



## **PROPOSED INVERCARGILL CITY DISTRICT PLAN**

**Report No. 11**

### **Electrical Interference**

**25 August 2014, 9.00 am  
COUNCIL CHAMBERS  
CIVIC ADMINISTRATION BUILDING**

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JOHN EDMONDS AND ASSOCIATES LTD**

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# 1. EXECUTIVE SUMMARY

This report relates to the provisions in the Proposed District Plan addressing electrical interference.

All electrical and electronic products have an associated electromagnetic field which is made up of electric and magnetic waves. Electromagnetic fields span an enormous range of frequencies and corresponding wave lengths, ranging from low frequency fields, such as those produced by electricity supply and electrical appliances, to high frequency radio waves, which are used to transmit information. The interaction of these waves can create electrical interference. This can be in the form of “noise” within the radio spectrum which can affect the quality of reception, cause a loss of signal or prevent reception, or can be an interaction which degrades the effective performance of another electrical device. This can affect amenity values and in some instances can impact on the safe and efficient operation of zone activities.

The importance of managing electrical interference is recognised by central government and throughout the world. There is substantial legislation enacted to help minimise electrical interference, including electromagnetic compatibility standards and licensing requirements. Radio Spectrum Management, a subsidiary group of the Ministry of Business, Innovation and Employment, is the leading government agency on this subject and monitors and manages the radio spectrum. As part their role they investigate electrical interference complaints and enforce electromagnetic compatibility standards.

New Zealand Standards, codes of practice and mutual recognition arrangements between New Zealand and countries importing electronic products to this country, have also been established as a response to the issue of electrical interference.

Eleven submission points and three further submissions were received on the Electrical Interference provisions of the Proposed District Plan. Of these submission points, one was in support, three were in support with an amendment and seven opposed the provisions.

The main concerns of the submitters were with regard to the Electrical Interference Rules of the Proposed District Plan. In general, the submission's opposed the rules which were supported by further submissions. Collectively the matters addressed by the submitters raised an important question as to what the Council's role is in relation to this topic and whether it is even necessary for the Proposed District Plan to include rules on electrical interference.

This report recommends deleting the Electrical Interference Rule Section of the Proposed District Plan. It is considered that the rules are superfluous, given that there is adequate legislation already established by other government agencies to minimise electrical interference. It is considered that the removal of the rules will provide a more simplified Plan and will help avoid conflict with other legislation and national environmental standards.

It is also recommended that a definition of “electrical interference” be added to Section Four of the Plan and that minor amendments are made to the wording of the policies. The changes will help clarify the issue and the intent of the provisions and will also provide consistency between the zone policies.

In this report:

- Part 2 considers several key procedural issues.
- Part 3 provides background information on the issue of electrical interference.

- Part 4 summarises the various statutory provisions that apply to the consideration of the Proposed District Plan.
- Part 5 assesses the relevant issues raised by the submitters.
- Part 6 provides a discussion on the Section 32 matters.
- Part 7 sets out the overall conclusions.
- Appendix 1 sets out the recommendations on each of the submission points.
- Appendix 2 sets out the recommended changes to the text of the Proposed District Plan.

## 2. INTRODUCTION

### 2.1 Report Author

My name is Joanna Louise Shirley. I am a Policy Planner at the Invercargill City Council, a position I have held since February 2014. I hold a Bachelor of Environmental Management and am an associate member of the New Zealand Planning Institute. I have five years experience in the planning field as a Resource Management Officer, which has involved implementing the District Plan and producing various planning documents.

### 2.2 Peer Review

This report has been peer reviewed by Dan Wells and John Edmonds, from John Edmonds and Associates Ltd. Both John Edmonds and Dan Wells are practising resource management planners with a variety of experience throughout the plan change preparation process. Dan Wells has a Bachelor of Resource and Environmental Planning (Hons) and a Post Graduate Diploma in Development Studies, both from Massey University. John has a Bachelor of Regional Planning from Massey University.

### 2.3 How to Read this Report

This report is structured as follows:

- Interpretation (an explanation of some of the terms used).
- A summary of the hearing process.
- Background to the electrical interference topic, and the provisions of the Proposed Invercargill City District Plan 2013.
- Description of the statutory framework within which the proposed provisions have been developed.
- Analysis of the submissions, including a discussion of the key issues raised through the submissions and further submissions received.
- Assessment of the proposed changes under Section 32 of the RMA.
- Concluding comments.
- Recommendations on individual submissions.
- Tracked changes of the Proposed District Plan provisions relating to electrical interference.

To see my recommendation on an individual submission please refer to the table in **Appendix 1**. The table sets out the name and relevant submission number of those that submitted on the electrical interference provisions; a brief summary of their submission and decisions requested, followed by my recommendation and the reasons for it.

### 2.4 Interpretation

In this report, the following meanings apply:

“Council” means the Invercargill City Council.

“FS” means further submitter in Appendix 2.  
“Hearings Committee” means the District Plan Hearings Committee.  
“ICNIRP is the International Commission on non-ionising Radiation Protection  
“NES” is a National Environmental Standard  
“NPSET” is the National Policy Statement on Electricity Transmission  
“Operative District Plan” means the Invercargill City District Plan 2005.  
“Proposed District Plan” means the Proposed Invercargill City District Plan 2013.  
“Provisions” is a term used to collectively describe Objectives, Policies and Rules.  
“RMA” means the Resource Management Act 1991.  
“Submitter” means a submitter to the Proposed District Plan.

## **2.5 The Hearing Process**

A number of hearings are to be held to consider the submissions lodged to the Proposed Invercargill City District Plan 2013. The hearings have been divided up to ensure that submissions on similar issues have been grouped together and to enable the District Plan Hearings Committee to make decisions on the provisions relating to those issues. This report applies to the electrical interference provisions of the Proposed District Plan.

The Hearings Committee comprises of accredited Invercargill City Councillors, with the assistance of an Independent Hearings Commissioner. This Committee is to consider the Proposed Plan and the submissions and further submissions lodged. The Hearings Committee has full delegation to issue a decision on these matters.

This report is prepared pursuant to Section 42A of the Resource Management Act 1991 (the “RMA”). Section 42A provides for a report to be prepared prior to a hearing, setting out matters to which regard should be had in considering a Proposed District Plan and the submissions lodged to it. This report highlights those matters that are considered appropriate by the author for the Hearings Committee to consider in making decisions on the submissions lodged. This report has been prepared on the basis of information available prior to the hearing.

While the Hearings Committee is required to have regard to this report, regard must also be given to the matters raised in submissions, and presentations made at the hearing. The comments and recommendations contained in this report are not binding on the Hearings Committee and it should not be assumed that the Hearings Committee will reach the same conclusions set out in the report having heard from the submitters and Council advisers.

The hearing is open to the public, and any person may attend any part of the hearing. Those persons who lodged a submission have a right to speak at the hearing. They may appear in person, or have someone speak on their behalf. They may also call evidence from other persons in support of the points they are addressing.

At any time during or after the hearing, the Hearings Committee may request the preparation of additional reports. If that is done, adequate time must be provided to the submitters, to assess and comment on the report. The Hearings Committee may determine that:

- The hearing should be reconvened to allow responses to any report prepared, or



- Any responses be submitted in writing within a specified timeframe.

