



**TRANSPOWER**

*Keeping the energy flowing*

Transpower House  
96 The Terrace  
PO Box 1021  
Wellington 6140  
New Zealand  
P 64 4 495 7000  
F 64 4 495 7100  
[www.transpower.co.nz](http://www.transpower.co.nz)

Adele Radburnd  
City Planning Unit  
Strategy and Planning Group  
Christchurch City Council

By email: [adele.radburnd@ccc.govt.nz](mailto:adele.radburnd@ccc.govt.nz)

### **Notices of requirement lodged by Transpower NZ Limited**

We refer to Christchurch City Council's 18 July 2014 letter notifying Transpower New Zealand Limited (Transpower) of the Order in Council (OIC) at it relates to the review and replacement of the existing Christchurch City District Plan. We also note your reliance on the earlier request for rollover notices.

The OIC (clause 4(11), Schedule 1) contemplates that an earlier request can be regarded as a request made under the OIC. Clause 4(4) allows designations to be rolled over with modifications. The clause sets out the process in detail, including stating that requiring authorities have 30 working days to advise of rollover designations and that the council must not notify a draft proposal before the end of this 30 working day timeframe (clause 4(2)(b)). Clause 4(5) of Schedule 1 requires rollover designations (including modifications sought by requiring authorities) to be included in the notified replacement plan.

Transpower has responded to the Council's renewed request as quickly as it has been able given the condensed timeframes in the OIC.

Further to the council's request, we **enclose** notices of requirement on behalf of Transpower. To the extent that they are inconsistent, these notices of requirement replace the earlier notices lodged with the Council.

We note that clause 4(7) contemplates that a notice of requirement for a new designation or an alteration to an existing designation can both be processed as part of the District Plan Review. In order to avoid duplicate hearing processes, consistent with the objectives of the OIC, please confirm that the designations will be rolled over with the modifications sought.

Yours sincerely

Dhilum Nightingale  
**Corporate Counsel**

# Proposed Christchurch City District Plan – Notice of Requirement to Include Designations

Prepared for Transpower New Zealand Ltd (Transpower) By Beca Ltd (Beca)

For Submission to: Christchurch City Council

14 August 2014

*Keeping the energy flowing*



## **ADDRESS FOR SERVICE:**

Ainsley McLeod C/- Beca Ltd

410 Colombo Street, Sydenham, Christchurch 8023

PO Box 13960, Armagh Street, Christchurch 8141

Telephone: 027 215 0600

Email: [ainsley.mcleod@beca.com](mailto:ainsley.mcleod@beca.com)

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## 1 Introduction

Transpower New Zealand Limited (Transpower) is the requiring authority responsible for a number of designations within the jurisdiction of Christchurch City Council. In accordance with Clause 4(2) of Schedule 1 of the Canterbury Earthquake (Christchurch Replacement District Plan) Order 2014 (OIC), Transpower now provides written notice to Christchurch City Council of its requirement to include (“roll-over”) Transpower’s existing designations in the Proposed Christchurch City Plan (“the Proposed Plan”), with modifications.

To the extent that they are inconsistent, this written notice replaces Transpower’s earlier “roll-over” request, made under the First Schedule to the Resource Management Act 1991 (RMA) that was dated 31 March 2014.

Transpower requests that the following designations be rolled over in the Plan:

- Addington Substation (operative District Plan Map 38);
- Bromley Substation (operative District Plan Map 40); and
- Islington Substation and Systems Control Centre (operative District Plan Maps 36 and 37).

As provided for by Clause 4(4) of Schedule 1 of the OIC, Transpower seeks modifications to these designations. The details of the modifications and the reasons for the modifications are set out in detail in the subsequent sections of this document. No new requirements for designation are sought in this notice.

Further, in the interests of keeping Council informed future asset plans, Transpower advises that it is in the process of selling a portion of the Addington Substation site to Orion New Zealand Limited. Transpower intends to give notice of the removal of the designation over that part of the site pursuant to section 182 of the RMA following completion of this sale.

## 2 Addington Substation

Transpower requests that the Addington Substation designation be included in the Proposed Plan, with modifications. The details of the modifications and reasons for the modifications are set out below:

### 2.1 Modifications

	Current notation	Modified notation
Requiring Authority	Transpower (NZ) Ltd	<b>Transpower New Zealand Limited</b>
Designation notation	Addington Substation	No modification
Designation purpose	Electricity Substation	<b>National Grid</b>
Legal description	Lot 3 DP 60544, Lot 7 DP 62347 and Section 1 SO 19130 (being part of CT 39D/175)	No modification
Location	Clarence & Princess Street	<b>Corner of Princess Street and Whiteleigh Avenue</b>
Area	4.5694ha	No modification
Expiry timeframe exceeding 5 years	N/A	N/A
Map	As shown on operative Planning Map 38	No modification to extent of designation mapped.
Conditions	As included in Volume 3, Part 12, Clause 2.5.1 of the operative District Plan	See section 2.2.4 below

### 2.2 Reasons for Modifications

#### 2.2.1 Requiring Authority

Transpower requests that the Requiring Authority name be amended to read “**Transpower New Zealand Limited**” in order to correctly reflect Transpower’s legal name.

#### 2.2.2 Designation Purpose

Transpower requests that the designation purpose be amended to read “**National Grid**” in order to provide a clearer statement of the works on, and use of, the site. The term “National Grid” also reflects the terminology included in the National Policy Statement on Electricity Transmission 2008.

#### 2.2.3 Location

Transpower requests that the designation location be amended to read “**Corner of Princess Street and Whiteleigh Avenue**” in order to reflect the correct physical address of the substation.

#### 2.2.4 Conditions

Transpower requests that designation condition 3(b) that applies to Addington substation be amended as follows (amendments presented as “track changes” to current conditions included in Volume 3, Part 12, Clause 2.5.1 of the operative District Plan

*(b) Any new buildings shall be set back a minimum of 6m from a boundary of the site with a road."*

This more accurately reflects the intent of the condition and its role in managing future development at the substation site.

### 3 Bromley Substation

Transpower requests that the Bromley Substation designation be included in the Proposed Plan, with modifications. The details of the modifications and reasons for the modifications are set out below:

#### 3.1 Modifications

	Current notation	Modified notation
Requiring Authority	Transpower (NZ) Ltd	<b>Transpower New Zealand Limited</b>
Designation notation	Bromley Substation	No modification
Designation purpose	Electricity Substation	<b>National Grid</b>
Legal description	Lot 2 DP 57450, Pt RS 1149 and Lot 1 DP 57447, Blk XII, ChCh S.D. (CT 34A/223 & 225)	<b>Lot 2 DP 57450 and Lot 2 473065</b>
Location	Ruru Road	No modification
Area	6.761ha	<b>5.5684ha</b>
Expiry timeframe exceeding 5 years	N/A	N/A
Map	As shown on operative Planning Map 40	<b>Reduced extent of designation to reflect recent sale of a portion of the site.</b>
Conditions	As included in Volume 3, Part 12, Clause 2.5.1 of the operative District Plan	See section 3.2.4 below

#### 3.2 Reasons for Modifications

##### 3.2.1 Requiring Authority

Transpower requests that the Requiring Authority name be amended to read “**Transpower New Zealand Limited**” in order to correctly reflect Transpower’s legal name.

