

# Waimakariri District Council

## Proposed Plan Change - Rangiora Airfield



Merton Road, Rangiora

Plan Change to the  
Waimakariri District Council

July 2018



## Planz Consultants

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- Appendix 1: Certificates of Title
- Appendix 2: Noise Contour Plan
- Appendix 3: Aircraft Noise Assessment Report
- Appendix 4: Proposed Amendments to Waimakariri District Plan Map 145
- Appendix 5: Economic Benefits Report

## 1 Introduction

### 1.1 Outline of Requested Plan Change

The Rangiora Airfield has been present on the land just south of the Ashley River since the 1950's. Since that time the use of the airfield has increased with various aircraft related buildings now occupying the site and supporting aircraft movements approaching 40,000 annually.

This growth has meant the Rangiora Airfield is now listed as strategic infrastructure within the Canterbury Regional Policy Statement. In recognition of that status, and projected future continued growth, the Waimakariri District Council ("the Council") has resolved to undertake a plan change to the Operative Waimakariri District Plan ("the District Plan") in accordance with Clause 21 of Part 2 of the First Schedule to the Resource Management Act ("the RMA"). The Proposed Plan Change is referred to as the "PPC".

The land subject to the PPC comprises the properties located within the proposed 55dBA  $L_{dn}$  noise contour lines and the Obstacle Limitation Surfaces associated with the existing and future use of the Rangiora Airfield as identified in **Figure 1**.

The existing Obstacle Limitation Surfaces currently identified on Planning Map 145 do not reflect the current runway lengths. Accordingly, revised Obstacle Limitation Surfaces are proposed to be adopted as part of the Proposed Plan Change.

The legal descriptors of the properties affected by the PPC are:

<u>Contours</u> (*both contours and Obstacle Limitation Surfaces)	<u>Obstacle Limitation Surface Only</u>
▪ Lot 1 DP 320694*	Lots 9 & 10 DP 83612
▪ Lot 2 DP 320694	Lots 11, 12, 13 & 14 DP 83612
▪ Lots 2 DP 410643*	Lot 1 DP 68030
▪ Lots 3 and 4 in DP 410643	Lot 1 DP 81053
▪ Lot 1 DP 24674*	Pt RS 5928
▪ RS 38634*	RS 5655
▪ Lot 1 in DP 410643	RS 2720
▪ Lot 5 in DP 410643*	Lot 3 DP 496829
▪ Part RES 3101 (Ashley River Riparian Reserve)*	RS 3320
▪ Lots 1 and 2 DP 426606*	
▪ RS 5727*	
▪ RS 5751*	
▪ RS 5926*	
▪ Lots 1 and 2 DP 46093*	
▪ Pt RS 10471*	
▪ Lot 1 DP 83612*	
▪ Lots 2 and 3 DP 83612	

- Lot 2 DP 27290\*
- RS 42645\*
- Section 1 SO 18768\*
- Lot 2 DP 4449\*
- Lots 1 and 2 DP 484368\*
- Lot 2 DP 415561\*
- Lot 1 DP 22924\*
- Lot 2 DP 5225
- RS 10449\*
- Pt RS 33396

In accordance with clause 21 of Schedule 1 to *the Resource Management Act 1991* (“the RMA”), the Council seeks to make the following principal changes to the District Plan:

- Amend Planning Map 145 by identifying the 65dBA  $L_{dn}$  (the air noise boundary) and 55dBA  $L_{dn}$  (outer control boundary) noise contour lines around the Rangiora Airport site based on the application of NZS 6805:1992;
- Amend Planning Map 145 to amend the Obstacle Limitation Surface for the Rangiora Airfield based on the current and projected runway configuration and the present land ownership of Rangiora Airfield;
- Amend the objective and policy framework for the Utilities and Traffic and Rural Chapters to avoid the potential for reverse sensitivity effects by providing on-going protection for the operation, efficient use and development of the Rangiora Airfield, which is recognised as ‘strategic infrastructure’ within the Canterbury Regional Policy Statement;
- Amend the rule framework in Chapter 31 Health, Safety and Wellbeing to:
  - i. require any noise sensitive activity (including new dwellinghouses or additions to dwellinghouses) to be insulated from aircraft noise within the 55dBA  $L_{dn}$  noise contour lines around the Rangiora Airport site; and
  - ii. Prohibit noise sensitive development (which includes dwellinghouses) within the proposed Rangiora Airfield 65dBA  $L_{dn}$  noise contour; and
  - iii. Amend Rule 30.5 to require Rangiora Airfield to operate so that the noise from the aircraft operations does not exceed  $L_{dn}$  65dBA outside the  $L_{dn}$  65dBA airport noise contour in accordance with NZS6805:1992.

Note: The Plan Change also includes any consequential amendments to the Waimakariri District Plan as a result of the above changes, including numbering and cross referencing. This may include Planning Maps 33, 34 and 110A being amended to include the contours proposed to be shown on Planning Map 145.



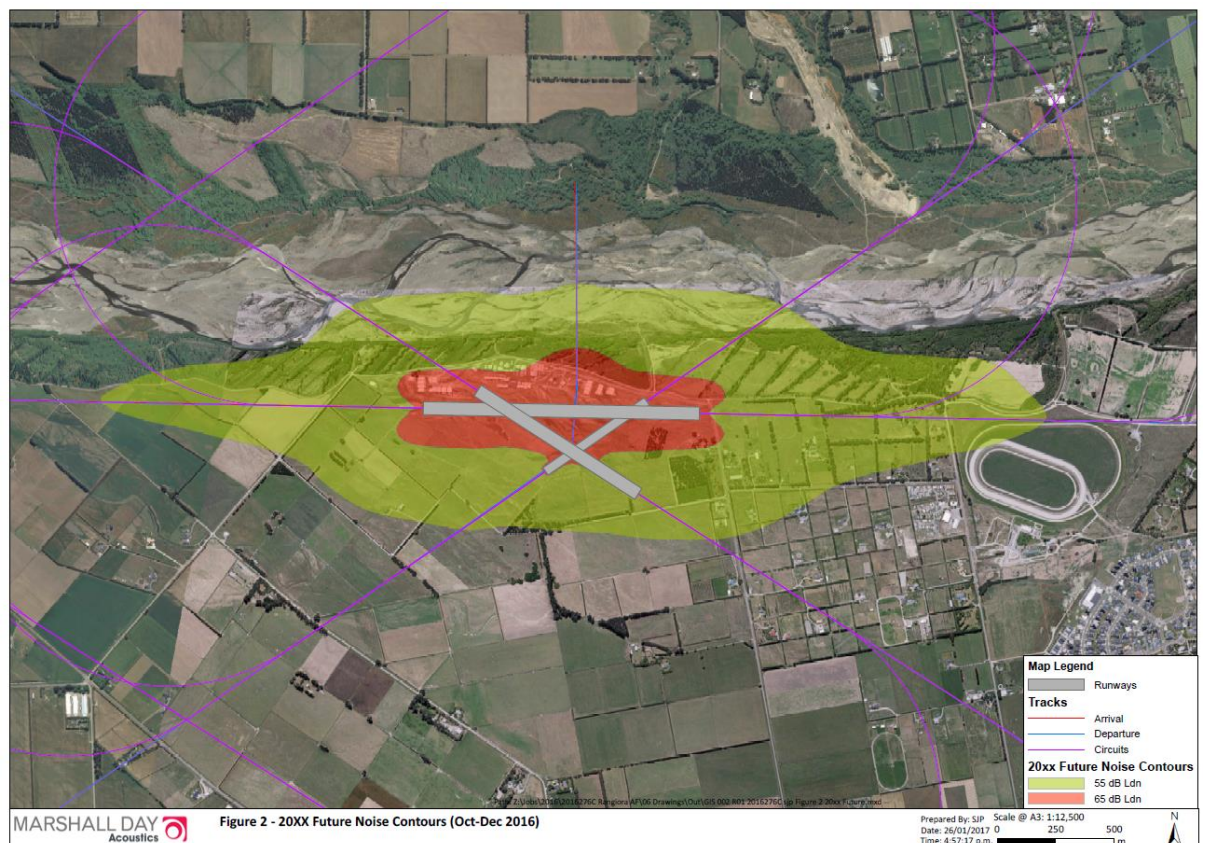


Figure 1 - Land Subject to this Proposed Plan Change

## 1.2 Notice of Requirement

In conjunction with this PPC the Council is also issuing a Notice of Requirement pursuant to section 168A of the RMA to designate the airfield site owned by the Waimakariri District Council, as well as the adjoining privately owned land within the 65dBA noise contour.

The purpose of the proposed designation comprises two parts:

- For the land owned by Waimakariri District Council to be recognised for providing for efficient and effective airport facilities and operations; and
- For the balance of the land within the identified 65dBA, the purpose is more constrained, and seeks only to protect the efficient and effective use of the airfield operations. The designation does not extend the airport activities or associated works onto this land.

## 1.3 Scope of Report

This report has been prepared to support the PPC and is intended to fulfil the requirements of Section 32, and Schedules 1 and 4 of the RMA.

The report:

- Explains the purpose of the noise contours and other matters included in the PCC;
- Outlines the extent of the land included within the proposed noise contours;
- Sets out the changes sought to the operative District Plan;
- Discusses the statutory requirements for the preparation and consideration of the PPC;

- Assesses the effects on the environment of the PPC;
- Presents a Section 32 evaluation; and
- Outlines the extent of consultation undertaken.

#### **1.4 Supporting Information**

Specific investigations and assessments in relation to aircraft noise have been commissioned by the Council to support the PPC.

The following supporting technical information is appended to this report:

- Appendix 1 – Certificates of Title
- Appendix 2 – Noise Contour Plans prepared by Marshall Day Acoustics
- Appendix 3 – Noise Assessment Report prepared by Marshall Day Acoustics
- Appendix 4 – Waimakariri District Plan Maps (proposed amendments)
- Appendix 5 – Economic Benefits Report prepared by Brown Copeland & Co Ltd

The supporting technical information forms the basis upon which the PPC is sought, while also contributing to satisfying the requirement under Clause 22(2) of Schedule 1 to the RMA for an assessment of the anticipated effects on the environment of implementing the PPC.



## 2 Existing Environment

The Rangiora Airfield is located on the southern side of the Ashley River, at the northern end of Merton Road. The site is located approximately 1.3km west of Rangiora township's urban limits. The northern site boundary is approximately 130m from the Ashley River bank at its closest point.

Three grass runways are located on site, capable of handling regular light aircraft operations such as microlights, agricultural aircraft, general aviation aircraft, light twin engine aircraft and DC3s. The main east west runaway is approximately 1km in length and is known as 25/07. A helicopter pad accounts for some 13% of all current movements.

On the north side of the runway, the site contains a cluster of aviation related buildings, including aircraft hangars (approximately 95), workshops, offices and clubrooms. There are currently no buildings located south of the main runway. All buildings on site are used for activities that are directly related to the airfield.

The predominant use of the airfield is for recreational, agricultural and training operations. The airfield currently supports 40-45,000 aircraft movements per annum, comprising aeroplanes, microlight planes, helicopters, gliders, and gyroplanes. Based on recent data collected, operations generally peak annually in October with approximately 3,500 aircraft movements over the month, with operations peaking on Sundays. The airfield is capable of handling take-offs and landing at three minute intervals. There are no commercial passenger flights from the airfield, however there are limited commercial helicopter operations from the airfield. The airfield does not contain lighting or navigational aids and therefore there are no operations outside of daylight hours.

The Rangiora Airfield site is approximately 49ha in area, being held in seven separate titles as described below in **Table 1**. The relevant Certificates of Titles are attached in **Appendix 1**.

**Table 1 - Rangiora Airfield Landholdings**

Address	Legal Description	CT Reference	Land Area
217B Merton Road	Lot 1 DP 320694	439710	6.9205ha
217 Merton Road	Lot 1 DP 24674	439710	20.4872ha
219 Merton Road	RS 38634	CB795/5	9.0037ha
217A Merton Road	Lot 2 DP 320694	439710	0.7195ha
110 Priors Road	Lot 2 DP 410643	439710	4.0000ha
130 Priors Road	Lot 3 DP 410643	439710	4.0000ha
150 Priors Road	Lot 4 DP 410643	439710	4.0000ha
<b>TOTAL LAND AREA:</b>			<b>49.1309ha</b>

### 2.1 Surrounding Environment

The environment surrounding the airfield is zoned Rural in the Waimakariri District Plan and is characterised by relatively flat rural pastureland, with large trees, shelterbelts and paddocks and is generally occupied by farming activities and lifestyle blocks. Two stands of pine trees are located immediately to the east and south-east of the site.

To the east of the site is rural pastureland, with several 4 hectare properties containing a residential dwellinghouse. These properties appear to be used for a mix of hobby, intensive and small holding farm blocks. The properties to the south and west of the airfield are generally large and have a lower dwelling density.

The Rangiora Holiday Park and Racecourse are located further to the east of the site, with Rangiora Township located beyond these facilities to the east and south-east, with the closest residential zoning to the airfield located 1.3km to the east. Additionally, there is a block of residential zoned land approximately two kilometres to the south of the site, in the block bound by Swannanoa Road, Johns Road and Mt Thomas Road.

The Ashley River is located directly to the north of the site. The river forms a broad braid in this location, with extensive willow trees and other riverbed vegetation screening the airfield from view within the bed of the river. The land to the north of the Ashley River is predominantly flat pastureland.

## 2.2 Rural Zone

The purpose of the Rural Zone as identified in the District Plan (14.1) is to maintain the existing open space character of the rural environment, and to protect existing farming activities from being constrained by residential development. The zone rules provide for a minimum allotment size of 4 hectares.

The existing noise provisions in the Waimakariri District Plan require that the daytime noise environment shall not exceed the noise limits contained in Rule 31.12.1.1 within the notional boundary of any dwellinghouse in the Rural Zone. The District Plan noise limits are set out below in **Table 2**.

It is noted there is no height limit for buildings in the Rural zone.

**Table 2 - Noise Limits for residential dwellings in Rural Zones**

	Time	Permitted Noise Level
Monday – Saturday	7am – 7pm	50dBA L <sub>10</sub>
Sundays and Public Holidays	9am – 7pm	50dBA L <sub>10</sub>
Other times		40dBA L <sub>10</sub>
Daily	10pm – 7am the following day	70dBA L <sub>max</sub>

## 2.3 Natural Hazards

The Rangiora Airfield is located directly to the south of the Ashley River. Chapter 27 ‘Natural Hazards’ of the Waimakariri District Plan contains setback requirements from the Ashley River. These provisions require any structure to be setback a minimum of 100 metres, as measured from the edge of the bed of the waterbody.

Part of the Rangiora Airfield is located within 100 metres from the Ashley River. While the PPC and accompanying NoR do not include any specific proposal to expand the existing airfield activities within 100 metres of the Ashley River, the NoR for the designation of the Airfield includes a condition which replicates the District Plan requirement for buildings to be setback a minimum of 100 metres from the Ashley River.

### 3 Purpose of the Proposed Plan Change

#### 3.1 Overall Purpose

The overall purpose (objective) of the PPC is to:

- Introduce noise contours for the Rangiora Airfield. The noise contours have a dual purpose; to provide protection for the airfield in relation to noise sensitive uses beyond the airfield boundary, as well as providing a definable monitoring requirement for managing airport noise;
- Safeguard the operations of the Rangiora Airfield and to minimise impacts of surrounding land uses on its continued operation;
- Provide strategic recognition of the economic, social and cultural contribution of Rangiora Airfield, and ensure that aviation clubs and businesses which locate at the airfield will not be at risk from development surrounding the airfield; and
- Provide greater clarity within the district plan of the operational requirements of Rangiora Airfield, and provide notice of its location to surrounding landowners.

Where there are no current residential or other noise sensitive activities within the 55dBA  $L_{dn}$  airport noise contour, it is advantageous to protect the Rangiora Airfield from new sensitive activities from establishing in these Rural Zones immediately surrounding the airfield. This will create a noise buffer between the airfield and neighbouring activities before potential land use conflicts are created.

In areas where noise-sensitive activities exist within the 55dBA airport noise contour, such as residential development, acoustic insulation for additions or alterations to existing activities to mitigate against noise would be required.

The purpose of the PPC is to ensure new noise sensitive activities are avoided within areas affected by the 55dBA airport noise contour in order to mitigate noise and ensure safety from airport operations. It is noted that noise sensitive activities as defined in the District Plan does not include residential activities provided that these are in conjunction with rural activities that comply with the rules in the plan, including but not limited to any dwellinghouse shall be on a site which has a minimum area of 4ha.

#### 3.2 Need for the Proposed Plan Change

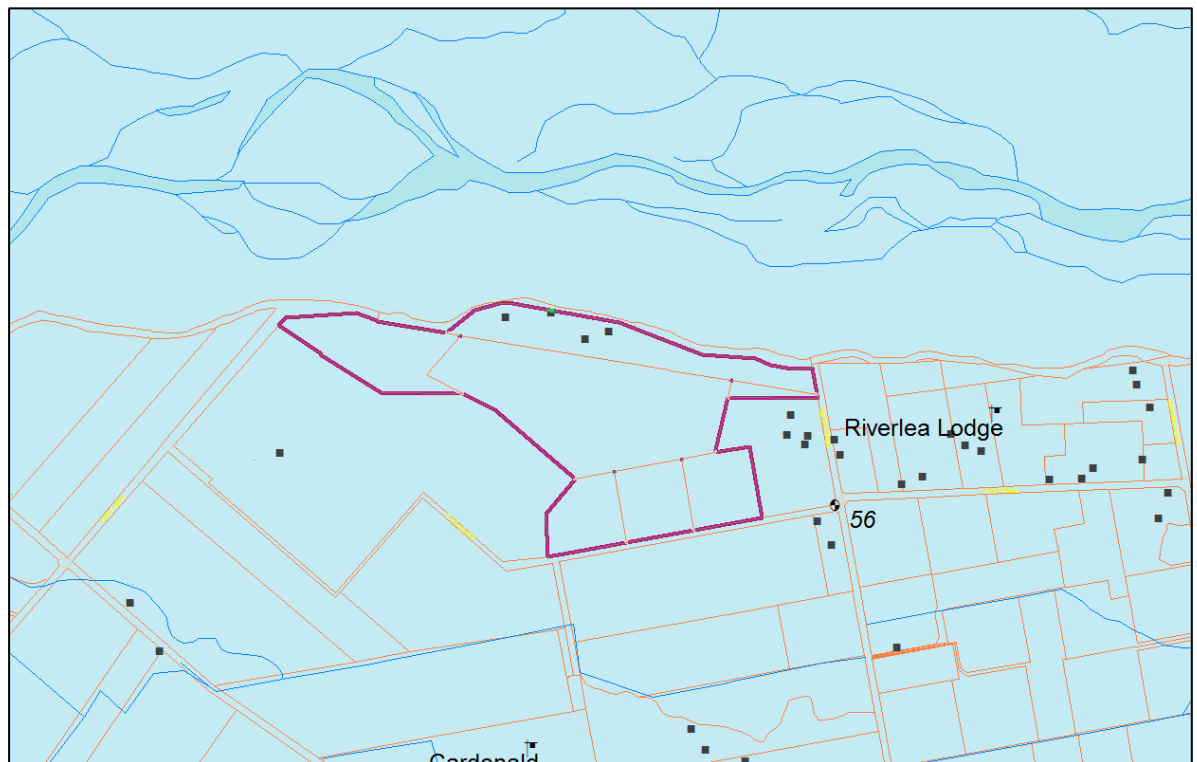
The PPC is required to:

- Recognise the Rangiora Airfield operations in the Waimakariri District Plan, which has operated on this site circa 1950's;
- Avoid new noise sensitive activities within the proposed 55dBA noise contour, and prohibit sensitive activities within the 65dBA noise contour;
- Formally recognise the existence and ongoing operation of the Rangiora Airfield in the Waimakariri District Plan; and
- Recognise, and '*give effect*' to the status of the Rangiora Airfield as 'Strategic Infrastructure' in the Canterbury Regional Policy Statement by ensuring that status is reflected in the Waimakariri District Plan.

### 3.3 Area Affected by the Proposed Plan Change

The Proposed Plan Change will apply to the Rangiora Airfield landholdings which are illustrated in **Figure 2** below. In addition, the Proposed Plan Change will also affect:

- The land surrounding the Rangiora Airfield out to the 55dBA noise contour modelled by Marshall Day Acoustics (**Appendix 2**); and
- Land within the revised Obstacle Limitation Surfaces for the Airfield as illustrated on revised Planning Map 145 which accompanies this report as **Appendix 4**.