At the conclusion of the hearing process, the Hearings Committee will prepare a written decision. The decision is sent to all persons who lodged a submission. If not satisfied with the decision the submitters have a right of appeal to the Environment Court. If an appeal is lodged, the RMA requires a copy to be served on all submitters with an interest in that matter. Any submitter served may, if they wish, become a party to the appeal either in support or opposition to it.

If there is an appeal, the Environment Court will provide an opportunity for mediation between the parties. If mediation is not accepted, or does not resolve the issues, a further hearing will take place before a Judge and Court appointed Commissioners.

Except on points of law, the decision of the Environment Court is final.

### 3. BACKGROUND

All electrical and electronic products have an associated electromagnetic field which is made up of electric and magnetic waves. Electromagnetic fields span an enormous range of frequencies and corresponding wave lengths<sup>1</sup>, ranging from low frequency fields, such as those produced by electricity supply and electrical appliances, to high frequency radio waves, which are used to transmit information<sup>2</sup>. The interaction of these waves can create electrical interference. This can be in the form of “noise” within the radio spectrum which can affect the quality of reception, cause a loss of signal or prevent reception<sup>3</sup>, or can be an interaction which degrades the effective performance of another electrical device. This can affect a person’s amenity values and in some instances can impact on the safe and efficient operation of zone activities.

The importance of managing electrical interference is recognised by central government and throughout the world. All electrical, electronic and radio products supplied to the New Zealand market must comply with Electromagnetic Compatibility Standards. The standards are set down in legislation prescribed in Gazette notices and require conformity and product labelling. Any person, company, or organisation transmitting radio waves must comply with comprehensive national and international framework standards, engineering and licensing.

New Zealand Standards, codes of practice and mutual recognition arrangements between New Zealand and countries importing electronic products to the country have also been established as a response to the issue of electrical interference.

This report relates to the provisions on the Proposed District Plan addressing electrical interference, and includes:

- Section 2.2, which contains the issues relating to Amenity Values of the District;
- Sections 2.19 to 2.43, containing the issues, objectives, policies and methods of implementation for each of the Zones; and
- Section 3.5, which contains the District Wide rules for Electrical Interference.

#### 3.1 Proposed Issues, Objectives and Policies

There are no specific issues and objectives in the District Wide Section of the Proposed District Plan relating to the issue of electrical interference. However the Issues and Objectives relating to amenity values are considered relevant.

In the Zone Specific Section of the Issues, Objectives and Policies, each zone has policies relating to electrical interference. The policies are predominantly focused on ensuring freedom from nuisance, but also recognise that in some areas of the district, such as the Airport Operation and Airport Protection Zones, adverse affects of electrical interference can affect the safe and efficient operation of the activities taking place within the Zones. The Proposed District Plan encourages consideration regarding the placement and maintenance of electrical equipment and machinery, including transmitting aerials.

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<sup>1</sup> Center for Cosmological Physics. (2002). Yerkes Summer Institute 2002 Radio Waves Basics. Retrieved from <https://kicp.uchicago.edu/education/explorers/2002summer-YERKES/pdfs-sum02/background.pdf>

<sup>2</sup> World Health Organisation. (2014). *Electromagnetic Fields (EMF)*. July 2014. Retrieved from <http://www.who.int/peh-emf/about/WhatisEMF/en/>.

<sup>3</sup> Ministry of Economic Development, Radio Spectrum Management. (2009). Compliance Guide for users of the Radio Spectrum for Suppliers of Electrical & Radio Products. New Zealand: Author.

## **3.2 Proposed Rule**

As in the Operative District Plan, the Proposed District Plan includes a District Wide Rule on Electrical Interference (Section 3.5). Similar to Rule 4.35.2 of the Operative District Plan, Rule 3.5.1 states that no land use activity shall create electrical interference at or beyond the boundary of the property.

Rule 3.5.2 is a new addition to the rule and requires facilities emitting electric and magnetic fields to comply with all relevant New Zealand standards, measured at or beyond the boundary of a site.

Where an activity cannot comply with Rules 3.5.1 and 3.5.2 then the activity is non-complying. This is a change from the Operative District Plan which currently provides an activity status of restricted discretionary.

## **4. STATUTORY CONTEXT / LEGISLATIVE REQUIREMENTS**

### **4.1 Resource Management Act 1991**

In reviewing the District Plan, the Council must follow the process outlined in Schedule 1 of the RMA.

The process under the First Schedule includes notification for submissions (clause 5) and further submissions (clause 8), holding a hearing into submissions (clause 8(b)), and determining whether those submissions are accepted or rejected and giving reasons for the decisions (clause 10).

Clause 29(4) of the First Schedule to the RMA states that after considering a plan the local authority may decline, approve, or approve with modifications, the plan change, and shall give reasons for its decisions.

Under Section 74 of the RMA, in relation to changes to the District Plan, Council must consider Part 2 of the RMA (purposes and principles), Section 32 (alternatives, benefits and costs), and relevant regional and district planning documents.

#### **4.1.1 Part 2 of the RMA**

Part 2 of the RMA (ss5-8) sets out the Act's purpose and principles.

The purpose of the RMA is set out in Section 5. I confirm that the provisions for electrical interference fall within the purpose of the Act. In particular, policies are designed to avoid, remedy or mitigate adverse effects on the environment in accordance with Section 5(2)(c) of the RMA.

Section 6 of the RMA sets out matters of national importance which must be recognised and provided for. None of these matters are of particular relevance to the issue of electrical interference.

Section 7 of the RMA sets out "other matters" for which particular regard shall be had. It is considered that the most relevant matters to the issue of electrical interference are:

- (c) *The maintenance and enhancement of amenity values.*
- (f) *Maintenance and enhancement of the quality of the environment.*

It is considered that the provisions relating to electrical interference in the Proposed District Plan demonstrate particular regard to these matters.

Section 8 of the RMA obliges persons exercising functions and powers under the RMA to take account of the principles of the Treaty of Waitangi. Representatives from Te Ao Marama Inc have been part of the Plan Review process as members of the Council's Plan Group who have worked on developing the Proposed District Plan. Consultation with Iwi has also occurred. The protection of amenity values that make an environment special is pivotal to understanding the links between Maori people, their language and the environment. The provisions of the Proposed District Plan seek to ensure freedom from nuisance from electrical interference, which helps protect amenity values.

#### **4.1.2 Functions of Territorial Authorities under the RMA**

Section 31 of the RMA describes the functions of a territorial authority under that Act. One of the functions set out in Section 31(1)(a) is:

*“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.”*

Under Section 31(1)(b) of the RMA a territorial authority is required to “... control ... any actual or potential effects of the use, development, or protection of land ...”

With respect to the issue of electrical interference, it is noteworthy that ‘land’ is defined in Section 2 of the RMA and includes the ‘the airspace above land’.

The provisions of the Proposed District Plan include policies, and methods intended to avoid the creation of electrical interference from land use activities. Careful consideration of the placement and maintenance of electrical equipment is encouraged by the Plan to ensure freedom from electrical interference.

#### **4.1.3 Consideration of alternatives, benefits, and costs**

Section 32 of the RMA sets out the Council’s obligations in assessing the alternatives, benefits and costs.