##### 3.2.2 Designation Purpose

Transpower requests that the designation purpose be amended to read “**National Grid**” in order to provide a clearer statement of the works on, and use of, the site. The term “National Grid” also reflects the terminology included in the National Policy Statement on Electricity Transmission 2008.

##### 3.2.3 Legal Description, Area and Map

Transpower requests that the legal description, land area and associated map of the existing designation be amended by reducing the area subject to the designation in order to reflect a recent sale of a portion of the site to Orion New Zealand Limited. The land sold to Orion was part of Lot 1 DP 57447 on the north side of Ruru Road, and is now known as Lot 1 DP 473065. Accordingly, Transpower now gives notice that its designation for Bromley Substation no longer includes Lot 1 DP 473065. The Bromley Substation designation now comprises: Lot 2 DP 57450 (3.2097ha) and Lot 2 DP 473065 (2.3587ha) as shown in the Computer Freehold Register (CFR) (attached as **Appendix A**). An updated plan of the designation is also attached as **Appendix B**.

### 3.2.4 Conditions

Transpower requests that designation condition 3(b) that applies to Bromley substation be amended as follows (amendments presented as “track changes” to current conditions included in Volume 3, Part 12, Clause 2.5.1 of the operative District Plan

*(b) Any new bBuildings shall be set back a minimum of 6m from a boundary of the site with a road.“*

This more accurately reflects the intent of the condition and its role in managing future development at the substation site.



## 4 Islington Substation and Systems Control Centre

Transpower requests that the Islington Substation and Systems Control Centre designation be included in the Proposed Plan, with modification. The details of the modifications and reasons for the modifications are set out below:

### 4.1 Modifications

	Current notation	Modified notation
Requiring Authority	Transpower (NZ) Ltd	<b>Transpower New Zealand Limited</b>
Designation notation	Islington Substation and Systems Control Centre	No modification
Designation purpose	Electricity Substation	<b>National Grid (including National Grid Training Facility)</b>
Legal description	Lot 1 DP 70489 (being part of CT 41A/55)	Lot 1 DP 61259 and Lot 1 DP 70489
Location	Moffett Street, Gilberthorpes Road and Roberts Road	No modification
Area	21.2246ha	<b>24.9946ha</b>
Expiry timeframe exceeding 5 years	N/A	N/A
Map	As shown on operative Planning Maps 36 and 37	<b>Alter boundaries of the designation as described in 4.2.3 below and shown on the plan attached as Appendix D.</b>
Conditions	As included in Volume 3, Part 12, Clause 2.5.1 of the operative District Plan	See sections 4.2.4 and 4.3.7 below.

### 4.2 Reasons for Modifications

#### 4.2.1 Requiring Authority

Transpower requests that the Requiring Authority name be amended to read “**Transpower New Zealand Limited**” in order to correctly reflect Transpower’s legal name.

#### 4.2.2 Designation Purpose

Transpower requests that the designation purpose be amended to read “**National Grid (including National Grid Training Facility)**” in order to provide a clearer statement of the works on, and use of, the site. The term “National Grid” also reflects the terminology included in the National Policy Statement on Electricity Transmission 2008. The National Grid Training Facility component of the requested modification is further detailed in section 4.3 below.

#### 4.2.3 Legal Description, Area and Map

Transpower requests that the legal description, land area and associated map be amended by:

- Removing the designation notation on Planning Map 37 that shows a parcel of land adjacent to the substation site (known as Lot 2 DP 58224) as designated. This area of land is not subject to the existing, or modified, designation; and
- Modifying the boundaries of the existing designation to include adjacent Lot 1 DP 61259 (an area of 3.77ha). This area of land is owned by Transpower and will accommodate the National Grid Training Facilities (detailed below). The area of land has been the subject of a designation for the Islington Substation and Systems Control Centre in favour of Transpower in the past, and as recently as 2001.

The area subject to the designation is contained in Computer Freehold Register (CFR) CB41A/55 (attached as **Appendix C**). An updated plan of the designation is also attached as **Appendix D**.

#### 4.2.4 Existing Conditions

Transpower requests that the designation conditions that apply to the Islington Substation be amended as follows (amendments presented as “track changes” to current conditions included in Volume 3, Part 12, Clause 2.5.1 of the operative District Plan):

##### **“Special conditions**

...

4. *With respect to the **Islington Substation and Systems Control Centre** :*

...

(b) *~~Any new b~~Buildings shall be set back a minimum of 10m from a boundary of the site with a road and 3m from the boundary of the site with a site in a Living zone.*

(c) *~~Any new b~~Buildings shall not project beyond a building envelope constructed by recession planes from points 2.3m above all site boundaries that adjoin a site in a Living zone, as shown in Volume 3, Part 12, Appendix 6 diagram A and D.*

...

5. *With respect to all sites, no facility shall ~~cause~~~~emit~~ radio frequency electromagnetic radiation in excess of the exposure standards in NZS 2772.1:~~(1999)~~ where members of the public may be exposed.*

6. *With respect to all sites, no facility shall create exposures to power frequency electric and magnetic fields in areas normally accessible to the public exceeding ~~400~~200 micro teslas as measured and assessed in accordance with the International Commission on Non-ionising Radiation Protection Guidelines.*

7. *With respect to all sites, all works shall comply with Transpower's code of practice ‘Oil Spill Management’ ‘Oil Containment Facilities and Spill Mitigation Code of Practice (Issued December 2011-2 March 1994)’.* “

The amendments sought to Conditions 4(b) and (c) more accurately reflect the intent of the conditions and their role in managing future development at the substation site.

The amendment sought to Condition 5 better reflects the terminology contained in the relevant, and referenced, standard and clarifies the intent and application of the standard.

The amendment sought to Condition 6 reflects the current International Commission on Non-Ionising Radiation Protection Guidelines and is therefore the appropriate standard for electric and magnetic fields.

The amendment sought to Condition 7 updates the reference to Transpower's code of practice to reflect the most recent code of practice document. The code of practice included in the current condition has been superseded.

New conditions are also sought as part of the National Grid Training Facility component of this designation (see section 4.3.7 below).

### **4.3 National Grid Training Facility**

Transpower is seeking to develop a site adjacent to the existing Islington Substation and Systems Control Centre as a National Grid Training Facility. The national training facilities are currently located in Omaka (Marlborough). The Omaka facilities require substantial upgrade and Transpower has now decided to develop a new training facility at the Islington site. The Islington site provides significant advantages and efficiencies for a number of reasons including:

- Its location in Christchurch, being easily accessible from across New Zealand;
- Its proximity to the recently developed and upgraded National Grid Operations Control Centre at Islington;
- Its proximity to a number of Transpower "live" assets (including accommodation facilities); and
- Land availability and ownership.

