

## **2.10 Electricity transmission corridors – section 32 evaluation for the Proposed Auckland Unitary Plan**

|          |   |           |
|----------|---|-----------|
| <b>1</b> | <b>OVERVIEW AND PURPOSE</b> .....                     | <b>2</b>  |
| 1.1      | Subject Matter of this Section.....                   | 2         |
| 1.2      | Resource Management Issue to be Addressed .....       | 2         |
| 1.3      | Significance of this Subject .....                    | 3         |
| 1.4      | Auckland Plan .....                                   | 3         |
| 1.5      | Current Objectives, Policies, Rules and Methods ..... | 3         |
| 1.6      | Information and Analysis .....                        | 4         |
| 1.7      | Consultation Undertaken.....                          | 4         |
| 1.8      | Decision-Making.....                                  | 4         |
| 1.9      | Proposed Provisions .....                             | 5         |
| 1.10     | Reference to other Evaluations .....                  | 8         |
| <b>2</b> | <b>OBJECTIVES, POLICIES AND RULES</b> .....           | <b>8</b>  |
| 2.1      | Objective .....                                       | 9         |
| 2.2      | Objective .....                                       | 10        |
| 2.3      | Objective .....                                       | 12        |
| <b>3</b> | <b>ALTERNATIVES</b> .....                             | <b>14</b> |
| <b>4</b> | <b>CONCLUSION</b> .....                               | <b>20</b> |
| <b>5</b> | <b>RECORD OF DEVELOPMENT OF PROVISIONS</b> .....      | <b>21</b> |
| 5.1      | Information and Analysis.....                         | 21        |
| 5.2      | Consultation Undertaken.....                          | 22        |
| 5.3      | Decision-Making.....                                  | 23        |

## **1 Overview and Purpose**

The Proposed Auckland Unitary Plan (the Unitary Plan) contains objectives, policies and rules to manage subdivision, land use and development within close proximity to the high voltage transmission lines and support structures (towers/poles) in order to:

- prevent risks to people and property;
- protect the electricity transmission network;
- preserve line access for inspection and maintenance; and
- protect amenity values.

These electricity transmission corridor provisions have been developed to give effect to the council's statutory requirements under policy 10 and 11 of the National Policy Statement (NPS) on Electricity Transmission (2008) –

### **Policy 10**

*In achieving the purpose of the Act, decision-makers must to the extent reasonably possible manage activities to avoid reverse sensitivity effects on the electricity transmission network and to ensure that operation, maintenance, upgrading and development of the electricity transmission network is not compromised.*

### **Policy 11**

*Local authorities must consult with the operator of the national grid, to identify an appropriate buffer corridor within which it can be expected that sensitive activities will generally not be provided for in plans and/or given resource consent. To assist local authorities to identify these corridors, they may request the operator of the national grid to provide local authorities with its medium to long-term plans for the alteration or upgrading of each affected section of the national grid (so as to facilitate the long-term strategic planning of the grid).*

These policies, in particular policy 11, provide a clear directive that the council must include an electricity transmission corridor with associated provisions in the Unitary Plan to manage the impacts of activities on the national (electricity) grid. While the NPS on Electricity Transmission (2008) pre-empts a regulatory approach to be undertaken, it is important that the council demonstrates that it has considered other alternative approaches to managing subdivision, land use and development in relation to the electricity transmission network.

This section provides an evaluation of these provisions in accordance with section 32 of the RMA.

### **1.1 Subject Matter of this Section**

The electricity transmission network; specifically the high voltage transmission lines and support structures (towers/poles) which form part of the national electricity grid. These lines and support structures are owned and operated by Transpower New Zealand Limited.

### **1.2 Resource Management Issue to be Addressed**

The electricity transmission corridor provisions will assist in improving the resilience of the electricity transmission network by restricting inappropriate subdivision, land use and development. This addresses Priority 2 of the Auckland Plan

*Priority 2: "Improve Energy Efficiency, Security and Resilience"*

The electricity transmission provisions also address issue 2.1.2 in the Plan – *"enabling economic well-being"*; specifically that part addressing the security of energy supply and the corresponding text -

*“enabling the upgrading, maintenance and operation of new and existing energy supply infrastructure to improve physical security and resilience of supply; in particular by controlling the location of sensitive activities<sup>1</sup> near electricity...transmission facilities”.*

These provisions include rules which restrict activities sensitive to transmission lines.

### **1.3 Significance of this Subject**

The electricity transmission corridor provisions represent a significant policy shift because:

- They regulate land use, development and subdivision across a large number of land parcels and existing buildings in the Auckland region; the majority of these land parcels are currently not subject to controls under the Auckland Council Operative District Plans.

The implementation of the proposed electricity transmission provisions will restrict development rights and increase consenting fees for some landowners; particularly where activities sensitive to transmission lines are proposed. These outcomes arise from council's statutory requirement to meet policy 11 of the NPS on Electricity Transmission (2008). However, in acknowledgment of Auckland's existing built environment (e.g. large levels of development under or near existing transmission lines), the proposed provisions also provide a degree of development flexibility to landowners (see further comments under 2.3.3). This will reduce the scale and impact of the proposed provisions on future economic and/or residential development aspirations in the region.

The proposed electricity transmission provisions will have a number of benefits which are considered to outweigh the costs identified above. In particular the provisions will enable the integrity of Auckland's electricity transmission network to be maintained; the supply of electricity from this network has significant economic and social benefits to the Auckland region. They will also provide further protection for the public and property from live transmission lines.

### **1.4 Auckland Plan**

The electricity transmission corridor provisions address Priority 2 of the Auckland Plan “Improve Energy Efficiency, Security and Resilience”.

### **1.5 Current Objectives, Policies, Rules and Methods**

The Operative District Plans and Auckland Regional Policy Statement have not been specifically amended to give effect to the requirements of the NPS on Electricity Transmission (2008). They do not contain specific objectives and policies addressing the management of subdivision, land use and development within close proximity to the electricity transmission network.

The Operative District Plans (where transmission lines exist) do contain rules that manage subdivision, land use and development in relation to the electricity transmission network. However, reliance on these rules would not satisfy the requirements of the NPS on Electricity Transmission (2008) because they do not cover large sections of the electricity transmission network. Furthermore they do not reflect the level of regulatory control anticipated by the NPS on Electricity Transmission (2008). For example, the rules do not specifically manage activities sensitive to the effects of transmission lines (e.g. dwellings); this is a requirement under policy 11 of the NPS on Electricity Transmission (2008).

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<sup>1</sup> The Unitary Plan defines activities sensitive to transmission lines as any dwelling, papakainga, visitor accommodation, boarding house, retirement village, supported residential care, educational facilities, hospitals and healthcare services and care centres.

## 1.6 Information and Analysis

The development of the electricity transmission corridor provisions has been guided by the following documents, meetings and feedback:

- National Policy Statement on Electricity Transmission (2008)
- National Policy Statement on Electricity Transmission: Evaluation under Section 32 of the Resource Management Act 1991.
- Ministry for the Environment, NPS on Electricity Transmission: Further Guidance on Risks of Development near High-Voltage Transmission Lines, January 2010.
- Transpower landowner guides.
- Review of legacy Auckland Council Operative District Plans and Auckland Council Regional Policy Statement.
- Feedback from Transpower meetings (various 2012/2013).
- Workshops with Auckland Utility Operators Group (various 2012).
- Affected business landowner's meeting and feedback (2012).
- Feedback on Draft Unitary Plan from various stakeholders (2013).