**Figure 2 - Rangiora Airfield (QuickMaps 2017)**

The properties beyond the Rangiora Airfield which are identified as being affected by the 65dBA noise contour are listed in **Table 3** below.

**Table 3 - Land within the 65dBA Noise Contour outside the Rangiora Airfield Landholdings**

Registered Title	Registered Owner	Approximate Allotment Area
Lot 1 DP 410643	Neil William Smith	8ha
Lot 5 DP 410643	Neil William Smith	43.9ha
Lot 2 DP 426606	Amy and Graham Boyce	4.52ha
Ashley River Riparian Area	Crown Land	

Each of these properties are zoned Rural on Planning Maps 33, 34 and 110A. These properties are rural in character and include pasture grasslands, shelterbelts and ancillary buildings. While Lot 1 DP 410643 contains a dwellinghouse, this building is located outside the proposed 65dBA noise contour and was constructed circa 1950's.

## 4 Proposed Changes to the Waimakariri District Plan

The Proposed Plan Change includes amendments to the District Plan text and the associated maps. The changes proposed to the text include new objectives, policies and rules, as well as amendments to the existing objectives and policies. These changes are discussed in detail in the following subsections.

### 4.1 Introduction of Noise Contours for Rangiora Airfield on Planning Maps

The Proposed Plan Change includes amendments to Planning Map 145 which is attached as **Appendix 4**. The key changes proposed to this map are:

- The introduction of 55dBA and 65dBA Noise Contours for the projected operation of the Rangiora Airfield; and
- Revised Obstacle Limitation Surface height controls which will maintain the safe on-going operation of the existing airfield runways.

The proposed Noise Contours include a 65dBA and 55dBA noise contour are extracted below in **Figure 3** below, along with the airfield land ownership boundary, and are attached in **Appendix 2**.

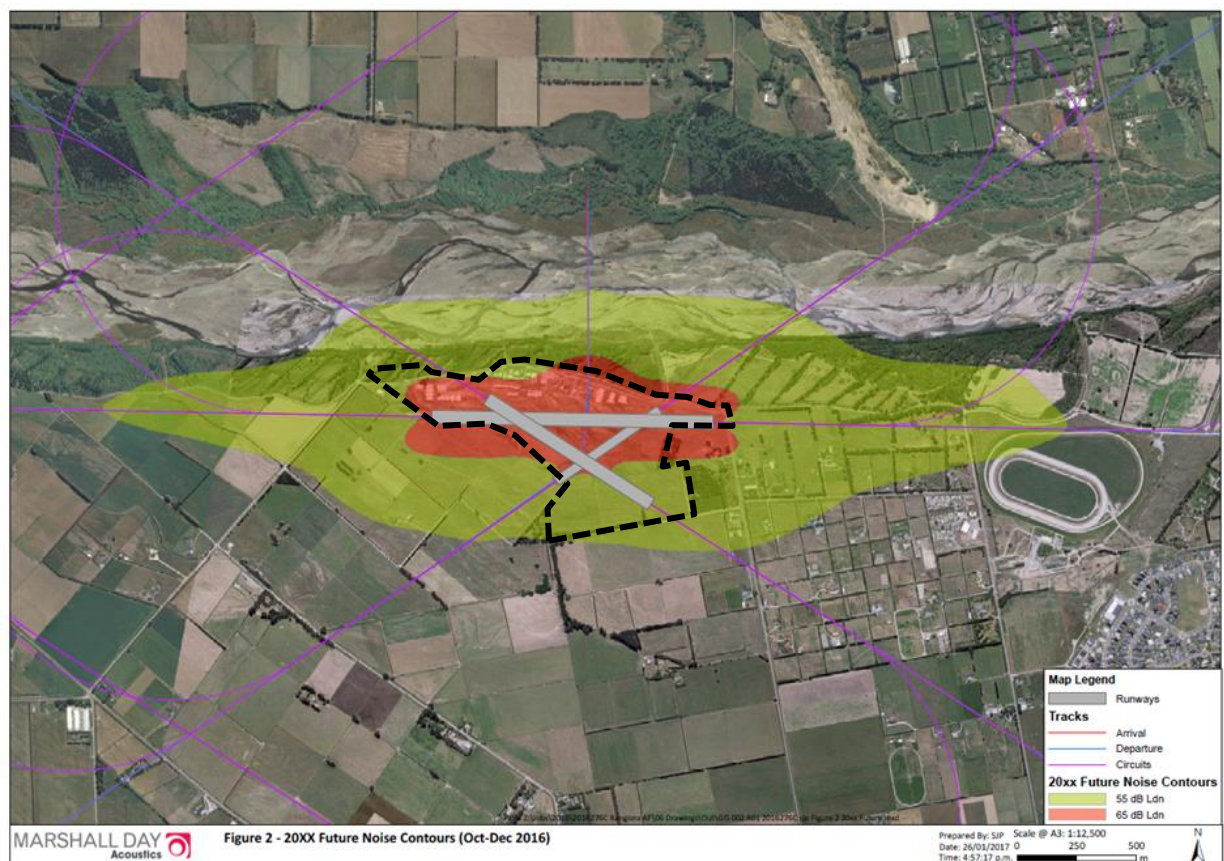


Figure 3 - Proposed Rangiora Airfield Noise Contours

### 4.2 Proposed New Objectives and Policies in the Waimakariri District Plan

This PPC proposes to introduce two new objectives and related policies. The proposed new text is shown as underlined.



#### 4.2.1 Chapter 11: Utilities and Traffic

After Policy 11.1.1.8 insert the following and renumber accordingly:

##### **Objective 11.1.2**

**Provide for the safe, efficient and effective development and use of Rangiora Airfield to ensure it continues to contribute to the social and economic wellbeing of the Waimakariri district.**

##### **Policy 11.1.2.1**

**Recognise and provide for the social and economic benefits of Rangiora Airfield, and avoid adverse effects from incompatible activities, including reverse sensitivity effects on Airport operations.**

##### **Explanation**

The Rangiora Airfield is a significant physical resource, contributing to the social and economic welfare of the community of the Waimakariri District and the wider Canterbury region. The significance of the Rangiora Airfield is recognised in the Canterbury Regional Policy Statement as strategic infrastructure, for its importance in supporting commercial and recreational aviation activities in the region.

The Rangiora Airfield provides significant transport and recreational infrastructure which supports both commercial and recreational aviation activities. Designation of the Rangiora Airfield provides protection of current and future aviation activities, which contribute to the social and economic wellbeing of Waimakariri District.

Defined noise contours enable potential conflict between Rangiora Airfield operations and noise sensitive activities to be appropriately addressed. This includes avoiding intensive subdivision and noise sensitive development within the 55 dBA Ldn noise contour, prohibiting dwellinghouses and noise sensitive activities within the 65 dBA Ldn contour and requiring new residential activities or alterations to existing residential activities associated with permitted rural uses subject to appropriate noise insulation being provided.

##### **Methods**

##### **District Plan Rules 11.1.2.1.1**

Rules providing that subdivision and dwellinghouse development involving areas of less than four hectares in the Rural Zone is a non-complying activity.

Rules requiring acoustic insulation for new rural dwellinghouses or additions to existing dwellinghouses.

Rules restricting noise sensitive activities within a 55 dBA Ldn contour.

Rules prohibiting dwellinghouses and noise sensitive activities within a 65 dBA Ldn contour.

Rules restricting land use where any structure or vegetation penetrates the height control surfaces.

##### **District Plan Maps 11.1.2.1.2**

Map showing the location of the 65 and 55 dBA Ldn noise contours.

#### 4.2.2 Chapter 14: Rural Zones

After Policy 14.3.1.1 insert the following and renumber accordingly:

#### Issues 14.4

The adverse effect on the health and safety of people occupying properties in the Rural Zone affected by noise of aircraft using Rangiora Airfield, and the reverse sensitivity effect on the operation, efficient use and development of Rangiora Airfield, from complaints from people occupying properties in the Rural Zone affected by the noise of aircraft using the Airfield.

#### Objective 14.4.1

The avoidance of noise sensitive activities within the 55dBA Ldn noise contour for Rangiora Airfield.

#### Policy 14.4.1.1

Avoid the development of noise sensitive activities in the Rural Zone within the 55dBA Ldn noise contour relating to Rangiora Airfield as shown on District Plan Map 145.

#### Explanation

Rangiora Airfield is a valuable strategic asset providing for recreational, agricultural and training operations. The Airfield operates during daylight hours, seven days a week. As a consequence, occupiers of properties located on land in the Rural Zone, within the projected noise contours for Rangiora Airfield, may be exposed to noise effects from aircraft operations.

To address the potential for conflict between Rangiora Airfield operations and noise sensitive activities, it is prudent to avoid intensive subdivision and noise sensitive development in the Rural Zone within the 55 dBA Ldn noise contour relating to Rangiora Airfield and prohibit such activities within the 65 dBA Ldn noise contour. Residential activities associated with permitted rural uses remain permitted subject to appropriate noise insulation, being provided.

#### Methods

#### District Plan Rules 14.3.4.1.1

Rules providing that subdivision and dwellinghouse development involving areas of less than four hectares in the Rural Zone is a non-complying activity.

Rules requiring acoustic insulation for new rural dwellinghouses or additions to existing dwellinghouses.

Rules restricting noise sensitive activities within a 55 dBA Ldn contour.

### **4.3 Proposed Amendments to the Objectives and Policies in the Waimakariri District Plan**

In addition to the proposed new policies above, the following amendments to the existing provisions of the Waimakariri District Plan are proposed. Text shown to be deleted is shown as ~~strikethrough~~ and text to be added is shown as **bold underlined**.

#### **4.3.1 Chapter 11: Utilities and Traffic Management**

#### **Policy 11.2.1.1**

*Avoid, remedy or mitigate adverse environmental effects caused by the provision, use, maintenance and upgrading of utilities by:*

**m. avoiding noise sensitive activities within the 55dBA Ldn noise contour for Rangiora Airfield.**

**CROSS REFERENCE: Policy 12.1.1.12**



#### **Explanation**

...The ability to control the effect of the operation of Christchurch International Airport is limited. However the effects can be:

- Avoided to some degree by requiring that noise sensitive activities be discouraged from locating within areas identified as likely to be effected by such noise and in particular within the 50dBA Ldn noise contour; and
- Partially mitigated by a requirement for noise insulation of buildings or activities shown in Table 31.2 within the 55dBA Ldn noise contours.

In the case of Rangiora Airfield, **noise sensitive activities within the 55dBA Ldn contour will be avoided. Further, the protection of Obstacle Limitation Surfaces take-off and approach paths** avoids potential for conflict and safety issues as a result of inappropriate development. ...

#### **Methods**

District Plan Rules 11.2.1.1.1

...

Controls requiring noise insulation of dwellinghouses within the 55dBA Ldn noise contours of Christchurch International Airport **and Rangiora Airfield.**

**Rules restricting noise sensitive activities within a 55 dBA Ldn contour for Rangiora Airfield.**

### **4.3.2 Chapter 12: Health Safety and Wellbeing**

#### **Policy 12.1.1.12**

Avoid the noise effect from aircraft and avoid or mitigate the noise effect from road traffic in the receiving environment.

#### **Explanation**

Aircraft can only be controlled in relation to the use of airports. There are also limitations on the control of traffic noise. Mitigation of the noise effect in the receiving environment involves consideration of the appropriateness of residential development in some areas, and the extent to which building design can reduce the noise, eg insulation, setbacks.

~~There is no current noise data for Rangiora Airfield~~ **Noise data collected for the current Rangiora Airfield operation has been used to create aircraft noise contours which show the future 65 dBA and 55 dBA contours will encroach on land surrounding the Rangiora Airfield. To mitigate the noise effects of the Rangiora Airfield on surrounding properties, new residential dwellinghouses and other noise sensitive activities are to be prohibited inside the 65 dBA noise contour, while between the 65 and 55 dBA noise contours noise sensitive activities are to be avoided while new dwellinghouses or additions to existing dwellinghouses associated with rural activities will require acoustic attenuation. Noise associated with aircraft operations is also restricted so that it does not exceed 65 dBA Ldn outside the 65 dBA Ldn noise contour thus providing an assurance as to the future noise levels that can be anticipated.**

~~However, the take-off and landing vectors~~ **associated with Rangiora Airfield** are known and **also protected by** rules protect their use.

#### **Methods**

Research/Information Collection 12.1.1.12.1

~~Measure the noise levels within land surrounding Rangiora Aerodrome.~~

Measure the noise levels within land adjoining strategic roads.

*Information 12.1.1.12.2*

Provide land developers with available information on likely noise effects from aircraft landing and taking off, road traffic and suitable methods of noise insulation.

Information about the 50 dBA Ldn aircraft noise contour for Christchurch International Airport on Land Information Memoranda for all properties within the contour as shown on Plan Map 138.

**Information about the 55 dBA Ldn aircraft noise contour for Rangiora Airfield on Land Information Memoranda for all properties within the contour as shown on Plan Map 145.**

*District Plan Maps 12.1.1.12.3*

Map the noise contours, and sound exposure levels for a Boeing 747-200 single event, for Christchurch International Airport.

**Map the noise contours for Rangiora Airfield.**

*Liaison 12.1.1.12.4*

Meet with Christchurch City Council, Christchurch International Airport Ltd, and Rangiora Aerodrome **Airfield** users, to monitor effects of aircraft noise, and appropriateness of District Plan provisions.

*Processes to Deal With Cross Boundary Issues 12.1.1.12.5*

NOTE: See Chapter 19: Cross Boundary Issues

*District Plan Rules 12.1.1.12.6*

Noise insulation standards within the 55Ldn dBA noise contour of Christchurch International Airport **and Rangiora Airfield.**

Rural Zone subdivision standards for allotment area as a controlled activity.

Rural Zone minimum site areas for dwellinghouses as a permitted activity.

**Rules restricting aircraft operations so that they do not exceed 65 dBA Ldn outside the 65 dBA Ldn noise contour.**

**Rules restricting noise sensitive activities within the 55 dBA Ldn contour for Rangiora Airfield.**

**Rules prohibiting dwellinghouses and noise sensitive activities within a 65 dBA Ldn contour for Rangiora Airfield.**

**Rules restricting land use where any structure or vegetation penetrates the height control surfaces for Rangiora Airfield.**

#### 4.3.3 Chapter 14: Rural Zones

##### **Policy 14.5.1.1**

To avoid new residential and rural residential activities and development outside of existing urban areas and priority areas within the area identified in Map A in Chapter 6 of the Canterbury Regional Policy Statement; rural residential development areas identified in the Rural Residential Development Plan and MR873.

##### *Anticipated Environmental Results and Monitoring 14.5*

<b>Anticipated Environmental Result</b>	<b>Monitoring Indicator</b>	<b>Information</b>	<b>Monitoring Frequency</b>

Avoidance of complaints caused by noise from aircraft using Christchurch International Airport and Rangiora Airfield	Complaints  <u>Aircraft numbers for Rangiora Airfield</u>	Waimakariri District Council complaints register  <u>Records of actual aircraft operations</u>	Annually  <u>Annually once levels reach 70,000 movements</u>
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#### 4.4 Amendments to the Rules

To achieve the outcomes of the proposed objectives and policies detailed in **Sections 4.12 and 4.3**, the following additional rules and changes to rules are proposed:

##### 4.4.1 Chapter 30: Utilities and Traffic Management

##### 30.5 Non-complying Activities

##### Rangiora Airfield Aerodrome

**30.5.1** Any land use where any structure or vegetation penetrates **the Obstacle Limitation Surfaces** shown on District Plan Map 145 and described as:

- ~~take-off climb/approach surface and approach obstacle limitation surfaces, commencing at ground level at the end of the runway and with a width of 80m at the end of each runway, rising at a gradient of 1 in 20 30 for a horizontal distance of 1200m 1600m from the end of each runway; or~~
- ~~side surfaces, commencing at the edge of each runway and rising at a gradient of 1 in 20 5 for horizontal distance of 300m 115m from the edge of each runway,~~

shall be a non-complying activity.

**30.5.2** Rangiora Airfield shall operate so that the noise from the aircraft operations does not exceed Ldn 65 dBA outside the Ldn 65dBA airport noise contour shown on District Plan Map 145.

Measurement and Assessment of noise from Rangiora Airfield shall be carried out in accordance with New Zealand Standard NZS 6805:1992 "Airport Noise Management and Land Use Planning".

**30.5.3** When recorded aircraft movements exceed 70,000 movements per annum compliance with Rule 30.5.2 shall be determined by calculations of noise from airfield operations and shall be based on noise data from the Rangiora Airfield Noise Model and records of actual aircraft operations at Rangiora Airfield and the results shall be reported to the Council's Manager, Regulation.

**30.5.4** Measurement of the noise levels at the site shall commence once aircraft operations reach 88,000 movements per annum and shall be calculated over the busiest three-month period of the year. The measurements shall be undertaken annually while aircraft operations are at 88,000 movements or higher and the results shall be reported to the Council's Manager, Regulation.

The following activities are excluded from Aircraft Operations:

- Aircraft operating in an emergency for medical or national / civil defence reasons

- Air shows
- Military operations
- Aircraft using the airfield as a necessary alternative to an airfield elsewhere
- Aircraft taxiing
- Aircraft engine testing

#### 4.4.2 Chapter 31: Health, Safety and Wellbeing

##### Noise

##### 31.12 Permitted Activities

Any land use is a permitted activity if it:

- i. is not otherwise listed as a discretionary activity (restricted) or non-complying activity under Rules 31.13 and 31.13A; ...

##### 31.12.1 Conditions

31.12.1.4 Within the 55dBA Ldn noise contour shown on District Plan Map 138 and 145, any proposed dwellinghouse, or any building or part of a building described in Table 31.2, shall be insulated from aircraft noise to ensure that indoor sound levels stated in that table are not exceeded.

31.12.1.5 Within the 55dBA Ldn noise contour shown on District Plan Map 138 and 145, any additions to existing dwellinghouses, or any building or part of a building described in Table 31.2, shall be insulated from aircraft noise to ensure that indoor sound levels stated in that table are not exceeded.

##### 31.14 Non-Complying Activities

31.14.1 Any noise sensitive activity within the 55dBA Ldn noise contour shown on District Plan Map and 145.

##### 31.15 Prohibited Activities

31.15.1 Any residential dwellinghouse or noise sensitive activities within the 65 dBA Ldn noise contour shown on District Plan 145 is a prohibited activity and no resource consent will be granted.

[Renumber following clauses accordingly].

#### 4.5 Amendments to Chapter 1: Definitions

To support the revisions in Rule 30.5 add to Chapter 1: Definitions the following:

##### Aircraft operations means:

- The landing and take-off aircraft (including helicopters) at Rangiora Airfield.
- Airfield flying along any flight path associated with a landing or take off at Rangiora Airfield.

#### 4.6 Amendments to the Planning Maps and Appendices of the District Plan

To implement the proposed Plan Change, the amendments outlined in

Table 4 below will be required to the Planning Maps.

**Table 4 - Required Amendments to Planning Maps**

Planning Map	Required Amendment(s)
<p>Map 145*</p> <p>* Planning Map 145 will also show the designation arising from the Notice of Requirement being issued concurrently with this PPC.</p>	<ul style="list-style-type: none"> <li>▪ Indicate the 65dBA and 55dBA noise contours.</li> <li>▪ Update the Take Off Climb and Approach obstacle limitation surface paths to reflect the current runway lengths and requirements (the location and angle of these obstacle limitation surface paths are detailed in Rule 30.5).</li> <li>▪ Amend the Rangiora Airfield landholding.</li> </ul>

Planning Map 145 reflecting all the above required changes is attached as **Appendix 4** to this report.

#### **4.7 Consequential Amendments**

The Plan Change will enable any consequential amendments to the District Plan as a consequence of the above, including numbering and cross referencing. This may include Planning Maps 33, 34 and 110A being amended to include the contours.

## 5 Statutory Framework

### 5.1 Introduction

This section of the report outlines the statutory documents which must be had regard to in the preparation of changes to district plans. These are as follows:

- Resource Management Act 1991 (specifically the purpose and principles of the RMA as set out in Part II)
- Canterbury Regional Policy Statement;
- Canterbury Regional Plans; and
- Operative Waimakariri District Plan.