Whilst a Section 32 report was released at the time of notification of the Proposed District Plan, the Council is required to carry out a further evaluation through the hearing, consideration and deliberation process before making its decision on the Plan Change. Section 6 of this report includes my evaluation of the Proposed District Plan Provisions in accordance with Section 32AA.

### **4.2. Relevant Planning Policy Documents**

The RMA specifies a number of documents which need to be considered when making a decision on a Proposed District Plan, and the weight that should be given to these. These are addressed in the following section.

#### **4.2.1 New Zealand Coastal Policy Statement**

Section 75 of the RMA requires that a District Plan must give effect to any New Zealand Coastal Policy Statement. There are no provisions of direct relevance to electrical interference, but it is noted that the provisions of the Proposed District Plan seek to protect electrical interference, which includes interference to navigation communication systems such as the communication and navigation of boats.

#### **4.2.2 National Policy Statements**

In accordance with Section 75 of the RMA, a District Plan must give effect to National Policy Statements.

The National Policy Statement on Electricity Transmission (NPSET) facilitates the operation, maintenance, upgrading and development of the electricity transmission network. Policy 9 of the NPSET states that:

*“Provisions dealing with electric and magnetic fields associated with the electricity transmission network must be based on the International Commission on Non-ionising Radiation Protection (ICNIRP) Guidelines for limiting exposure to time varying electric magnetic fields (up to 300 GHz) (Health Physics, 1998, 74(4): 494-522) and recommendations from the World Health Organisation monograph Environment Health Criteria (No 238, June 2007) or revisions thereof and any applicable New Zealand standards or national environmental standards.”*

One submitter has requested that Rule 3.5.2 be amended to include reference to these guidelines as specified by the NPSET. As discussed later in my report (Paragraph 5.2.2) I do not consider that the ICNIRP guidelines and recommendations from the World Health Organisation monograph Environment Health Criteria to be relevant to the electrical interference provisions of the Proposed District Plan. I do, however, accept that Rule 3.5.2 is too broad and that the intent of the provisions is not clear, which has created some confusion. For this reason, amongst others, I am recommending that the rule be deleted.

It is noted that the NPSET is given effect to through the infrastructure provisions of the Proposed District Plan.

#### **4.2.3 National Environmental Standards**

Section 44A of the RMA prescribes how District Plans must be amended if a rule conflicts with a National Environmental Standard (NES). The NES for Electricity Transmission Activities 2009 and the NES for Telecommunication Facilities 2008 are relevant.

##### **4.2.3.1 NES for Electricity Transmission Activities 2009**

The NES for Electricity Transmission Activities 2009 specifies that electricity transmission activities are permitted, subject to terms and conditions, to ensure that these activities do not have significant adverse effects on the environment. The NES regulates electric and magnetic field strength produced by transmission lines. However, the regulations are for the purpose of protecting human health rather than for the protection of electrical interference with other electrical devices.

A submission from Transpower questions their ability to comply with Rule 3.5.1 of the Proposed District Plan, which has an activity status of non-complying for activities which create electrical interference at the property boundary. As their transmission lines traverse property boundaries they consider that they will never be able to comply with the rule. The ability to not be able to comply with this rule is inconsistent with the National Policy Statement on Electricity Transmission and the National Environmental Standard for Electricity Transmission Activities.

I acknowledge that a potential conflict could arise if a transmission activity, complying with the regulations of the NES, was to create electrical interference. This would make the transmission activity non-complying, which conflicts with the permitted activity status of the NES. As discussed in paragraph 5.2.2 below, I am recommending that the rule on electrical interference be deleted. This will avoid any potential for conflict to occur, which is in accordance with Section 44A of the RMA.

#### 4.2.3.2 NES for Telecommunication Facilities 2008

The NES for Telecommunication Facilities provides a nationally consistent planning framework for radiofrequency fields of all telecommunication facilities and low impact telecommunications infrastructure on road reserves. An activity (such as a mobile phone transmitter) that emits radio-frequency fields is a permitted activity provided it complies with the existing New Zealand Standard (NZS2772.1:1999 Radio-frequency Fields Part 1: Maximum Exposure Levels 3kHz-300GHz).

Several submitters have commented that Rule 3.5.2 of the Proposed District Plan is inconsistent with the NES for Telecommunication Facilities. Like electricity transmission activities, I acknowledge that a potential conflict could arise between the electrical interference rules of the Proposed District Plan and the NES for Telecommunication Facilities. This further supports my recommendation to delete Rules 3.5.1 -3.5.3.

#### 4.2.4 Regional Policy Statement

Under Section 75 of the RMA, a District Plan must give effect to an operative Regional Policy Statement.

The objective below from the Southland Regional Policy Statement (1997) is considered relevant to the issue of electrical interference:

*Objective 10.2 To maintain and enhance the environmental quality of the Region's built environment.*

I consider that the Objectives and Policies of the Proposed District Plan relating to electrical interference are sufficient to help ensure that the environmental quality of the region's built environment is maintained and enhanced. The electrical interference policies seek to protect amenity values by avoiding a nuisance. This is a matter that will be considered as part of an application for resource consent, for activities likely to cause electrical interference.

#### 4.2.5 Proposed Regional Policy Statement

In accordance with Section 74, regard needs to be given to any proposed Regional Policy Statement. The Proposed Southland Regional Policy Statement was notified in May 2012. The following objectives and policies are relevant to the issue of electrical interference.

*Policy URB.1 – The adverse effects of urban development on the environment should be appropriately avoided, remedied or mitigated.*

Similar to Objective 10.2 of the Operative RPS, the policies on Electrical Interference of the Proposed District Plan give regard to this policy by seeking to avoid a nuisance from electrical interference.

#### 4.2.6 Regional Plans

In accordance with Section 74 of the RMA, a District Plan must not be inconsistent with a Regional Plan. There are no plans of significant relevance to the electrical interference provisions of the Proposed District Plan, but it is noted that the Coastal Plan does include provisions for the safe and efficient navigation in the coastal

marine area. The objectives and policies of the Coastal Plan are predominantly concerned with physical navigation routes, but I note that electrical interference can affect navigation communication, which is also important. The policies of the Proposed District Plan seek to ensure freedom from electrical interference, which is consistent with the Coastal Plan.

#### **4.2.7 Iwi Management Plans**

Section 74 of the RMA requires that a local authority must take into account any relevant planning document recognised by an iwi authority and lodged with the territorial authority.

Ngai Tahu has lodged an Iwi Management Plan with the Council. The relevant document is the *Ngai Tahu ki Murihiku Natural Resource and Environmental Iwi Management Plan 2008 – The Cry of the People - Te Tangi a Tauria*. Te Tangi a Tauria views amenity values as pivotal to understanding the links between Maori people, their language and the environment. The following policy is of particular relevance to the issue of electrical interference:

*Amenity Values 3.2.2 (pg 82)*

*Policy 2        Ensure where avoidable that impacts from activities that create effects such as glare, shading or electrical disturbance do not interfere with the amenity values associated with a place, environment or neighbouring property.*

The provisions of the Proposed District Plan seek to ensure freedom from nuisance from electrical interference, which helps protect amenity values. The policies of the Proposed District Plan on electrical interference are considered sufficient to ensure that the effects of an activity, including electrical interference, are considered and are addressed as part of an application for resource consent.

