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|                                 | <p style="text-align: center;">Resource Management Act 1991<br/> <b>Waimakariri District Council</b><br/> Proposed Waimakariri District Plan</p> <p style="text-align: center;"><b>Section 32 Report</b></p> | <p style="text-align: center;"><b>Plan Change</b><br/> <b>2</b></p> |
| <p style="text-align: center;">Proposed new Rules in relation to high voltage electrical transmission lines.</p> |  |   |

This report assesses proposed Plan Change 2 in terms of Section 32 of the Resource Management Act 1991; it should be read in conjunction with the Plan Change Report.

Section 32 requires Territorial authorities to:

- A. Evaluate:
  - 1. The extent to which each Objective (in the plan) is the most appropriate way to achieve the purpose of the Act, and
  - 2. Whether, having regard to their efficiency and effectiveness, the Policies, Rules, or Other Methods are the most appropriate to achieve the Objectives.
  
- B. Take into account in the course of that evaluation:
  - 1. The likely benefits and costs of Policies, Rules, or other Methods, and
  - 2. The risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the Policies, Rules or other Methods..

## **1.0 THE PURPOSE OF THE ACT**

The purpose of the Resource Management Act 1991 is contained in Section 5 of the Act and is stated as being:

*‘.....to promote the sustainable management of natural and physical resources’.*

*Sustainable management means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well being, and for their health and safety while –*

- (a) Sustaining the potential of natural and physical resource (excluding minerals) to meet the reasonable foreseeable needs of future generations; and*
- (b) Safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and*
- (c) Avoiding, remedying, or mitigating and adverse effects of activities on the environment.*

The Waimakariri District Plan sets out the resource management issues of the District. Relative to the identified issues are appropriate Objectives and Policies. The Objectives and Policies in the District Plan should represent the most suitable mechanisms by which to promote the sustainable management of natural and physical resources within the District, and thereby to achieve the purpose of the Act. If they do not, it is appropriate to change them so that they do.

In addition sections 6 (Matters of national importance) and 7 (Other matters) set out certain matters that are to be addressed in the process of achieving sustainable management of natural and physical resources.

## **2.0 EXTENT TO WHICH THE RELEVANT OBJECTIVE ACHIEVES THE PURPOSE OF THE ACT**

### *Objective 11.1.1.*

*Utilities that maintain or enhance the community's social, economic and cultural wellbeing, and its health and safety.*

Objective 11.1.1 is considered an appropriate way to achieve the purpose of the Act because it has as its goal the maintenance or enhancement of the community's health and safety, and social, economic and cultural well being. These are core factors encapsulated in Sections 5, 7(b), 7(c), 7(f), and 7(g) of the Act (see Table 1):

### **2.1 Appropriateness of the Policies, Rules, or Other Methods in achieving the Objective.**

In assessing whether the Policies, Rules, or Other Methods are appropriate, the Council must have regard to the efficiency and effectiveness of those Policies and Rules in achieving the Objective.

- *Effectiveness* refers to the chosen option being a practical and workable solution with the potential to generate desired environmental outcomes, as determined by the Objectives of the District Plan.
- *Efficiency* refers to the ratio of benefits to costs of a particular option. The option that produces the greatest level of environmental, economic, and social net benefits to the community is the most efficient option. Efficiency is measured in both monetary and non-monetary terms.

The relevant Policies in the District Plan are Policies 11.1.1.1 and 11.2.1.2.

#### *Policy 11.1.1.1*

*A utility should:*

- Contribute to a safe environment*
- Maintain or enhance public health*
- Avoid or mitigate adverse effects on the environment by meeting environmental standards set by the Plan*
- Be appropriate to the particular amenity or character of the area in which it is placed*
- Integrate with existing utilities where they are accessible and are, or can be, expanded to manage any additional loading and where such integration is technically and operationally feasible*
- Promote efficient use of resources and efficient development of the utility, so that resources are conserved and used in a sustainable manner*
- Meet accepted design standards*
- In the case of utilities associated with the development and occupation of Pegasus Bay town, require adequate redundant plant to be provided as part of the sewage*