### 5.2 Matters to be considered

Section 74 of the RMA provides the statutory framework for assessing the PPC, and sets out those matters the Council must consider. These include:

- The extent to which the PPC is in accordance with the functions of the Council for the purpose of giving effect to the RMA as set out in Section 31;
- The extent to which the PPC achieves the purpose and principles of the RMA as set out in Part II;
- The extent to which the PPC is appropriate in terms of Section 32 and is the most effective and efficient means of achieving the purpose of the RMA and the objectives of the District Plan; and
- any national policy statement.

Section 74 also requires the Council to have regard to other documents when considering the PPC, which in this case includes the following:

- Management plans and strategies prepared under other Acts;
- Relevant entries in the Historic Places Register (although it is noted that none apply to the subject site);
- The extent to which the district plan needs to be consistent with the plans of adjacent territorial authorities; and
- Any relevant planning document recognised by an iwi authority.

Under Section 75 of the RMA, the Council is also required to ensure that the PPC gives effect to any national policy statement and any regional policy statement.

### 5.3 Part 2 – Section 5 of the RMA

Part 2 of the RMA sets out the purpose and principles of the Act. Section 5 sets out the purpose of the RMA, being “to promote the sustainable management of natural and physical resources” which is defined to mean:

*“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 wellbeing and for their health and safety, while –*

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

To achieve the purpose of the RMA, the PPC seeks, in conjunction with a Notice of Requirement (NoR), to maintain and provide for the continued use and development of the Rangiora Airfield for airport purposes. However, this outcome needs to be balanced with the welfare and needs of the community in the surrounding area. Accordingly, the PPC proposes objectives, policies and rules which seek to manage any adverse effects of the Rangiora Airfield’s activities on the local environment and also address the effects of potential future reserve sensitivity on airfield operations moving forward.

The proposal has been considered in the context of the Canterbury Regional Policy Statement (“CRPS”). The analysis of the relevant planning provisions (refer to **Section 5.7** of this report) has shown that the PPC gives effect to the strategic direction established by the CRPS. As such, the PPC will continue to ensure that the sustainable management purpose of the RMA can be achieved through the District Plan.

The PPC (in conjunction with the NoR) will enable the ongoing operation of strategic infrastructure, in the form of the Rangiora Airfield. The PPC provides a rule framework for addressing the potential for conflict between the airfield operations and noise sensitive activities. This is to be achieved by prohibiting any future dwellinghouse or noise sensitive development with the modelled 65 dBA  $L_{dn}$  contour. Within the 55 dBA  $L_{dn}$  contour, the PPC seeks to avoid intensive subdivision and associated dwellinghouse development, as well as other noise sensitive activities such as education activities and travellers accommodation. It is considered that the social and economic welfare of the community which includes the airfield would be better enabled through the proposed noise contours than the current status quo.

In addition to the above the PPC includes amendments to the current Obstacle Limitation Surfaces to reflect the current runway lengths. These are important in ensuring the on-going safe operation of the airfield for aircraft taking off and landing in accordance with Civil Aviation Authority (CAA) requirements.

The airfield is not known to have any significant values from an ecological perspective. Given its current use for aircraft operations and the associated existing noise environment, it is considered that the PPC will not result in an impact on the life supporting capacity of the air, water, soil and ecological resources in the area.

The proposed inclusion of a policy and rule (including mapping) framework for Rangiora Airfield will ensure that the provisions of the District Plan will manage any potential adverse effects associated the operational activities of the airfield. The evaluation report prepared pursuant to section 32 of the RMA has shown that the proposed provisions are appropriate and will ensure that any potential for adverse effects on the environment can be appropriately addressed.

Overall, allowing for the proposed changes to the District Plan is considered to better achieve the overriding purpose of the RMA, being the sustainable management of natural and physical resources.

#### **5.4 Part 2 – Section 6 of the RMA**

The PPC does not relate to any of the values within the scope of subsections 6(a) to (g) of the RMA.



## 5.5 Part 2 – Section 7 of the RMA

Section 7 requires particular regard to be had to “other matters”. Of relevance to the PPC are:

- (a) *The efficient use and development of natural and physical resources;*
- (b) *The maintenance and enhancement of amenity values;*
- (f) *The maintenance and enhancement of the quality of the environment.*

Rangiora Airfield represents an existing physical resource. The PPC, in conjunction with the NoR for designation of the airfield for airport purposes, seeks to protect both the ongoing operations of the Rangiora Airfield, and the acoustic amenity of the surrounding area. These two mechanisms seek to balance the efficient use of the airfield operations with the use of the surrounding land for rural activities. The substantive changes to the District Plan have been designed to enable the continued use of surrounding properties for rural purposes, subject to a level of noise insulation for dwellinghouses, while restricting the establishment of noise sensitive activities within areas identified to be exposed to aircraft noise greater than 55 dBA. The provisions also ensure that overall airfield operations will meet an established noise limit thereby protecting the amenity of the surrounding area from increasing aircraft noise beyond the set limit.

For the area within the 65 dBA contour dwellinghouses and noise sensitive activities have been prohibited. The noise levels in this area are considered to have a too greater impact on amenity to allow such development to occur.

The PPC will not result in any adverse impacts on the natural or physical environment surrounding the airfield, including the Ashley River as assessed later in this report.

## 5.6 Part 2 – Section 8 of the RMA

Section 8 of the RMA requires that the principles of the Treaty of Waitangi be taken into account.

These principles have been considered. There are no known cultural values that need to be taken into account in respect of this PPC on the subject properties.

## 5.7 The Canterbury Regional Policy Statement

The *Canterbury Regional Policy Statement* (“CRPS”) sets the overall strategic direction for growth and development within the region by identifying relevant issues for which objectives and policies are detailed. Rangiora Airfield sits inside the Greater Christchurch area shown on Map A of the CRPS.

The CRPS contains under the ‘*Definitions for Greater Christchurch*’ the following definition of ‘strategic infrastructure’:

***Strategic infrastructure*** means those necessary facilities, services and installations which are of greater than local importance, and can include infrastructure that is nationally significant. The following are examples of strategic infrastructure:

- *Strategic transport networks*
- *Christchurch International Airport*
- *Rangiora Airfield*
- *Port of Lyttelton*
- *Bulk fuel supply infrastructure including terminals, wharf lines and pipelines*

- Defence facilities including Burnham Military Camp and West Melton Military Training Area
- Strategic telecommunications facilities
- The electricity transmission network
- Other strategic network utilities

(Emphasis added)

In addition, the CRPS includes the following definition of 'Regionally significant infrastructure' for the entire region which the CRPS relates:

**Regionally significant infrastructure is:**

- (1) Strategic land transport network and arterial roads
- (2) Timaru Airport
- (3) Port of Timaru
- (4) Commercial maritime facilities at Kaikōura
- (5) Telecommunication facilities
- (6) National, regional and local renewable electricity generation activities of any scale
- (7) The electricity transmission network
- (8) Sewage collection, treatment and disposal networks
- (9) Community land drainage infrastructure
- (10) Community potable water systems
- (11) Established community-scale irrigation and stockwater infrastructure
- (12) Transport hubs
- (13) Bulk fuel supply infrastructure including terminals, wharf lines and pipelines.
- (14) Electricity distribution network
- (15) Infrastructure defined as 'strategic infrastructure' in this regional policy statement.

*Note: For the avoidance of doubt, this infrastructure is also referred to as 'infrastructure that is regionally significant'.*

(Emphasis added)

Based on the application of these definitions within the CRPS, the Rangiora Airfield is both 'strategic infrastructure' and 'regionally significant infrastructure'. The rules to implement, and the objectives and policies introduced through the PPC are therefore required to *give effect* to the respective provisions of the Canterbury Regional Policy Statement which seek to recognise and provide for Rangiora Airport as 'strategic infrastructure' and 'regionally significant infrastructure'. A summary of how the PPC directly contributes to giving effect to the relevant CRPS objectives and policies, which include those for the Entire Region and those of Chapter 6, is outlined in **Table 5** below.

**Table 5 - Contribution of the Proposed Plan Change to the Canterbury Regional Policy Statement Objectives and Policies**

Objectives and Policies	Proposed Plan Change Contribution
<b>Chapter 5 - Land-use and Infrastructure</b>	
<b>Objective 5.2.1 – Location, design and function of development (Entire Region)</b>	<ul style="list-style-type: none"> <li>▪ Provides for the ongoing economic and social well-being of airfield</li> </ul>

<p>Development is located and designed so that it functions in a way that:</p> <p>2. Enables people and communities, including future generations, to provide for their social, economic and cultural well-being and health and safety; and which:</p> <p>(c) Encourages sustainable economic development by enabling business activities in appropriate locations;</p> <p>(f) Is compatible with, and will result in the continued safe, efficient and effective use of regionally significant infrastructure;</p> <p>(g) Avoids adverse effects on significant natural and physical resources including regionally significant infrastructure, and where avoidance is impracticable, remedies or mitigates those effects on those resources and infrastructure;</p> <p>(i) avoids conflicts between incompatible activities.</p>	<p>users.</p> <ul style="list-style-type: none"> <li>▪ Supports and guides land uses on land surrounding the Rangiora Airfield, in a manner which will avoid the location of activities which are sensitive to noise.</li> <li>▪ Provides for the safety of airfield users.</li> <li>▪ Specifically recognises the Airfield as a significant infrastructure resource and the benefits it has to user groups.</li> <li>▪ Addresses potential reverse sensitivity issues.</li> <li>▪ Sets a limit for the level of overall aircraft noise that can emulate from the airfield.</li> </ul>
<p><b>Chapter 6 - Recovery and Rebuilding of Greater Christchurch</b></p>	
<p><b>Objective 6.2.1 – Recovery Framework</b></p> <p>Recovery, rebuilding and development are enabled within Greater Christchurch through a land use and infrastructure framework that:</p> <p>9. Integrates strategic and other infrastructure and services with land use development.</p> <p>10. Achieves development that does not adversely affect the efficient operation, use, development, appropriate upgrade, and future planning of strategic infrastructure and freight hubs.</p> <p>11. Optimise use of existing infrastructure.</p> <p><b>Policy 6.3.5 – Integration of land use and infrastructure</b></p> <p>Recovery of Greater Christchurch is to be assisted by the integration of land use development with infrastructure by:</p> <p>4. Only providing for new development that does not affect the efficient operation, use, development, appropriate upgrading and safety of existing strategic infrastructure ... .</p> <p>5. Managing the effects of land use activities on infrastructure, including avoiding activities that have the potential to limit the efficient and effective, provision, operation, maintenance or upgrade of strategic infrastructure and freight hubs.</p> <p><b>Policy 6.3.9 - Rural residential development</b></p> <p>In Greater Christchurch, rural residential development further to areas already zoned in district plans as at 1<sup>st</sup> January 2013 can only be provided for by territorial</p>	<ul style="list-style-type: none"> <li>▪ The introduction of planning rules which will support the ongoing operations of the Rangiora Airfield, and manage the effects on surrounding properties.</li> <li>▪ The prioritisation of the ongoing operations of the Rangiora Airfield, which is identified as significant infrastructure, and the management of development surrounding the Airfield to mitigate adverse impacts on new noise sensitive activities and ensure its operation is not compromised.</li> <li>▪ Introduction of planning rules which will manage and protect surrounding landowners from airfield operations.</li> <li>▪ Ensures that Rangiora Airfield is not compromised by urban growth and intensification.</li> <li>▪ Protects the existing investment in the Airfield recognising that it would be extremely inefficient to relocate as a result of the effects of other more sensitive land uses.</li> <li>▪ Acknowledges that the operation of the Airfield can affect the liveability of residential development in the</li> </ul>

<p>authorities in accordance with an adopted rural residential development strategy prepared in accordance with the Local Government Act 2002, subject to the following:</p> <p>(e) not compromise the operational capacity of the Burnham Military Camp, West Melton Military Training Area or <u>Rangiora Airfield</u>;</p>	<p>vicinity, despite the application of practicable mitigation measures to address effects, which can in turn exert pressure to further mitigate effects and that it is better avoid such reverse sensitivity constraints.</p>
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Pursuant to Section 75(3)(c) of the RMA, the PPC is considered to give effect to the Canterbury Regional Policy Statement's recognition of the Rangiora Airfield as 'Strategic Infrastructure' by ensuring that it is appropriately recognised and is protected from reverse sensitivity effects through the introduction of noise contours and associated provisions.

## 5.8 Regional Plans

The various Regional Plans are not considered to have any relevance in terms of the Proposed Plan Change.

## 5.9 National Policy Statements

The only National Policy Statement (NPS) that is of some relevance is that on Urban Development Capacity (UDC).

The NPS on UDC requires councils to provide in their plans enough development capacity to ensure that demand can be met. This includes both the total aggregate demand for housing and business land, and also the demand for different types, sizes and locations.

The relevance of this NPS is limited to the fact that the PPC will essentially curtail the potential for future urban growth in the direction of Rangiora Airfield via the proposed noise contours. The NPS contains objectives that seek:

*OC1: Planning decisions, practices and methods that enable urban development which provides for the social, economic, cultural and environmental wellbeing of people and communities and future generations in the short, medium and long-term; and*

*OD2: Coordinated and aligned planning decisions within and across local authority boundaries.*

Therefore, while the PPC will effectively prevent the urban development of Rangiora growing in this direction it is for sound environmental reasons (the impact of aircraft noise) and relates to existing infrastructure which would be difficult to move and replicate. It is therefore considered that the PPC is an appropriate planning decision for these reasons within the local authority boundary.

## 5.10 Management Plans and Strategies

The Civil Aviation Authority (CAA) Advisory Circular AC139-7 & AC91-15 addresses Aerodrome Standards and Requirements— Aeroplanes at or below 5700 kg MCTOW—Non Air Transport Operations (18 December 2009).

While the aerodrome current exists and meets CAA standards of particular relevance to the PPC is the change to the Obstacle Limitation Surface in clause 3.2.1 of the circular. This requires that *each runway should have a takeoff climb and approach surface which should:*

- (a) Rise from the end of the runway strip; and*
- (b) Be obstacle free above a gradient of 1:20; and*

- (c) *Extend horizontally 1200 m from the inner edge; and*
- (d) *Have sides that are splayed outwards at the rate of 1:20; and*
- (e) *Not turn before 300 m from the inner edge, if a turn is necessary.*

Since the current District Plan was made operative there have been amendments to the length of runways at the Airfield which are now registered in the Aeronautical Information Publication NZ. It is therefore considered important to update the District Plan (Planning Map 145) by revising the take-off climb and approach Obstacle Limitation Surface in accordance with the above requirements to reflect the new runway lengths.

#### **5.11 Waimakariri 2048 District Development Strategy June 2017**

Rangiora Airfield is referred to with the District Development Strategy under the Strategic Aim of being well-connected through infrastructure. The strategy notes that infrastructure, which includes Rangiora Airfield, is critical for sustainable development of the District and that in order to efficiently provide for infrastructure an integrated approach is required<sup>1</sup>.

The PPC is considered to be consistent with this particular aim of the District Development Strategy as the Rangiora Airfield is an example of strategic infrastructure as defined in the CRPS.

#### **5.12 Consistency with the Plans of Adjacent Territorial Authorities**

The PPC is considered to be consistent with the Plan of adjoining local authorities noting that the in the Replacement Christchurch District Plan a 50dBA contour is used for certain situations in terms of urban growth which reflects its own circumstances.

#### **5.13 Mahaanui Iwi Management Plan 2013**

The Mahaanui Iwi Management Plan provides a values-based policy framework for the protection and enhancement of Ngāi Tahu values, and for achieving outcomes that provide for the relationship of Ngāi Tahu with natural resources. The Rangiora Airfield sits within the Rakahuri Catchment as identified within the Plan.

Key provisions of relevance to the PPC are:

##### *Policy P3.2*

*To ensure early, appropriate and effective involvement of Papatipu Rūnanga in the development and implementation of urban and township development plans and strategies, including but not limited to:*

- (c) *Plan changes and Outline Development Plans;*

##### *Policy P4.1*

*To work with local authorities to ensure a consistent approach to the identification and consideration of Ngāi Tahu interests in subdivision and development activities, including:*

- (a) *Encouraging developers to engage with Papatipu Rūnanga in the early stages of development planning to identify potential cultural issues; including the preparation of Cultural Impact Assessment reports;*
- (b) *Ensuring engagement with Papatipu Rūnanga at the Plan Change stage, where plan changes are required to enable subdivision;*

<sup>1</sup> Waimakariri 2048 District Development Strategy, June 2017, Page 25

*Policy R1.1*

*To require that land and water management in the Rakahuri catchment recognises and provides for the importance of this river as mahinga kai to generations of Ngāi Tahu. This means that:*

- (c) Inappropriate land use on floodplains and river margins is discontinued;*

The PPC/NoR process has involved engagement with Ngai Tūāhuriri Rūnanga. No matters of cultural significance were identified. Further, it is noted that the NoR contains a condition restricting development within 100 metre of the Ashley River.

On the basis of the above it is considered that the PPC is consistent with the Mahaanui Iwi Management Plan.

## 6 Section 32 Evaluation

### 6.1 Overview

The purpose of the PPC is principally to provide a clear policy framework for the Rangiora Airfield's continued safe operation. To achieve that outcome the PPC introduces noise contours to provide on-going protection for the airfield operations from reverse sensitivity effects arising from noise sensitive land uses seeking to establish on the immediately surrounding land.

The Rangiora Airfield has operated on the site circa 1950s, and provides an important recreational facility within Canterbury, supporting a number of local and regional aviation clubs. The airfield has three runways which support a wide range of aircraft movements including aeroplanes, microlight plans and helicopters. While there are no commercial passenger movements from the Airfield, a small number of commercial helicopter movements occur from the Airfield.

Based on technical evidence gathered for the Airfield and a review of the relevant statutory documentation, the Council is seeking to make the following broad changes to the Waimakariri District Plan:

- Amend Planning Map 145 by identifying the 65dBA  $L_{dn}$  and 55dBA  $L_{dn}$  noise contour lines around the Rangiora Airport site;
- Amend Planning Map 145 to reflect the amended Obstacle Limitation Surface height slopes for the Rangiora Airfield based on the current and projected runway configuration and the land ownership of Rangiora Airfield;
- Amend the objective and policy framework for the Utilities and Traffic and Rural Chapters to recognise the reverse sensitivity effects on, and providing protection for the operation, efficient use and development of the Rangiora Airfield which is identified as 'strategic infrastructure' within the Canterbury Regional Policy Statement;
- Amend the rule framework in Chapter 31 Health, Safety and Wellbeing to:
  - i. require any noise sensitive activity (including new dwellinghouses or additions to dwellinghouses) to be insulated from aircraft noise within the 55dBA  $L_{dn}$  noise contour lines around the Rangiora Airport site; and
  - ii. Prohibit noise sensitive development (which includes dwellinghouses) within the proposed Rangiora Airfield 65dBA noise contour; and
- Amend Rule 30.5 to update the take-off climb/approach Obstacle Limitation Surface provisions and require Rangiora Airfield to operate so that the noise from the aircraft operations does not exceed  $L_{dn}$  65dBA outside the  $L_{dn}$  65dBA airport noise contour.

The PPC does not cover the airport related activities on the Airfield land, as the airport activities will be managed through the proposed designation of the site which is outlined in the accompanying Notice of Requirement for the Rangiora Airfield.