#### **4.2.8 Management Plans and Strategies Prepared under other Acts**

A District Plan is required to have regard to management plans and strategies prepared under different Acts. For the District Plan review, the Invercargill City Centre Action Plan and the Big Picture (both prepared under the Local Government Act) are considered relevant. However, there are not considered to be any relevant matters arising from these documents with regard to electrical interference.

### **4.3 Summary**

It is considered that the purpose and principles of the RMA are met by the electrical interference provisions set out in the Proposed District Plan. The proposed provisions fall within the functions of local authorities (amendments are proposed to make this clearer). The requirements of Section 32 of the RMA have been met through the evaluations carried out prior to notification and in this report. The various documents required to be considered have been appropriately addressed in the preparation of provisions relating to electrical interference.



## **5. ANALYSIS OF SUBMISSIONS**

Eleven submission points and three further submissions were received on the Electrical Interference provisions of the Proposed District Plan. Of these submission points, one was in support, three were in support with an amendment and seven opposed the provisions. These submissions are summarised in table format, along with recommended responses, in Appendix 2 of this report.

The main concerns of the submitters were with regard to the Electrical Interference Rules of the Proposed District Plan. In general the submissions opposed the rules which were supported by further submissions. Collectively the matters addressed by the submitters raises an important question as to what the Council's role is in relation to this topic and whether it is even necessary for the Proposed District Plan to include rules on electrical interference.

Submissions were also received on the policies for electrical interference, which are discussed below.

### **5.1 Policies**

Five submission points were received on the Zone Specific Policies of the Proposed District Plan. Three of the submission points were in general support and two submissions were in opposition.

#### **5.1.1 Is electrical interference better addressed in the District Wide Section of the Plan?**

Invercargill Airport Limited supports the electrical interference provisions in the Airport Operation and Airport Protection Zones but questions whether the issue of electrical interference is better addressed in the District Wide Section of the Plan. They consider that electrical interference is an issue that arises throughout the district and that policies should apply to the entire region, rather than being specific to these Zones.

The Proposed District Plan recognises that amenity values vary from place to place and that each zone has different functions and needs. For example, in the Airport Operation and Airport Protection Zones the policies on electrical interference are worded more strongly than the policies for the Residential Zones. This is because electrical interference has the potential to adversely affect the safe and efficient operation of the airport because of the reliance on effective radio communication. I therefore consider that the issue of electrical interference is appropriately addressed in the Zone Specific Section of the Proposed District Plan and should remain as notified (with a minor amendment set out in Appendix 2).

The submission does, however, highlight the importance of consistency between the zone policies which have a similar function and amenity value. It is noted that the wording of the policies and their explanations vary slightly between the zones and it is therefore recommended that these be amended to provide consistency.

### **5.1.2 Policy already addressed by relevant National Environmental Standards**

One submitter has requested the deletion of Policy 12 in the Residential 1 Zone because they consider that the provision is already provided for by relevant National Environmental Standards.

The submitter does not clarify what National Environmental Standards they are referring to but it is assumed that they are referring to the National Environmental Standards on Electricity Transmission Activities and Telecommunication Facilities. These standards provide controls on electric and magnetic field exposure and radiofrequency exposure, for the purpose of protecting human health.

The electrical interference provisions of the Proposed District Plan serve a different purpose to the national environmental standards, and have been provided to avoid a nuisance being created which could affect a person's amenity values. They are not intended to manage exposure levels for the purpose of protecting human health. The electrical interference provisions also apply to a much wider scope of products than what is covered by the NES. I therefore do not agree with the submitter and consider that the policy should remain as notified.

I do, however, acknowledge that the issue of electrical interference is not clear in the Proposed District Plan. I believe that this can be easily addressed by adding a definition of "Electrical Interference" to Section Four of the Plan. This will help to avoid confusion and will also help to clarify the issue.

The following wording is recommended:

"Electrical Interference – Means the interruption, disruption or degradation of the effective performance of an electrical device or radio frequency."

### **5.1.3 Smelter Zone Policy 5**

Smelter Zone Policy 5 seeks to avoid nuisance from electrical interference beyond the zone boundary.

The New Zealand Aluminium Smelter opposes the policy and has requested that it be deleted. They consider the policy to be unjustified and unnecessary given the isolation of the smelter operation from other activities.

I disagree with the submitter. The smelter operation utilises large quantities of electricity and therefore has the potential to produce electrical interference. Electromagnetic waves span a large range of frequencies and wave lengths and therefore it is very difficult to determine where the source of interference may occur. Although it is acknowledged that electromagnetic waves reduce rapidly with distance, the smelter zone closely adjoins the coastal marine area, where boating and fishing operations occur. Electrical interference can adversely impact on navigation equipment and radiocommunications, which are important for these activities.

Including a policy on electrical interference raises awareness of this issue and is something that should be considered by the smelter as part of their site operations.

## 5.2 Section 3.5 Rules

Six submission points and three further submissions were received on the Electrical Interference Rules of the Proposed District Plan. In general the submissions opposed the Electrical Interference Rules, which were supported by the further submissions. The matters addressed by the submitters raises a key question as to Council's role in relation to this topic and whether it is even necessary for the Proposed District Plan to include rules on electrical interference.

Set out below is a summary of the submission points, followed by my discussion and recommendations.

### 5.2.1 Summary of Submission Points

Rule 3.5.1 of the Proposed District Plan states that "no land use activity shall create electrical interference at or beyond the boundary of a property."

Transpower New Zealand Limited has commented that the rule has zero tolerance for radio frequency interference at the boundary of a property. As their lines traverse property boundaries they consider that this rule could never be met, which they state is inconsistent with the National Policy Statement on Electricity Transmission.

Rule 3.5.2 states that the electric and magnetic field exposure at or beyond the boundary of any site containing a facility emitting electric and magnetic fields shall be such as to comply with all relevant New Zealand standards.

Several submitters have commented that Rule 3.5.2 is too vague by referring to "all relevant New Zealand standards" and consider that it is inconsistent with the National Environmental Standard for Telecommunication Facilities. Some of the submitters seek for the rule to be deleted while others recommend amending the rule to be more specific. It is suggested by one submitter that the rule be amended to adopt the wording specified in the National Environmental Standard for Telecommunication Facilities. Another submitter considers that as well as New Zealand Standards, international guidelines, such as the ICNIRP Guidelines, should also be recognised by the rule.

The New Zealand Aluminium Smelter Limited considers that Rules 3.5.1 – 3.5.3 are not warranted in relation to the smelter site and believes that this matter would be best addressed as a performance standard or through the resource consent process.

### 5.2.2 Discussion

The standard referred to in the NES for Telecommunication facilities is *NZS 2772:Part1:1999 Radiofrequency Fields Part 1 – Maximum Exposure Levels – 3 kHz to 300GHz*. This standard specifies basic restrictions and derived reference levels for exposure of radiofrequency fields to the human body and does not apply to the interference of electronic equipment<sup>4</sup>. Similarly, the International Commission on Non-ionising Radiation Protection (ICNIRP) Guidelines seek to limit electromagnetic field exposure to the human body.