These information sources have been analysed to develop a set of electricity transmission corridor provisions which acknowledge the Auckland context (in particular the high number of existing buildings under transmission lines in urban areas) and the council's legal obligations under policy 10 and 11 of the NPS on Electricity Transmission (2008).

## 1.7 Consultation Undertaken

The development of the electricity transmission corridor provisions has involved consultation with the following parties:

- Transpower (various meetings 2012/2013)
- Auckland Utility Operators Group (various meetings 2012)
- Business landowners group (meetings 2012)

In addition to the above, in March 2013, letters were sent to land owners in the electricity transmission corridors. These letters outlined the proposed electricity transmission provisions and provided an opportunity for land owners to contact the council (phone or email) to discuss the proposed provisions further.

The community engagement process associated with the release of the Draft Unitary Plan (post March 2013) also provided an opportunity to discuss the proposed electricity transmission corridor provisions with residents. This occurred at a number of local board led community meetings.

## 1.8 Decision-Making

The development of the electricity transmission corridor provisions have been shaped by the following Unitary Plan Political Working Party meetings and Auckland Plan Committee meeting:

- **Unitary Plan Political Working Party meeting 9 May 2012** – officers provided a presentation on the options in relation to the application of the transmission line buffers. At this meeting the Working Party requested that: officers apply a transmission buffer corridor based on the New Zealand Electrical Code of Practise 34: 2001 and future upgrades; develop rules for land uses (buildings and activities) and subdivision; and apply these rules to rural and urban contexts.
- **Unitary Plan Political Working Party meeting 26 September 2012** – officers provided an updated presentation which covered the proposed extent of the electricity transmission corridor buffer; the proposed rules and development controls and case studies to illustrate the impacts of the proposed provisions. At this meeting the Working Party agreed to keep development in buffer zones to a minimum because of health

- **Political Working Party Workshop Notes – 4<sup>th</sup> December 2012** – at this workshop a Discretionary Activity status in the inner electricity transmission corridor for non-sensitive activities was supported by the Working Party. It was also agreed that new residential buildings in the inner electricity transmission corridor should be a non-complying activity.
- **The Auckland Plan Committee – 25 July 2013** – at this committee meeting the following interim directions were generally agreed:
  - “Inner and Rural Corridor*  
*Retain the inner and rural corridor in order to prevent risks to people and property, protect the electricity transmission network and preserve line access for inspection and maintenance and to protect amenity values.*
  - Outer Corridor*  
*Remove the outer corridor in urban areas. Control over subdivision is not warranted given that activities in the outer corridor are unlikely to impede maintenance activities and compliance with the NZECP 34: 2001 is mandatory.*
  - Intensive farming buildings in the Rural Corridor*  
*Maintain the status quo. Not demonstrated to be a significant issue in the rural context. Intensive farming is not a sensitive activity under the National Policy Statement definition”*

Since the release of the Draft Unitary Plan in March 2013, the electricity transmission corridor provisions have been further amended to reflect feedback from stakeholders and the directions of the Auckland Plan Committee. The main amendments are summarised as follows:

- The inner and rural electricity transmission corridors have been consolidated into the electricity transmission corridor.
- The outer electricity transmission corridor has been removed. Reliance on the New Zealand Electrical Code of Practice (NZECP34:2001) and other consenting requirements from other sections of the Plan (e.g. subdivision, earthworks) will address the potential impacts of subdivision, land use and development on the electricity transmission network.
- The electricity transmission support structures (towers/poles) will not be shown on the planning maps due to mapping accuracy concerns raised by Transpower. The removal of this portion of the overlay on the planning maps correspondingly means that the earthworks controls will be located in the Auckland Wide Land Disturbance (earthworks) section.

## **1.9 Proposed Provisions**

The proposed provisions can be summarised as follows:

### Electricity transmission corridor provisions

- A specific objective and policy in the infrastructure overlay section of the Plan that manages the impact of subdivision, land use and development on the electricity transmission network.

- An electricity transmission corridor will apply to 12m (both sides) from the transmission centre line. This line crosses both urban and rural parts of the region – see figure 1 below. The 12 metre distance is based on Transpower’s (non-statutory) Corridor Management Policy (CMP); in turn this width -
  - *“ is based on the requirements to maintain and operate 220 kilovolt flat-top towers – this distance would also incorporate other smaller line configurations*
  - *is consistent with and incorporates most NZECP34: 2001 requirements*
  - *provides limited ability to alter existing line specifications (maintenance or upgrading) without adversely affecting activities underneath, or being constrained or affected by those activities*
  - *is consistent with international good electrical industry practice”. (Ministry for the Environment, NPS on Electricity Transmission: Further Guidance on Risks of Development near High-Voltage Transmission Lines, January 2010).*

**Figure 1: Aerial map depicting the electricity transmission corridor passing through urban and rural areas**



- Within the electricity transmission corridor subdivision, land use and development is managed in order to prevent risks to people and property; protect the electricity transmission network; preserve line access for inspection and maintenance and to protect amenity values. Other features of this corridor are:
  - Activities sensitive to the effects of transmission lines, such as residential and care centres have greater restrictions placed on them in this corridor (this includes subdivision involving the creation of a building platform for an activity sensitive to transmission lines). These activities are listed as non-complying activities in recognition of the requirements of policy 11 of the NPS on Electricity Transmission (2008) which states that sensitive activities will generally not be provided for in plans.
  - In recognition of the level of built development and the need to provide landowners some flexibility, the Plan takes a more permissive approach to activities not sensitive to the effects of transmission lines (e.g. industrial buildings, rural production activities); and alterations and extensions to existing buildings. This is subject to certain standards being met, including the maintenance of access to transmission line support structures and the requirement to meet the New Zealand Electrical Code of

Practice (NZECP34:2001). This code sets minimum safe distances from transmission lines to protect people, property, vehicles and mobile plant from harm or damage from electrical hazards. This more permissive approach is consistent with policy 10 of the NPS on Electricity Transmission (2008) which does not require the council to impose a level of regulatory control on activities commensurate with that envisaged by policy 11.<sup>2</sup>

- In greenfield areas (zoned Future Urban) a more restrictive approach is taken for activities not sensitive to the effects of transmission lines (e.g. industrial and business). In these areas the current level of under build is low. To ensure that this continues the Plan classifies new buildings as discretionary activities.
  - Subdivision generally requires resource consent in order to ensure the layout of future buildings do not unduly constrain the operation and maintenance of the transmission lines.
  - A development control to ensure that activities do not physically impede existing vehicular access to a transmission line support structure on the site or an adjoining site.
- In comparison to the Operative District Plan provisions, the objective, policy and rules for the electricity transmission corridor are more comprehensive because they apply to a wider range of activity types and apply across the entire transmission network. Furthermore they generally place a greater level of regulatory control on land owners (e.g. activities sensitive to transmission lines are listed as non-complying activities).

### **1.10 Reference to other Evaluations**

Refer to the Section 32 Topic Matrix for reference to related section 32 evaluations. These include:

- 2.3 Residential zones
- 2.5 Building heights
- 2.6 Business building form & design
- 2.20 Conversion of dwellings
- 2.22 Future Urban zone
- 2.23 Greenfield Urban precincts
- 2.31 Earthworks
- 2.35 Rural subdivision
- 2.37 Schools

## **2 Objectives, Policies and Rules**

The following discussion provides an evaluation of the appropriateness of the objectives, policies and rules in achieving the purpose of the RMA.