In accordance with clause 5 of Schedule 1 to the Resource Management Act 1991 ("the RMA"), Section 32(1) and (2) of the *Resource Management Act 1991* requires a Plan Change to be accompanied by:

- (1) *An evaluation report required under this Act must-*
  - (a) *examine the extent to which the objectives of the proposal being evaluated are the most appropriate way to achieve the purpose of this Act; and*



- (b) examine whether the provisions in the proposal are the most appropriate way to achieve the objectives by—
  - (i) identifying other reasonably practicable options for achieving the objectives; and
  - (ii) assessing the efficiency and effectiveness of the provisions in achieving the objectives; and
  - (iii) summarising the reasons for deciding on the provisions; and
- (c) 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.
- (2) an assessment under subsection (1)(b)(ii) must -
  - (a) identify and assess the benefits and costs of the environmental, economic, social, and cultural effects that are anticipated from the implementation of the provisions, including the opportunities for—
    - (i) economic growth that are anticipated to be provided or reduced; and
    - (ii) employment that are anticipated to be provided or reduced; and
  - (b) if practicable, quantify the benefits and costs referred to in paragraph (a); and
  - (c) assess the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the provisions.
- (3) If the proposal (an **amending proposal**) will amend a standard, statement, national planning standard, regulation, plan, or change that is already proposed or that already exists (an **existing proposal**), the examination under subsection (1)(b) must relate to -
  - (a) the provisions and objectives of the amending proposal; and
  - (b) the objectives of the existing proposal to the extent that those objectives -
    - (i) are relevant to the objectives of the amending proposal; and
    - (ii) would remain if the amending proposal was to take effect.
- (4) .....
- (4A) If the proposal is a proposed policy statement, plan, or change prepared in accordance with any of the processes provided for in Schedule 1, the evaluation report must—
  - (a) summarise all advice concerning the proposal received from iwi authorities under the relevant provisions of Schedule 1; and
  - (b) summarise the response to the advice, including any provisions of the proposal that are intended to give effect to the advice.
- (5) .....
- (6) In this section, -
  - objectives** means, -
    - (a) for a proposal that contains or states objectives, those objectives:
    - (b) for all other proposals, the purpose of the proposal
  - proposal** means a proposed standard, statement, national planning standard, regulation, plan or change for which an evaluation report must be prepared under this Act
  - provisions** means, -
    - (a) for a proposed plan or change, the policies, rules, or other methods that implement, or give effect to, the objectives of the proposed plan or change:
    - (b) for all other proposals, the policies or provisions of the proposal that implement, or give effect to, the objectives of the proposal.

Section 32 (1)(a) requires an examination of the extent to which the objectives of the proposal being evaluated are the most appropriate way to achieve the purpose of the RMA. In terms of the meaning of "objectives", subsection (6) is therefore relevant. This requires an evaluation to be assessed in terms of the purpose of the proposal. The purpose of the proposal is set out under **Part 3** of this Plan Change request.

Section 32(1)(b) requires an examination as to whether the provisions *of the proposal* are the most appropriate way to achieve the objectives (i.e., the purpose of the proposal). Under Section 32(1)(b), subclauses (i) and (ii), this requires consideration of other reasonably practicable options for achieving the purpose of the proposal, assessing the efficiency and effectiveness of these provisions, and a summary of the reasons for deciding on the provisions as proposed through the PPC.

In terms of subsections 32(3) and 32(6), the PPC is an **amending proposal** as it amends an operative district plan that already exists. Accordingly, the examination under subsection (1) (b) must relate to the provisions and objectives (the purpose) of the amending proposal, and the objectives of the existing proposal (the operative district plan) to the extent that these are relevant to the PPC and would be able to remain if the amending proposal was to take effect. In other words, the PPC must not have the effect of creating inconsistencies or conflict with the existing objectives of the operative district plan.

Section 32(1)(c) requires that the evaluation 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.

## 6.2 Section 32 (1) (a)

**- the extent to which the objectives of the proposal (the purpose of the PPC) is the most appropriate way to achieve the purpose of the Act.**

The purpose of the Act (as quoted earlier in this assessment) is to provide for people's social, economic, and cultural wellbeing, and their health and safety while (at the same time) satisfying the requirements of subsections (a) to (c). This is to be achieved by sustaining the potential of natural and physical resources to meet the reasonably foreseeable needs of future generations and safeguard the life supporting capacity of air, water, soil and ecosystems.

Rangiora Airfield is a physical resource within Waimakariri District and as noted earlier is recognised in the CRPS as strategic infrastructure, but has little recognition within the present District Plan. As a physical resource with approximately \$10 million worth of investment it sustains a number of jobs and is a significant contributor to the Waimakariri economy.

The objective of the PPC, in conjunction with the accompanying NoR, is therefore to provide recognition of the Airfield's economic, social and cultural contribution to the Waimakariri District and to provide for its protection in relation to noise sensitive uses beyond the airfield boundary as well as providing a definable monitoring requirement for managing airport noise. The PPC therefore in terms of proposed rules is essentially restrictive in character - that is, it imposes controls and limits the range of activities that can occur within the proposed noise contours as well as restricting noise from Airfield operations to the limits set by the 65 dBA contour. To that extent, it can be considered consistent with providing for health and safety and avoiding or mitigation adverse effects.

Based on the above it is considered that PPC is the most appropriate way to achieve the purpose of the Act.

## 6.3 Section 32(1)(b)(i)

**- whether the provisions of the proposal are the most appropriate way to achieve the objectives (the purpose of the proposed plan change) in terms of other reasonably practicable options for achieving the objectives.**

As an amending proposal which adds additional objectives or policies, the analysis below is confined to assessing alternative means of achieving the purpose of the PPC. In this context, the do nothing option is not considered relevant, as it would not achieve the purpose of the PPC. Notwithstanding this, the status quo position has been included in the table below in order to provide context to the other options.

Note: moving the airfield to a new location was not considered as a practical option due to the level of existing investment and costs associated with relocation.

A summary of the advantages and disadvantages of the selected option (Option E below), and alternative options is provided below in **Table 6**.

**Table 6 - Summary of Evaluation of Alternative Options**

OPTION	ADVANTAGES	DISADVANTAGES
<b>A – Status Quo</b> Continue with existing Rural zoning, with no planning rules or policies which acknowledge the continued operation of the Rangiora Airfield.	<ul style="list-style-type: none"> <li>No cost for the Plan Change would be incurred.</li> <li>No new regulation imposed upon properties surrounding the airfield.</li> </ul>	<ul style="list-style-type: none"> <li>Retains current uncertainty and confusion as to appropriate activities undertaken within and proximate to the airfield through having no integrated recognition of Rangiora Airfield in the District Plan.</li> <li>Continues the situation of having to deal with proposed activities on the Airfield against the existing Rural Zone requirements, including incongruent buildings and structures with Rural zone outcomes.</li> <li>Provides no protection for the ongoing operations of the Airfield from development on surrounding properties which could cause reverse sensitivity, or generate aviation hazards.</li> <li>Reduces the long-term sustainability of Airfield activities on the site.</li> <li>Does not give effect to higher order planning documents.</li> </ul>
<b>B – Plan Change Only</b> Introduce the changes to the District Plan outlined in the PPC which include amendments to the	<ul style="list-style-type: none"> <li>Would provide an objective, policy and rule framework to protect the Airfield operations from activities which are sensitive to</li> </ul>	<ul style="list-style-type: none"> <li>Does not provide for airfield operations themselves particularly those which are required to change quickly and adapt to operational demands.</li> </ul>

Planning Maps to include noise contours.	<p>aviation noise or generate aviation hazards.</p> <ul style="list-style-type: none"> <li>Would provide an objective and policy framework protecting the operation, efficient use and development of the Rangiora Airfield and acknowledging its <i>'strategic infrastructure'</i> status thus giving effects to the Canterbury Regional Policy Statement.</li> </ul>	<ul style="list-style-type: none"> <li>Limits activities on adjoining properties within the identified noise contours.</li> <li>Relies on a continuation of the resource consents within the Rural Zone for airport related activities.</li> </ul>
<b>C – Designation only</b> Manage the operation of the Airport through Designation of the land only, with no new objectives or policies.	<ul style="list-style-type: none"> <li>Provides for Airfield activities on the site.</li> <li>Would establish exactly what is permitted to occur on the Airfield land.</li> <li>Reduces the reliance on the resource consent process and provides greater control over the activities that can occur within the designation purpose.</li> </ul>	<ul style="list-style-type: none"> <li>Would not protect the ongoing Airfield operations from the establishment of noise sensitive activities or activities which could generate aviation hazards.</li> <li>Does not provide an objective and policy framework for the Airfield.</li> <li>Unlikely to entirely give effect to the CRPS in terms of recognising the strategic infrastructure status of the Rangiora Airfield.</li> </ul>
<b>D – Introduce Airfield Zone alongside the Plan Change</b> Would require consideration of activity status of various activities, and would likely still require similar objectives and policy amendments to occur.	<ul style="list-style-type: none"> <li>Would a policy framework to protect and support Airfield operations on the Airfield land.</li> <li>Would provide an objective, policy and rule framework to protect the Airfield operations from activities which are sensitive to aviation noise or generate aviation hazards.</li> <li>Would establish a level of permitted activity which reduces the reliance on the resource consent process.</li> </ul>	<ul style="list-style-type: none"> <li>Would require significant changes to the existing District Plan beyond those proposed in this PPC.</li> <li>Would be a greater cost to the Council through the preparation of the Plan Change.</li> <li>Provides less certainty and control than a designation.</li> <li>Limits activities on adjoining properties within the identified noise contours.</li> </ul>
<b>E – Plan Change and Designation</b>	<ul style="list-style-type: none"> <li>Provides recognition of the Airfield activities on the site.</li> </ul>	<ul style="list-style-type: none"> <li>Costly and timely process.</li> </ul>

As proposed in this PPC and accompanying NoR.	<ul style="list-style-type: none"> <li>▪ Would establish exactly what is permitted to occur on the Airfield land.</li> <li>▪ Reduces the reliance on the resource consent process and provides greater control over the activities that can occur within the designation purpose.</li> <li>▪ Would provide an objective, policy and rule framework to protect the Airfield operations from activities which are sensitive to aviation noise or generate aviation hazards.</li> <li>▪ Gives effect to the CRPS.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Limits activities on adjoining properties within the identified noise contours.</li> </ul>
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Overall it is considered that the 'Proposal' (Option E) is the most appropriate way to achieve the objectives of the plan change taking into account the various advantages and disadvantages of each option.

#### 6.4 Section 32(1)(b)(ii)

**- whether the provisions of the proposal (the proposed plan change) are the most appropriate way to achieve the objectives in terms of the efficiency and effectiveness of the provisions in achieving the objectives.**

The requirements of this subclause are further subject to subclause section 32(2) as quoted above. In summary, this requires that the assessment under section 32(1)(b)(iii) must identify and assess the benefits and costs of the environmental, economic, social, and cultural effects that are anticipated from the implementation of the provisions, including the opportunities for economic growth and employment that are anticipated to be provided or reduced.

The RMA states that the benefits and costs should be quantified where practicable and that the risk of acting or not acting if there is uncertain or insufficient information about the subject matter of the provisions should also be assessed.

##### 6.4.1 Evaluation of the Effectiveness of the Proposed Provisions

*Effectiveness* means how successful a provision is in achieving the stated objective, or the purpose of the Act.

The proposed new and amended objectives, policies and rules are intended to protect the ongoing operation of the Rangiora Airfield, and restrict the opportunity for noise sensitive activities on land surrounding the airfield which may create reverse sensitivity issues.

The inclusion of amended Obstacle Limitation Surface height restrictions will protect the safe operation of the airfield as development occurs on surrounding properties.

The proposed objective and policy changes must be considered in conjunction with the proposed designation. That designation, amongst other things, limits the location of activities which could cause safety risks to the airfield operations and regulates the activities on the Airfield.

Accordingly, the proposed PPC and associated designation are considered to be effective in achieving the overall objective of the PPC, being to protect the ongoing safe operation of the Rangiora Airfield.

#### 6.4.2 Evaluation of the Efficiency of the Proposed Provisions

*Efficiency* means whether the benefits of the provisions outweigh the costs, either immediately or over time.

In essence the assessment of benefits and costs needs to consider both qualitative and quantitative attributes with a view to understanding what proposal is most efficient overall. A summary assessment of the costs and benefits of the proposed rules and methods is set out in **Table 7** below.

**Table 7 - Cost and Benefit Analysis of Proposed Plan Change**

Cost	Benefits
Economic	
<ul style="list-style-type: none"> <li>Financial cost to the Council in undertaking the plan change, which is borne by the ratepayers. Such a cost is likely to be in excess of \$100,000.</li> <li>Reduced future development potential for land within the proposed 55dBA noise contour, albeit these areas are already restricted in terms of the range and intensity of uses that can establish as of right.</li> </ul>	<ul style="list-style-type: none"> <li>Supports the continued operation of the airfield which is owned and operated by Council, and receives income from airfield users (\$115,000 in the 16/17 year).</li> <li>Increases the airfields regional competitiveness for aviation clubs and enthusiasts, which will result in increased income generated by Council.</li> <li>Efficient utilisation of existing significant infrastructure which in terms of private sector interests (hangars and other facilities) is estimated at approximately \$10 million.</li> <li>Provides certainty for existing and future Airfield operations and promotes employment opportunities. There are currently 24 full-time employees at the airfield and up to six part time employees.</li> <li>Provides certainty for future investment in support infrastructure and improvements related to the Airfield operations.</li> <li>Reduces resource consent costs, whilst acknowledging that there will be costs, albeit that they are likely to be lesser (in the order</li> </ul>

	of 25%), associated with Outline Plans of Works.
<b>Environmental</b>	
<ul style="list-style-type: none"> <li>▪ Could support expansion of existing airfield activities, which in turn generate additional effects associated with: <ul style="list-style-type: none"> <li>– a greater frequency and volume of vehicles on the surrounding road network;</li> <li>– noise effects associated with increased aircraft movements; and</li> <li>– visual effects associated with an increase in airfield related buildings on the subject site.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ Models anticipate airfield related growth with management via rules thus providing a greater level of certainty.</li> <li>▪ Ensures avoidance of incompatible activities, and accordingly a reduced prospect of reverse sensitivity effects, by introducing suitable rules and associated designation.</li> </ul>
<b>Social / Cultural</b>	
<ul style="list-style-type: none"> <li>▪ The proposed rules would support increased activity at the airfield which may not have been contemplated by surrounding landowners.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The PPC and associated designation will provide clarity and certainty around what is anticipated to occur on the Airfield land.</li> <li>▪ The proposed rules will avoid adverse effects on activities surrounding the airfield.</li> </ul>

Based on this analysis it is considered that the benefits of the proposed objectives, policies, rules and associated designation outweigh the costs and therefore the provisions represent an efficient approach to the issue.

In addition to the above it is considered that the key elements of the PPC being the establishment of noise contours and the associated rules are now well accepted practice and provide a high degree of certainty. Therefore, an assessment of the risk of acting or not acting is not considered to be required in this instance.

## 6.5 Section 32(3)

- (where) the (amending) proposal will amend a standard, statement, national planning standard, regulation, plan, or change that is already proposed or that already exists (an existing proposal) the examination under subsection (1) (b) must relate to -

- (a) the provisions and objectives of the amending proposal; and
- (b) the objectives of the existing proposal to the extent that those objectives -
  - (i) are relevant to the objectives of the amending proposal; and
  - (ii) would remain if the amending proposal was to take effect.

There are two matters to be considered under this clause of Section 32 - firstly, whether the provisions contained in the PPC are appropriate or necessary to achieve the objectives of the amending proposal (refer to Part 3 of this assessment), and secondly - whether the approval of the PPC would enable the objectives of the District Plan to remain without change. These are dealt with in turn below.



### 6.5.1 Evaluation of the Proposed Provisions

The overall premise behind the PPC and associated NoR is that the provisions are necessary to protect ongoing Rangiora Airfield operations, and manage adverse effects on the surrounding receiving environment.

To enable the ongoing airfield operations, it is considered appropriate to provide for activities that have an airport purpose. Similarly, the restrictions on activities in surrounding properties have been limited to only those which would interfere with the ongoing airfield operations. In this regard it is noted that 'noise sensitive activities' which are permitted within the rural zone (being dwellinghouses with an appropriate rural site size) could continue or be established, subject to appropriate noise insulation.

The key goals of the new and amended provisions are to:

- Provide certainty and a clear direction for development of the Airfield in the District Plan;
- Include provisions which support the ongoing Airfield operation; and
- Enable acceptable growth of the Airfield operations while addressing the potential adverse effects associated with development on surrounding properties.

The PPC includes both new and amended provisions in the Waimakariri District Plan, which are detailed in **Sections 4.2** and **4.3** respectively.

A summary of the consideration of each of the proposed new and amended provisions is provided in **Table 8** below.

**Table 8 - Consideration of Proposed Provisions**

Provision	Consideration
<b>Chapter 11 – Utilities and Traffic Management</b>  <b>Objective 11.1.1A &amp; Policy 11.1.1A.1</b>	<p>This objective is proposed to be introduced to recognise the key contribution the Rangiora Airfield makes to the social and economic welfare of the Waimakariri community and provide for the safe, efficient and effective use of the Airfield. The objective provides recognition in planning policy of the ongoing airfield activities, and sensitivity of airfield operations to surrounding development. This proposed objective will align the Waimakariri District Plan to the Canterbury Regional Policy Statement which identifies the Rangiora Airfield as 'strategic infrastructure' for the region.</p> <p>The objective is supported by a policy which seeks to avoid the establishment of new incompatible activities (noise sensitive activities), which will protect the current and future aviation activities from reverse sensitivity effects, and residents from significant acoustic impacts from the Airfield operations.</p>
<b>Chapter 11 – Utilities and Traffic Management</b>  <b>Policy 11.2.1.1</b>	<p>The amendment to Chapter 11 is to provide a policy application for the 55dBA noise contour for the Rangiora Airfield and development within it. The noise contours have been based on the application of NZS 6805:1992, which provides guidance for statutory limitations on activities within the identified 55dBA noise contour (outer control boundary) and 65dBA noise contour (the air noise boundary). Correspondingly, NZS6805:1992 also provides a duty for Aircraft noise management.</p> <p>This will mean the avoiding of the establishment of noise sensitive activities in an area known to be affected by current and future aircraft noise. The use of noise contours is an accepted and widely used method of addressing the</p>

	<p>potential for the creation of reverse sensitivity issues associated with noise generating activities such as airfields and airports, and also ensures an acceptable level of amenity to surrounding properties.</p> <p>The inclusion of the noise contours on the District Plan Maps will provide increased certainty within the planning framework of the operational impacts of the Rangiora Airfield, and the requirements for noise sensitive activities to be limited in these areas to protect the health, safety and wellbeing of the surrounding community.</p>
<p><b>Chapter 14 – Rural Zones</b></p> <p><b>Objective 14.3.1A and Policy 14.3.1A.1</b></p>	<p>This new objective and policy promote the avoidance of noise sensitive activities within the proposed 55dBA noise contour for the Airfield so as to both limit the nuisance suffered from aircraft noise and prevent reverse sensitivity effects. This is to be achieved through restricting intensive subdivision and noise sensitive development within the 55 dBA Ldn noise contour and prohibit such activities within the 65 dBA Ldn noise contour. The provisions take account of residential activities associated with permitted rural uses enabling them subject to appropriate noise insulation, being provided.</p> <p>The proposed explanation notes that Rangiora Airfield is a valuable strategic asset and that the Airfield operations are limited to daylight hours, and the adoption of the 55dBA noise contour reflects this limitation.</p>
<p><b>Chapter 12 – Health, Safety and Wellbeing</b></p> <p><b>Policy 12.1.1.12</b></p>	<p>An amendment is proposed to the explanation this policy to bring it up-to-date in terms of the overall plan change. The amendment identifies that noise data has now been collected from Rangiora Airfield operations and that this has been used in the establishment of the noise contours. It goes onto identify the resulting mitigation measures in terms of rules relating to the contours.</p>
<p><b>Chapter 30 - Utilities and Traffic Management</b></p> <p><b>Rule 30.5.2</b></p>	<p>Having proposed the introduction of the noise contours it is appropriate to ensure the future aircraft operations do not result in the levels set by the contours being exceeded.</p> <p>A new rule is included at a non-complying status requiring that noise associated with aircraft operations not exceed 65 dBA Ldn outside the established 65 dBA Ldn airport noise contour. The rule is to be based on noise data calculated over the busiest three month period of the year from the Rangiora Airfield Noise Model and records of actual aircraft operations. The rule will ensure that the noise levels predicted are not exceeded thus providing a high level of assurance to affected landowners as to the future noise levels that can be anticipated.</p> <p>There are some exclusions provided for relating to emergency situations, air shows, military operations, engine testing and taxiing.</p>
<p><b>Chapter 31 – Health, Safety and Wellbeing</b></p> <p><b>Rules 31.12.1.4 and 31.12.1.5, 31.13A.1 and 31.13B.1</b></p>	<p>The amendments to Chapter 31 adopt the proposed 55dBA noise contour for the Rangiora Airfield for rule purposes. The first of those is in terms of acoustic insulation for new dwellinghouses or additions or alteration to existing dwellinghouses that are associated with rural activities. The changes are made to Rules 31.12.1.4 and 31.12.1.5 which currently only apply to Christchurch Airport, and extends these as these relate to Rangiora Airfield.</p> <p>In addition to the above, noise sensitive activities, as defined, within the 55dBA contour are restricted as a non-complying activity to ensure that they are primarily excluded from this area.</p>

	<p>The use of the 55dBA noise contour for requiring acoustic insulation and restricting noise sensitive activities is consistent with national guidance (NZ Standard 6805:1992 "Airport Noise Management and Land Use Planning) and is designed to protect amenity values and to avoid the potential for issues of reverse sensitivity to arise.</p> <p>The final rule addition is a prohibition of any residential dwellinghouse or noise sensitive activity within the 65 dBA contour. This is the area in which noise exposure for such activities becomes unacceptable from an amenity point of view.</p>
<b>Planning Maps</b>	<p>The amendments to the Planning Maps introduce the 65dBA and 55dBA contours for Rangiora Airfield, amend the Take Off and Approach obstacle limitation surface paths to reflect the current runway lengths and amend the Rangiora Airfield landholding.</p>

As there is currently an absence of objectives and policies relating to the Rangiora Airfield in the existing Waimakariri District Plan. The introduction of these new and amended objectives, policies and rules will provide key recognition of the Rangiora Airfield in the local planning framework, which is the fundamental reason for the PPC and associated Notice of Requirement for the designation of the land for Airfield purposes.

