaking any work pursuant to this designation to confirm that:

- a. The Requiring Authority is aware of the location of all utility services existing at the time of construction in, or adjacent to, the designation and to identify any necessary exploratory excavation and evaluations of potential effects on the proper functioning of the utility services (including potential for earth potential rise or induction hazards) that should be undertaken;
- b. As far as practicable, all utility services (existing at 30 July 2013) located in or adjacent to the designated route are protected from the Works and any associated activities that may interfere with the proper functioning of those services; and
- c. Reasonable access to existing utility services located in or adjacent to the designation is maintained during construction.

10. Construction or maintenance works shall be designed and constructed so as not to cause existing assets of other utilities to be non-compliant with AS/NZS 4853:2012 — Electrical Hazards on Metallic Pipelines.

Hours of Work

11. The hours of work shall be restricted to 7 am to 6 pm Monday to Friday, 8 am to 6 pm Saturday, with no construction or maintenance work undertaken on Sundays and Public Holidays.

Property Access

12. Construction and maintenance of the cables shall be undertaken in such a manner as to ensure that reasonable access to properties on the cable route shall be maintained at all times.

Laying of Cables

13. All new cables shall be installed in accordance with the relevant New Zealand Codes of Practice, including NZECP 34 and 35.

Completion of Construction

14. On completion of works, all carriageways, road markings, signs, property access ways, drainage systems and other structures shall be restored to a standard at least comparable to their condition

before the commencement of construction and shall be made good as soon as practicable.

Outline Plan of Works

15. At the time of submitting an Outline Plan of Works to the Auckland Council Transpower will provide the following:

- a. An Erosion and Sediment Control Plan for any earthworks that exceed 500m²and/or 250m³;
- b. A Construction Management Plan;
- c. An arboricultural report where any future works will occur within the dripline of any tree and/or any tree trimming is proposed; and
- d. Visual assessment, if the works are to be located within 200 metres of Pukekiwiriki Volcanic Crater.

Designation Review

16. The Requiring Authority may, in consultation with the Council, as the road controlling authority:

- a. Review the width of the area designated for the project;
- b. Identify:
 - i. Any areas of designated land that are no longer necessary for the ongoing operation, maintenance, renewal and protection of the underground cables and ancillary activities; and
 - ii. Any areas of designated land within the legal road boundaries that are more than 2.5 metres from the centreline of the cables (excluding joint bays, which should be 3 metres in width); and
- c. Remove the designation over the areas identified in (b) above in accordance with section 182 of the Act and provide a plan of the final designated areas to the Council for inclusion in the Auckland Unitary Plan.

Attachments

Schedule of Legal Descriptions

Parcel ID/Appellation	
Lot 510 DP 387222	Lot 203 DP 373062
Lot 230 DP 416793	Lot 202 DP 373062
6869070	Lot 1002 DP426788
Lot 221 DP 387222	Lot 34 DP 417145
Lot 232 DP 417145	Lot 222 DP 396117

8533 Wiri Electricity Substation

Designation Number	8533
Requiring Authority	Transpower New Zealand Ltd
Location	656 Great South Road, Manukau
Rollover Designation	No
Lapse Date	Given effect to (i.e. no lapse date)

Purpose

Electricity transmission – Wiri electricity substation.

Conditions

General

1. The initial construction works at the Site shall be undertaken in general accordance with the plans and information submitted within the Assessment of Environmental Effects for the Notice of Requirement (reference “Notice of Requirement for Wiri Electricity Substation, dated 9 July 2019”) and further information submitted to council.

Cultural effects

2. 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, the Auckland 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 recover archaeological features discovered before work may recommence on the exposed site.
3. Kaitiaki representatives from Ngati Tamaoho are to be given the opportunity to monitor the earthworks for the outdoor to indoor conversion project onsite and conduct karakia and other such religious or cultural ceremonies and activities as are appropriate.

Construction and maintenance noise and vibration

4. All construction and maintenance work shall be designed, managed and conducted to ensure that construction and maintenance noise in accordance with NZS6803:1999 Acoustics– Construction Noise.
5. Prior to any significant construction work taking place, including any earthworks, a construction noise and vibration management plan (CNVMP) shall be prepared, with the assistance of a

suitably qualified and experienced person, that sets out the management procedures in terms of section 8 and Annex E of NZS6803:1999 and German Standard DIN 4150-3 (1999-02) Structural Vibration - Effects of Vibration on Structures. The CNVMP shall be submitted to the Team Leader Compliance Monitoring South for approval, at least 20 working days prior to the works commencing.

6. Where reasonable risk of vibration damage during construction activities has been identified, vibration shall be measured and assessed in accordance with, German Standard DIN 4150-3 (1999-02) Structural Vibration – Effects of Vibration on Structures

Earthworks

7. Prior to any significant construction work taking place, including any earthworks, an Erosion and Sediment Control Plan (ESCP) shall be prepared in accordance with GD05 and submitted to the Team Leader Southern Compliance Monitoring.
8. No earthworks activity on the subject site shall commence until written confirmation from the council is provided that the ESCP satisfactorily meets the requirements of GD05, and the erosion and sediment control measures referred to in that plan have been constructed or certified by a suitably qualified and experienced person.

Hazardous substances

9. Any new part of the facility containing oil shall be designed to comply with Transpower's Oil Spill Management Policy (TP: GS.54.01). Issue 4, December 2014.