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<sup>2</sup> Policy 10 states “ *that decision-makers must to the extent reasonably possible manage activities to avoid reverse sensitivity effects on the electricity transmission network...* ” . The NPS does not define “reasonably possible”. However, the MfE document “NPS on Electricity Transmission Implementation Guidance for Local Authorities 2010” states that – “*reasonably possible*” reflects that fact that it may not be reasonable or practicable to avoid all adverse effects, both because of the operational and technical constraints of Transpower, and also because of the potential impositions on property owners that controls could have on their ability to reasonably use their land”. The use of a permitted activity status for these activities and works will allow property owners to reasonably use their land.

The electricity transmission network is included in the definition of the significant infrastructure in the Unitary Plan. Accordingly the following evaluation also references those objectives and policies (at the Regional Policy Statement and Auckland wide level) which relate to the resilience and protection of significant infrastructure from reverse sensitivity effects. These are matters the council is required to address under the NPS on Electricity Transmission 2008.

To avoid repetition, an evaluation of the rules; costs and benefits of the proposed policies, rules and adequacy of information and risk of not acting is addressed under the electricity overlay provisions (section 2.3); this section relates directly to the electricity transmission network.

## **2.1 Objective**

The following objectives under Infrastructure and energy (Chapter B: enabling economic well-being) are relevant to the topic:

1. *A resilient infrastructure and high-quality service.*
  
6. *Auckland's significant infrastructure is protected from reverse sensitivity effects and incompatible subdivision, use and development.*

### **Appropriateness of the Objective(s)**

#### **Addressing the key Unitary Plan issues**

These objectives address the “enabling economic well-being” issue identified in Chapter B of the Unitary Plan (Regional Policy Statement).

#### **Achieving the purpose of the Act Relevance**

Section 5. The electricity transmission network is a physical resource that needs to be sustainably managed through the Unitary Plan. These objectives recognise the importance of providing for infrastructure, like the electricity transmission network, because of the benefits and contribution it makes to a liveable Auckland. Protecting significant infrastructure from reverse sensitivity effects (policy 6) is a key approach in ensuring that these benefits can continue to be realised. These objectives are consistent with section 5(1) and (2) (a) and (c) of the Act.

Section 6 of the Act identifies the matters of national importance which need to be recognised and provided for in achieving the purpose of the Act. None of the matters are of particular relevance to the electricity transmission corridor approach.

Section 7 of the Act identifies ‘other matters’ which need to be given particular regard to in achieving the purpose of the Act. The matters of particular relevance to these objectives are:

- (b) The efficient use and development of natural and physical resources
  
- (j) The benefits to be derived from the use and development of renewable energy.

Objective 1 is relevant to s7 because it promotes the efficient use of electricity transmission infrastructure which is a physical resource. Objective 6 recognises the need to protect significant infrastructure (e.g. electricity transmission) from reverse sensitivity effects so that Auckland continues to benefit from electricity usage.

*Section 8 - requires the principles of the Treaty of Waitangi (Te Tiriti O Waitangi) to be taken into account in achieving the purpose of the Act. The objectives need to be considered in the context of the Unitary Plan as a whole. When viewed within that context, the objectives do*

*not require amendment to reflect the principles of the Treaty of Waitangi (Te Tiriti O Waitangi).*

### **Usefulness**

The objectives will be useful for assisting decision-making when assessing plan changes, notices of requirement, and resources consents which impact on the electricity transmission network.

As these objectives are at the regional policy statement level, they are useful in setting the direction which the district plan level objectives need to give effect to.

### **Achievability**

The objectives are in accordance with the council's functions as a regional council under s30(1) of the RMA. In particular they are in accordance with the following function:

*'a. the establishment, implementation, and review of objectives, policies and methods to achieve integrated management of the natural and physical resources of the region:*

The Unitary Plan will contribute to the achievement of these objectives by including policies and rules which provide for the electricity transmission network.

### **Reasonableness**

These objectives do not seek an outcome that would have greater costs. Continuing to protect significant infrastructure from reverse sensitivity effects and incompatible subdivision, use and development to improve its resilience and servicing potential has significant attendant benefits to the Auckland region.

#### **2.1.1 Policies**

The following policies under Infrastructure and energy (Chapter B: enabling economic well-being) are relevant to the topic:

- 1. Provide for the efficient development, use, operation, maintenance and upgrading of secure and reliable infrastructure.*
- 7. Avoid reverse sensitivity effects by requiring subdivision, use and development to not occur in a location or form that constrains the use, operation, maintenance and upgrading of existing and planned significant infrastructure.*

These policies stress the importance of providing for an infrastructure network that is secure and reliable. In addition to capital spend, this can be achieved by managing the location and form of subdivision, land use (particularly activities sensitive to transmission lines) and development in proximity to significant infrastructure; this includes the electricity transmission network (policy 7).

The overall approach promoted by these policies is therefore consistent with the identified objectives.

#### **2.1.2 Rules, 2.1.3 Costs and Benefits of Proposed Policies and Rules and 2.1.4 Adequacy of Information and Risk of Not Acting**

See section 2.3 for further discussion.

### **2.2 Objective**

The following objective under Chapter C Auckland-wide objectives (Infrastructure) is relevant

–

5. *Auckland's significant infrastructure is protected from reverse sensitivity effects and incompatible subdivision, use and development.*

### **Appropriateness**

#### **Addressing the key Unitary Plan issues**

This objective address the “enabling economic well-being” issue identified in Chapter B of the Unitary Plan (Regional Policy Statement).

#### **Achieving the purpose of the Act**

Section 5 - The electricity transmission network is a physical resource to be sustainably managed through the Unitary Plan. This objective seeks to enable the development and operation of infrastructure (includes the electricity transmission network) which is consistent with section 5(1) and (2) of the Act.

Section 6 of the Act identifies matters of national importance which need to be recognised and provided for in achieving the purpose of the Act. None of the matters are of particular relevance to the electricity transmission corridor approach.

Section 7 of the Act identifies ‘other matters’ which need to be given particular regard to in achieving the purpose of the Act. The matters of particular relevance to this objective are:

- (b) The efficient use and development of natural and physical resources.
- (j) The benefits to be derived from the use and development of renewable energy.

This objective is relevant to s7 because it promotes the efficient use of the electricity transmission network and recognises the need to protect transmission infrastructure so that Auckland continues to benefit from the use of electricity.

Section 8 requires the principles of the Treaty of Waitangi (Te Tiriti O Waitangi) to be taken into account in achieving the purpose of the Act. The objectives need to be considered in the context of the Unitary Plan as a whole. When viewed within that context, the objectives do not require amendment to reflect the principles of the Treaty of Waitangi (Te Tiriti O Waitangi).

### **Usefulness**

The objectives will be useful for assisting decision-making when assessing plan changes, notices of requirement and resource consents affecting the electricity transmission network.

### **Achievability**

The objectives are in accordance with the council’s functions as a regional council under s30(1) of the RMA. In particular it is in accordance with the following function:

- ‘a. the establishment, implementation, and review of objectives, policies and methods to achieve integrated management of the natural and physical resources of the region:*

The Unitary Plan will contribute to the achievement of these objectives by policies and rules which provide for the electricity transmission network.

Monitoring and review will be required to measure achievement of the objective.

### **Reasonableness**

These objectives do not seek an outcome that would have greater costs. Protecting significant infrastructure from reverse sensitivity effects and incompatible subdivision, use

and development to improve its resilience and servicing potential has significant attendant benefits to the Auckland region.