The training facility is necessary to provide a qualified and competent workforce to meet transmission industry needs in relation to specialist skills for the installation, commissioning, maintenance and operation of National Grid assets. The Facility provides controlled, safe (as the Training Facility transmission lines are not live), practical and realistic training facilities that, in turn, contribute to the safety of Transpower (and contractor) staff on-site. The facility will cater for the skill development of transmission line mechanics, tower painters, foundation workers, patrollers, condition assessors, vegetation workers and land liaison personnel. The physical components of the Facility are required to deliver training that aligns with Transpower's minimum competency standards. These are described in greater detail in 4.3.3 and 4.3.4 below.

#### **4.3.1 Notice of Requirement**

While not strictly specified in Clause 4 of Schedule 1 of the OIC a completed Form 18 (the prescribed form) and the information requirement by that form is attached as **Appendix E** and included within this document.

#### **4.3.2 Description of the Site**

Transpower is seeking to modify the existing "Islington Substation and Systems Control Centre" designation to include an adjacent 3.77ha parcel of land that is legally described as Lot 1 DP 61259. It is proposed that the resultant 24.9946ha designated site be developed (primarily on the additional portion of designated land) as a National Grid Training Facility.

The site is bounded by Moffett Street, Giberthorpes Road and Roberts Road and is currently open pasture traversed by a number of transmission lines (including their support structures) and a distribution line (and its support structures). The site is adjacent to the Islington Substation and the recently upgraded and developed National Grid Operations and Control Centre. Residential properties are located adjacent to the southern and western boundaries of the site. The site is further described in the Statement of Landscape and Visual Effects attached as **Appendix F**.

Orion is responsible for the distribution lines that traverse the site. These lines are to be undergrounded in the near future.

#### **4.3.3 Description of the Facility (area of modified designation)**

The Training Facility will replicate a limited range of transmission line assets that are owned and operated by Transpower in order to enable training to be provided that is specific to the trade skills required to work competently on the various assets. The transmission line assets that form this facility will be “de-energised”, meaning that the conductors will not carry electricity. It is anticipated that five “replica” transmission lines (accommodating 8 circuits) will be constructed at the site as follows:

- A 350kV Line (HVDC, single circuit) including 4 lattice towers up to a maximum height of 28m.
- A 110kV Line (single circuit, simplex conductors) including 7 structures up to a maximum height of 23.5 metres. The structures will include lattice towers and steel, concrete and wooden poles.
- A 110kV Line (double circuit with one simplex and one duplex circuit) including 4 structures up to a maximum height of 25.5m. The structures will include lattice towers and a steel pole.
- A 220kV Line (double circuit with one simplex and one duplex circuit) including 3 structures up to a maximum height of 26.5m. The structures will include lattice towers and a steel pole. This transmission line will also include an overhead earthwire. One of these 200kV lattice towers will be used for tower construction training.
- A 400kV Line (double circuit, triplex conductors) including 4 structures up to a maximum height of 28 metres. The structures will include lattice towers and a steel pole. This transmission line will include an overhead OPGW (optical ground wire).

Subject to ground conditions and the presence of underground services, Transpower anticipates using a range of foundation designs for these structures, including base plate, grillage and piled foundations.

In addition the Training Facility will include:

- Two 5m x 5m construction pits excavated to a depth of 2.5m with suitable backfilled soil for pole construction training.
- One 10m X 10m construction pit excavated to a depth of 2.5m with suitable backfill soil for lattice tower base setup and pole construction training.
- One pre-constructed base for lattice tower construction training.
- Equipment storage.

It is not anticipated that the site will be surrounded by a large security fence (as occurs adjacent to a substation/switchyard). However, the site will be fenced and landscaped as described in 4.3.6 below.

#### **4.3.4 Description of the Facility (area of existing designation)**

A number of activities associated with the operation of the Training Facility will be accommodated in the portion of the site that is subject to the existing designation, both within existing buildings and new buildings (where these are required). In particular, the facility will include:

- Training rooms;
- Workshops;
- Equipment storage (including a range of specialised vehicles such as mobile lines maintenance and construction plant); and

- Kitchen and ablution facilities.

It is anticipated that additional car parking will be required on-site, either within the existing or modified designation.

#### **4.3.5 Operation of the Facility**

The site will cater for training up to 24 people at any given time. All training will occur during weekday daytime hours. On the basis of current training schedules it is anticipated that the facility will be used for 45 weeks over a year. Trainees may be working at height for a maximum of 5 hours per day (Monday – Friday).

Training activities may include:

- Tower and pole construction;
- Conductor stringing;
- Insulator replacement;
- Conductor maintenance;
- Emergency scenario training (for instance tower or pole failure);
- Tower maintenance and painting (dry and wet abrasive blasting);
- Structure replacement; and
- Simulated live line training.

Noise associated with works at the site will be related to vehicle use, such as an idling truck (with mounted crane). This is anticipated to be 75dB at 8m for a maximum of 4 hours per day. On occasions (8 five day training sessions per year) tower painting training (including abrasive blasting) will generate noise to a maximum of 91dB at 10m.

#### **4.3.6 Effects on the Environment and Proposed Mitigation**

##### Positive Effects

The proposed designation modification provides for a Training Facility to develop and enhance the skills of a specialist workforce that is responsible for ensuring that the National Grid is well maintained, in a safe manner. As such, the designation provides for the health, safety and well-being of Transpower's (and its contractors) workforce. Similar, through ensuring adequate and reliable electricity transmission, the proposed designation provides for the economic and social well-being of people and communities throughout New Zealand. Lastly, the Facility will also be a significant asset to Christchurch city in that it will attract approximately 1,000 people to the city for training purposes over the course of a year.

##### Visual, Landscape and Privacy Effects

The primary effect associated with the proposed designation modification and the use of the site as a Training Facility relates to potential visual and amenity effects on the approximately 20 residential properties located immediately to the south and west of the site. A landscape and visual assessment (attached as **Appendix F**) considers these effects.

The report concludes that the designation modification, and proposed Training Facility on the modified portion of the designation not introduce any elements that new to the adjoining residences although the density and proximity of the various conductors, towers and poles will increase. In addition, the introduction of more activity in close proximity to these properties, including people regularly working and height may also result in some loss of amenity including shading and loss of

privacy. Given their current outlook it is likely that adjoining residents will be more sensitive to these broader effects on amenity when compared to a general change in scene.

The assessment concludes that the overall visual effects will not be significant, subject to mitigation and separation (as recommended) such as a 15 metre buffer zone, planting and sensitive location of outdoor gathering areas. It is noted that the extent of planting, and the associated buffer will be determined following the completion of a final site layout and in consultation with neighbouring owners and a landscape architect. This will form the basis of a designation condition.

#### Noise Effects

As described above, the Training Facility will generate noise as a result of vehicle operations at the site and some specific activities, such as tower construction, tower painting and conductor stringing. It is anticipated that any adverse noise effects that have the potential to be more than minor can be managed and mitigated through designation conditions and appropriate distance to residential boundary separation distances.