The new provisions in association with the Notice of Requirement seek to set out a clear direction around what activities are anticipated and intended to occur on the Rangiora Airfield site and surrounding properties. They also establish a position of the ongoing use of the Airfield for 'airport purposes' and control development and specific activities within the proposed Airfield designation and surrounding properties.

#### **6.5.2 Evaluation of the Relevant Existing Waimakariri District Plan Provisions**

The second part of this section relates to the relevance of existing objectives of the District Plan and whether they would remain if the PPC was to take effect. The objectives, and for context their associated policies, of relevance to the PPC have been identified and discussed below.

#### **Chapter 14 Rural Zone**

The total area subject to the PPC is within the Rural Zone of the District Plan. The Rural Zone seeks to maintain rural character and amenity through the objective and policy framework, including restricting minimum lot sizes to 4 hectares, recognising the important role the Rural Zone has for agricultural, pastoral farming and horticultural activities and maintaining the environmental qualities and natural features of the rural environment.

The existing relevant objective and policies for the Rural Zone which are applicable to the Rangiora Airfield and this PPC are extracted and discussed below.

##### **Objective 14.1.1**

*Maintain and enhance both rural production and the rural character of the Rural Zones, which is characterised by:*

- The dominant effect of paddocks, trees, natural features and agricultural, pastoral or horticultural activities;*
- Separation between dwellinghouses to maintain privacy and a sense of openness;*
- A dwellinghouse clustered with ancillary buildings and structures on the same site;*
- Farm buildings and structures close to lot boundaries, including roads;*
- Generally quiet – but with some significant intermittent and/or seasonal noise from farming activities;*

- f) *Clean air – but with some significant short term and/or seasonal smells associated with farm activities; and*
- g) *Limited signage in the Rural zone.*

**Policy 14.1.1.1**

*Avoid subdivision and/or dwellinghouse development that results in any loss of rural character or is likely to constrain lawfully established farming activities.*

**Policy 14.1.1.2**

*Maintain the continued domination of the Rural Zones by intensive and extensive agricultural, pastoral and horticultural land use activities.*

**Policy 14.1.1.3**

*Maintain and enhance the environmental qualities such as natural features, air and noise levels, including limited signage and rural retail activities that contribute to the distinctive character of the Rural Zones, consistent with a rural working environment.*

The Plan seeks to avoid higher density developments and encourage agricultural and horticultural activities in the Rural Zone to maintain the character and amenity of the rural environment.

The PPC aligns with these provisions with its key objective being to reduce conflict between the Rangiora Airfield operations and noise sensitive activities in the surrounding rural environment. A restriction on activity intensification and retention of open space is considered to be consistent with the above objective and policies for maintaining rural amenity. The PPC will continue to enable the surrounding rural land to be used for rural purposes, however additional rules will ensure that rural dwellinghouse activities within the identified noise contours would not compromise the safe and efficient ongoing operation of Rangiora Airfield.

Notwithstanding the above, it is necessary to introduce specific provisions associated with Rangiora Airfield into Chapter 14. These proposed provisions align with those which are specific to Christchurch International Airport.

### **Chapter 11 Utilities and Traffic Management**

Specific to this plan change Chapter 11 addresses Utilities within the District and in particular the management of the effects of utilities on the environment. This is considered relevant to the assessment of the PPC, which seeks to support the ongoing operation of the Rangiora Airfield, which forms part of the local utility network.

The relevant objective and policy of the Utilities and Traffic Management Chapter applicable to the PPC are discussed below.

**Objective 11.2.1**

*Adverse effects on the environment caused by the provision, use, maintenance and upgrading of utilities are avoided, remedied or mitigated.*

**Policy 11.2.1.1**

*Avoid, remedy or mitigate adverse environmental effects caused by the provision, use, maintenance and upgrading of utilities by:*

...

- k. *avoiding in the receiving environment the noise created by aircraft approaching Christchurch International Airport; and*
- l. *avoiding land uses under airfield approach paths that could adversely affect the safety of airfield operations.*

Policy 11.2.1.1 presently addresses the noise in the receiving environment stemming from aircraft approaching Christchurch International Airport. The Explanation notes that these effects can be:

- *avoided to some degree by requiring that noise sensitive activities be discouraged from locating within areas identified as likely to be affected by such noise ..., and*
- *partially mitigated by a requirement for noise insulation of buildings or activities ... .*

For consistency the PPC includes a similar clause to k. above (and associated amendments to the Explanation) which seeks to avoid noise sensitive activities within the introduced 55 dBA Ldn contour thus restricting the establishment of conflicting land uses within areas known to be affected by Rangiora Airfield operations. This policy framework is not however designed to preclude rural activities which are not considered noise sensitive.

The amendments proposed to the Take-off Climb and Approach obstacle limitation surfaces are considered to be consistent with the safety thrust of clause l. above.

### **Chapter 12 Health, safety and wellbeing**

Chapter 12 addresses Health, Safety and Wellbeing and the relevant objective and policies for which are applicable to the Rangiora Airfield and this PPC are extracted and discussed below.

#### **Objective 12.1.1**

*Maintain the amenity values and a quality of environment appropriate for different parts of the District which protects the health, safety and wellbeing of present and future generations, and ensure that any potential adverse environmental effects from buildings and structures, signs, glare, noise and hazardous substances are avoided or mitigated.*

#### **Policy 12.1.1.10**

*Control noise to a level that is not unreasonable, measured against the character and circumstances of the zone.*

#### **Policy 12.1.1.11**

*Avoid noise adversely affecting the amenity values and health and safety of people on neighbouring sites or zones.*

#### **Policy 12.1.1.12**

*Avoid the noise effect from aircraft and avoid or mitigate the noise effect from road traffic in the receiving environment.*

As previously referred to, Rangiora Airfield is identified as ‘strategic infrastructure’ in the CRPS, providing important aviation facilities for recreational, agriculture and training operations. However, it is accepted that aircraft noise can have an adverse effect on the quality of the noise environment for properties adjacent to the airfield. Notwithstanding this, it is impractical to limit the noise to the boundary of the airfield while maintaining effective and efficient aviation operations. The PPC therefore seeks to ensure that Rangiora Airfield can continue to operate whilst also ensuring that the amenity values and quality of life for people living around the airfield are safeguarded through the use of noise contours.

The proposed noise contours have been prepared based on data obtained from existing operations of, and the projection of future operations for, the Rangiora Airfield based on modelling undertaken in accordance with NZS 6805. The contours establish clear boundaries of the future extent of potential adverse effects for noise sensitive activities. Under the PPC, the operators of the Airfield would also have a statutory responsibility to manage airfield operations such that noise levels are contained within the levels sets by the contours. The PPC therefore increases certainty as to the anticipated noise levels based on the contour lines.

The proposed contour lines will therefore provide protection against potential reverse sensitivity effects on the operation of the airfield in the future. Therefore, it is considered that the PPC is consistent with the overall intent of these provisions. Amendments are proposed to update the Explanation to Policy 12.1.1.12 to align it with the PPC.

### **Conclusion**

Overall it is concluded that the existing objectives would remain if the amending proposal was to take effect

## **6.6 Section 32(1)(c)**

### **- Details corresponding to the scale and significance of the environmental, economic, social, and cultural effects that are anticipated from the implementation of the proposal**

The following assesses the scale and significance of the various environmental (noise, visual and landscape, traffic and safety), economic, social, and cultural effects that are anticipated from the PPC.

#### **6.6.1 Environmental - Noise**

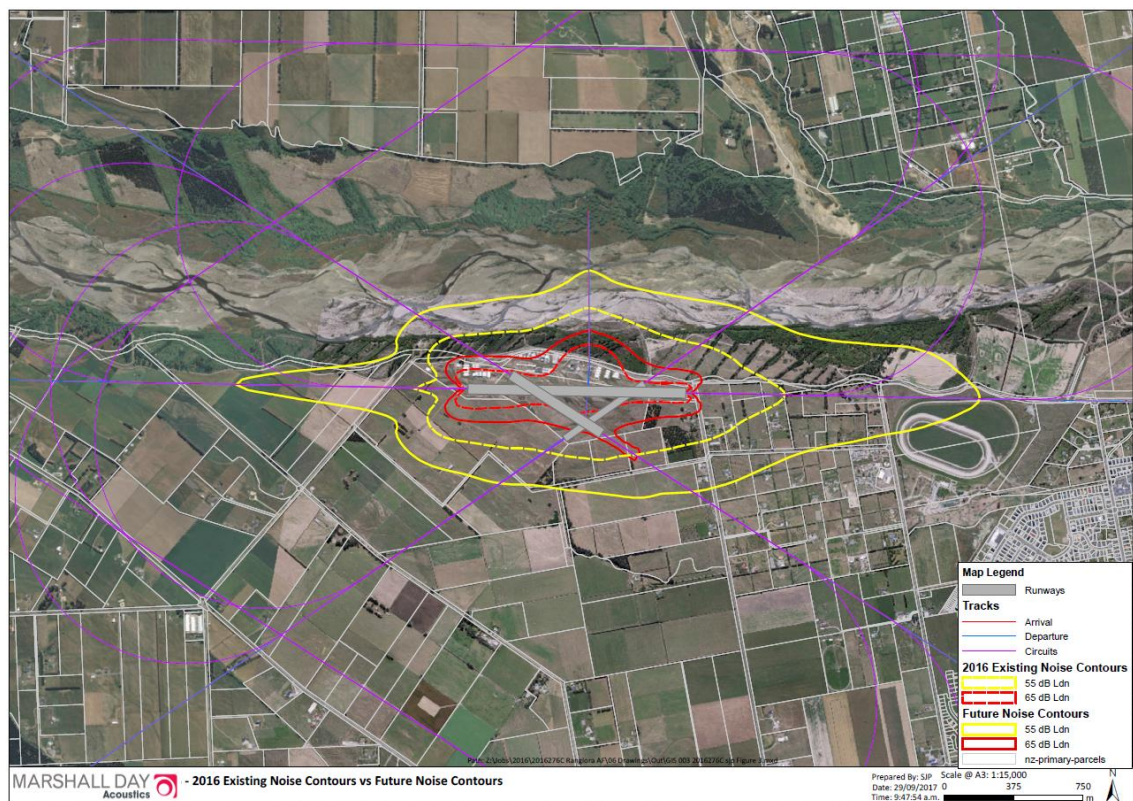
The intent of the PPC, in association with the NoR to designate for airport purposes, is to preserve and protect the ongoing operation of the Rangiora Airfield, and avoid the potential for land use conflicts to occur. A key land use conflict consideration is the management of aircraft noise associated with the existing and future operations of the Rangiora Airfield.

The *New Zealand Standard 6805:1992 "Airport Noise Management and Land Use Planning"* (NZS6805:1992) establishes maximum acceptable levels of aircraft noise exposure for land surrounding airports. Its purpose is to protect the health and amenity of the community, while recognising and protecting the efficient operation of airports.

NZS6805:1992 supports the inclusion of rules within District Plans prohibiting, regulating or allowing activities in areas which are exposed to certain levels of aircraft noise. The level of aircraft noise exposure will determine the control boundary which applies. NZS6805:1992 establishes the Air Noise Boundary (ANB) where noise sensitive activity should be prohibited as being 65dBA  $L_{dn}$ , and that regulation of noise sensitive activity within the 55dBA  $L_{dn}$  noise contour (Outer Control Boundary (OCB)) should occur.

An analysis of the noise generated from the airfield operations has been undertaken by Marshall Day and their report is attached in **Appendix 3**. The Noise Assessment identifies the location of the 55dBA  $L_{dn}$  and 65dBA  $L_{dn}$  noise contours for the Rangiora Airfield based on data from existing airfield operations coupled with a projection of future operations. The identified noise contours have formed the basis for the extent of the proposed airport purposes designation which accompanies this PPC, as well as the changes sought through this PPC. While there are no noise contours at present Figure 4 below shows the comparison between contours based on the existing level of aircraft movement and the proposed contours projections of future operations:





**Figure 4 - Comparison between existing and future operation contours**

The PPC aims to mitigate the noise impacts of the ongoing operation of the Rangiora Airfield by requiring that aircraft movements do not exceed 65 dBA Ldn outside the 65 dBA Ldn contour thus providing an assurance as to the future noise levels that can be anticipated, and by preventing the establishment of noise sensitive activities within the 55dBA Ldn contour. The inclusion of noise attenuation requirements for new rural dwellinghouses or alterations to existing dwellinghouses within the 55dBA Ldn will protect such activities on land surrounding the airfield from adverse indoor acoustic impacts. However, greater protection for outdoor activities cannot be provided.

An aircraft noise assessment undertaken by Marshall Day (contained in **Appendix 3**) included the following assumptions in establishing noise contours for Rangiora Airfield:

The 2016 noise contours have been calculated based on:

- A total of 39,992 annual aircraft movements, of which 14% are helicopter movements (based on October, November and December 2016 AIMM data);
- The existing runway configurations
- Input data, as provided by WDC (via AIMM) including:
  - Aircraft type;
  - Time of day (day 0700-2200 or night 2200 – 0700);
  - Departure or arrival;
  - Recorded aircraft movements for 2016;
  - Runway usage; and



- Flight tracks.

The future contours, which form part of the Plan Change assume that land on the south side of the Airfield that is currently vacant will be developed, and that based on the available area, the existing number of hangers will be doubled.

An additional 20% of aircraft movements has been allowed to account for monthly variability, making an estimated increase of 120% in total movements. Future noise contours for 20XX have therefore been calculated based on the following:

- A total of 87,982 annual aircraft movements, of which 14% are helicopter movements;
- No change to the anticipated fleet mix;
- The threshold of vector R28 would in time be extended to increase its potential usefulness;
- No change to 2016 vectors splits;
- No night-time use of the airfield; and
- No significant change to flight tracks.

The proposed noise control boundaries would, if such increased movements occurred, represent a change in aircraft noise levels compared with the current noise exposure. The effect of this change on the surrounding areas would result in an increase in average noise exposure, of slightly over 3 dB at all nearby dwellinghouses which the assessment describes as being just detectable.

The assessment recommends for activities within the proposed contours that:

- New Activities Sensitive to Aircraft Noise (ASAN) located within the OCB, should be prohibited, unless there is a strong existing expectation of residential development, such as associated with a rural use;
- New ASANs located within the ANB should be prohibited;
- Alterations and additions to existing ASANs located within the OCB in all zones should be fitted with appropriate sound insulation; and
- Where sound insulation is required a ventilation system (or systems) should be provided.

The assessment recommends for airport noise management that:

- On land not designated airport purposes (i.e. any land not owned by the airport), noise from aircraft operations should be managed so as not to exceed a Day/Night Level of 65 dB Ldn (fixed wing and helicopters) outside the proposed ANB and 55 dB Ldn (fixed wing and helicopters) outside the proposed OCB;
- Noise monitoring should be undertaken to verify that noise levels are not exceeding the requirements set out above. If the calculated noise level exceeds 64 dB at any point on the ANB, then infield monitoring is required for a minimum of one month (at one measurement location) to demonstrate compliance with the noise limit of the ANB; and
- Exemptions to these noise rules should be provided for:
  - Aircraft operating in an emergency for medical or national / civil defence reasons;
  - Air shows;
  - Military operations;

- Aircraft using the airfield as a necessary alternative to an airfield elsewhere;
- Aircraft taxiing;
- Aircraft engine testing; and
- All helicopter operators be made aware of the Helicopter Association International's "Fly Neighbourly" program and should avoid, where possible flying over or close to residential areas.

The above recommendations have generally been incorporated in the PPC or some limited cases will be addressed directly through the airfield users. However, no requirement at this stage has been made in the PPC for ventilation to be required in conjunction with sound insulation.

Overall the scale and significance of noise effects anticipated by the proposed Plan Change (the proposal) is relatively confined. There is already aircraft noise within the receiving environment created by the existing airfield operations (represented by the existing contours in Figure 4 above) and the extent of the additional area which may potentially receive noise above 55dBA i.e. that between the existing and proposed contours, is not extensive with approximately 50% being within the Ashley River margins. Further, the associated provisions do not limit the ability for dwellinghouses associated with rural activities at 4ha or above to be established but rather require they be appropriately insulated (along with additions and expansions to existing dwellinghouses). The insulation requirements are not significantly greater than modern construction materials currently provide for. It is also noted that flying is limited to daylight hours due to there being no airfield lighting (and a restriction on such lighting within the NoR) and that this is reflected in the proposed contours. (Note: there are a very small number of flights outside the daytime hours of 7am – 10pm primarily in the summer period prior to 7am)

The provisions to restrict noise sensitive activities therefore generally align with existing provisions associated with non-rural activities.

#### **6.6.2 Environmental - Visual and Landscape Effects**

The PPC seeks to provide a policy framework to support the associated designation of the Rangiora Airfield. While no specific public works are proposed, the designation of the airfield and the PPC will deliver a planning framework for its ongoing operation, and the future expansion of existing facilities. As detailed in the NoR no specific building works are proposed at this time, so the visual impact of future airport related activities cannot be accessed in detail. However, based on the types of activities which operate at the Rangiora Airfield, structures will be single or two-storey industrial/airfield style buildings, with limited visual impact.

The location of the site directly to the south of the Ashley River, requires consideration of the on-going airfield operations on the Ashley River landscape. It is noted that dense vegetation is located along both the northern and the southern banks of the river, which is of a scale and density which provides significant visual screening of the existing airfield improvements. Further, the Ashley River and its surrounding vegetation provides physical separation between the airfield and land use activities on the northern side of the river.

On this basis in conjunction with the ability to consider specific projects under the s176A (of the RMA) mechanism for considering any submitted Outline Plan of Works, it is considered that the scale and significance of visual and landscape effects associated with the PPC will be minimal.

#### 6.6.3 Environmental - Traffic Effects

The PPC and the associated designation do not include any proposal for specific public works or intensification of use of the existing Rangiora Airfield operations. However, both the PPC and designation seek to provide long-term protection for the ongoing operation of the airfield and possible future expansion. As above, section 176A(3)(d) provides recourse to further consider the traffic implications of any specific project if necessary.

The noise contours prepared by Marshall Day which are proposed to be adopted through the PPC and the designation include assumptions for the future expansion of airfield operations, and therefore there is the potential for additional vehicle movements to and from the airfield in the future.

Vehicle access is primarily from Oxford Road along Merton Road into the airfield. This route does not require any turns once vehicles are on Merton Road. Traffic counts undertaken by Waimakariri District Council in August 2015 indicate an average daily traffic rate of 362 vehicles along Merton Road, with a peak rate of 51 vehicles per hour (count taken approximately 1,000m north of Oxford Road). Merton Road has been designed for a maximum vehicle capacity of 1,700 per hour in each direction, and therefore there is significant surplus capacity in the existing road network servicing Rangiora Airfield.