I do not believe the electrical interference provisions are intended to address effects from non-ionising radiation and radiofrequencies on human health, as set out by

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<sup>4</sup> Clause 2.5 of NZS 2772:Part 1:1999.  
Section 42A Report  
Electrical Interference

NZS 2772:Part1:1999 and the ICNIRP guidelines. This matter is already addressed by the National Environmental Standards and where required has been incorporated into the Infrastructure provisions of the Proposed District Plan (Section 2.9.3 Policy 14 and Section 3.9.21).

I agree with the submitters that the use of the term “all relevant New Zealand standards” in Rule 3.5.2 is too vague and, as shown by the interpretation of the submitters, opens the rule up to a broad range of considerations outside of the scope of the electrical interference provisions. In researching what New Zealand Standards are “relevant” I have found that there are a range of comprehensive standards, guidelines and codes of practice established for the purpose of managing electrical interference.

- New Zealand Standard NZS 6869:2004 – *Limits and Measurement Methods of Electromagnetic Noise from High Voltage a.c Power Systems, 0.15 - 1000MHz.*

This New Zealand standard establishes limits for electromagnetic interference from alternating current (a.c) overhead powerlines and high voltage equipment installations in the frequency range 0.15 to 1000MHz (Megahertz). The limits are specified for the protection of broadcast radio reception and other radio communication services, including navigation and safety of life services. The frequency range referred to in the standard is very high and is likely to only apply to limited apparatus. To provide a comparison, the majority of New Zealand’s national grid only operates at a frequency rate of 50Hz (Hertz).

- Electromagnetic Compatibility Standards and Licensing

Anyone who makes or supplies electrical, electronic or radio products to the New Zealand market must ensure that their products comply with Electromagnetic Compatibility Standards. These standards have been established under the Radiocommunication Act 1989 and are administered and enforced through the Radio Spectrum Management (RSM) group, a subsidiary group of the Ministry of Business, Innovation and Employment. The mandatory requirements for electrical, electronic and radio products are prescribed in Gazette Notices and cover electromagnetic compatibility standards, compliance, radio standards, mutual recognition agreements, prohibited equipment, and codes of practice.

Any person, company, or organisation transmitting radio waves must also comply with comprehensive national and international framework standards, engineering and licensing requirements.

The RSM group is the leading government agency on radio and electromagnetic fields and is responsible for administering the radio spectrum under the Radiocommunication Act 1989. The RSM enforces the electromagnetic compatibility standards and provides an interference investigation service which investigates commercial, domestic, and public safety interference complaints. This process involves tracing complaints, and once the source of the interference is found, requiring the party responsible to correct the matter. If it is determined that the source of the interference is as a result of non-compliance with the Electromagnetic Compatibility legislation

the offender may be issued with an infringement notice or have legal action taken against them.

Tracing interference is a complex and unpredictable process. If the Council decides to take on the responsibility of enforcing New Zealand standards, it could result in a significant cost to the Council. The issue of electrical interference is one that is very technical and would require a high level of guidance from an expert in the field, in order to understand and effectively implement these guidelines. I question whether the Council should be taking on this responsibility, given that the standards are already controlled and implemented by another government agency.

In my opinion, the electrical interference rules of the Proposed District Plan are superfluous because of the comprehensive array of standards and guidelines already established through legislation outside of the RMA. The RSM is responsible for administering the radio spectrum under the Radiocommunication Act 1989 and has the authority and knowledge to investigate and manage the issue of electrical interference. The Council does not have the in-house knowledge or expertise on this topic and therefore, in my opinion, the Council should step back from the issue and allow it to be managed by RSM. This will also avoid any conflict between the two legislations, which could arise if one authority was to give consent to electrical disturbance which did not comply with the legislation of the other government agency.

I acknowledge that electrical interference can have an adverse effect on amenity values which is a matter of the RMA, and therefore it needs to be recognised and provided for by the Proposed District Plan. However, I believe that this can be done through the Policies on Electrical Interference, which will need to be given regard to as part of the resource consent process and through performance standards. For example, under Rule 3.9.17 of the Proposed District Plan, a resource consent application to operate an electricity substation must assess the effects of the proposal on amenity values. Electrical Interference should be among those effects considered. Section 17 of the RMA is also noted and can be used by the Council if it is considered that an adverse effect from electrical interference is not being adequately avoided, remedied or mitigated.

Since the District Plan became operative in 2005 there have been no applications for resource consent to breach the electrical interference rules and to the knowledge of Planning Staff there have been very few complaints or enquiries on this matter. This indicates to me that electrical interference is not a significant issue and can be adequately addressed by the policies of the Proposed District Plan.

### **Recommendation**

I recommend that Rules 3.5.1 – 3.5.3 be deleted. The Rules on electrical interference are considered superfluous as the matter is largely governed by legislation outside of the Resource Management Act. The policies in the Proposed District Plan are considered adequate to ensure that the matter is considered as part of an application for resource consent.

### **5.3 Minor Amendment**

A minor change is also recommended to the wording of the policies to replace the word “freedom” with “avoid”. The term “avoid” is consistent with the wording used in the RMA which I consider is more appropriate than the term “freedom”. The change

is minor in effect and will result in no consequence to the intention and outcome of the provisions. I consider that the effects of these amendments are such that they can be made at this stage under clause 16(2) of the First Schedule of the RMA.

## **6. DISCUSSION OF SECTION 32 MATTERS**

Section 32 of the RMA establishes the framework for assessing objectives, policies and rules proposed in a Plan. This requires the preparation of an Evaluation Report. This Section of the RMA was recently amended (since the notification of the proposed District Plan) and the following summarises the current requirements of this section.

The first step of Section 32 requires that objectives are assessed to determine whether they are the most appropriate way to achieve the purpose of the RMA (as defined in Section 5).

The second step is to examine policies and rules to determine whether they are the most appropriate way to achieve the objectives. In this instance, the objectives are those proposed by the District Plan. This assessment includes requirements to:

- Identify the costs of the environmental, economic, social, and cultural effects that are anticipated from the implementation of the provisions (including effects on employment and economic growth)
- Identify other reasonably practicable options for achieving the objectives; and
- Assess the efficiency and effectiveness of the provisions in achieving the objectives.

An Evaluation Report was released at the time of notification of the Proposed Plan.

Section 32AA of the RMA requires a further evaluation to be released with decisions, outlining the costs and benefits of any amendments made after the Proposed Plan was notified.

Section 32 states that Evaluation Reports need to contain a level of detail that corresponds to the scale and significance of the environmental, economic, social, and cultural effects that are anticipated from the implementation of the proposal. This means that if, in its decision, the Hearings Panel recommends minor changes from what was in the Proposed Plan, a further evaluation can be relatively brief.

### **6.1 Relevant Section 32AA Matters**

Electrical interference is covered in the amenity section of the original Section 32 report and in the Zone Specific Issues Section of Plan. Minor changes are recommended to the majority of the policies and their explanations. The changes are only minor in nature and do not change the intent of the policies.

I am recommending that the Rule Section on Electrical Interference be deleted from the Proposed District Plan. This is considered relevant for further evaluation under Section 32AA of the RMA.