*treatment and disposal system, in order to avoid adverse effects on the surrounding environment in the event of any plant breakdown or loss of power supply*

- (i) *Have regard to cross boundary issues where the utility or the service provided by the utility crosses the territorial boundary*
- (j) *Where it is necessary to service new development, be paid for by the developer, or as a condition of consent for the development*
- (k) *Maintain and enhance social wellbeing.*

#### *Policy 11.2.1.2*

*To minimise any actual or potential risks to health or safety with high voltage transmission lines by encouraging location of lines away from incompatible land uses and avoiding development, which might increase those risks, near any lines.*

Due to the resolution of a reference, the District Plan contains no Rules in relation to the placement of structures in close proximity to electrical transmission lines designed to operate at or above 110kV. While the Policies appropriately achieve the Objective, by seeking to minimise any actual or potential risks to health, safety and/or wellbeing, the absence of Rules to give effect to the Policies means that the Objective is not achieved. It is therefore necessary for the Council to promote a Plan Change to the District Plan to insert controls that will efficiently and effectively give effect to Policies 11.1.1.1 and 11.2.1.2.

An analysis of the appropriateness of the Policies, Rules and Other Methods in achieving the Objectives of the District Plan is set out in Table 2.

### **3.0 THE PLAN CHANGE – EVALUATION OF OPTIONS**

#### **3.1 Benefits and costs**

The Council is required to evaluate the proposed changes in terms of the potential costs and benefits to the community.

Table 3 sets out an analysis of the potential benefits and costs of assessed options for achieving the Objectives and Policies of the Proposed District Plan.

Option 2 is considered to provide the greatest benefit to cost ratio.

#### **3.2 The risk of acting or not acting**

The Resource Management Act requires the Council to evaluate the risk of acting or not acting if there is uncertain or insufficient information.

The risk of undertaking the Plan Change to set minimum separation distances for structures from high voltage electrical transmission lines is that some mild inefficiencies in land use may result and the physical resource may not be maintained.

The risk of not undertaking Plan Change 2 is potentially high. There may be potential adverse effects to the health, safety and wellbeing of those living in dwellings closer to the lines than the recommended separation distances. There is also a risk that efficient operation and maintenance of the lines will be adversely affected, with consequential adverse effects on economic and social components of the community. Adverse effects may also result from

unintended contact of structures with the lines leading to potential economic and health effects.

**3.3 Is the Plan Change method an appropriate means to achieve efficient and effective outcomes?**

The Council is required to determine whether, having regard to efficiency and effectiveness, the Rule changes are appropriate to achieve the Objectives of the District Plan.

Table 3 contains a comparative analysis of the efficiency and effectiveness of the selected options.

The option considered to best achieve Objective 11.1.1 and Policies 11.1.1.1 and 11.2.1.2, and therefore to be the most appropriate, has been determined as Option 2 because it is highly likely to achieve both efficient and effective outcomes. Option 1 is considered to be potentially less effective than Option 2 because the potential for adverse effects on the health, safety and well being of the community is increased, and damage to lines or disruption of maintenance and upgrading of lines is increased.

**TABLE 1:** Extent to which the Objective achieves the purpose of the Act.

| Criteria – Objective |   |   |   |  |  |  |   |
|----------------------|---|---|---|--|--|--|---|
|                      | Contributes to the efficient use and development of natural and physical resources. | Regard to finite characteristics of natural and physical resources. | Contributes to maintenance and enhancement of amenity values. | Contributes to sustaining the potential of natural and physical resources. | Contributes to safeguarding the life-supporting capacity of air, water, soil and ecosystems. | Contributes to avoiding, remedying or mitigating adverse effects of activities on the environment. | Contributes to maintenance and enhancement of the quality of the environment. |
| Objective 11.1.1     | ✓   | ✓   | ✓   | ✓  | ✓  | ✓  | ✓   |