It is clear from the existing traffic generation, and the surplus capacity in the support road network, that even if the future expansion enabled by the PPC and associated designation were to occur the scale and significance of any increased traffic effects would only be a minimal on the operation of the local road network.

#### 6.6.4 Environmental - Safety

The Rangiora Airfield does not conduct air transport operations or support aircrafts over 5,700kg Maximum Certified Take-Off Weight (MCTOW), and therefore Runway End Safety Areas (RESA)<sup>2</sup> are not required. Notwithstanding this, it is considered that the adoption of the NoR for the airfield designation will help ensure sufficient clearance is provided at the end of each runway.

The take-off and landing slopes have been updated to reflect current requirements and will restrict the development of structures on adjoining properties. These amendments are however considered to have a minimal effect on the surrounding properties as they reduce the areas concerned from that currently shown in the operative District Plan, and result in substantial positives in terms of health and wellbeing in ensuring that the areas immediately beyond the runways do not contain obstacles which would form a hazard to take-off or landing of aircraft.

#### 6.6.5 Economic Effects

A report assessing the economic effects of the PCC (and NoR) has been undertaken by Mike Copeland and included in **Appendix 5**. The report concludes that:

- The Rangiora Airfield provides significant social and economic benefits to residents and businesses of the Waimakariri District and the wider Canterbury region. These benefits are expected to grow in importance in the future;

---

<sup>2</sup> The requirement for Runway End Safety Areas (RESA) to be provided are outlined in the *Civil Aviation Authority of New Zealand (CCA) Advisory Circular 139-6*

- The Council's NoR and PPC are expected to provide a range of economic benefits to the District and wider Canterbury region;
- From a District perspective, the economic costs associated with the NoR and PPC are negligible; and
- The net economic benefits of the Council's NoR and PPC will be significant.

It is noted that the prohibition of dwellinghouse development within 65dBA contour will not impact on any landowner's ability to create a 4ha subdivision and position a dwelling platform outside that contour.

Overall therefore the scale and significance of economic effects of the PPC can be seen as considerable in the context of Waimakariri District.

#### **6.6.6 Social and Cultural Effects**

The PPC seeks to ensure that the District Plan provides a suitable planning policy framework to reflect the 'strategic infrastructure' value of the airfield within the Canterbury region.

By supporting aviation clubs, hobbyists and local helicopter operators, the airfield provides a social and cultural contribution to the local and regional community. The PPC provides the necessary amendments to the District Plan provisions to ensure that the ongoing operation of the airfield is protected, as well as its social and cultural contribution to the wider community.

It is noted that the introduction of noise contours which apply to land outside of the Rangiora Airfield landholdings will impose additional limitations on the activities which can occur on this land. However, the design of the NoR and the PPC have aimed to minimise the restrictions imposed on privately owned land, and in some cases provide opportunities for the effects of the airport operations to be mitigated through design and construction, rather than introducing prohibition of activities.

Accordingly, it is considered that the scale and significance of the PPC in terms of social and cultural effects will overall be moderately positive.

#### **6.7 Section 32 (4A)**

**- If the proposal is a proposed policy statement, plan, or change prepared in accordance with any of the processes provided for in Schedule 1, the evaluation report must—**

- (a) summarise all advice concerning the proposal received from iwi authorities under the relevant provisions of Schedule 1; and**
- (b) summarise the response to the advice, including any provisions of the proposal that are intended to give effect to the advice.**

A copy of the PPC and the NoR was provided to Mahaanui Kurataiao Ltd along with an explanatory letter informing what was proposed, and to provide a basis for direct consultation, including the opportunity to meet with relevant staff.

The PPC and NoR were discussed by the Kaitiaki Committee for Te Ngāi Tūāhuriri Rūnanga at a meeting on Friday 15<sup>th</sup> June 2018). The response from the Committee was that they did not have any concerns with the proposed Plan Change/ designation process and therefore did not wish to provide any feedback.

As a result of the above no further changes to the provisions have been made.

## 6.8 Section 32 Conclusion

Based on the analysis of the Proposal outlined in this section, it is concluded that:

- The objectives of the Proposed Plan Change are the most appropriate way in achieving the purpose of the Act, and giving effect to the Canterbury Regional Policy Statement.
- The proposed provisions of the Proposed Plan Change in terms of efficiency and effectiveness are the most appropriate way to achieve the objectives having considered other reasonably practicable options.
- The benefits of the Proposed Plan Change in terms of the environmental, economic, social, and cultural effects outweigh the costs and in conjunction with the Notice of Requirement will provide opportunities for economic and employment growth.
- There is sufficient information that demonstrates that there are no significant risks around proceeding with the Proposed Plan Change.
- The Proposed Plan Change and the associated designation are the best means of protecting the ongoing Airfield operations, with minimal impact on other surrounding properties.
- Proposed Plan Change will provide clarity around intentions for the future use and development of the Airfield and surrounding area.
- The existing objectives and associated policies will remain if the Proposed Plan Change takes effect.
- Advice from Iwi authorities is that they did not have any concerns with the proposed Plan Change (or designation).

## 7 Consultation/Notification

A draft of the Proposed Plan Change and Notice of Requirement for the associated designation of the airfield was provided to relevant stakeholders as part of a Consultation Plan undertaken in accordance with the relevant provisions of Schedule 1 of the RMA.

The Consultation Plan included letters being sent out to statutory and other consultees accompanied by the draft Plan Change and Notice of Requirement. The holding of specific meetings with Environment Canterbury, Christchurch International Airport and local Iwi. Wider meetings with key stakeholder groups - Airfield Users and Residences affected by the noise contours and the general public meeting.

### 7.1 Consultation Parties

The consultation process included the following stakeholder groups:

- The Minister for the Environment;
- Civil Aviation Authority;
- Environment Canterbury;
- Adjoining local authorities;
- Christchurch International Airport Limited;
- Local rūnanga, Te Ngāi Tūāhuriri Rūnanga;
- Affected Landowners including:
  - Landowners and occupiers within the proposed 65dBA noise contour, which will be effected by the proposed designation;
  - Landowners and occupiers within the proposed 55dBA noise contour; and
  - Landowners and occupiers within the revised take off climb and approach obstacle limitation surfaces;
- Tenants and users of the Airfield; and
- The general public via an advertised public meeting.

### 7.2 Consultation Response

The following responses to the consultation exercise were made:

- Environment Canterbury (ECan) indicated there were no concerns in relation to the designation of ECan owned land from ECan as landowner. They also confirmed that the report accurately assessed the Canterbury Regional Policy Statement (CRPS) and that the proposed plan change was consistent with the CRPS which recognises the Rangiora Airfield as regionally significant infrastructure and provides planning mechanisms to support the ongoing use of this facility whilst managing the potential for reverse sensitivity effects.
- Christchurch City Council noted the positivity in Assessment of Economic Effects associated with PPC and NoR with regards the more efficient use of Christchurch International Airport's resources. They did not seek to undertake any further consultation prior to lodgement of the documentation.

- The Kaitiaki Committee for Te Ngāi Tūāhuriri Rūnanga did not have any concerns with the proposed Plan Change/ designation process and therefore did not wish to provide any feedback.
- Discussions were held with Rhys Boswell from Christchurch International Airport Limited (CIAL) regarding the nature and detail on the Plan Change. There were no matter of concern for CIAL identified at this point in time.
- At the public meeting local residents asked a number of questions about the PPC and NoR which were addressed at the meetings. The questions and answers have been documented in a report to the Council. One outcome from the public meetings has been the inclusion of an addition condition within the NoR to address the non-provision of lighting on the runways to ensure that flying during non-daylight hours does not occur as follows:

*There shall be no imbedded runway lighting*



## 8 Conclusion

The Proposed Plan Change has been prepared to provide recognition and support for the ongoing operation of the Rangiora Airfield. The changes include new and amended objectives, policies and associated rules, as well as changes to the District Plan Planning Maps.

The changes are proposed in co-ordination with the proposed designation of the Rangiora Airfield and surrounding lands within the projected 65 dBA noise contour for airport purposes. The Plan Change and NoR for a Designation will align the District Plan with the Regional Policy Statement which recognises the Rangiora Airfield as being both “*Strategic Instructure*” and “*Regionally Significant Infrastructure*”.

The PPC has been prepared in accordance with the relevant provisions of Schedule 1 of the *Resource Management Act 1991*. The proposed changes are accompanied by a comprehensive Evaluation Report prepared in accordance with Section 32 of the *Resource Management Act 1991*.

The overall purpose of the PPC is to:

- Provide strategic recognition of the economic, social and cultural contribution of Rangiora Airfield, and ensure that aviation clubs and businesses which locate at the airfield will not be at risk from development surrounding the airfield;
- Safeguard the operations of the Rangiora Airfield and to minimise impacts of surrounding land uses on its continued operation;
- Introduce noise contours for the Rangiora Airfield. The noise contours have a dual purpose; to provide protection for the airfield in relation to noise sensitive uses beyond the airfield boundary, as well as providing a definable monitoring requirement for managing airport noise; and
- Provide greater clarity within the district plan of the operational requirements of Rangiora Airfield, and provide notice of its location to surrounding landowners.

The assessment and evaluation outlined in this report demonstrates that the PPC is founded on sound resource management principles and satisfies all of the requirements for changes to District Plan as set out in the RMA. In particular,

- The PPC will continue to provide for the integrated management of the effects of the use and development of Rangiora Airfield and the surrounding area;
- The PPC is efficient and effective when measured against the requirements of Section 32 of the RMA;
- The changes proposed are consistent with the existing objective and policy framework in the District Plan;
- The PPC will enable people and communities to better provide for their social, economic and cultural wellbeing;
- The PPC will ensure that the overriding purpose of the RMA to promote the sustainable management of natural and physical resources will continue to be achieved.

Consultation has been undertaken with statutory consultees, parties affected by the noise contours and take off climb and approach obstacle limitation surfaces, airfield tenants and users and the general public. All these parties have been advised of the both the PPC and the NoR and in the case of the NoR a condition has been added restricting runway lighting as a result.

It is considered that the Proposed Plan Change will give effect to the Regional Policy Statement, is appropriate in achieving the set objectives, will maintain the established objective and policy framework of the District Plan and overall will ensure that the overriding purpose of the RMA to promote the sustainable management of natural and physical resources is achieved. On this basis, it is concluded that the purpose of the Act under this Section 5 would be better achieved by the Plan Change proceeding.

## APPENDIX 1:

### Certificates of Title



## COMPUTER FREEHOLD REGISTER UNDER LAND TRANSFER ACT 1952



**Guaranteed Search Copy issued under Section 172A  
of the Land Transfer Act 1952**

  
R. W. Muir  
Registrar-General  
of Land

**Identifier** **439710**  
**Land Registration District** **Canterbury**  
**Date Issued** 03 December 2008

### Prior References

82010 82011

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<b>Estate</b>	Fee Simple
<b>Area</b>	40.1272 hectares more or less
<b>Legal Description</b>	Lot 2-4 Deposited Plan 410643 and Lot 1-2 Deposited Plan 320694 and Lot 1 Deposited Plan 24674

### Proprietors

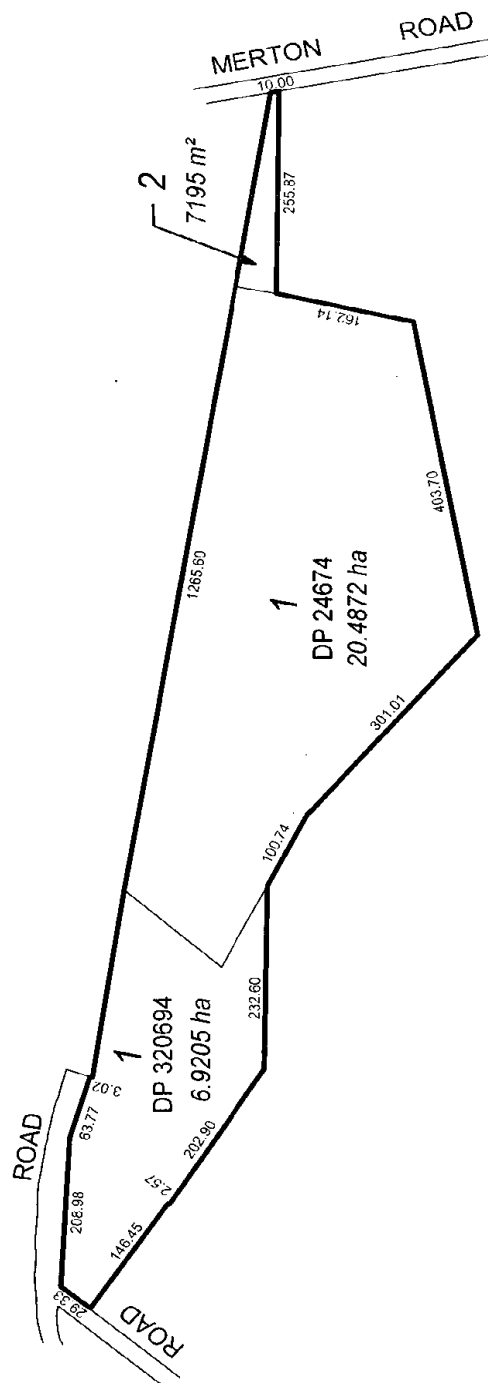
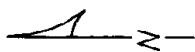
Waimakariri District Council

### Interests

Subject to Section 241(2) Resource Management Act 1991 (affects DP 410643 )

8013674.5 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 3.12.2008 at 9:06 am  
(affects lots 2,3,4 DP 410643)

8013674.6 Consent Notice pursuant to Section 221 Resource Management Act 1991 - 3.12.2008 at 9:06 am  
(affects lots 2,3,4 DP 410643)



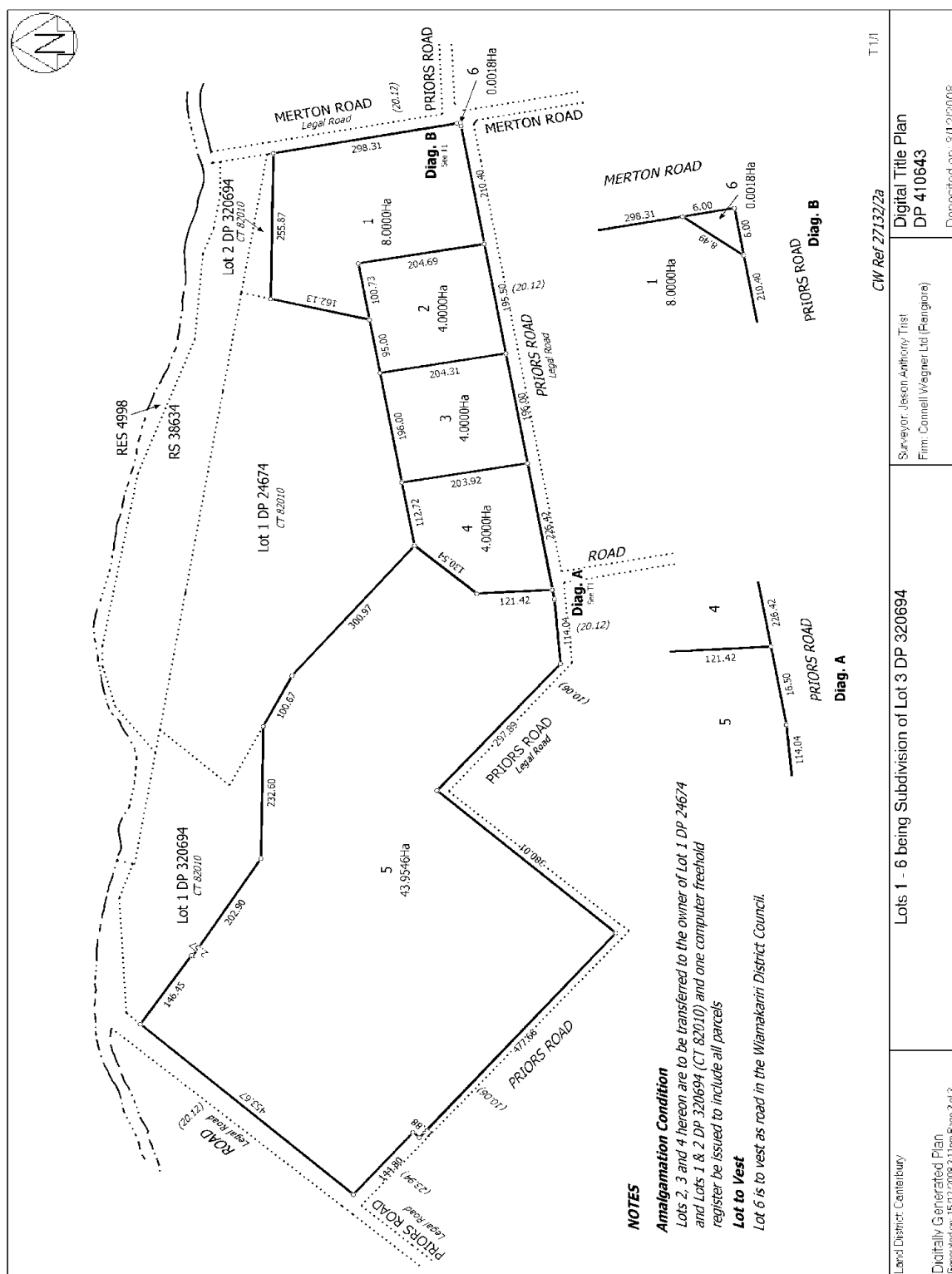
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Title Diagram CT 82010

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Date (C): 21/08/03





# COMPUTER FREEHOLD REGISTER UNDER LAND TRANSFER ACT 1952



**Guaranteed Search Copy issued under Section 172A  
of the Land Transfer Act 1952**

  
R. W. Muir  
Registrar-General  
of Land

**Identifier** CB795/5  
**Land Registration District** Canterbury  
**Date Issued** 06 May 1959

**Prior References**  
CBPR98/1

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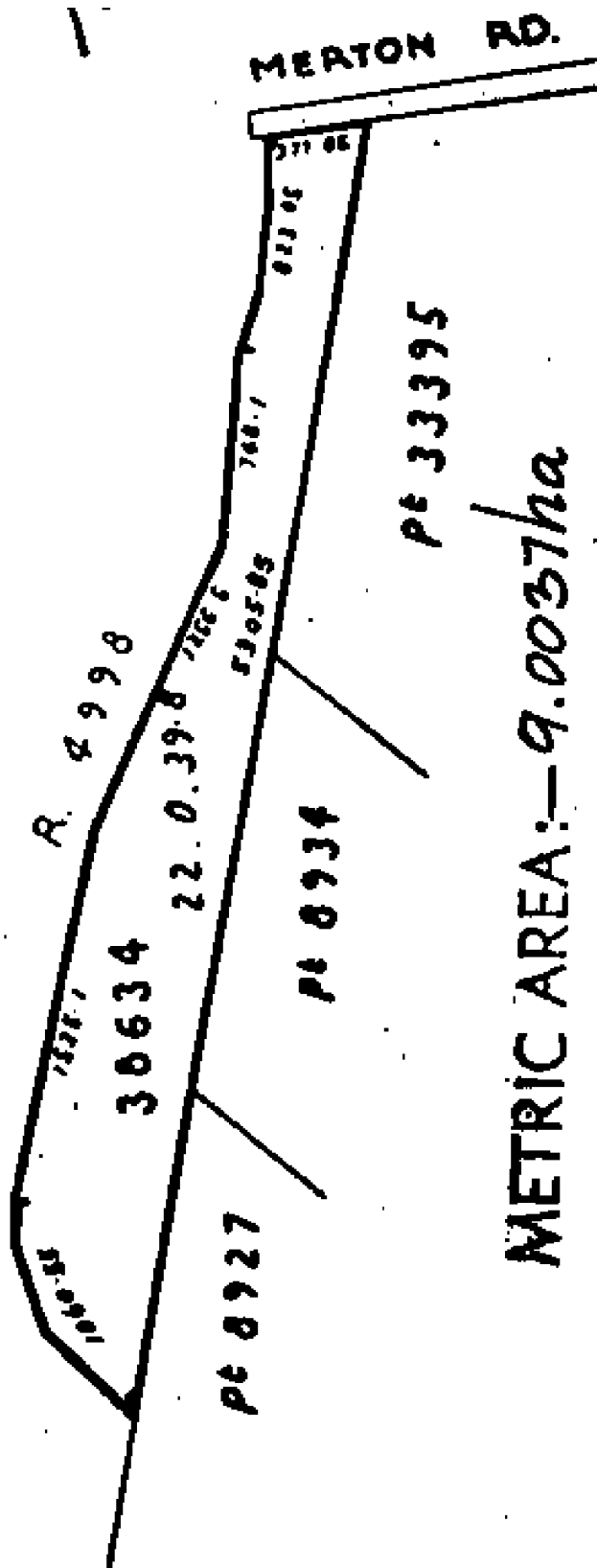
<b>Estate</b>	Fee Simple
<b>Area</b>	9.0037 hectares more or less
<b>Legal Description</b>	Rural Section 38634
<b>Purpose</b>	Aerodrome