### **6.2 Section 32AA Further Evaluation**

It is considered that issue of electrical interference is adequately governed by legislation outside of the RMA and that the rules of the Proposed District Plan are not necessary. Since the District Plan became Operative in 2005 there have been no applications for resource consent to breach the Electrical Interference Rules and to the knowledge of Planning Staff have been very few enquiries or complaints on this topic. This indicates that electrical interference is not a significant issue and is one that can be adequately addressed by the Policies of the Proposed District Plan.

The environmental, social, cultural and economic effects of this change are considered minor. The issue of electrical interference will continue to be recognised by the policies of the Plan and is an environmental effect that can be considered as part of an application for resource consent. Adverse effects of electrical interference will be monitored and managed by the RSM group, who has the expertise and equipment to effectively implement electromagnetic compatibility legislation. The public will be made aware of the investigation service provided by RSM through the advice of Council staff and sharing of information.

Overall I consider that the policies on electrical interference are sufficient to help ensure that the maintenance and enhancement of amenity values is achieved and that the objectives for the zones are met.



## 7. CONCLUDING COMMENTS

The Proposed District Plan includes Zone Specific Policies and District Wide Rules on the issue of electrical interference. The provisions are predominantly focused on ensuring freedom from nuisance from electrical interference but also recognise that in some areas of the district electrical interference can affect the safe and efficient operation of the activities taking place within the Zones.

The importance of managing electrical interference is recognised by central government and throughout the world. There is substantial legislation enacted to help minimise electrical interference, including electromagnetic compatibility standards and licensing requirements. Radio Spectrum Management, a subsidiary group of the Ministry of Business, Innovation and Employment, is the leading government agency on this subject and monitors and manages the radio spectrum. Part of its role is to investigate electrical interference complaints and enforce electromagnetic compatibility standards.

Given the legislation already in place to minimise electrical interference, I do not consider it to be necessary for the District Plan to also regulate the issue. Since the District Plan became Operative in 2005 there have been no applications for resource consent to breach the electrical interference rules and to the knowledge of Planning Staff have been very few complaints or enquiries on this matter. This indicates to me that electrical interference is not a significant issue. The removal of the rules will provide a more simplified Plan and will help avoid conflict with other legislation and national environmental standards.

It is considered that the policies on electrical interference are sufficient to help ensure that the maintenance and enhancement of amenity values is achieved and that the objectives of the zones are met.

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## APPENDIX 1 – Recommendations on Submissions

Submitter	Submission	Recommendation
<b>SECTIONS 2.19 – 2.43 POLICIES</b>		
<b>Airport Operations Zone – Policy 8</b>		
<b>103.32 Invercargill Airport Ltd</b>	<p>Support. The submitter considers this policy appropriate but believes it may be best appearing as a District Wide policy, rather than specific to the Airport Operations Zone.</p> <p><b>DECISION SOUGHT:</b> Insert similar policy in the Transportation section (2.17) or Infrastructure section (2.9) of the District Wide part of the Plan</p>	<p><b>Reject in part</b></p> <p>It is considered that the issue of electrical interference is appropriately addressed in the zone specific section of the Proposed District Plan, which recognises the individual functions and amenity values of the individual zones.</p> <p>The submission does, however, highlight the importance of consistency between the zone policies which have a similar function and amenity value. It is noted that the wording of the policies and their explanations vary slightly between the zones and it is therefore recommended that these be amended to provide consistency. The recommended changes are set out in Appendix 2.</p>
<b>Airport Protection Zone – Policy 8</b>		
<b>103.47 Invercargill Airport Ltd</b>	<p>Support. The submitter supports this policy, however believes it may be better as a District Wide rule as the issue arises throughout the District.</p> <p><b>DECISION SOUGHT:</b> Insert similar policy in the Transportation section (2.17) or Infrastructure section (2.9) of the District Wide part of the Plan</p>	<p><b>Reject in part</b></p> <p>See reasons and recommendations set out above in submission 103.32.</p>

Submitter	Submission	Recommendation
<b>Residential 1 – Policy 12</b>		
<b>107.14 A4 Simpson Architects Limited</b>	<p>The submitter opposes the inclusion of this provision on the grounds that he believes it is covered by relevant National Environmental Standards.</p> <p><b>DECISION SOUGHT:</b> Delete 2.36.3 Policy 12</p>	<p><b>Reject</b></p> <p>The National Environmental Standards on Electricity Transmission Activities and Telecommunication Facilities include controls on electric and magnetic field exposure and radiofrequency exposure to ensure exposure levels are safe for human health. The Electrical Interference provisions of Proposed District Plan are provided to protect amenity values and therefore serve a different purpose to that of the NES. The electrical interference provisions also apply to a much wider scope than the national environmental standards which are limited to exiting electricity transmission activities and telecommunication facilities which are located in the road reserve.</p> <p>It is noted, however, that the submitter is one of several submitters who have misinterpreted the electrical interference provisions. I therefore recommend adding a definition of “electrical interference” to support the policies and help to clarify the issue.</p> <p><b>RECOMMENDATION:</b></p> <p>Add the following definition to Section Four of the Proposed District Plan:</p> <p><u>“Electrical Interference – Means the interruption, obstruction or degradation of the effective performance of an electrical device or radio frequency.”</u></p>
<b>Seaport Zone – Policy 5</b>		
<b>24.52 South Port NZ Ltd</b>	<p>Support.</p> <p><b>DECISION SOUGHT:</b> Retain.</p>	<p><b>Accept (with minor amendment)</b></p> <p>A minor amendment is recommended to the wording of the policy. The recommended change is set out in Appendix 2.</p>

Submitter	Submission	Recommendation
<b>Smelter Zone – Policy 5</b>		
<b>71.36 NZAS Ltd</b>	<p>Oppose. The submitter considers that this policy is unjustified and unnecessary. The submitter considers that given the isolation of the operation from other activities electrical interference is unlikely to be an issue</p> <p><b>DECISION SOUGHT:</b> Delete Policy 5</p>	<p><b>Reject</b></p> <p>Electromagnetic fields span a large range of frequencies and corresponding wave lengths which means that the source and location of electrical interference can be difficult to determine. Although it is acknowledged that electromagnetic waves reduce rapidly with distance, the Smelter Zone closely adjoins the coastal marine area, where boating and fishing operations occur. Electrical interference can adversely impact navigation equipment and radiocommunications, which are important for these activities.</p> <p>Retaining the Policy on electrical interference raises awareness of this issue and is a matter that should be considered by the smelter as part of their site operations.</p>
<b>SECTION 3.5 RULES</b>		
<b>71.50 NZAS Ltd</b>	<p>The submitter opposes rules 3.5.1 – 3.5.3. The submitter considers this provision is not warranted in relation to the smelter site, that the provisions would be best as performance standards or considerations when processing resource consents for activities likely to result in electrical interference, and that the rule is too uncertain in referring to “all relevant New Zealand Standards”.</p> <p><b>DECISION SOUGHT:</b> Delete 3.5.1 – 3.5.3 and replace with appropriate performance standards for the Council to measure an activity against when resource consent is sought for that activity. AND That electrical interference is defined with reference to an appropriate standard.</p>	<p><b>Accept in part</b></p> <p>The submission raises an important question as to whether rules on electrical interference are necessary. It is agreed that the term “all relevant NZ standards” referred to in Rule 3.5.2 is too uncertain and it is acknowledged that it has been a source of confusion by many of the submitters.</p> <p>There are many standards, guidelines and code of practices established in response to the issue of electrical interference and is a matter that appears to be largely governed by legislation outside of the Resource Management Act. Electromagnetic Compatibility Standards and licensing have been established under the Radiocommunication Act 1989 and are administered and enforced through the Radio Spectrum Management (RSM) group, a subsidiary group of the Ministry of Business, Innovation and Employment.</p>