**TABLE 2:** Analysis of Efficiency and Effectiveness of Policies, Rules, or Other Methods in achieving the Objective.

| Analysis Criteria – Policies                                 |   |  |   |  |                      |                                      |                                      |           |
|--|---|--|---|--|----------------------|--------------------------------------|--------------------------------------|-----------|
|  | Contributes to maintenance of amenity values. | Contributes to maintenance of the quality of the environment | Contributes to protecting health, safety and well being | Contributes to avoiding or mitigating adverse effects of high voltage electrical transmission lines. |                      |                                      |                                      |           |
| Policy 11.1.1.1  | ✓   | ✓  | ✓   | ✓  |                      |                                      |                                      |           |
| Policy 11.2.1.2  | ✓   | ✓  | ✓   | ✓  |                      |                                      |                                      |           |
| Analysis Criteria – Rules and Other Methods                  |   |  |   |  |                      |                                      |                                      |           |
|  | Dependable                                    | Acceptable   | Enforceable   | Monitoring feasible/affordable   | Practically feasible | Minimal time required to take effect | Low financial cost of implementation | Equitable |
| Option 1 – No separation distances for structures.           | ✗   | ✗  | ✓   | ✓  | ✓                    | ✓                                    | ✓                                    | ?         |
| Option 2 – Separation distances in line with NZCEP 34, 2001. | ✓   | ✓  | ✓   | ✓  | ✓                    | ✓                                    | ✓                                    | ✓         |

**TABLE 3:** Environmental benefits and costs of Options relative to the Objectives and Policies of the District Plan.

| APPROACH  | Environmental Benefits   | Environmental Costs   | Economic & Social Benefits   | Economic & Social Costs  |
|---|--|---|--|--|
| <p><b>OPTION 1</b> – No separation distances for structures or rule relating to earthworks under the lines.</p>   |  | <p>The establishment of structures, especially dwellings, close to transmission lines may compromise amenity values in conjunction with the residential activity.</p> | <p>Potentially greater numbers of rural allotments.</p> <p>More freedom to place structures where most suitable for the land owner.</p> <p>Increased range of land use options.</p>  | <p>Potential increased maintenance and repair costs.</p> <p>Potential increases in adverse effects on health, safety and well being.</p> <p>Potential adverse effects on economic and social factors from difficulties with maintenance and upgrading, and physical damage to lines.</p> |
| <p><b>OPTION 2</b> – Introduce Rules specifying required separation distances from transmission lines for structures and earthwork controls under the lines (set out in NZECP 34:2001 “New Zealand Electrical Code of Practice for Electrical Safe Distances”).</p> | <p>Restriction on density of development and subdivision.</p> <p>Maintenance of lower density living environment in the Rural Zone.</p> <p>Maintenance of amenity.</p> |   | <p>Potential mitigation of adverse health effects.</p> <p>Less potential for disruption to electricity supply and subsequent economic and social costs.</p> <p>Increased range of land use options.</p> <p>Ease of access for maintenance and upgrading.</p> | <p>Restriction on the ability of land owners to place structures where most suitable.</p> <p>Restrictions for subdivision of land in the Rural Zone.</p> <p>May create some inefficiencies in land use.</p>  |

#### 4.0 REASONS FOR ADOPTING THE CHOSEN OPTION

Objective 11.1.1 and Policies 11.1.1.1 and 11.2.1.2 must be achieved in an efficient and effective manner if the sustainable management of the health, safety and wellbeing of people, and of physical transmission line resource in the Waimakariri District is to be achieved.

Option 2 will contribute effectively and efficiently to the sustainable management of the health, safety and wellbeing of people, and of the physical resource within the District by avoiding or mitigating the potential adverse effects to the health, safety and wellbeing of people from high voltage electrical transmission lines, and by protecting those lines from damage. Option 2 will enhance sustainable management in the District by:

- Providing the greatest amount of environmental, economic and social benefits while contributing no significant environmental, economic or social costs.
- Providing for integrated management of the environment in the District.
- Controlling any actual or potential effects of the use or development of land.

It is considered that **OPTION 2** would provide the most efficient, effective and therefore appropriate means to mitigate and/or avoid the adverse impacts of transmission lines on the environment, and of adverse impacts of land use activities on the physical resource of transmission lines. Option 2 is considered to also allow efficient and effective subdivision and use of land adjacent to transmission lines in the Rural Zone.

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