### **2.2.1 Policies**

The following policy under Chapter C Auckland-wide policies (Infrastructure) is relevant –

2. *Prevent reverse sensitivity effects from inappropriate subdivision, use and development which may compromise the operation and capacity of existing or approved significant infrastructure.*

This policy is relevant to the identified objective because subdivision, use and development can compromise the functioning of significant infrastructure (this includes electricity transmission infrastructure) if it is not managed. Managing these activities enables the continued development, operation and upgrading of significant infrastructure.

### **2.2.2 Rules, 2.2.3 Costs and Benefits of Proposed Policies and Rules and 2.2.4 Adequacy of Information and Risk of Not Acting**

See section 2.3 for further discussion.

### **2.3 Objective**

The following objective under Chapter E: Overlay objectives and policies – Infrastructure, Electricity transmission corridor is relevant –

1. *The efficient development, operation and upgrading of the electricity transmission network (national grid) is not unnecessarily constrained by subdivision, land use and development.*

### **Appropriateness**

#### **Addressing the key Unitary Plan issues**

This objective address the “enabling economic well-being” issue identified in Chapter B of the Unitary Plan (Regional Policy Statement).

#### **Achieving the purpose of the Act**

Section 5 - Ensuring that subdivision, land use and development does not unnecessarily constrain the electricity transmission network will allow the benefits derived from electricity usage in the Auckland region to continue. This approach is consistent with section 5(1) and (2) (a) and (c) of the Act.

Section 6 of the Act identifies matters of national importance which need to be recognised and provided for in achieving the purpose of the Act. None of the matters are of particular relevance to the electricity transmission corridor approach.

Section 7 of the Act identifies ‘other matters’ which need to be given particular regard to in achieving the purpose of the Act. The matters of particular relevance to this objective are:

- (b) The efficient use and development of natural and physical resources
- (j) The benefits to be derived from the use and development of renewable energy.

This objective is relevant to s7 because it promotes the efficient use of the electricity transmission network and recognises the need to protect this network so that Auckland continues to benefit from electricity usage.

Section 8 requires the principles of the Treaty of Waitangi (Te Tiriti O Waitangi) to be taken into account in achieving the purpose of the Act. The objectives need to be considered in the

context of the Unitary Plan as a whole. When viewed within that context, the objectives do not require amendment to reflect the principles of the Treaty of Waitangi (Te Tiriti O Waitangi)

### **Usefulness**

This objective will be useful for assisting decision-making when assessing plan changes, notices of requirement and resources consents involving the electricity transmission network.

### **Achievability**

The objective are in accordance with the council's functions as a regional council under s30(1)(a) of the RMA and as a district council under s31(1)(a):

*s30 (1)(a) – the establishment, implementation, and review of objectives, policies and methods to achieve integrated management of the natural and physical resources of the region; and*

*s31 (1) (a)- the establishment, implementation, and review of objectives, policies, and methods to achieve integrated management of the effects of the use, development, or protection of land and associated natural and physical resources of the district.*

The Unitary Plan will contribute to the achievement of this objective by policies and rules which provide for the electricity transmission network.

Monitoring and review will be required to measure whether this objective has been achieved.

### **Reasonableness**

The objective is reasonable because it recognises that not all development, subdivision and land use should be precluded in the vicinity of the electricity transmission network. This approach is important in the Auckland urban context where land limitations; growth pressures and existing patterns of development will mean that it will not always be feasible to preclude all development in electricity transmission corridors.

### **2.3.1 Policies**

The following policy under Chapter E: Overlay objectives and policies - Electricity transmission corridor is relevant:

#### *Policy*

1. *Require subdivision, land use and development within the electricity transmission corridor to be undertaken so that it:*
  - a. *meets the New Zealand Electrical Code of Practice for Electrical Safe Distances (NZECP 34: 2001)*
  - b. *does not compromise security of supply and/or the integrity of transmission assets*
  - c. *does not compromise existing access to conductors and support structures for maintenance and upgrading works*
  - d. *does not foreclose operation and maintenance options or the carrying out of planned upgrade works*
  - e. *manages sensitive activities to avoid exposure to risk and minimise exposure to nuisance, such as noise, line drip and flashovers*
  - f. *takes transmission assets into account at the design stage of subdivision e.g. by locating compatible activities such as roads under or in close proximity to lines.*

This policy is directly relevant with the identified objective; it sets out the factors that need to be considered when managing subdivision, land use and development in the vicinity of the electricity transmission network. Addressing these factors will ensure that the electricity transmission network is not unnecessarily compromised.

### 2.3.2 Rules

The proposed rules are summarised in section 1.9 above.

These rules manage subdivision, land use and development within the electricity transmission corridor as defined on the planning maps. In comparison to the alternatives considered in section 3.0, the proposed rules are the most effective in achieving objectives 2, 5 (Regional Policy Statement); objective 5 (Auckland-wide Objectives) and objective 1 (Electricity transmission corridor overlay). This is because they provide a more comprehensive response to meeting the council's requirements under the NPS on Electricity Transmission (2008); in particular because they address reverse sensitivity effects on the electricity transmission network which the other alternatives do not provide for. In terms of efficiency, the costs of this approach are outweighed by the benefits as set out in section 3.0.

The level of regulation (this includes the spatial extent of the proposed rules) proposed under the preferred alternative (alternative 4) has been adopted because it acknowledges the Auckland context (in particular the high number of existing buildings under transmission lines in urban areas) and the council's legal obligations under policy 10 and 11 of the NPS on Electricity Transmission (2008). Applying less (alternatives 1,2) or more regulation (alternative 3) is unlikely to achieve this regulatory balance.

### 2.3.3 Costs and Benefits of Proposed Policies and Rules

The costs and benefits of the alternatives considered, including the proposed policies and rules, are outlined in section 3. These have not been monetised as the NPS on Electricity Transmission (2008) provides a clear directive that the council must manage (through regulation) the impact of subdivision, land use and development on the electricity transmission network. The costs and benefits have instead been assessed in a qualitative fashion and reflect the information and feedback assessed in section 1.6. The benefits and costs arising from the preferred approach are well understood and have been traversed through a number of district plan changes (including hearings) around New Zealand since the introduction of the NPS on Electricity Transmission in 2008.

The proposed rules have been developed so they do not unduly constrain economic growth and employment. For example, new and/or extensions to industrial buildings are a permitted activity, subject to meeting the NZECP34:2001 and the access development standard. The use of a permitted activity standard (as opposed to a resource consent being required as of right) will provide a degree of flexibility for the large number of land owners who have businesses within the proposed electricity transmission corridor.

### 2.3.4 Adequacy of Information and Risk of Not Acting

There is sufficient technical information underpinning the rules (in particular NZECP34:2001) to guide decision makers and applicants. Case law and past resource consent decisions by the council will continue to provide guidance on addressing potential reverse sensitivity effects on significant infrastructure like the electricity transmission network.

## 3 Alternatives

The proposed preferred alternative is discussed in 1.9 above. The table below discusses each alternative compared to the Proposed Alternative. The alternatives are:

**Alternative 1:** Status quo Operative Plan rules and enforcement of the New Zealand Electrical Code of Practice (NZECP34:2001)

This approach involves less regulation than the other alternatives. It would involve a combination of the following two approaches:

1. Reliance on those Auckland Council Operative District Plan which contain rules to manage land use activities and subdivision in relation to transmission lines; and
2. Enforcement of the NZECP34:2001 by the Ministry of Business, Innovation and Employment and Transpower. This code sets minimum safe distances from transmission lines to protect persons, property, vehicles and mobile machinery from harm or damage from electrical hazards.

Under this option the electricity transmission corridors would not be identified on the planning maps.