#### **4.3.7 Nature of the Proposed Restrictions/Conditions**

##### Area of Modified Designation

It is proposed that conditions are applied to the modified (additional portion) of the designation only. Such conditions should relate specifically to the management of actual and potential effects of the Training Facility and relate to the following:

- Setback from the site boundaries with residential uses;
- Landscaping to provide for privacy and visual mitigation;
- Noise; and
- Maximum structure height.

Transpower will be in a position to provide proposed conditions prior to the hearings panel's consideration of the proposed modification and following the completion of a conceptual design and layout for the site.

##### Area of Existing Designation

It is proposed that the following amendment is made, in addition to those set out above in 4.2.4 (and duplicated here), to the existing designation included in Volume 3, Part 12, Clause 2.5.1 of the operative District Plan):

#### ***“Special conditions***

...

*4. With respect to the **Islington Substation and Systems Control Centre** as it applies to Lot 1 DP 70489 : ...”*

#### **4.3.8 Tanspower's Objectives**

Transpower is the state-owned enterprise that owns and operates the National Grid, or high voltage electricity transmission network, that carries electricity around the country. It connects power stations owned by generating companies to substations feeding the local networks that distribute electricity to homes and businesses. Some businesses connect directly to the National Grid. The National Grid represents the asset base and includes towers, poles, lines, cables and substations, that are connected across all of New Zealand.

Transpower's Statement of Corporate Intent for July 2012 to June 2015 includes the following:

*"The role of the National Grid is to enable New Zealand to achieve its international and local aspirations. It is vital infrastructure of critical importance to all New Zealand. New Zealand needs a reliable supply of electricity, delivered to areas of demand, in order to:*

- *Sustain commercial confidence;*
- *Enable economic growth and development;*
- *Enable New Zealand to effectively participate and be competitive in the global community; and*
- *Maintain and enhance the living standards of all New Zealanders."*

Therefore, one of Transpower's key objectives is to maintain and develop the National Grid. In order to do this it is critical that an adequate and skilled workforce is available to develop, maintain and operate the National Grid. The proposed Training Facility is essential to developing the requisite skills and is therefore fundamental to Transpower's objectives.

Transpower's overall objective for the training facility is:

**To facilitate the construction, operation, maintenance, development and (when appropriate) disestablishment of overhead transmission line infrastructure by providing a national overhead line training facility in a central location.**

A modified designation affords the appropriate protection of the facility that will be used in conjunction with the adjacent (currently designated) site. The modified designation enables the consistent use and management of the site and provides the community with certainty in terms of the use of the site.

#### **4.3.9 Outline Plan**

Transpower will provide an outline plan (in accordance with section 176A of the RMA) at the completion of detailed design of the site and Training Facility. The outline plan will address the matters listed in Section 176A in detail as follows:

- the height, shape, and bulk of the public work, project, or work; and
- the location on the site of the public work, project, or work; and
- the likely finished contour of the site; and
- the vehicular access, circulation, and the provision for parking; and
- the landscaping proposed; and
- any other matters to avoid, remedy, or mitigate any adverse effects on the environment.

The outline plan will address the works within the existing and modified portions of the designation.

Appendix A

Computer Freehold Register  
- Bromley Substation





**COMPUTER FREEHOLD REGISTER  
UNDER LAND TRANSFER ACT 1952**

**Historical Search Copy**



R. W. Muir  
Registrar-General  
of Land

**Identifier** CB34A/225  
**Land Registration District** Canterbury  
**Date Issued** 21 January 1991

**Cancelled**

**Prior References**  
PROC 353099

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**Estate** Fee Simple  
**Area** 3.5513 hectares more or less  
**Legal Description** Lot 1 Deposited Plan 57447

**Original Proprietors**  
Trans Power New Zealand Limited

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**Interests**

Subject to Part IV A Conservation Act 1987  
Subject to Section 3 Petroleum Act 1937  
Subject to Section 8 Atomic Energy Act 1945  
Subject to Section 3 Geothermal Energy Act 1953  
Subject to Sections 6 and 8 Mining Act 1971  
Subject to Sections 5 and 261 Coal Mines Act 1979  
5018758.1 Change of Name of Trans Power New Zealand Limited to Transpower New Zealand Limited - 17.1.2001 at 9:00 am  
5864388.3 Lease Term commencing on 22.12.2003 to 22.6.2071 (Right of Renewal) CT 131837 issued - 13.1.2004 at 2:54 pm  
8316589.1 Variation of Lease 5864388.3 - 26.11.2009 at 1:54 pm  
9650949.4 Surrender of Lease 5864388.3 as to Lot 1 DP 473065 - 1.4.2014 at 4:14 pm  
9650949.5 CTs issued - 1.4.2014 at 4:14 pm

<b>Legal Description</b>	<b>Title</b>
Lot 1 Deposited Plan 473065	646394
Lot 2 Deposited Plan 473065	646395

CANCELLED  
CANCELLED

[illegible]



# COMPUTER FREEHOLD REGISTER UNDER LAND TRANSFER ACT 1952



R. W. Muir  
Registrar-General  
of Land

## Search Copy

**Identifier** 646394  
**Land Registration District** Canterbury  
**Date Issued** 01 April 2014

### Prior References

CB34A/225

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**Estate** Fee Simple  
**Area** 1.1926 hectares more or less  
**Legal Description** Lot 1 Deposited Plan 473065

### Proprietors

Orion New Zealand Limited

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### Interests

Subject to Section 3 Petroleum Act 1937

Subject to Part IV A Conservation Act 1987

Subject to Section 8 Atomic Energy Act 1945

Subject to Sections 5 and 261 Coal Mines Act 1979

Subject to Section 3 Geothermal Energy Act 1953

Subject to Sections 6 and 8 Mining Act 1971

9650949.6 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 1.4.2014 at 4:14 pm

Subject to a right of way over part marked A, D, F, G & H on DP 473065 created by Easement Instrument 9650949.7 - 1.4.2014 at 4:14 pm

Appurtenant hereto is a right of way created by Easement Instrument 9650949.7 - 1.4.2014 at 4:14 pm

The easements created by Easement Instrument 9650949.7 are subject to Section 243 (a) Resource Management Act 1991

Subject to a right to convey electricity, telecommunications and computer media over part marked B, C, D and G on DP 473065 created by Easement Instrument 9650949.8 - 1.4.2014 at 4:14 pm

Some of the easements created by Easement Instrument 9650949.8 are subject to Section 243 (a) Resource Management Act 1991

Subject to a right to convey water over part marked A, D, E, G and H on DP 473065 created by Easement Instrument 9650949.9 - 1.4.2014 at 4:14 pm

The easements created by Easement Instrument 9650949.9 are subject to Section 243 (a) Resource Management Act 1991



# COMPUTER FREEHOLD REGISTER UNDER LAND TRANSFER ACT 1952



R. W. Muir  
Registrar-General  
of Land

## Search Copy

**Identifier** 646395  
**Land Registration District** Canterbury  
**Date Issued** 01 April 2014

### Prior References

CB34A/225

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**Estate** Fee Simple  
**Area** 2.3587 hectares more or less  
**Legal Description** Lot 2 Deposited Plan 473065