**Proprietors**  
The Rangiora County Council

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**Interests**  
Subject to Section 59 Land Act 1948

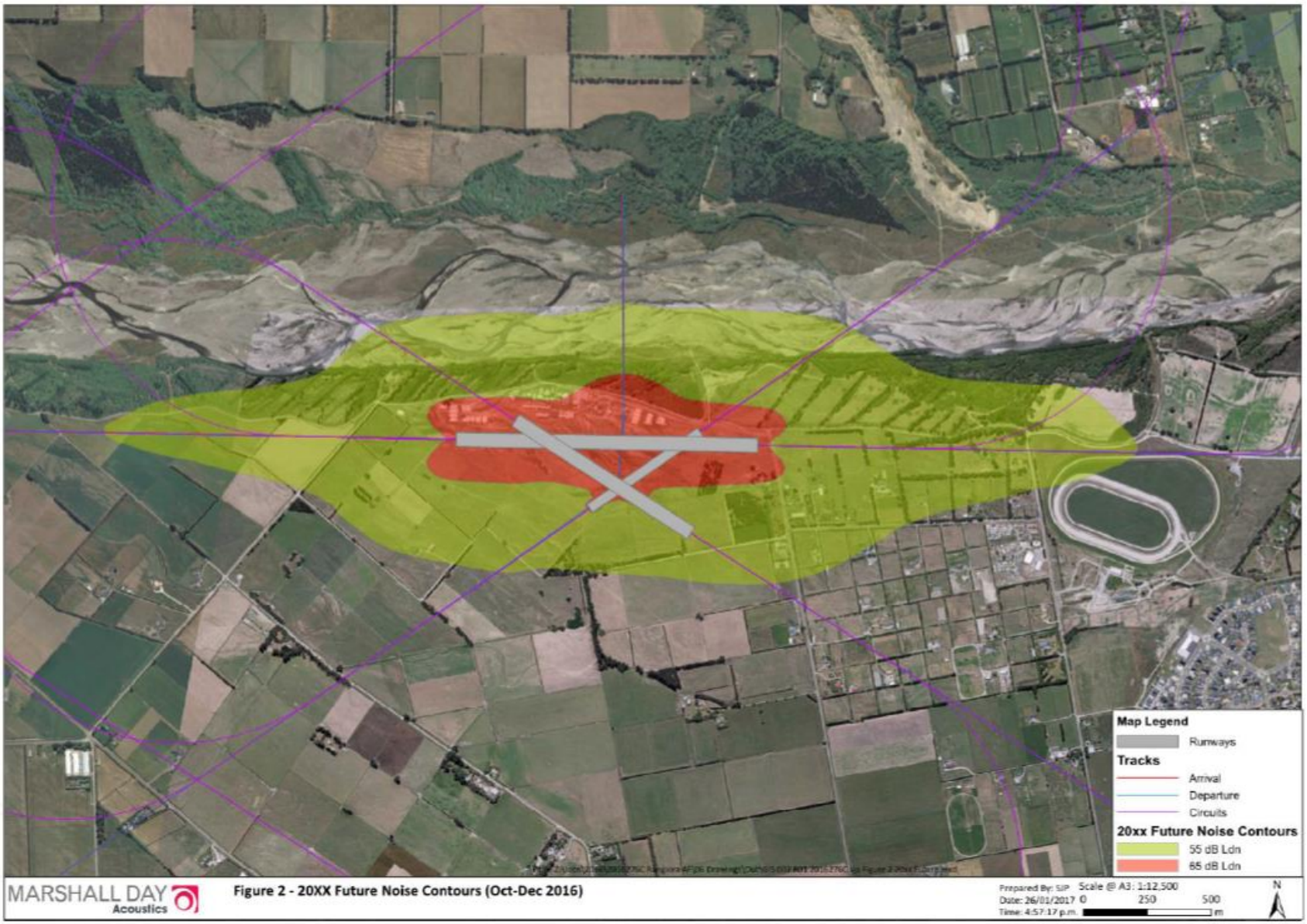




Scale: - 10 chains to an inch.  
S. 29.037. x 1.7

## APPENDIX 2:

### Noise Contour Map



## APPENDIX 3:

### Noise Assessment Report





MARSHALL DAY  
Acoustics 

RANGIORA AIRFIELD  
Modelling of Future Aircraft Noise Contours  
Rp 001 R02 2016276C | 16 February 2018

Project: **RANGIORA AIRFIELD**

Prepared for: **Waimakariri District Council  
Private Bag 1005  
Rangiora 7440**

Attention: **Craig Sargison**

Report No.: **Rp 001 R02 2016276C**

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#### Document Control

Status:	Rev:	Comments	Date:	Author:	Reviewer:
Approved		For review	22 Dec 2017	Rob Hay	Gary Walton
Approved	R01	Minor changes	8 Jan 2018	Rob Hay	Gary Walton
Approved	R02	Minor change	16 Feb 2016	Rob Hay	Steve Peakall

## EXECUTIVE SUMMARY

Marshall Day Acoustics (MDA) has been engaged by Waimakariri District Council (WDC) to develop both a current and future set of aircraft noise contours for Rangiora Airfield.

Airport noise contours (and the subsequent noise control boundaries) provide the basis for the implementation of New Zealand Standard NZS 6805 in the District Plan. This report describes the methodology used and provides the current (2016) and future (20XX) 55 dB  $L_{dn}$  and 65 dB  $L_{dn}$  noise contours.

We recommend that the proposed Outer Control Boundary and Air Noise Boundary, based on the future contour set (20XX) and as shown in Appendix E.2, be implemented.

We also recommend the introduction of District Plan noise rules relating to land use planning controls and noise associated with Rangiora Airport that reflect the future (20XX) noise control boundaries and to incorporate the recommendations of NZS 6805.

With the implementation of the proposed noise control boundaries and associated land use planning controls, the noise effects arising from the plan change are considered reasonable.



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APPENDIX E RANGIORA AIRFIELD NOISE CONTOURS

## 1.0 INTRODUCTION

Marshall Day Acoustics (MDA) has been engaged by Waimakariri District Council (WDC) to develop both a current and future set of aircraft noise contours for Rangiora Airfield.

Airport noise contours (and the subsequent noise control boundaries) provide the basis for the implementation of New Zealand Standard NZS 6805 in a District Plan.

This report describes the methodology used and provides the current and future 55 dB  $L_{dn}$  and 65 dB  $L_{dn}$  noise contours.

A glossary of relevant acoustical terms is provided in Appendix A.

## 2.0 RANGIORA AIRFIELD DESCRIPTION

Rangiora Airfield has three grass runways and a helicopter pad located on approximately 49 ha of land. There are no runway lights or navigation aids and the runway surface is not suited to heavy aircraft. Currently the airfield supports around 40,000 movements per year, comprising general aviation aircraft, microlights, helicopters, gliders and gyros. There are no commercial passenger flights from the airfield and limited commercial helicopter operations. There are approximately 90 hangers, with little opportunity for further development of hangers on the north side of the airfield. The dominant vectors used are R07 (53%) and R25 (32%), with the helicopter pad accounting for a further 13%. All other vectors combined account for the remaining 7% of movements<sup>1</sup>.

The importance of Rangiora Airfield as a piece of strategically, and regionally, significant infrastructure has been described by others<sup>2</sup>. It is proposed that Rangiora Airfield be future-proofed by seeking a Designation and Plan Change for the site and surrounding area under the Resource Management Act. Residential and noise sensitive activities would be prohibited within the 65 dB  $L_{dn}$  noise contour. Between the 65 and 55 dB  $L_{dn}$  noise contours, residential activities associated with a permitted rural use would remain permitted, subject to appropriate sound insulation<sup>3</sup> being provided, while noise sensitive activities (as defined in the District Plan) would be restricted.

## 3.0 NEW ZEALAND STANDARD 6805:1992

New Zealand Standard NZS 6805:1992 *"Airport Noise Management and Land Use Planning"* provides a recommended approach for territorial authorities when dealing with airports and land affected by airport noise. The recommended process aims to manage the adverse effects of airport noise by controlling the use of land around airports, and by ensuring the airport does not exceed the future noise contours used for the planning process. A summary of NZS 6805 is provided in Appendix B.

The Standard recommends two boundaries, the Air Noise Boundary (ANB), set at 65 dB  $L_{dn}$ , and the Outer Control Boundary (OCB), set at 55 dB  $L_{dn}$ .

In addition, New Zealand Standard NZS 6807:1994 *"Noise Management and Land Use Planning for Helicopter Landing Areas"* (NZS 6807) has been developed specifically to deal with noise from helicopter landing areas.

NZS 6807 is similar to NZS 6805 in that it recommends controlling noise and the use of land around helicopter landing areas by establishing a 'helinoise boundary', defining an area of land within which, no new incompatible land uses are recommended unless adverse effects are mitigated.

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<sup>1</sup> Based on AIMM data from September 2016 to May 2017.

<sup>2</sup> Plan Change documentation.

<sup>3</sup> As provided for in Table 31.2 of the Waimakariri District Plan.

NZS 6807 recommends that where an area is subject to planning measures in accordance with NZS 6805 as well as in accordance with NZS 6807, the position of the OCB should consider the position of the helinoise boundary.

Based on the limited number of helicopter movements at Rangiora, it is our experience that helicopter noise emissions would not be particularly significant and therefore for compliance monitoring purposes the pragmatic approach would be to adopt the 55 dB  $L_{dn}$  contour from fixed wing and helicopter movements as the OCB.

Therefore, for Rangiora Airfield, the proposed noise control boundaries to be implemented in the District Plan are the:

- 65 dB  $L_{dn}$  ANB; *and*
- 55 dB  $L_{dn}$  OCB.

When establishing the location of noise boundaries, an allowance for the expected growth of the airport is made. NZS 6805 recommends a minimum 10-year projection of future aircraft operations. MDA typically recommends 20 – 30 year forecasts are used, as has been implemented at other New Zealand airports and airfields. The noise contours to be incorporated into the District Plan are based on predicted future aircraft movements as discussed below.

#### 4.0 INTEGRATED NOISE MODEL

Several computer based noise modelling software programmes have been developed to predict aircraft noise near an airport or airfield. The most widely used of these (and the model referenced in NZS 6805) is the Integrated Noise Model (INM) developed by the US Federal Aviation Authority.

The INM calculation procedures use an energy averaging technique to calculate the noise exposure in terms of  $L_{dn}$ . The noise level is calculated at many grid points by summing the 'noise energy' from each aircraft movement during a 'typical' day's operation. The 'noise energy' is calculated using the hourly  $L_{Aeq}$  value, night-weighted by +10 dB and then averaged over 24 hours to give the daily  $L_{dn}$  value at each grid point. The grid points with equal noise level are then joined graphically to give a plot of  $L_{dn}$  noise contours.

The latest version of INM is v7d (Version 7d). All aircraft noise emission contours, presented in this report, have been produced using INM v7d.

To be able to provide a comprehensive assessment of noise effects it is necessary to understand current airport noise emissions in relation to noise emissions being sought via a plan change process. To this end current airport noise emissions are also presented in the following section.

#### 4.1 2016 Aircraft Activity

The aircraft activity for 2016 has been provided by WDC, via the AIMM platform, and is summarised in Table C1 of Appendix C.

It is understood that the level of aircraft activity at the airport has been increasing in recent years, which has been reflected in an increase in the number of hangars built on the Airfield. We understand that the current capacity for new hangars to be constructed has largely been exhausted, unless airfield land to the south side of the Airfield (off Priors Road) is developed for additional hangars. Therefore, the potential for additional flights (and any increase in aircraft noise) is constrained, other than from training aircraft visiting from other Canterbury airfields.

The 2016 noise contours have been calculated based on the following:

- A total of 39,992 annual aircraft movements, of which 14% are helicopter movements (based on October, November and December 2016 AIMM data);
- The existing runway configurations (refer aerodrome chart in Appendix D)

- Input data, as provided by WDC (via AIMM) including:
  - Aircraft type;
  - Time of day (day 0700-2200 or night 2200 – 0700);
  - Departure or arrival;
  - Recorded aircraft movements for 2016 (Appendix C);
  - Runway usage (Appendix C); and
- Flight tracks as depicted in Appendix D and Appendix E (noise contour outputs).

#### 4.2 20XX Future Aircraft Activity

The main forecasting of future aircraft activity for 20XX was estimated by MDA on behalf of the WDC.

We have assumed that land on the south side of the Airfield that is currently vacant will be developed, and that based on the available area, the existing number of hangars will be doubled. An additional 20% of aircraft movements has been allowed to account for monthly variability, making an estimated increase of 120% in total movements.

Future noise contours for 20XX have therefore been calculated based on the following:

- A total of 87,982 annual aircraft movements, of which 14% are helicopter movements;
- No change to the anticipated fleet mix;
- The threshold of vector R28 would in time be extended to increase its potential usefulness<sup>4</sup>;
- No change to 2016 vectors splits;
- No night-time use of the airfield; and
- No significant change to flight tracks as depicted in Appendix E.

### 5.0 CALCULATED NOISE CONTOURS

#### 5.1 2016 Noise Contours

Noise contours representative of the current situation have been calculated to allow an assessment of current noise exposure in the community to occur. This also enables a comparison to be made between the current noise exposure and that which would be allowed under the proposed revised noise control boundaries.

The predicted current noise contours are shown Appendix E.1.

A distinctive feature of the contour is a convex bulge in both the 65 dB  $L_{dn}$  and 55 dB  $L_{dn}$  noise contours on the northern side of the main runway (07/25). This bulge results from helicopter activity at the jet fuel pump.

#### 5.2 20XX Future Noise Contours

The predicted 20XX future noise contours are shown in Appendix E.2.

The noise contours normally used for the ANB and OCB under NZS 6805 are the 65 dB  $L_{dn}$  and 55 dB  $L_{dn}$  contours respectively.

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<sup>4</sup> As vectors R10 and R28 combined make up less than 1.5% of total movements, extending the threshold has very little impact on the extent of the noise contour.

These noise contours are also referred to throughout this report as the '20XX 55 dB L<sub>dn</sub> contour' and the '20XX 65 dB L<sub>dn</sub> contour' respectively and include combined fixed wing aircraft (all types) and helicopter movements.

The predicted 20XX 55 dB L<sub>dn</sub> contour is more extensive than the 2016 contours, particularly to the west and east on extended runway centreline, and to the north (near the helicopter refuelling area) and south (near a slight extension in the threshold of runway 28).

## 6.0 ASSESSMENT OF NOISE EFFECTS

NZS 6805 inherently envisages some level of growth in noise emissions from the airport by adopting a minimum 10-year planning period and by recognising the need to be able to operate an airport efficiently. Further, the Standard advocates the implementation of practical land use and airport management techniques to promote and conserve the health of people living near airports.

As a result, there is a requirement to determine what level of airport growth is reasonable, when considered in conjunction with the requirement to ensure a satisfactory living environment for existing and future residents. To facilitate this, and in terms of the RMA, an effects assessment is necessary, as detailed below.

The effects of the proposed noise control boundaries on the surrounding community have been assessed by considering the change in noise level resulting from growth and the predicted level of annoyance.

### 6.1 Existing Noise Environment

Noise level measurements of both the existing noise environment without aircraft and the airport's noise emissions were carried out between Monday 7 March 2016 and Monday 11 March 2016. The measurements involved automated noise data logging approximately 100m east of the threshold of runway 25.

In terms of the noise environment near the airport, at times when no aircraft are operating, during the daytime, measured noise levels show that the area is typical of a rural environment, with residual noise levels of approximately 30 - 40 dB L<sub>Aeq</sub> during non-adverse weather conditions. Night-time noise levels have not been considered as Rangiora is a VFR airfield with no significant<sup>5</sup> night-time activity.

Existing dwellings within the 55 dB L<sub>dn</sub> contour receive between 55 and 57 dB L<sub>dn</sub>. This suggests the area would otherwise be typical of a general rural environment but at this location is affected to a moderate extent by aircraft operations. This is typical in such proximity to a local airport in New Zealand.

### 6.2 Change in Noise Level

The proposed 20XX airport noise control boundaries would, if such increased movements occurred, represent a change in aircraft noise levels compared with the current noise exposure. The effect of this change on the surrounding areas has been assessed.

Two airport operating scenarios have been examined:

- **'Current'** - The level of actual activity in 2016 (considered representative of current activity)
- **'Proposed'** - The proposed future 20XX noise control boundaries (Appendix E.2)

The future growth of air traffic would result in a change in average noise exposure, as described by the L<sub>dn</sub> noise metric, of slightly over 3 dB at all nearby dwellings.

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<sup>5</sup> AIMM records typically note 0-2 'night-time' movements per month

We have assumed only the 120% increase in total traffic, with the split between aircraft type and vectors remaining constant. Allowance has been made to extend the length of runway 10/28 by displacing the threshold of 28 as far as practicable to the south-east.

The subjective response to a change in noise level is widely variable from individual to individual and is also different for a change that occurs immediately, compared with a change that occurs slowly over many years.

However, to give an indication of the meaning of the changes in noise level presented below, the following general response to an immediate change in noise is typical;

- A change in noise level of 10 dB sounds subjectively about twice or half as loud, respectively;
- A change in noise level of 5 to 8 dB is regarded as noticeable;
- A change in noise level of 3 to 4 dB is just detectable;
- A change in noise level of 1 to 2 dB is not discernible.

### 6.3 Annoyance Effects

Individual responses to a certain level of aircraft noise vary greatly. Many studies have been carried out overseas have attempted to determine the overall relationship of response to noise of a residential community. Much of this was considered when NZS 6805 was developed.

A dose response relationship specific to aircraft noise has been developed by Miedema and Ouldshoorn<sup>6</sup>, as shown in Figure 1 below. This relationship is similar to other relationships developed by Bradley<sup>7</sup> and another study by Miedema and Vos<sup>8</sup>. The Miedema and Ouldshoorn relationship has been adopted by the European Commission position paper in 2002<sup>9</sup> and is generally regarded as the latest research in this area.

**Figure 1: Miedema & Ouldshoorn Dose-Response Relationship**

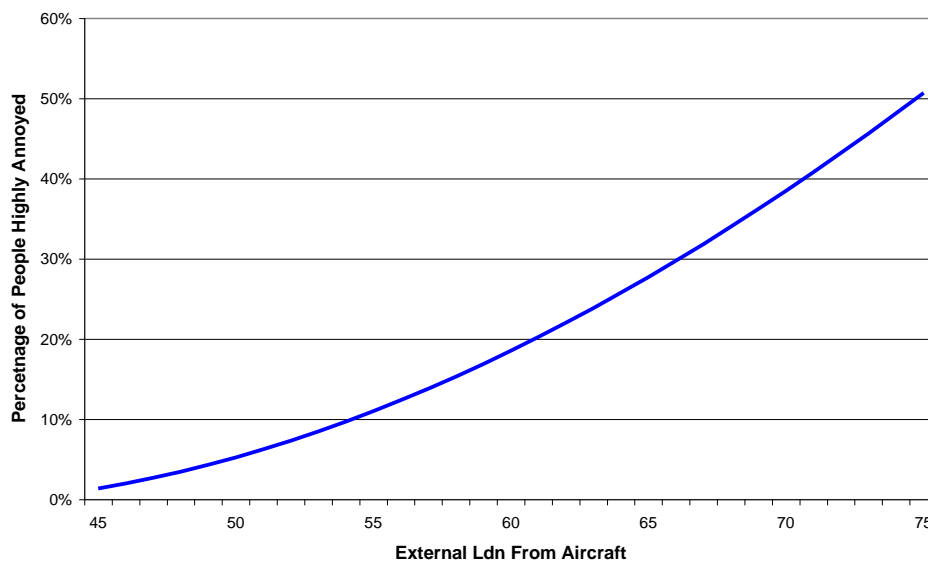
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<sup>6</sup> Miedema, H M E and Oudshoorn, G M (2001) *"Annoyance from transportation noise: relationships with exposure metrics DNL and DENL and their confidence intervals."* Environmental Health Perspectives 109 (4) 409 – 416.