**Alternative Two:** Activities in the electricity transmission corridors to comply with the NZECP34:2001 as a permitted activity standard

This approach involves less regulation than alternatives 3 and 4. It would involve the council doing the following:

1. Include the electricity transmission corridors (inner and outer) on the Unitary Plan maps; and
2. Include a permitted activity standard in the Unitary Plan that states that new buildings (including extensions) and earthworks within the electricity transmission corridors need to comply with the NZECP34:2001. Non-compliance with this standard would result in an activity being classified as non-complying. This permitted activity standard would replace the existing patch work of Operative District Plan rules.

**Alternative Three:** Application of two electricity transmission corridors (inner and outer corridor) with associated objectives, policies and rules to manage subdivision, use and development.

This approach is similar to preferred alternative 4 but would involve a greater level of regulation.

The main difference between alternative 4 is the inclusion of an electricity outer transmission corridor. This corridor covers the area between 12 and 32 metres (both sides) of the transmission centre line in urban areas. The rules in this corridor would be more permissive than the inner transmission corridor due to the increased distance from the transmission lines and support structures. In this corridor there would still be a requirement for all activities to meet NZECP34:2001 (as a permitted activity standard) because electrical safety considerations will still need to be factored into most building proposals. Subdivision involving the creation of a new title would require a resource consent.

**Alternative Four:** Application of one corridor (electricity transmission corridor) with associated objectives, policies and rules to manage subdivision, use and development.

The electricity transmission corridor will apply to 12m (both sides) from the transmission centre line. This line crosses both urban and rural parts of the region. See section 1.9 for further detail on this preferred alternative.

| 3.0             | Alternative 1: Status Quo Alternative Continued implementation of Operative Plan rules and enforcement of the NZECP34:2001.  | Alternative 2 Activities in the electricity transmission corridors to comply with the NZECP34:2001 as a permitted activity standard.  | Alternative 3: Application of two electricity transmission corridors (inner and outer corridor in urban areas) with associated objectives, policies and rules to manage subdivision, use and development.  | Alternative 4: Preferred approach. Application of one corridor (electricity transmission corridor) with associated objectives, policies and rules to manage subdivision, use and development.  |
|-----------------|--|---|--|--|
| Appropriateness | <ul style="list-style-type: none"> <li>Under this approach the objectives (objective 6 (Chapter B, Regional Policy Statement Infrastructure and Energy), objective 5 (Chapter C Auckland-wide objectives, infrastructure) and objective 1 (Chapter E, electricity transmission corridor overlay) are not supported by these provisions because they do not address the impact of activities sensitive to transmission lines or urban subdivision (the Operative rules address rural subdivision) on the electricity transmission network. Reverse sensitive impacts are a key issue to be addressed under policy 11 of the NPS on Electricity Transmission.</li> </ul>   | <ul style="list-style-type: none"> <li>Under this approach the objectives are not fully supported by these provisions. A permitted activity standard linked to the NZECP34:2001 would partially address the operation and upgrading requirements associated with the electricity transmission network; this is a key theme associated with these objectives. However, this approach does not address the impact of activities sensitive to transmission lines (including associated reverse sensitivity effects) and subdivision on the electricity transmission network. On this basis these provisions are not considered to be an appropriate response to these objectives or the requirements of the NPS on Electricity Transmission 2008.</li> </ul> | <ul style="list-style-type: none"> <li>The provisions proposed are appropriate as they support objective 6 (Chapter B, Regional Policy Statement Infrastructure and Energy), objective 5 (Chapter C Auckland-wide objectives, infrastructure) and objective 1 (Chapter E, electricity transmission corridor overlay) for the reasons stated below (see effectiveness discussion below).</li> </ul>   | <ul style="list-style-type: none"> <li>The provisions proposed are appropriate as they support objective 6 (Chapter B, Regional Policy Statement Infrastructure and Energy), objective 5 (Chapter C Auckland-wide objectives, infrastructure) and objective 1 (Chapter E, electricity transmission corridor overlay) for the reasons stated below (see effectiveness discussion below).</li> </ul>   |
| Effectiveness   | <ul style="list-style-type: none"> <li>The adoption of this option will partially achieve objective 6 (Chapter B, Regional Policy Statement Infrastructure and Energy), objective 5 (Chapter C Auckland-wide objectives, infrastructure) and objective 1 (Chapter E, electricity transmission corridor overlay); but only where the existing Operative Plan rules have been drafted to meet the requirements of the NPS on Electricity Transmission 2008. The majority of the transmission network is not covered by rules that would meet the requirements of the NPS on Electricity Transmission 2008. Furthermore the NZECP34:2001 has limitations as noted. Therefore on balance this option is not considered to be an effective approach to meeting these objectives nor would it achieve policy 10 and 11 of the NPS on Electricity Transmission 2008.</li> </ul> | <ul style="list-style-type: none"> <li>The adoption of this option will only partially achieve the objectives. Electrical safety would be addressed through this approach. However, these provisions do not address reverse sensitivity effects, subdivision and vehicular access for maintenance. These are matters which can impact on the electricity transmission network if they are not managed. Therefore on balance this approach is not considered to be an effective approach to meeting these objectives nor would it achieve policy 10 and 11 of the NPS on Electricity Transmission 2008.</li> </ul>   | <ul style="list-style-type: none"> <li>The adoption of this option will achieve objective 6 (Chapter B, Regional Policy Statement Infrastructure and Energy), objective 5 (Chapter C Auckland-wide objectives, infrastructure) and objective 1 (Chapter E, electricity transmission corridor overlay). In addition to electrical safety matters and safeguarding the structural integrity of line support structures, the proposed provisions also address reverse sensitivity effects on the network, subdivision and vehicular access for line maintenance. This provides a more comprehensive response to meeting the council's requirements under policy 10 and 11 of the NPS on Electricity Transmission 2008.</li> </ul> | <ul style="list-style-type: none"> <li>The adoption of this option will achieve objective 6 (Chapter B, Regional Policy Statement Infrastructure and Energy), objective 5 (Chapter C Auckland-wide objectives, infrastructure) and objective 1 (Chapter E, electricity transmission corridor overlay). In addition to electrical safety matters and safeguarding the structural integrity of line support structures(*), the proposed provisions also address reverse sensitivity effects on the network, subdivision and vehicular access for line maintenance. This provides an effective response to meeting the council's requirements under policy 10 and 11 of the NPS on Electricity Transmission 2008.</li> </ul> <p><i>Note:</i></p> <p><i>The earthworks rules in the Auckland Wide Land Disturbance (earthworks) section address the impact of earthworks within 12 metres of a transmission support structure.</i></p> |
| Efficiency      | <ul style="list-style-type: none"> <li>The adoption of this option is not an efficient response as the costs are considered to outweigh the benefits.</li> </ul>   | <ul style="list-style-type: none"> <li>The adoption of this option is not an efficient response as the costs are considered to outweigh the benefits.</li> </ul>  | <ul style="list-style-type: none"> <li>The adoption of this option is an efficient response as the benefits are considered to outweigh the costs.</li> </ul>   | <ul style="list-style-type: none"> <li>The adoption of this option is an efficient response as the benefits are considered to outweigh the costs.</li> </ul>   |
| Costs           | <p>The council would not meet its obligations under policy 10 and 11 of the NPS on Electricity Transmission 2008 because:</p> <p>i. The rules in the Operative District Plans do not</p>   | <p>Linking the NZECP34:2001 with the Unitary Plan would represent an improved regulatory response (than alternative 1) to policy 10 and 11 of the NPS on Electricity Transmission 2008. However, on balance this response is not considered sufficient to</p>   | <ul style="list-style-type: none"> <li>The costs identified under this alternative are largely similar to those identified under alternative 4 (see next column). However, because alternative 3 extends the spatial extent of the regulation (by including the outer</li> </ul>   | <ul style="list-style-type: none"> <li>The cost of obtaining consent for subdivision, use and development within the electricity transmission corridor will increase compared with the current approach. Aside from the processing costs (passed onto to the applicant),</li> </ul>  |

<sup>3</sup> See National Policy Statement on Electricity Transmission: Evaluation under Section 32 of the Resource Management Act 1991 and Transpower's written evidence (2012) to Whangarei District Plan Change 123A: Network Utilities-Electricity Transmission.