### Proprietors

Transpower New Zealand Limited

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### Interests

Subject to Section 3 Petroleum Act 1937

Subject to Section 8 Atomic Energy Act 1945

Subject to Part IV A Conservation Act 1987

Subject to Section 3 Geothermal Energy Act 1953

Subject to Sections 5 and 261 Coal Mines Act 1979

Subject to Sections 6 and 8 Mining Act 1971

5864388.3 Lease Term commencing on 22.12.2003 to 22.6.2071 (Right of Renewal) CT 131837 issued - 13.1.2004 at 2:54 pm.

8316589.1 Variation of Lease 5864388.3 - 26.11.2009 at 1:54 pm

9650949.6 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 1.4.2014 at 4:14 pm

Subject to a right of way over part marked E on DP 473065 created by Easement Instrument 9650949.7 - 1.4.2014 at 4:14 pm

Appurtenant hereto is a right of way created by Easement Instrument 9650949.7 - 1.4.2014 at 4:14 pm

The easements created by Easement Instrument 9650949.7 are subject to Section 243 (a) Resource Management Act 1991

Appurtenant hereto is a right to convey electricity, telecommunications and computer media created by Easement Instrument 9650949.8 - 1.4.2014 at 4:14 pm

The easements created by Easement Instrument 9650949.8 are subject to Section 243 (a) Resource Management Act 1991

Appurtenant hereto is a right to convey water created by Easement Instrument 9650949.9 - 1.4.2014 at 4:14 pm

The easements created by Easement Instrument 9650949.9 are subject to Section 243 (a) Resource Management Act 1991



# COMPUTER FREEHOLD REGISTER UNDER LAND TRANSFER ACT 1952



R. W. Muir  
Registrar-General  
of Land

## Search Copy

**Identifier** CB34A/223  
**Land Registration District** Canterbury  
**Date Issued** 21 January 1991

### Prior References

GN 802435.1 PROC 726439

---

**Estate** Fee Simple  
**Area** 3.2097 hectares more or less  
**Legal Description** Lot 2 Deposited Plan 57450

### Proprietors

Transpower New Zealand Limited

---

### Interests

Subject to Part IV A Conservation Act 1987

Subject to Section 3 Petroleum Act 1937

Subject to Section 8 Atomic Energy Act 1945

Subject to Section 3 Geothermal Energy Act 1953

Subject to Section 6 and 8 Mining Act 1971

Subject to Section 5 Coal Mines Act 1979

Subject to Section 261 Coal Mines Act 1979

5864388.3 Lease Term commencing on 22.12.2003 to 22.6.2071 (Right of Renewal) C/T 131837 issued - 13.1.2004 at 2:54 pm

8316589.1 Variation of Lease 5864388.3 - 26.11.2009 at 1:54 pm

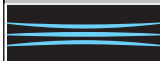
Appurtenant hereto is a right to convey electricity, telecommunications and computer media created by  
Easement Instrument 9650949.8 - 1.4.2014 at 4:14 pm

Register Only

## Appendix B

# Modified Designation Plan - Bromley Substation

# Bromley Substation Designation





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## Legend

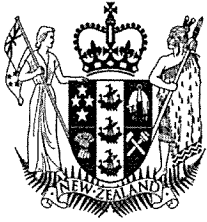
-  Designation
-  Cadastre

Scale: 1:2500 Page A4(P)  
Projection: NZTM 2000



Appendix C

**Computer Freehold Register  
- Islington Substation**



# COMPUTER FREEHOLD REGISTER UNDER LAND TRANSFER ACT 1952



Search Copy

  
R.W. Muir  
Registrar-General  
of Land

**Identifier** CB41A/55  
**Land Registration District** Canterbury  
**Date Issued** 08 September 1995

**Prior References**

CB36B/1291 CB39A/751

---

**Estate** Fee Simple  
**Area** 24.9946 hectares more or less  
**Legal Description** Lot 1 Deposited Plan 61259 and Lot 1  
Deposited Plan 70489

**Proprietors**

Transpower New Zealand Limited

---

**Interests**

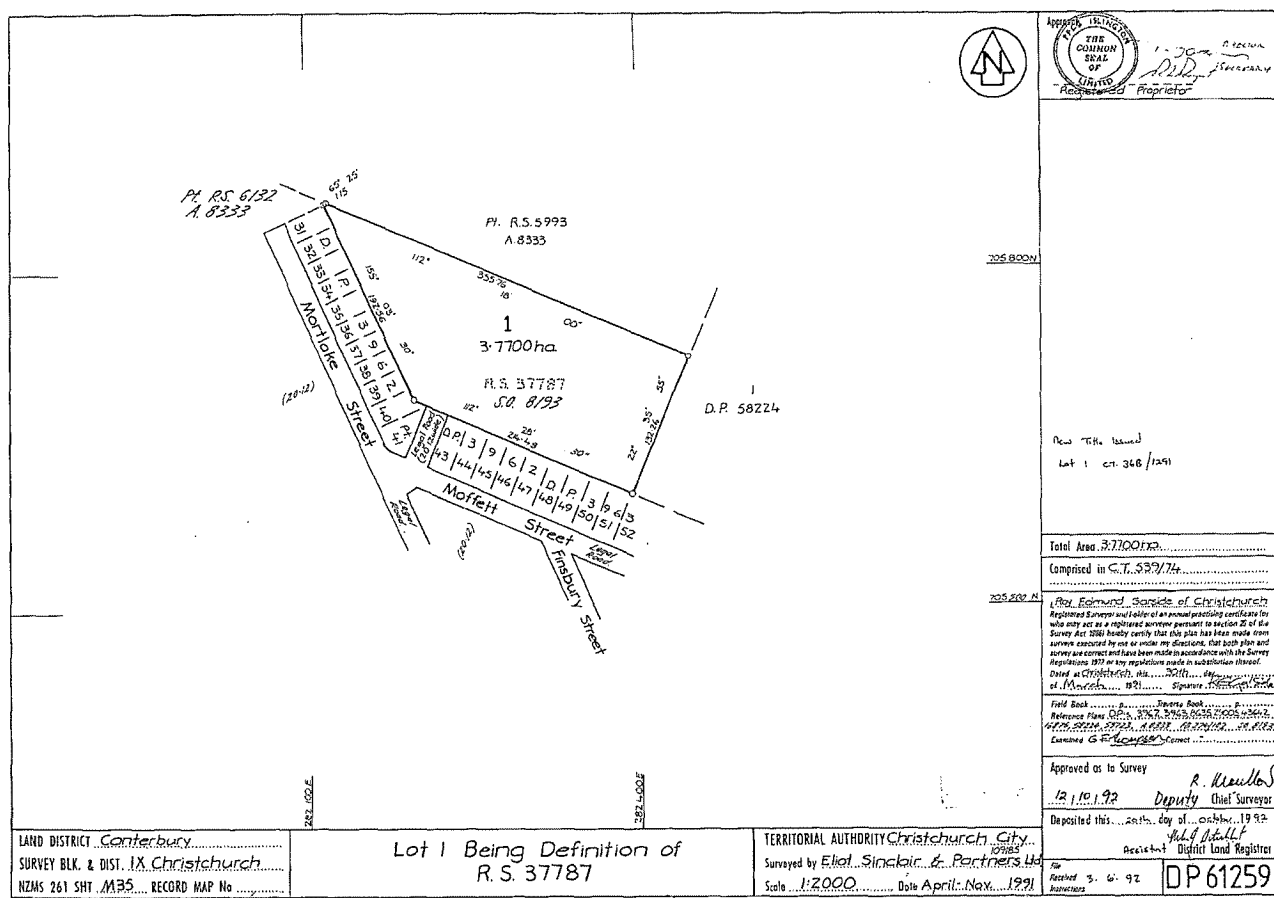
Subject to Section 8 Coal Mines Amendment Act 1950 (affects Lot 1 DP 61259)  
Subject to Section 3 Petroleum Act 1937  
Subject to Section 8 Atomic Energy Act 1945  
Subject to Section 3 Geothermal Energy Act 1953  
Subject to Sections 6 and 8 Mining Act 1971  
Subject to Sections 5 and 261 Coal Mines Act 1979  
Subject to Part IV A Conservation Act 1987