Submitter	Submission	Recommendation
		<p>Given the legislation already established to minimise electrical interference I consider that this is an issue that the Council can step back from. The policies on electrical interference are considered sufficient to raise awareness of the issue and where relevant can be considered as part of an application for resource consent.</p> <p><b>Recommendation:</b></p> <p>Delete Rule 3.5.1 – 3.5.3</p> <p>The submitter’s request to define electrical interference is accepted. (See recommendation outlined above in submission point 107.14).</p>
<p><b>FS25.3 Transpower NZ Ltd</b></p>	<p><b>Support in part submission 71.50</b>  The further submitter considers that the proposed rule does not follow good practice by referring to “any relevant NZ Standard”, and does not provide certainty to the public or the Council on what standards must be met.</p> <p><b>DECISION SOUGHT:</b>  Not stated.</p>	<p><b>Accept</b></p> <p>It is agreed that the reference to “all relevant New Zealand standards” in Rule 3.5.2 is too broad and provides no certainty to the user of the Plan as to what standards must be met.</p>
<p><b>87.43 Transpower NZ Ltd</b></p>	<p>The submitter considers that Rule 3.5.1 has a zero tolerance for radio frequency interference (RFI) at the boundary of a property and as their lines traverse property boundaries and therefore could never comply with this rule. The submitters assets do comply with <b>NZS 6869:2004</b> and the submitter consider that the limits within this standard should be relied on to manage any potential effects of RFI.</p> <p>The submitter seeks that Rule 3.5.2 be amended to include reference to the <i>International Commission on Non-ionising Radiation Protection (ICNIRP) Guidelines</i> that is included in</p>	<p><b>Accept in part</b></p> <p>The primary aim of the electrical interference provisions is to avoid a nuisance being created which degrades a person’s amenity. Therefore the rule would only be triggered if the transmission activity was producing electrical interference which was creating an adverse effect. The Infrastructure Rule of the Proposed District Plan provides rules which seek to avoid reverse sensitivity effects on transmission activities within the national grid, such as electrical interference. It is therefore considered that a transmission line could comply with Rule 3.5.1 providing that an adverse effect is not being created. I do</p>

Submitter	Submission	Recommendation
	<p>the NPSET. The submitter considers that a non-complying status for a new line does not give effect to the NPSET.</p> <p><b>DECISION SOUGHT:</b></p> <p>(i) That 3.5.1 is deleted</p> <p>(ii) That 3.5.2 is amended to refer to international guidelines as follows:</p> <p>“<b>3.5.2</b> The electric and magnetic fields exposure at or beyond the boundary of any site containing a facility emitting electric and magnetic fields shall be such as to comply with all relevant New Zealand standards <u>and international guidelines.</u>”</p> <p>(iii) And any consequential amendments.</p>	<p>note, however, that it is recommended that the rule be deleted in response to submission point 71.50 (<i>see reasons and recommendations outlined above</i>).</p> <p>The International Commission on Non-ionising Radiation Protection (ICNIRP) Guidelines seeks to limit electromagnetic field exposure to the human body. This is a matter outside of the electrical interference provisions, which seek to avoid a nuisance from the adverse effects of electrical interference. It is however acknowledged that Rule 3.5.2 is unclear which further supports the recommendation for its deletion under submission point 71.50.</p>
<p><b>FS12.7 PowerNet Ltd</b></p>	<p><b>Support submission 87.43</b></p> <p>The further submitter agrees that 3.5.1 should be deleted and 3.5.2 should be amended to reflect that there are international standards which are accepted industry standards in relation to the issue of electrical interference</p> <p><b>DECISION SOUGHT:</b></p>	<p><b>Accept in part</b></p> <p>See reasons and recommendation outlined above in submission 87.43.</p>
<p><b>52.5 NZ Police</b></p>	<p>Oppose. The submitter states that this rule is inconsistent with the telecommunications NES, and that the rule is too uncertain in referring to “all relevant New Zealand Standards”</p> <p><b>DECISION SOUGHT:</b></p> <p>Delete Rule 3.5.2 or adopt the appropriate wording from the Telecommunications NES.</p>	<p><b>Accept</b></p> <p>It is acknowledged that a potential conflict could arise between the electrical interference rules of the Proposed District Plan and the NES for Telecommunication facilities. This would arise if a telecommunication facility was to create electrical interference but complied with the regulations of the NES. This would mean that the telecommunication activity would be non-complying under the Proposed District Plan but permitted under the NES regulations.</p>

Submitter	Submission	Recommendation
		<p>Under Section 44A of the RMA the Council must amend a rule if it conflicts with a National Environmental Standard.</p> <p>It is agreed with the submitter that the reference to “all relevant New Zealand standards” in Rule 3.5.2 is too broad and provides no certainty to the user of the Plan as to what standards must be met.</p> <p>It is recommended that Rule 3.5.2 be deleted under submission point 71.50. The points raised by the submitter further support this recommendation.</p>
<p><b>FS25.4 Transpower NZ Ltd</b></p>	<p><b>Support in part submission 52.5</b></p> <p>The further submitter supports the rule to the extent that its activities are captured by the telecommunications NES.</p> <p>However, the further submitter opposes the narrow approach sought by the submitter as they believe that the rule is not intended to just apply to telecommunications facilities but to any activity that creates an electric or magnetic field, not just radiofrequency fields.</p> <p>The further submitter suggests that the rule refer to the ICNIRP 2010 Exposure Guidelines</p>	<p><b>Accept in part</b></p> <p>See reasons and recommendations outlined in submission point 52.5 above.</p> <p>I agree with the further submitter that the electrical interference provisions of the Proposed District Plan are not limited to radiofrequency fields only and include electric and magnetic fields also. I recommend the suggestion to include reference in the rule to the ICNIRP Guidelines be rejected. This document is not considered relevant to the electrical interference provisions of the Proposed District Plan.</p>
<p><b>102.9 Chorus NZ Ltd</b></p>	<p>Oppose. The submitter states that this rule is inconsistent with the telecommunications NES, and that the rule is too uncertain in referring to “all relevant New Zealand Standards”</p> <p><b>DECISION SOUGHT:</b> Delete Rule 3.5.2</p>	<p><b>Accept</b></p> <p>See reasons and recommendations outlined above in Section 52.5.</p>
<p><b>104.9 Telecom NZ</b></p>	<p>Oppose. The submitter states that this rule is inconsistent</p>	<p><b>Accept</b></p>



Submitter	Submission	Recommendation
Ltd	<p>with the telecommunications NES, and that the rule is too uncertain in referring to “all relevant New Zealand Standards”</p> <p><b>DECISION SOUGHT:</b> Delete Rule 3.5.2</p>	See reasons and recommendations outlined above in Section 52.5.

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## APPENDIX 2 - RECOMMENDED CHANGES TO THE PROPOSED DISTRICT PLAN

(Underline indicates recommended additions, strikethrough indicates recommended deletions.)