<sup>4</sup> Per comms, Transpower Regional lines maintenance manager, Auckland (2012).

| 3.0 | Alternative 1: Status Quo Alternative Continued implementation of Operative Plan rules and enforcement of the NZECP34:2001.   | Alternative 2 Activities in the electricity transmission corridors to comply with the NZECP34:2001 as a permitted activity standard.  | Alternative 3: Application of two electricity transmission corridors (inner and outer corridor in urban areas) with associated objectives, policies and rules to manage subdivision, use and development.  | Alternative 4: Preferred approach. Application of one corridor (electricity transmission corridor) with associated objectives, policies and rules to manage subdivision, use and development.   |
|-----|---|---|--|---|
|     | <p>cover large sections of the electricity transmission network. For example, under the Auckland Isthmus Operative Plan the transmission rules only apply to a small section of the Onehunga business area; in the Isthmus area the transmission lines covers a number of other suburbs (e.g. Lynfield, Mt Roskill, Penrose).</p> <p>ii. The existing rules do not reflect the level of regulatory control anticipated by the NPS on Electricity Transmission 2008. For example, aside from the business chapter of the Manukau Operative Plan, the other Operative Plans do not contain rules which address the location of sensitive activities in relation to electricity transmission lines. This is a requirement under policy 11 of the NPS on Electricity Transmission 2008.</p> <p>iii. The continued enforcement of the NZECP34:2001 by Ministry of Business, Innovation and Employment and Transpower has been identified<sup>3</sup> as an insufficient response to protecting the electricity transmission network. Reasons for this include:</p> <ul style="list-style-type: none"> <li>- NZECP34:2001 does not provide an opportunity for Transpower to be involved at the resource consent stage; at this stage unsafe or poorly designed developments can be screened and prevented. Transpower often only becomes aware of breaches of NZECP34:2001 once developments are in place.</li> <li>- the NZECP34:2001 does not identify activities sensitive to the effects of electricity transmission (in particular residential) and thereby does not prevent the types of inappropriate development contemplated by the NPS on Electricity Transmission 2008.</li> </ul> <p>These statements above are supported in part. The NZECP34:2001 has not been updated to</p> | <p>meet the council's obligations because:</p> <ol style="list-style-type: none"> <li>i. the NZECP34:2001 does not identify activities sensitive to the effects of electricity transmission (in particular residential). Therefore compliance with this permitted activity standard would not prevent the types of inappropriate development contemplated by the NPS on Electricity Transmission 2008.</li> <li>ii. the NZECP34:2001 does not address proposals at the subdivision stage where there is a greater opportunity to screen and prevent unsafe or poorly designed developments.</li> <li>iii. the NZECP34:2001 does not address vehicular access for maintenance purposes.</li> </ol> <ul style="list-style-type: none"> <li>• Increased administration costs (processing, monitoring, enforcement) as the council would be required to manage the implementation of a new code (NZECP34:2001) as part of its resource management functions.</li> </ul> <p><u>Notes:</u></p> <ul style="list-style-type: none"> <li>• <i>The application costs to landowners under this proposal are likely to be cost neutral. Currently land owners may incur costs (surveying, electrical engineer input) to demonstrate compliance with NZECP34:2001. These type of costs would not be duplicated under this proposal as compliance under this code (as separate from the RMA) would also be sufficient to meet the permitted activity standard.</i></li> </ul> <p><i>As an adjunct to this, an application that defaulted to non-complying status due to non-compliance with NZECP34:2001, is also unlikely to incur additional costs to an applicant. This is because the council would be extremely unlikely to proceed with the processing of an application that did not comply with the NZECP34:2001 in the first instance.</i></p> | <p>electricity transmission corridor) these costs would fall on a larger portion of land owners. This additional cost is not considered necessary as the impact of subdivision, land use and development at this distance from the transmission lines and support structures can be adequately addressed through the existing NZECP34:2001 and the Plan's subdivision rules. For example, the creation of a fee simple title is a restricted discretionary activity with the impact of a proposed building platform(s) on the electricity transmission network one of the assessment criteria to be addressed prior to granting/declining the subdivision consent.</p> | <p>some activities due to their type, dimensions and proximity to existing transmission lines/towers, are likely to require the applicant to provide additional technical information. Examples of additional information where further costs will occur include: electrical engineering assessments and surveyor's certificates (indicating the location of buildings in relation to existing towers).</p> <p>In some cases these costs exist already because of the mandatory requirements of NZECP 34:2001. Under this Code, an electrical engineering assessment is required when buildings are proposed within specified distances of an electricity transmission line.</p> <ul style="list-style-type: none"> <li>• Will have an impact on development options; particularly where a activity sensitive to the effects of transmission lines is involved. However, the non-complying status for activities sensitive to the effects of transmission lines in this corridor does not prohibit development outright. Consent can still be granted providing that the proposal meets the tests under s104D (1) of the RMA 1991<sup>5</sup>.</li> <li>• Potential reductions in land values arising from increased awareness by purchasers of the proximity of the lines and the additional Unitary Plan restrictions. This reduction needs to be balanced against the benefit to the buyer who would be likely to buy the land at a value which reflected these restrictions.</li> <li>• Increased administration costs (processing, monitoring, enforcement) as the council would be required to manage new rules relating to subdivision, use and development within this electricity transmission corridor.</li> <li>• Potential for duplication to occur as the landowner will be required to comply with the Unitary Plan controls and the NZECP34:2001. The running of two different approval regimes for</li> </ul> |

<sup>5</sup> Section 104 (d) (1) Despite any decision made for the purpose of section 95A (2) (a) in relation to adverse effects, a consent authority may grant a resource consent for a non-complying activity only if it is satisfied that either—

- (a) the adverse effects of the activity on the environment (other than any effect to which section 104(3)(a)(ii) applies) will be minor; or
- (b) the application is for an activity that will not be contrary to the objectives and policies of—
  - (i) the relevant plan, if there is a plan but no proposed plan in respect of the activity; or
  - (ii) the relevant proposed plan, if there is a proposed plan but no relevant plan in respect of the activity; or
  - (iii) both the relevant plan and the relevant proposed plan, if there is both a plan and a proposed plan in respect of the activity.