Traffic

10. A construction traffic management plan (CTMP) shall be submitted to the council and approved by the Team Leader, Southern Compliance Monitoring, in conjunction with Auckland Transport, and the approved CTMP shall be adhered to throughout the duration of the construction of the outdoor to indoor conversion project onsite to the satisfaction of Auckland Council.
11. Access to the site will be only from the existing access.

Radio frequency interference

12. Any new works or equipment shall comply with NZS 6869:2004 Limits and Measurement Methods of Electromagnetic Noise from High-Voltage a.c. Power Systems, 0.15 to 1000 MHz.

Earth potential rise

13. Any new substation earth grids shall be designed, built, and tested to ensure electrical safety at or beyond the designation boundary is in accordance with Transpower Standard Design of Substation Earthing TP.DS.52.01, Issue 3, May 2016.

Light spill

14. All exterior lighting shall comply with:
 - (a) AS/NZS 1158 Lighting for Roads and Public Spaces 2005 Part 3.1; and
 - (b) Transpower's Guidelines and Information for Switchyard and Grounds Lighting, TP

- DS 40.03, Issue 3.1, August 2018; and
(c) AS 4282 1997, Control of Obtrusive Effects of Outdoor Lighting.

Operational noise

15. Any new works or equipment (such as transformers, necessary fans and circuit breakers) shall be designed and operated to ensure that the following noise limits shall not be exceeded (when combined cumulatively with the other operating elements of the substation):
- (a) At or within the boundary of any Business – General Business zoned site outside of the designated area:
 - i. All times: 65dBA LAeq
 - (b) At or within the boundary of any residentially zoned site outside of the designated area:
 - i. Monday to Saturday 7am to 10pm, and Sunday 9am to 6pm: 55dB LAeq
 - ii. All other times: 45dB LAeq; and iii. All other times: 75dB LAFmax
 - (c) At or within the boundary of any Business - Metropolitan Centre zoned site outside of the designated area:
 - i. Daytime 7am to 11pm: 65dB LAeq
 - ii. Night-time 11pm to 7am: 60dB LAeq; and 75dB LAFmax.

Electric and Magnetic Fields (EMF)

16. Any new equipment shall be designed and operated to limit the electric and magnetic field exposures at or beyond the secure boundary of the substation site to 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). That is the public exposure reference levels of 5 kV/m for electric fields and 200 μ 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).
17. Transpower shall within 6 months of completing the outdoor to indoor conversion project onsite engage an electrical engineer to confirm the substations complies with the ICNIRP guidelines as evidenced by actual measurements of electric and magnetic fields in relevant locations. The engineer's report shall be submitted to the Council's Team Leader Southern Compliance Monitoring. In the event of any non-compliance, the report shall demonstrate how compliance can be achieved and the timeframes for completion.

Landscaping and visual amenity

- 18 The requiring authority shall ensure that a planting strip is retained and managed within the Site along the full extent of the western (Great South Road) boundary (excluding the access way). The planting strip shall be a minimum width of 40 metres from the boundary in the area north of the access way to Great South Road, and a minimum width of 10 metres from the boundary in the area south of the access way to Great South Road.

All existing vegetation associated with the above condition shall be maintained regularly and kept in a tidy condition, including replacement if any planting dies or becomes over mature. The replacement of any vegetation shall be planted no later than the next planting season (i.e. April to September) following discovery of the need for replacement.

Advice note:

Any new works or equipment means those works or equipment which were not existing prior to the confirmation of this designation and inclusion in the Auckland Unitary Plan (Operative in Part).

Attachments

No attachments.

8534 Flat Bush sub precinct C

Designation Number	8534
Requiring Authority	Transpower New Zealand Ltd
Location	36 Tir Conaill Avenue, 125 Murphys Road, 23 Murphys Park Drive, 125B Murphys Road Flat Bush
Lapse Date	Given effect to (i.e. no lapse date)

Purpose

Electricity transmission - National Grid Underground 220kV cables, above ground cable termination structures and ancillary works [Protection Only]

Conditions

Designation lapse

1. In accordance with section 184(1)(c) of the Resource Management Act 1991 (the "RMA"), this designation will lapse if not given effect to within 10 years from the date on which it is included in the Auckland Unitary Plan.

General conditions

2. As soon as practicable following completion of construction of the underground cables, the above ground cable termination structures and ancillary works, the requiring authority shall provide as-built plans to the Council.
3. The Requiring Authority will, as soon as practicable following completion of the road network (subject to the designation) and Transpower cable works:
 - a) Review the width of the area designated for the project; and
 - b) Identify any areas of designated land that are no longer necessary for the on-going operation, maintenance, renewal and protection of the underground cables and ancillary activities;
 - c) Remove the designation over any surplus areas identified in (b) above in accordance with section 182 of the Act and provide a plan of the final designated areas to the Council for inclusion in the Auckland Unitary Plan.
4. The Requiring Authority (Transpower) shall not require Auckland Transport to seek written consent under Section 176(1)(b) of the RMA for the following activities associated with the routine maintenance, replacement and urgent repair of its road:
 - Road Marking; and
 - Road resurfacing and repairs, and replacement kerb and channel, with excavations less than 500mm in depth; and
 - Installation or reinstallation of signs and support posts with excavations less than 500mm in depth.

Attachments

No attachments.