### SECTION TWO ISSUES, OBJECTIVES AND POLICIES

#### 2.19 Airport Operations Zone

**Policy 8 Electrical interference (pg 2-70) – No change**

**Explanation:** No change

#### 2.20 Airport Protection Zone

**Policy 8 Electrical interference (pg 2-73) – No change**

**Explanation:** No change

#### 2.21 Business 1 (Central Business District) Zone

**Policy 8 Electrical Interference (2-79)**

To ensure avoid freedom nuisance from electrical interference.

**Explanation:** No change

#### 2.22 Business 2 (Suburban Shopping and Business) Zone

**Policy 6 Electrical Interference (2-86)**

To ensure avoid freedom nuisance from electrical interference.

**Explanation:** No change

#### 2.23 Business 3 (Specialist Commercial) Zone

**Policy 8 Electrical Interference (2-93)**

To ensure avoid freedom nuisance from electrical interference.

**Explanation:** ~~Specialist commercial and business uses are entitled to freedom from electrical interference.~~ The possibility of electrical interference is an environmental effect that needs to be considered in the placement and maintenance of electrical equipment and machinery, including transmitting aerials.

## 2.24 Business 4 (Neighbourhood Shop) Zone

### Policy 5 Electrical Interference (2-97)

To ensure ~~avoid freedom~~ nuisance from electrical interference.

**Explanation:** The possibility of electrical interference is an environmental effect that needs to be considered in the placement and maintenance of electrical equipment and machinery, including transmitting aerials.

## 2.25 Business 5 (Rural Service) Zone

### Policy 5 Electrical Interference (2-102)

To ~~prevent~~ avoid nuisance from electrical interference.

**Explanation:** ~~Land uses within the zone and near it have a right to freedom from electrical interference.~~ The possibility of electrical interference is an environmental effect that needs to be considered in the placement and maintenance of electrical equipment and machinery, including transmitting aerials.

## 2.26 Hospital Zone

### Policy 5 Electrical Interference (2-106)

To ensure ~~avoid freedom~~ nuisance from electrical interference.

**Explanation:** No change

## 2.29 Industrial 1 (Light) Zone Industrial 1A (Marine) Zone

### Policy 6 Electrical Interference (2-112)

To ensure ~~avoid freedom~~ nuisance from electrical interference.

**Explanation:** The possibility of Eelectrical interference is an environmental effect that needs to be considered in the placement and maintenance of electrical equipment and machinery, including transmitting aerials.

## 2.30 Industrial 1A (Marine) Zone

### Policy 6 Electrical Interference (2-112)

To ensure ~~avoid freedom~~ nuisance from electrical interference.

**Explanation:** The possibility of Eelectrical interference is an environmental effect that needs to be considered in the placement and maintenance of electrical equipment and machinery, including transmitting aerials.

### 2.31 Industrial 2 (Urban) Zone

#### Policy 5 Electrical Interference (2-118)

To ensure ~~avoid freedom~~ nuisance from electrical interference.

**Explanation:** The possibility of Eelectrical interference is an environmental effect that needs to be considered in the placement and maintenance of electrical equipment and machinery, including transmitting aerials.

### 2.32 Industrial 3 (Large) Zone

#### Policy 6 Electrical Interference (2-124)

To ensure ~~avoid freedom~~ nuisance from electrical interference.

**Explanation:** The possibility of Eelectrical interference is an environmental effect that needs to be considered in the placement and maintenance of electrical equipment and machinery, including transmitting aerials.

### 2.33 Industrial 4 (Awarua) Zone

#### Policy 6 Electrical Interference (2-124)

To ensure ~~avoid freedom~~ nuisance from electrical interference.

**Explanation:** The possibility of Eelectrical interference is an environmental effect that needs to be considered in the placement and maintenance of electrical equipment and machinery, including transmitting aerials.

### 2.34 Otatarā Zone

#### Policy 7 Electrical interference (2-135)

To ~~ensure freedom from~~ avoid nuisance from electrical interference.

**Explanation:** No change

### 2.36 Residential 1 Zone

#### Policy 12 Electrical interference (2-146)

To ~~ensure freedom from~~ avoid nuisance from electrical interference.

**Explanation:** People expect not to be bothered by electrical interference in residential areas. Electrical interference can be a source of irritation to residents within the residential zones. This is an environmental effect that needs to be considered in the placement and maintenance of electrical equipment and machinery, including transmitting aerials.

**2.37 Residential 1A (Medium Density) Zone**

**Policy 12 Electrical interference (2-146)**

To ensure freedom from avoid nuisance from electrical interference.

**Explanation:** ~~People expect not to be bothered by electrical interference in residential areas.~~ Electrical interference can be a source of irritation to residents within the residential zones. This is an environmental effect that needs to be considered in the placement and maintenance of electrical equipment and machinery, including transmitting aerials.

**2.38 Residential 2 (Bluff and Omaui) Zone**

**Policy 12 Electrical interference (2-146)**

To ensure freedom from avoid nuisance from electrical interference.

**Explanation:** ~~People expect not to be bothered by electrical interference in residential areas.~~ Electrical interference can be a source of irritation to residents within the residential zones. This is an environmental effect that needs to be considered in the placement and maintenance of electrical equipment and machinery, including transmitting aerials.

**2.39 Residential 3 (Large Lot) Zone**

**Policy 12 Electrical interference:**

To ensure freedom from avoid nuisance from electrical interference.

**Explanation:** Electrical interference can be a source of irritation to residents within the residential zones. ~~The possibility of electrical interference~~ This is an environmental effect that needs to be considered in the placement and maintenance of electrical equipment and machinery, including transmitting aerials.

**2.40 Rural 1 Zone**

**Policy 11 Electrical interference (2-166)**

To ensure freedom from avoid nuisance from electrical interference

**Explanation:** No change

**2.41 Rural 2 (Rural Transition) Zone**

**Policy 10 Electrical interference (2-171)**

To ensure freedom from avoid nuisance from electrical interference

**Explanation:** No change

## 2.42 Seaport Zone

### Policy 5 Electrical Interference (2-175)

To ~~ensure freedom~~ avoid nuisance from electrical interference.

**Explanation:** ~~People expect not to be bothered by electrical interference. Electrical interference may have adverse effects on the efficient operation of the Seaport Zone. The possibility of electrical interference is an environmental effect that needs to be considered in the placement and maintenance of electrical equipment and machinery, including transmitting aerials.~~

## 2.43 Smelter Zone

### Policy 5 Electrical Interference (2-179) – No change

**Explanation:** No change

## SECTION THREE RULES

### 3.5 ~~Electrical Interference~~

3.5.1 ~~No land use activity shall create electrical interference at or beyond the boundary of the property.~~

3.5.2 ~~The electric and magnetic fields exposure at or beyond the boundary of any site containing a facility emitting electric and magnetic fields shall be such as to comply with all relevant New Zealand standards.~~

3.5.3 ~~Where any of the provisions of Rules 3.5.1 and 3.5.2 above will not be met then the activity shall be a non-complying activity.~~

## SECTION FOUR DEFINITIIONS

**Electrical Interference** – Means the interruption, obstruction or degradation of the effective performance of an electrical device or radio frequency.