| 3.0      | Alternative 1: Status Quo Alternative Continued implementation of Operative Plan rules and enforcement of the NZECP34:2001.   | Alternative 2 Activities in the electricity transmission corridors to comply with the NZECP34:2001 as a permitted activity standard.   | Alternative 3: Application of two electricity transmission corridors (inner and outer corridor in urban areas) with associated objectives, policies and rules to manage subdivision, use and development.  | Alternative 4: Preferred approach. Application of one corridor (electricity transmission corridor) with associated objectives, policies and rules to manage subdivision, use and development.  |
|----------|---|--|--|--|
|          | <p>reflect the requirements of the NPS on Electricity Transmission 2008, particularly around managing reverse sensitivity effects. However, another contributing factor is likely to be the lack of awareness by the public and historic enforcement of NZECP34:2001 by these agencies.</p> <ul style="list-style-type: none"> <li>The status quo approach would increase the level of development (under build) under or near existing lines/towers which is already significant; this has been identified as a particular issue by Transpower in Auckland's urban areas<sup>4</sup>. Increased under build increases the potential for reverse sensitivity effects to occur on the electricity transmission network and potentially compromise the operation, maintenance, upgrading and development, access and maintenance of the network<sup>1</sup>.</li> </ul> | <ul style="list-style-type: none"> <li><i>This approach is not considered to reduce development options for properties within these corridors beyond what currently exists now under the NZECP34:2001 now.</i></li> </ul>  |  | <p>the same proposal has the potential to increase application costs and timeframes for the applicant. The council will need to proactively work with Transpower (in particular) to develop an integrated processing system to avoid this.</p>   |
| Benefits | <ul style="list-style-type: none"> <li>Reduced compliance costs to council as these agencies would continue to enforce the NZECP34:2001.</li> <li>In comparison to the other alternatives, this option would provide more development rights to land owners. For example, a new residential building which met the NZECP34:2001 separation distances and was not subject to an Operative Plan rule would be permitted under this option. Under alternative 3 and 4 the same activity could potentially be declined under reverse sensitivity grounds if it was proposed to be located in the inner electricity and/or electricity transmission corridor.</li> <li>Reduced resource consent fees to landowners as resource consents would only be required for activities subject to the existing Operative Plan rules.</li> </ul>                                     | <ul style="list-style-type: none"> <li>The identification of the electricity transmission corridors on the planning maps and the associated permitted activity standard would increase the awareness and compliance of NZECP34:2001. These factors have been identified as a contributing factor in non-compliance with the Code.</li> <li>Reliance on the NZECP34:2001 would potentially provide more development rights, particularly to land owners within the inner electricity transmission corridor. For example, a new residential building in this corridor which met the separation distances specified in the NZECP34:2001 would be a permitted activity under this option. In comparison, under alternative 3 or 4 the council could decline the same application on reverse sensitivity grounds.</li> <li>In comparison to alternative 3 and 4 there would be reduced resource consent costs to landowners as resource consents would be required for a reduced range of activities. For example, a resource consent would not be required for a subdivision in the inner electricity transmission corridor; under alternative 3 and 4 this would be a requirement.</li> </ul> | <ul style="list-style-type: none"> <li>The benefits identified under this alternative are largely similar to those identified under alternative 4 (see next column).</li> <li>Would provide an additional regulatory response to managing subdivision, land use and development in the outer corridor. This would increase the level of compliance with the NPS on Electricity Transmission (2008). However, as noted above, subdivision, land use and development in the outer corridor area can be adequately addressed through the existing NZECP34:2001 and the Plan's subdivision rules.</li> </ul> | <ul style="list-style-type: none"> <li>The preferred approach will meet the council's obligations under policy 10 and 11 of the NPS on Electricity Transmission 2008.</li> <li>Will reduce the probability and consequences of risk arising from inappropriate development near high voltage transmission lines. This means: <ul style="list-style-type: none"> <li>the public and property will be reasonably protected from live transmission lines;</li> <li>the integrity of Auckland's electricity supply will be maintained by ensuring that no activities that may affect or damage the line are located beneath, or in too close proximity to, the line;</li> <li>existing lines can be operated, which includes a requirement for assets to be routinely inspected and maintained;</li> <li>the option of upgrading existing lines, rather than building additional lines, to meet increased electricity demand is not precluded by the development of buildings under or immediately adjacent to existing lines; and</li> <li>a minimum level of amenity is retained for those living in close proximity to lines by not being located directly underneath lines<sup>6</sup>.</li> </ul> </li> <li>This approach will still provide a degree of</li> </ul> |

<sup>6</sup> Source: Ministry for the Environment, NPS on Electricity Transmission: Further Guidance on Risks of Development near High-Voltage Transmission Lines, January 2010.

| 3.0   | Alternative 1: Status Quo Alternative Continued implementation of Operative Plan rules and enforcement of the NZECP34:2001.   | Alternative 2 Activities in the electricity transmission corridors to comply with the NZECP34:2001 as a permitted activity standard.   | Alternative 3: Application of two electricity transmission corridors (inner and outer corridor in urban areas) with associated objectives, policies and rules to manage subdivision, use and development.  | Alternative 4: Preferred approach. Application of one corridor (electricity transmission corridor) with associated objectives, policies and rules to manage subdivision, use and development.   |
|-------|---|--|--|---|
|       |   | <ul style="list-style-type: none"> <li>The removal of the Operative Plan rules (replaced by a permitted activity standard) would benefit those landowners where the rules require a landowner to obtain a resource consent, irrespective of whether the activity complies with NZECP34: 2001. For example, in the Manukau Plan, a resource consent for a discretionary activity is required within 12 metres of the transmission centre line.</li> </ul> |  | development flexibility to landowners to undertake a range and scale of activities, subject to meeting relevant development standards. This more enabling approach is particularly important within the Auckland urban context where reduced lot sizes constrain the ability of land owners located in or adjacent to existing transmission lines and support structures, to undertake works on existing buildings (of which there are thousands) outside of the electricity transmission corridor. |
| Risks | The subject matters that these provisions relate to are: electrical safety; protection of vehicular access for line maintenance and protecting the structural integrity of line support structures. There is sufficient technical information underpinning the NZECP34:2001 (which has been established in law since 2001) and the existing Operative Plan rules; these rules are linked to the NZECP34:2001 through assessment criteria. | As noted under alternative 1, the subject matters that these provisions relate to are: electrical safety; protection of vehicular access for line maintenance and protecting the structural integrity of line support structures. There is sufficient technical information underpinning the NZECP34:2001 which has been established in law since 2001.  | There is sufficient technical information underpinning the rules related to electrical safety and earthworks in the vicinity of transmission support structures (in particular NZECP34:2001) to guide decision makers and applicants. Case law and past resource consent decisions by the council will continue to provide guidance on addressing potential reverse sensitivity effects on significant infrastructure like the electricity transmission network. | There is sufficient technical information underpinning the rules related to electrical safety and earthworks in the vicinity of transmission support structures (in particular NZECP34:2001) to guide decision makers and applicants. Case law and past resource consent decisions by the council will continue to provide guidance on addressing potential reverse sensitivity effects on significant infrastructure like the electricity transmission network.                                    |

## 4 Conclusion

In conclusion, the following alternatives are not recommended:

- i. **Alternative 1: Status Quo** - retaining the Operative Plan rules relating to electricity transmission lines and the enforcement of NZECP34:2001 by the Ministry of Business, Innovation and Employment and Transpower.

Alternative 1 (Status Quo) is not recommended because the Operative District Plan rules do not cover large parts of the electricity transmission network. Furthermore they do not reflect the level of regulatory control expected by the NPS on Electricity Transmission (2008); in particular they don't address reverse sensitivity effects. In addition the NZECP34:2001 has a number of limitations; these include not addressing reverse sensitivity effects and the location of building platforms at the subdivision stage. Adoption of this approach would therefore not meet the council's requirements under the NPS on Electricity Transmission (2008).

- ii. **Alternative 2: Permitted Activity Standard** - identifying the electricity transmission corridors (inner and outer) on the planning maps in conjunction with a permitted activity standard that required new buildings (including extensions) and earthworks within these corridors to comply with the NZECP34:2001.