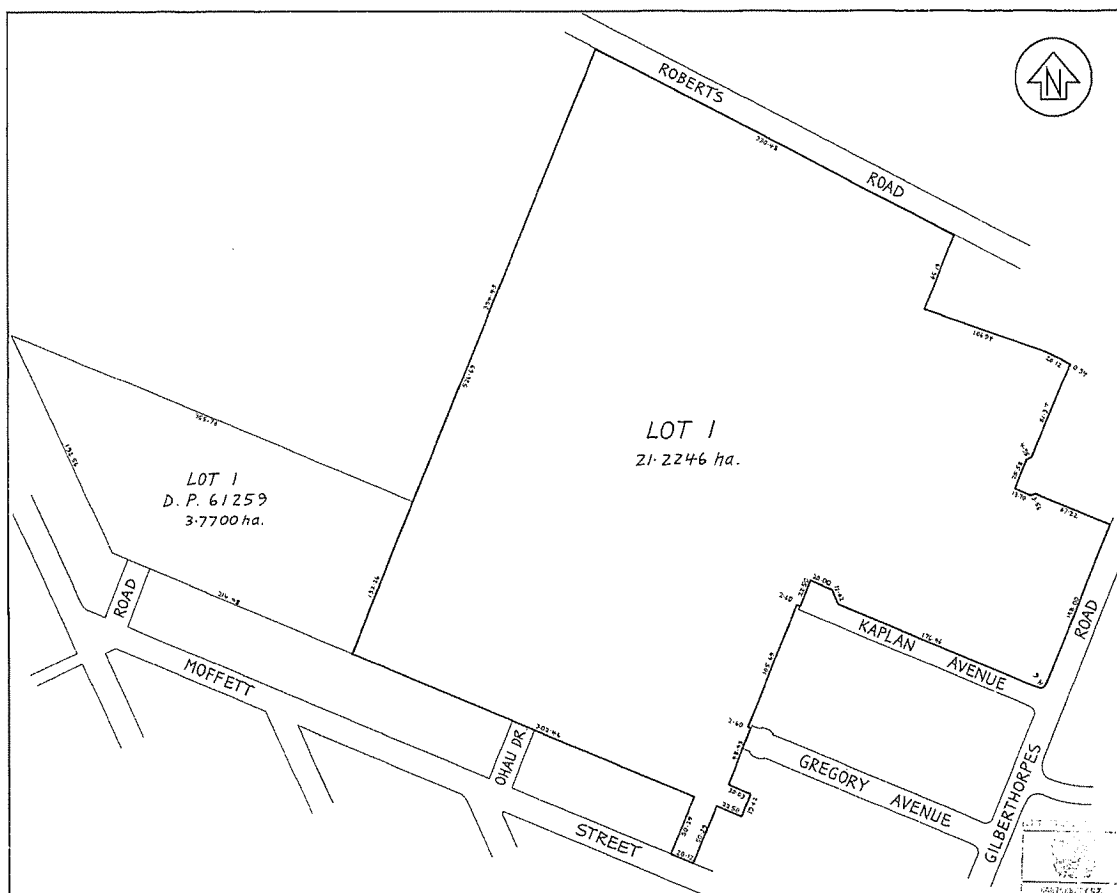
A10179.1 Transfer creating the following easements

Type	Servient Tenement	Easement Area	Dominant Tenement	Statutory Restriction
Drain sewage and stormwater	Lot 51 Deposited Plan 3693 - CT CB36A/625	Part	Lot 1 Deposited Plan 61259 - herein	
Drain sewage and stormwater	Lot 51 Deposited Plan 3693 - CT CB36D/545	Part	Lot 1 Deposited Plan 61259 - herein	

5864388.3 Lease Term commencing on 22.12.2003 to 22.6.2071 (Right of Renewal) CT 131837 issued - 13.1.2004 at 2:54 pm

8316589.1 Variation of Lease 5864388.3 - 26.11.2009 at 1:54 pm





NEW CT ALLOCATED  
LOT 1 D.P. 61259 and LOT 1 hereon-41A/55

PARCEL	FORMERLY	CT REF
LOT 1	Pt Lot 1 D.P. 58224	39A/751

Total Deduced Area  
21.2246 ha.

Approved for CT diagram purposes only  
*R. Meulles*  
Chief Surveyor

Deposited for CT diagram purposes only  
8.9.1995  
*Ant* District Land Registrar

Drawn by *ARF* Checked by *ARF* DP70489

LAND DISTRICT CANTERBURY  
Survey Blk. & Dist. IX Christchurch  
NZMS 261 Sheet Rod Map No.

### PLAN OF LOT 1 FOR CT DIAGRAM PURPOSES

TERRITORIAL AUTHORITY Christchurch City  
Surveyed by Dept of Survey and Land Information  
Scale Proportional Date 15 September 1995

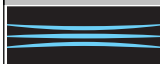
W.A. ROBERTSON, DIRECTOR GENERAL/SURVEYOR GENERAL DEPARTMENT OF SURVEY AND LAND INFORMATION, NEW ZEALAND