Alternative 2 has a number of benefits, particularly from a landowners' perspective (e.g. more development rights, reduced consent costs). However, this approach would not fully address the council's requirements under policy 10 and 11 of the NPS on Electricity Transmission (2008). In particular a standard requiring compliance with only NZECP34:2001 would not address potential reverse sensitivity effects arising from sensitive activities locating in proximity to the electricity transmission lines and/or support structures.

- iii. **Alternative 3: Application of two electricity transmission corridors** – identifying the electricity transmission corridors (inner and outer corridor) with associated objectives, policies and rules to manage subdivision, use and development.

Alternative 3 has similar costs and benefits to alternative 4 (preferred). However, because alternative 3 extends the spatial extent of the regulation (by including the outer electricity transmission corridor) the costs of this option would fall on a larger portion of land owners. This additional cost is not considered necessary as the impact of subdivision, land use and development at this distance from the transmission lines and support structures can be adequately addressed through enforcement of the existing NZECP34:2001 and the Plan's subdivision rules.

- iv. **Alternative 4: Preferred option - Application of one corridor** – identifying one electricity transmission corridor for the region with associated objectives, policies and rules to manage subdivision, use and development.

Alternative 4 is the preferred option. This option will result in more costs in comparison to alternative 1 and 2 because a greater level of regulation is proposed. However, some flexibility is provided to landowners through these rules, particularly in relation to those activities that are not sensitive to the effects of transmission lines.

These costs are off-set by the benefits which include:

- the public and property will be reasonably protected from live transmission lines;

- the integrity of Auckland's electricity supply will be maintained by ensuring that no activities that may affect or damage the line are located beneath, or in too close proximity to, the line;
- existing lines can be operated, which includes a requirement for assets to be routinely inspected and maintained;
- the option of upgrading existing lines, rather than building additional lines, to meet increased electricity demand is not precluded by the development of buildings under or immediately adjacent to existing lines; and
- a minimum level of amenity is retained for those living in close proximity to lines by not being located directly underneath lines.

Overall the level of regulation proposed through alternative 4 is considered to be commensurate with the requirements of policy 10 and 11 of the NPS on Electricity Transmission 2008.

## 5 Record of Development of Provisions

### 5.1 Information and Analysis

| Date                              | Author                               | Title   | Comments   |
|-----------------------------------|--------------------------------------|---|--|
| 2008                              | Ministry for the Environment         | National Policy Statement on Electricity Transmission (Appendix 3.10.1)   | These documents set the direction for the proposed electricity transmission provisions.  |
| 2008                              | Ministry for the Environment         | National Policy Statement on Electricity Transmission: Evaluation under Section 32 of the Resource Management Act 1991 (Appendix 3.10.2)  |  |
| 2010                              | Ministry for the Environment         | NPS on Electricity Transmission: Further Guidance on Risks of Development near High-Voltage Transmission Lines (Appendix 3.10.3)          |  |
| 2013                              | Transpower                           | Transpower landowner guide: Questions and Answers – Transmission line buffer corridor (Appendix 3.10.4)                                   | Guide provides information for landowners on the implications of transmission buffer corridors.  |
| 2012                              | Transpower                           | Whangarei District Plan Change 123A: Network Utilities-Electricity Transmission – Transpower written evidence (various) (Appendix 3.10.5) | Plan change provides evidence (various Transpower officers/consultants) on the rationale and importance of transmission buffer corridors |
| <b>Legacy documents and codes</b> |                                      |   |  |
| Various                           | Auckland Council                     | Legacy Auckland Council Operative District Plans and Auckland Council Regional  | Reviewed to determine existing provisions applying to the electricity transmission network   |
| 2001                              | Ministry of Business, Innovation and | New Zealand Electrical Code of Practise 34 (Appendix 3.10.6)  | This code sets minimum safe distances from transmission lines to protect people,   |

| Date | Author     | Title | Comments   |
|------|------------|-------|--|
|      | Employment |       | property, vehicles and mobile plant from harm or damage from electrical hazards. |

## 5.2 Consultation Undertaken

| Date      | Author                                  | Title   | Comments   |
|-----------|---|---|--|
| 2012/2013 | Transpower                              | Transpower meetings:<br>- August 2012<br>- September 2012<br>- October 2012 (x2)<br>- November 2012<br>- January 2013<br>- April 2013 | Meetings to discuss direction and feedback on draft electricity transmission provisions  |
| 2012/2013 | Auckland Utility Operators Group (AUOG) | AUOG meetings and feedback:<br>- October 2012 (x2)<br>- May 2013  | Meetings to discuss direction and feedback of infrastructure chapter; including electricity transmission corridors.  |
| 2012      | Onehunga Business Association           | Meeting with affected property and business owners with a focus on the Onehunga surrounds.  | Meeting to discuss implications of draft electricity transmission corridor provisions on business activities   |
| 2013      | Auckland Council                        | Landowners letter   | Letters sent to directed affected landowners in the electricity transmission corridors. These letters outlined the proposed electricity transmission provisions and provided an opportunity for land owners to contact the council (phone or email) to discuss the proposed provisions further |
| 2013      | Auckland Council                        | Community engagement process (post March 2013)  | Provided an opportunity to discuss the proposed electricity transmission corridor provisions with residents. This occurred at a number of local board led community meetings.  |

### 5.3 Decision-Making

| Date | Author           | Title  | Comments  |
|------|------------------|--|---|
| 2012 | Auckland Council | Unitary Plan Political Working Party 9 May                       | <ul style="list-style-type: none"> <li>At this meeting the Working Party requested that: officers apply a transmission buffer corridor based on the New Zealand Electrical Code of Practise 34: 2001 and future upgrades; develop rules for land uses (buildings and activities) and subdivision; and apply these rules to rural and urban contexts.</li> </ul>   |
| 2012 | Auckland Council | Unitary Plan Political Working Party meeting 26 September        | <ul style="list-style-type: none"> <li>At this meeting the Working Party agreed to keep development in buffer zones to a minimum because of health dangers and other associated impacts; to change the zoning maps to remove terrace housing apartments from buffer zones; make new buildings in the inner transmission buffer corridor a discretionary activity and to bring back a proposal for how directly affected parties will be engaged.</li> </ul>   |
| 2012 | Auckland Council | Unitary Plan Political Working Party Workshop Notes 4th December | <ul style="list-style-type: none"> <li>At this workshop a Discretionary Activity status in the inner electricity transmission corridor for non-sensitive activities was supported by the Working Party. It was also agreed that new residential buildings in the inner electricity transmission corridor should be a non-complying activity.</li> </ul>   |
| 2013 | Auckland Council | The Auckland Plan Committee 25 July                              | <ul style="list-style-type: none"> <li>At this committee meeting the following interim directions were generally agreed: <ul style="list-style-type: none"> <li><i>“Inner and Rural Corridor</i></li> <li><i>Retain the inner and rural corridor in order to prevent risks to people and property, protect the electricity transmission network and preserve line access for inspection and maintenance and to protect amenity values.</i></li> <li><i>Outer Corridor</i></li> <li><i>Remove the outer corridor in urban areas. Control over subdivision is not warranted given that activities in the outer corridor are unlikely to impede maintenance activities and compliance with the NZECP 34: 2001 is mandatory.</i></li> </ul> </li> </ul> |

| Date | Author | Title | Comments  |
|------|--------|-------|---|
|      |        |       | <p data-bbox="922 264 1437 327"><i>Intensive farming buildings in the Rural Corridor</i></p> <p data-bbox="922 365 1437 526"><i>Maintain the status quo. Not demonstrated to be a significant issue in the rural context. Intensive farming is not a sensitive activity under the National Policy Statement definition”</i></p> |