Approved LRI 54/06 002A1 F004 015

## Appendix D

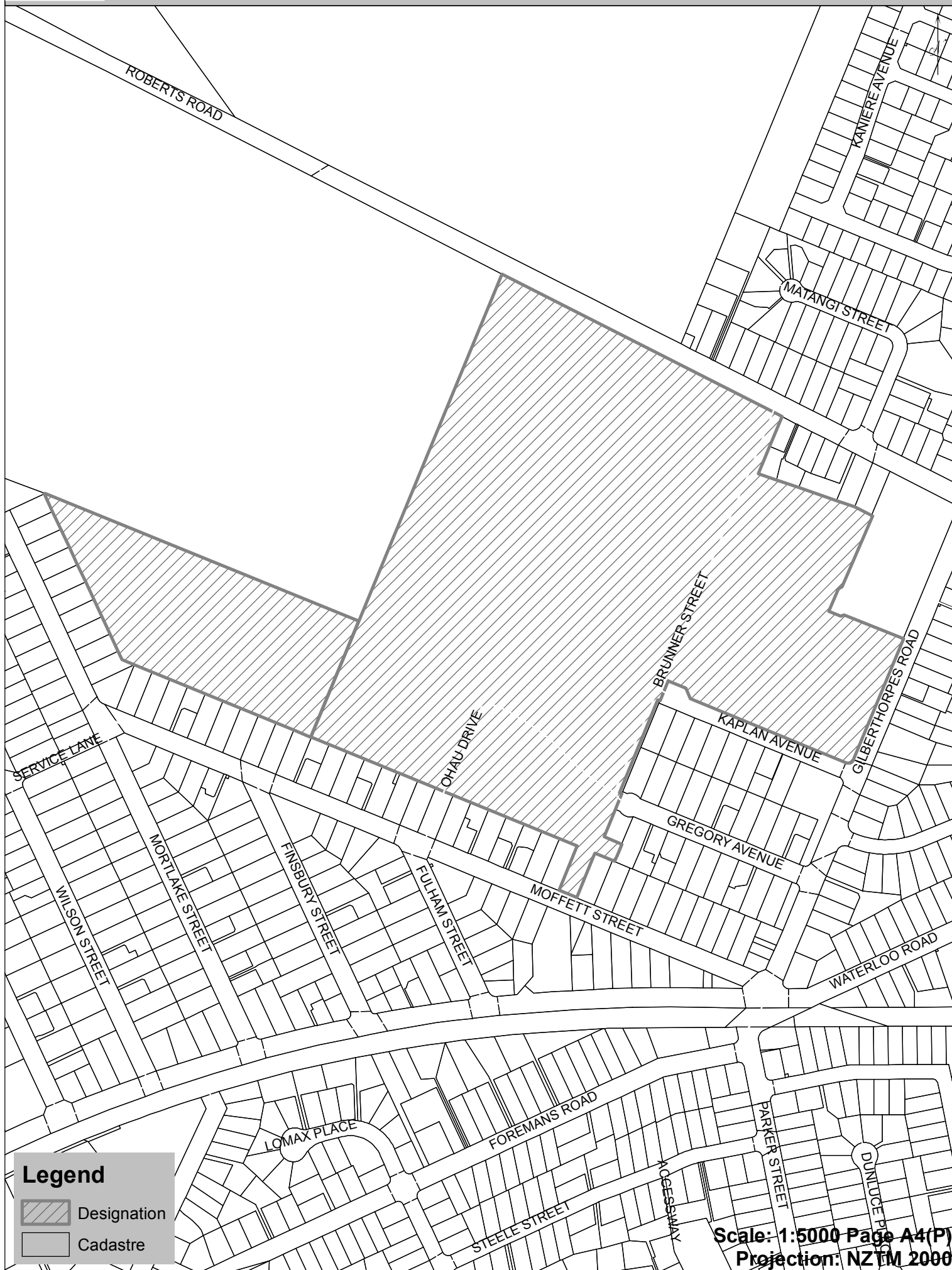
# Modified Designation Plan - Islington Substation

# Islington Substation and Systems Control Centre Designation



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Appendix E

## Form 18

## Form 18

### Notice of requirement by Minister, local authority, or requiring authority for designation or alteration of designation

*Sections 145, 168(1), (2), 168A, and 181, and clause 4 of Schedule 1, Resource Management Act 1991*

**To**                    **Christchurch City Council**  
                         **PO Box 73013**  
                         **CHRISTCHURCH 8154**

**Transpower New Zealand Limited (Transpower)** gives notice of a requirement for an alteration to a designation for a project or work.

#### **The site to which the requirement applies is as follows:**

Transpower is seeking to modify the existing "Islington Substation and Systems Control Centre" designation to include an adjacent 3.77ha parcel of land that is legally described as Lot 1 DP 61259. The combined 24.9946ha site is bounded by Moffett Street, Giberthorpes Road and Roberts Road, Christchurch. The site is further described in the accompanying documentation.

#### **The nature of the project or work is:**

Transpower seeks to modify the existing "Islington Substation and Systems Control Centre" designation pursuant to Clause 4(2) of Schedule 1 of the Canterbury Earthquake (Christchurch Replacement District Plan) Order 2014 to include an additional parcel of land and to amend the designation purpose to "National Grid (including National Grid Training Facility)" in order to provide for the development of a training facility at the site. The Training Facility (over the modified portion of the designation) comprises a number of "replica" transmission lines including towers, poles and conductors (and associated foundations) that will be used to develop the trade skills necessary for construction, maintenance and emergency works on various Transpower assets. The training facility is further described in the accompanying documentation.

#### **The nature of the proposed restrictions that would apply are:**

It is proposed that conditions are applied to the modified (portion of the designation only in order to specifically manage adverse effects on the environment of the Training Facility. It is anticipated that the conditions will address:

- Setback from the site boundaries with residential uses;
- Landscaping to provide for privacy and visual mitigation;
- Noise; and
- Maximum structure height.

Transpower will propose suggested conditions following completion of the site layout and design, and before the hearings panel considers this modification.

Further, amendments to the existing conditions are proposed to provide for the components of the training facility within the existing designation and to manage any associated adverse effects. These are detailed in the accompanying documentation.

#### **The effects that the project or work will have on the environment, and the ways in which any adverse effects will be mitigated, are:**

The potential effects on the environment as a result of the modified designation include:



- Positive effects;
- Visual/privacy effects; and
- Noise effects.

It is considered that the effects of the proposed modification are not significant, when considered in conjunction with proposed mitigation. These effects, and associated mitigation are further detailed in the accompanying documentation.

**Alternative sites, routes, and methods have been considered to the following extent:**

Section 171(1)(b) of the RMA directs that a territorial authority must have particular regard to whether adequate consideration has been given to alternative sites, routes, or methods of undertaking the work if:

- The requiring authority does not have an interest in the land sufficient for undertaking the work; or
- It is likely that the work will have a significant adverse effect on the environment.

In this instance the site is owned by Transpower and it is considered that the modified designation, providing for training facilities, is not likely to have significant adverse effects. Therefore a consideration of alternative sites, routes and methods is not required under section 171(1)(b) and has not specifically been undertaken.

However, it is noted that at a national level Transpower has given consideration to the provision of training facilities and selected the Islington site for a number of reasons including the accessibility of a Christchurch location; the proximity to other Transpower facilities (including the Systems Control Centre), the availability of Transpower owned accommodation and the availability of adequate land.

**The project and alteration are reasonably necessary for achieving the objectives of the territorial authority because:**

Transpower owns and operates the National Grid, or high voltage electricity transmission network, that carries electricity around the country. The National Grid is identified by the National Policy Statement on Electricity Transmission (2008) as nationally significant infrastructure. In order to maintain the National Grid an appropriately trained and skilled workforce is required. The proposed Training Facility is essential to meeting this need. To this end, the proposed designation modification is necessary to provide for the training facility and thus enable Transpower to develop, operate and maintain the National Grid. Further information in this regard is included in the accompanying documentation.

**The following resource consents are needed for the proposed activity and have (or have not) been applied for:**

The need for any resource consents associated with the development of the Training Facility is yet to be determined. There is the potential for a discharge permit from Environment Canterbury for the discharge of stormwater to be required. This will be established following detailed design and layout of the site.

**The following consultation has been undertaken with parties that are likely to be affected:**

No consultation has been undertaken in relation to the proposed modification. Initial discussions are occurring with Orion in relation to the undergrounding of the existing distribution line.

**Transpower attaches the following information required to be included in this notice by the district plan, regional plan or any regulations made under the Resource Management Act 1991.**

A plan showing the extent of the modified designation and further information to supplement this notice contained in the accompanying documentation.



Ainsley McLeod  
Technical Director – Planning  
Beca Limited

Signature on behalf of  
**Transpower New Zealand Limited**

Date: **14 August 2014**

**Address for Service**

Transpower New Zealand Limited  
c/- Beca Limited  
PO Box 13960  
Christchurch 8141

Attention: Ainsley McLeod  
Email [ainsley.mcleod@beca.com](mailto:ainsley.mcleod@beca.com)

## Appendix F

# Statement of Landscape and Visual Effects

# Transpower New Zealand Ltd Islington Substation Designation - Statement of Landscape and Visual Effects

## Introduction

Transpower New Zealand Ltd (Transpower) has given notice to the Christchurch City Council that they wish to roll over a number of existing Designations into the Christchurch City Plan.

The following assessment has been prepared in support of Transpower's Notice to modify the existing Designation for the Islington Substation and Systems Control Centre.

The purpose of this report is to provide a high level consideration of the potential landscape and visual effects associated with the future development of the proposed training facility which the proposed designation modification will provide for should it be confirmed.

Following a visit to the site and surrounding local landscape and given the presence of the existing substation and the impact it has on the character and quality of the site and its immediate surrounds, the preparation of an exhaustive landscape and visual assessment was considered unnecessary in this case.

As the site photos below illustrate the site and local setting are characterised by the presence of the existing substation and transmission line infrastructure, which are visually dominant and somewhat imposing from certain viewpoints. Despite the way that rural pasture provides an open and homogenous ground plane the local setting is undoubtedly an industrial one and is characterised by the various towers and poles carrying conductors out across the landscape from the substation itself. Because the proposed training facility and introduction of additional transmission structure on the subject site is reflective of this existing character and will result in very little noticeable physical change (e.g. tree removal, excavation, natural feature modification) to the site the scope of this report is limited to visual effects and the effects on the amenity of residential properties to the south and west of the site.



Figure 1: View from Moffett Reserve looking north



Figure 1: View from Roberts Road looking south east

The proposed modification provides for an additional 3.77ha of land adjacent to the existing Islington Substation site to be used as a National Grid Training Facility. A full description of the training facility is provided under Section 4.3 of the Request for Designation document<sup>1</sup> and will facilitate the delivery of specialist skills for the installation, commissioning, maintenance and operation of grid assets. The provision of a practical line training facility is a key part of the strategy to providing the knowledge, skills and experience to the current and future Transpower workforce.

The facility will be utilised for competency training and development throughout all disciplines within a controlled environment which is in alignment with best practices internationally. It will provide the high level facilities and equipment requirements for the development of a new training facility that will cater for transmission line mechanic, tower painter, foundation worker, patroller, condition assessor, vegetation worker and land liaison training.

For the purposes of this Notice the following are considered to be the key elements of the proposed facility:

- A 350kV Line (HVDC, single circuit) including 4 lattice towers up to a maximum height of 28m.
- A 110kV Line (single circuit, simplex conductors) including 7 structures up to a maximum height of 23.5 metres. The structures will include lattice towers and steel, concrete and wooden poles.
- A 110kV Line (double circuit with one simplex and one duplex circuit) including 4 structures up to a maximum height of 25.5m. The structures will include lattice towers and a steel pole.
- A 220kV Line (double circuit with one simplex and one duplex circuit) including 3 structures up to a maximum height of 26.5m. The structures will include lattice towers and a steel pole. This transmission line will also include an overhead earthwire. One of these 200kV lattice towers will be used for tower construction training.

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<sup>1</sup> Beca Ltd. *Proposed Christchurch City District Plan - Notice of Requirement to Include Designations*. 14 August 2014.

- A 400kV Line (double circuit, triplex conductors) including 4 structures up to a maximum height of 28 metres. The structures will include lattice towers and a steel pole. This transmission line will include an overhead OPGW (optical ground wire).

In addition the training facility will include:

- Two 5m x 5m construction pits excavated to a depth of 2.5m with suitable backfilled soil for pole construction training.
- One 10m X 10m construction pit excavated to a depth of 2.5m with suitable backfill soil for lattice tower base setup and pole construction training.
- One pre-constructed base for lattice tower construction training.

## Evaluation

As mentioned above this report focusses on potential visual and amenity effects that the construction and operation of a future training facility may have on approximately 20 residential properties located immediately to the south and west of the site.

The majority of these properties contain standalone dwellings that front on to Moffett Street with detached garages to the rear (closest to the site). There are several examples of houses that are located to the rear of the lot with views oriented towards the site. In both instances outdoor living areas (e.g. lawns and patios) tend to be oriented north resulting in maximum sun exposure and views out across the adjoining rural land. These views out across the adjoining open pasture are relatively unobstructed although fences and amenity planting are prevalent and provide some screening of the site. The contrast between the underlying homogenous pasture land and the transmission line structures means that the latter are visually prominent and 'stand out' from all of these properties.

In this respect the proposed training facility will not introduce any elements that are not already familiar to the adjoining residences although the density and proximity of the various conductors, towers and poles will increase. In addition, the introduction of more activity in close proximity to these properties, including people regularly working and height may also result in some loss of amenity including shading and loss of privacy. Given their current outlook it is likely that adjoining residents will be more sensitive to these broader effects on amenity when compared to a general change in scene.

Based on these observations and the recommendations below it is considered that the overall visual effects of the construction and maintenance of the proposed training facility will not be significant because:

- The current outlook is already characterised by transmission line infrastructure
- The training facility will not result in the removal of any notable natural features or landforms
- There will continue to be a notable physical separation between residential properties and structures
- There will be positive effects associated with the introduction of a large area of buffer planting and views from residential properties.

## Recommendations

To address these issues it is recommended that a planted buffer zone in the range of 10 - 15 metres be included along the length of the site's southern and western boundary where it immediately adjoins existing residential properties. The purpose of this buffer is to provide

screening for ground level activity and to provide an increased sense of separation between additional structures and adjoining properties.

The implementation of the buffer zone will need to avoid potential shading effects on adjoining properties and will also need to take into account the requirement that Transpower has in maintaining vegetation in proximity to transmission lines.

It is also recommended that any communal/ gathering areas such as car parks and outdoor seating/ 'smoko' areas are located as far away from adjoining residential properties as practicable in order to avoid potential noise effects and maintain a sense of privacy for those residences.



Wade Robertson Registered NZILA