<sup>7</sup> Bradley, J S (1996). *"Determining acceptable limits for aviation noise"*. Proceedings of Internoise 1996.

<sup>8</sup> Miedema, H M E and Vos, H (1998). *"Exposure-response relationships for transportation noise"*. J. Acoust. Soc. Am. 104 (6) 3432 – 3445.

<sup>9</sup> European Commission Working Group on Dose-Effect Relations, 2002, *"Position Paper on dose response relationships between transportation noise and annoyance"* Luxembourg: Office for Official Publications of European Communities.



The above dose response relationship indicates that for aircraft noise environments of 65 dB L<sub>dn</sub> 28% of the population are likely to be highly annoyed. This is one of the reasons that NZS 6805 recommends prohibition of noise sensitive activity inside the ANB. For aircraft noise environments of 55 dB L<sub>dn</sub> 11% of the population are likely to be highly annoyed by the noise.

It is noted that annoyance effects are not confined to noise levels more than 55 dB L<sub>dn</sub>. Although the 55 dB L<sub>dn</sub> contour forms the basis of the OCB, and the outer extent to which land use planning and airport noise controls are proposed, there may be some annoyance effects for a small percentage of people in areas outside the OCB. This is because aircraft movements outside of the OCB would still be audible.

## 6.4 Mitigation of Effects

NZS 6805 recommends that the mitigation of aircraft noise effects be achieved through a combination of:

- Aircraft noise management measures;
- Restriction on development of noise sensitive activities; and
- Sound insulation treatment measures.

This is the approach adopted elsewhere in New Zealand and it is considered appropriate for Rangiora Airport. Sections 8.0 and 9.0 outline recommended provisions where appropriate.

It is noted that, while sound insulation provides an acceptable internal noise environment, it does not completely mitigate noise effects, particularly for outdoor environments or when windows and doors are open.

## 7.0 LAND USE PLANNING RECOMMENDATIONS

### 7.1 Inside the Outer Control Boundary

In keeping with the provisions of NZS 6805, MDA recommends that new 'Activities Sensitive to Aircraft Noise' (ASANs) inside the OCB be prohibited where practicable to do so.

NZS 6805 recommends that noise sensitive activity is prohibited between the OCB and the ANB unless a district plan permits it subject to appropriate sound insulation requirements (inside the ANB the Standard recommends that noise sensitive activity is prohibited). This approach recognises that not all effects of aircraft noise can be mitigated by insulating buildings, particularly for residential activity.



People generally have a desire and an expectation to be able to spend time in the garden, entertain guests outdoors and leave doors and windows open. In these situations, the level of aircraft noise exposure cannot be practicably mitigated. If new residential activity is to be permitted between the OCB and the ANB it can be expected that some residents would be annoyed by aircraft noise outdoors.

MDA supports the NZS 6805 approach to prohibit new noise sensitive activity inside the OCB as a desirable starting point but acknowledges that other factors such as historical land use development, landowners' expectations of property rights and regional pressures on developable land can modify land use restrictions that would otherwise be imposed by a territorial authority because of moderate noise effects.

For Rangiora, the proposed OCB covers rural zoned land only, none of which is currently shown on District Plan Maps as being earmarked for Future Urban Development (FUD).

It is understood that there is no existing expectation for urban residential development of Rural zoned land which lies within the proposed OCB. Accordingly, it is recommended that:

- Any new ASANs (or residential activity) inside the proposed OCB should be prohibited unless strongly associated with a genuine rural land use; and
- Any alterations or additions to *existing* ASANs (or residential dwellings) in all zones within the proposed OCB should be subject to sound insulation measures to ensure an acceptable internal noise environment is achieved.

Historically in most cases sound insulation standards for noise sensitive uses around airports have been specified as an internal noise criterion. Buildings must be built to achieve the target internal noise level based on the future external noise exposure defined by the airport noise contours.

If this approach is implemented, then the following design criterion is recommended:

- Internal noise level of 40 dB  $L_{dn}$  in all habitable rooms

To facilitate appropriate designs, a noise contour map showing 1 decibel  $L_{dn}$  contours and an aircraft noise design spectrum would need to be developed and made publicly available.

## 7.2 Inside the Air Noise Boundary

NZS 6805 recommends that noise sensitive activity is prohibited inside the ANB.

Noise environments greater than 65 dB  $L_{dn}$  are not suitable for residential activity. Sound insulation measures can improve internal noise environments but do not fully mitigate the effects for residential activity, particularly in outdoor living areas or where residents wish to open windows and doors.

NZS 6805 recommends that land use controls to prohibit new noise sensitive activities should be imposed within the ANB. This approach is recommended for Rangiora Airport.

There are no *existing* ASANs inside the proposed ANB and therefore sound insulation controls for alterations or additions to existing ASANS would not be required.

## 7.3 Ventilation Systems

In most situations, the required sound insulation standard cannot be achieved with doors or windows open. As almost all houses in New Zealand rely on open windows to provide ventilation, alternative methods such as mechanical systems are necessary to achieve minimum ventilation standards. Alternative ventilation can typically be achieved using moderately inexpensive ducted fan systems in ceiling spaces, which bring air from the outside into habitable rooms.

It is recommended that alternative ventilation is a specified requirement for noise sensitive activities located inside the noise control boundaries. Such a system should also be designed to comply with

an acceptable level of ventilation noise inside the dwelling. Typical limits are 30 - 35 dB  $L_{Aeq}$  in bedrooms, and 35 - 40 dB  $L_{Aeq}$  inside other habitable rooms.

Where ventilation systems are required, they should also meet suitable performance standards (refer Table H1 and example Table H2, Appendix H, as implemented elsewhere in New Zealand).

We note that MDA are not experts in ventilation system requirements, and third-party advice would be required regarding Table H2 in Appendix H.

## 7.4 Summary of Recommendations

We recommend that:

- New Activities Sensitive to Aircraft Noise (ASAN) located within the Outer Control Boundary (OCB), should be prohibited, unless there is a strong existing expectation of residential development, such as associated with a rural use;
- New ASANs located within the Air Noise Boundary (ANB) should be prohibited;
- Alterations and additions to *existing* ASANs located within the Outer Control Boundary (OCB) in all zones should be fitted with appropriate sound insulation (Section 7.1); and
- Where sound insulation is required a ventilation system (or systems) should be provided. Noise from such a system should not exceed a reasonable level (see Section 7.3).

## 8.0 AIRPORT NOISE CONTROL RECOMMENDATIONS

### 8.1 Airport Noise Management

We recommend that:

- On any land not designated airport purposes (i.e. any land not owned by the airport), noise from aircraft operations should be managed so as not to exceed a Day/Night Level of 65 dB  $L_{dn}$  (fixed wing and helicopters) outside the proposed Air Noise Boundary (ANB) and 55 dB  $L_{dn}$  (fixed wing and helicopters) outside the proposed Outer Control Boundary (OCB);
- Noise monitoring should be undertaken to verify that noise levels are not exceeding the requirements set out above. It is recommended that if the calculated noise level exceeds 64 dB at any point on the ANB, then infield monitoring is required for a minimum of one month (at one measurement location) to demonstrate compliance with the noise limit of the ANB, as shown in Appendix E.2; and
- Exemptions to these noise rules should be provided for:
  - Aircraft operating in an emergency for medical or national / civil defence reasons;
  - Air shows;
  - Military operations;
  - Aircraft using the airfield as a necessary alternative to an airfield elsewhere;
  - Aircraft taxiing;
  - Aircraft engine testing; and
- All helicopter operators be made aware of the Helicopter Association International's "Fly Neighbourly" program and should avoid, where possible flying over or close to residential areas.

## 9.0 CONCLUSIONS

Marshall Day Acoustics has prepared noise contours from aircraft operations for Rangiora Airport.

To provide for the airport's future growth, we recommend that the District Plan introduce noise control boundaries around the airport.

We recommend that the proposed Outer Control Boundary and Air Noise Boundary, as shown in Appendix E.2, be implemented.

We also recommend the introduction of District Plan noise rules relating to land use planning controls and noise associated with Rangiora Airport that reflect the future 20XX noise control boundaries and to incorporate the recommendations of NZS 6805.

With the implementation of the proposed noise control boundaries and associated land use planning controls, the noise effects arising from the plan change are considered reasonable.

## APPENDIX A GLOSSARY OF TERMINOLOGY

<b>dB</b>	<p><u>Decibel</u></p> <p>The unit of sound level.</p> <p>Expressed as a logarithmic ratio of sound pressure P relative to a reference pressure of <math>P_r=20 \mu\text{Pa}</math> i.e. <math>\text{dB} = 20 \times \log(P/P_r)</math></p>
<b>A-weighting</b>	<p>The process by which noise levels are corrected to account for the non-linear frequency response of the human ear.</p>
<b><math>L_{Aeq}(t)</math></b>	<p>The equivalent continuous (time-averaged) A-weighted sound level. This is commonly referred to as the average noise level.</p> <p>The suffix "t" represents the time period to which the noise level relates, e.g. (8 h) would represent a period of 8 hours, (15 min) would represent a period of 15 minutes and (2200-0700) would represent a measurement time between 10 pm and 7 am.</p>
<b><math>L_{Amax}</math></b>	<p>The A-weighted maximum noise level. The highest noise level which occurs during the measurement period.</p>
<b><math>L_{dn}</math></b>	<p>The day night noise level which is calculated from the 24 hour <math>L_{Aeq}</math> with a 10 dB penalty applied to the night-time (2200-0700 hours) <math>L_{Aeq}</math>.</p>
<b>SEL or <math>L_{AE}</math></b>	<p><u>Sound Exposure Level</u></p> <p>The sound level of one second duration which has the same amount of energy as the actual noise event measured.</p> <p>Usually used to measure the sound energy of a particular event, such as a train pass-by or an aircraft flyover</p>
<b>Noise</b>	<p>A sound that is unwanted by, or distracting to, the receiver.</p>
<b>Ambient</b>	<p>The ambient noise level is the noise level measured in the absence of the intrusive noise or the noise requiring control. Ambient noise levels are frequently measured to determine the situation prior to the addition of a new noise source.</p>
<b>ASAN</b>	<p><u>Activity Sensitive to Aircraft Noise</u></p> <p>Means any residential activity, boarding establishments, visitor accommodation, retirement villages, homes for elderly persons, day care facility, buildings used for overnight patient medical care, Marae or educational facilities (including all outdoor spaces associated with such an educational facility).</p>
<b>NZS 6801:1991</b>	<p>New Zealand Standard NZS 6801:1991 "<i>Measurement of Sound</i>"</p>
<b>NZS 6801:2008</b>	<p>New Zealand Standard NZS 6801:2008 "<i>Measurement of Environmental Sound</i>"</p>
<b>NZS 6802:1991</b>	<p>New Zealand Standard NZS 6802:1991 "<i>Assessment of Environmental Sound</i>".</p>
<b>NZS 6802:2008</b>	<p>New Zealand Standard NZS 6802:2008 "<i>Assessment of Environmental Noise</i>".</p>
<b>NZS 6805:1992</b>	<p>New Zealand Standard NZS 6805:1992 "<i>Airport Noise Management and Land Use Planning</i>"</p>
<b>NZS 6807:1994</b>	<p>New Zealand Standard NZS 6807:1994 "<i>Noise Management and Land Use Planning for Helicopter Landing Areas</i>"</p>

## APPENDIX B SUMMARY OF NZS 6805:1992

In 1991 the Standards Association of New Zealand published New Zealand Standards NZS 6805:1992 *“Airport Noise Management and Land Use Planning”* (Standard) with a view to providing a consistent approach to noise planning around New Zealand Airports.

The Standard has two major aims:

- (i) To establish compatible land use planning around an airport
- (ii) To set noise limits for the management of aircraft noise at airports

### B1 - Noise Boundaries

The Standard recommends two noise boundaries to achieve its aims. This involves fixing an Outer Control Boundary (OCB) and a smaller, much closer Air Noise Boundary (ANB) around the airport.

The Standard recommends that inside the ANB, new noise sensitive uses (including residential) should be prohibited. Between the ANB and the OCB new noise sensitive uses should also be prohibited unless provided with sound insulation. The ANB is also nominated as the location for future noise monitoring of compliance with a 65 dB  $L_{dn}$  limit.

The Standard is based on the Day/Night Sound Level ( $L_{dn}$ ) which uses the cumulative ‘noise energy’ that is produced by all flights during a typical day with a 10 dB penalty applied to night flights (see Appendix A for an explanation of terminology).  $L_{dn}$  is used extensively overseas for airport noise assessment and it has been found to correlate well with community response to aircraft noise.

When establishing the location of the Noise Boundaries, an allowance for the expected growth of the airport can be made and NZS 6805 recommends a minimum 10-year projection should be made of future aircraft operations. MDA typically recommends 20 – 30 year forecasts are used, as has been implemented at other New Zealand airports.

The  $L_{dn}$  contours for the airport can be calculated using a computer programme called the Integrated Noise Model (INM).

The location of the ANB is then based upon the projected 65 dB  $L_{dn}$  contour and the OCB on the projected 55 dB  $L_{dn}$ . NZS 6805 also recommends that, where appropriate, night time single event noise levels should be considered in the location of the ANB.

### B2 - Land Use Planning and Controls

Land Use Planning can be an effective way to minimise population exposure to noise around airports. Aircraft technology and flight management, although an important component in abating noise, will not be sufficient alone to eliminate or adequately control aircraft noise. Uncontrolled development of noise sensitive uses around an airport can unnecessarily expose additional people to high levels of noise and can constrict, by public pressure as a response to noise, the operation of the airport.

NZS 6805 lays out recommended criteria for Land Use Planning around airports. In summary, Tables 1 and 2 of the Standard recommend the following land use controls:

Inside the ANB:

- (i) New noise sensitive uses (including residential) should be prohibited
- (ii) Existing residential buildings and subsequent alterations should have appropriate sound insulation

Between ANB and OCB:

- (i) New noise sensitive uses (including residential) should be prohibited unless a District Plan permits such use subject to appropriate sound insulation
- (ii) Alterations or additions to existing noise sensitive uses (including residential) should include appropriate sound insulation

The standard also requires that the effects of individual aircraft movements at night be considered when setting land use controls but does not offer a method of control or limits of acceptability. The Sound Exposure Level (SEL) 95 dBA contour for the noisiest aircraft operating at night has been widely used at New Zealand Airports as a method of controlling potentially significant sleep disturbance effects.

### **B3 - Airport Noise Management**

In addition to land use controls, noise controls can be used to manage the level of noise impact around airports. These controls can take the form of preferential runway usage, noise abatement flight tracks, curfews, noise emission limits and others. NZS 6805 proposes maximum noise emission limits for the airport. This procedure is consistent with the general approach to noise control in New Zealand, in that it is left to the operator to best decide how to manage its activities to comply with an agreed level of noise.

The Standard proposes that the Day/Night Sound Level ( $L_{dn}$ ) produced by the Airport should not exceed 65 dB  $L_{dn}$  at or outside the ANB (or 65 dB  $L_{dn}$  contour). A measurement would involve monitoring the hourly noise levels over a period of typically 3 months and obtaining the  $L_{dn}$  by averaging the daytime and weighted night-time noise levels.

The location of the 65 and 55 dB  $L_{dn}$  contours determines the extent of the noise emission from the airport and thus the extent to which the airports future operations are constrained. Therefore, when calculating the contours and locating the ANB and OCB, it is vital that the future expansion of the airport be considered.

## APPENDIX C 2016 AIMM DATA USED IN INM MODEL

### C1 Aircraft Movements by Type

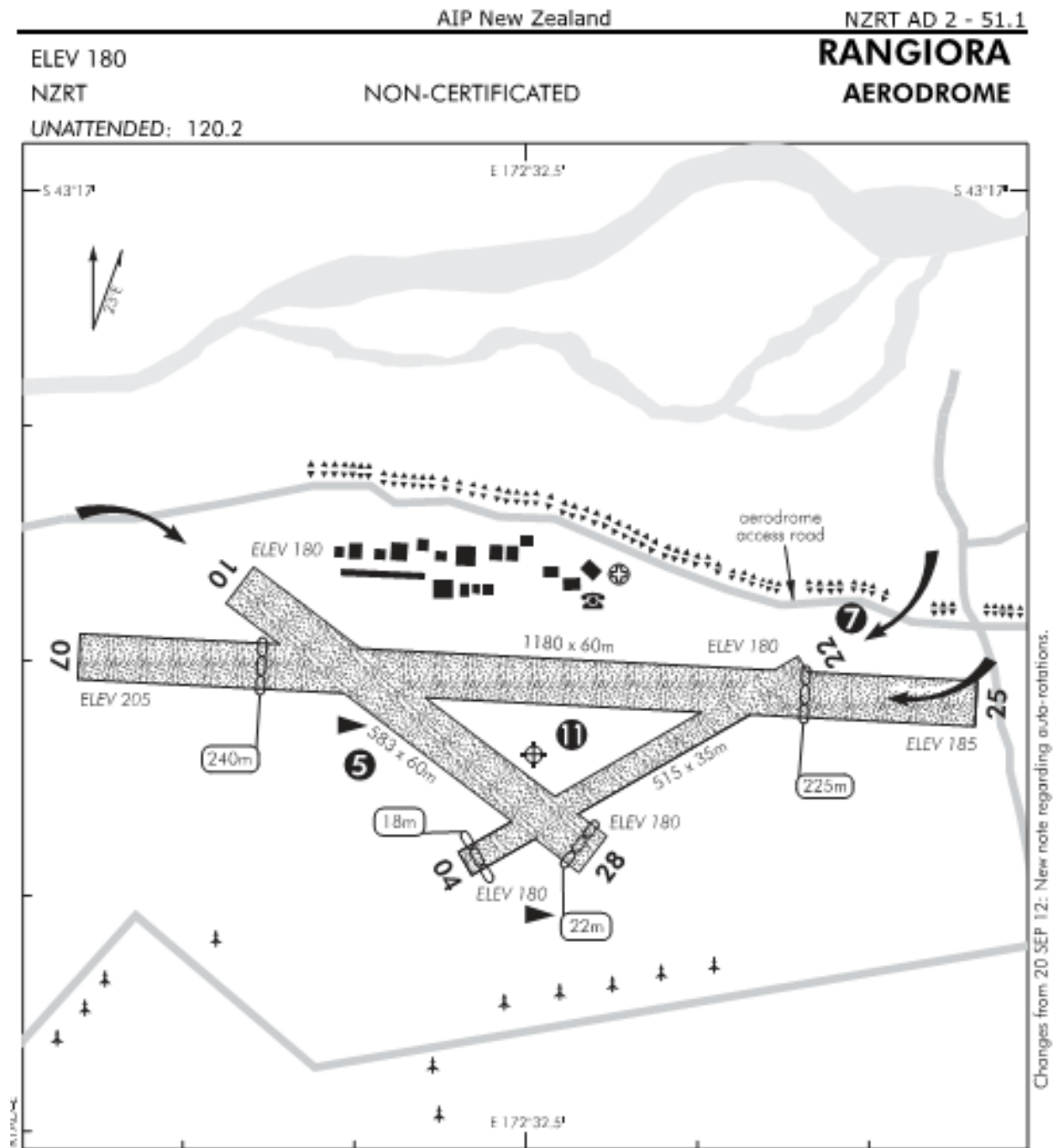
Aircraft Type	Aircraft Movements					
	Oct-16	Oct%	Nov-16	Nov%	Dec-16	Dec%
General Aviation (light aircraft) (includes unknown and amateur built)	1842	51.8	1446	48.4	1751	50.8
Microlight Aircraft (includes gyrocopters and gliders)	1279	35.9	992	33.2	1281	37.1
Helicopter	438	12.3	552	18.5	417	12.1
<b>Total</b>	<b>3559</b>	<b>100.0</b>	<b>2990</b>	<b>100.0</b>	<b>3449</b>	<b>100.0</b>

### C2 Aircraft Movements by Vector

Runway usage:	Aircraft Movements					
	Oct-16	Oct%	Nov-16	Nov%	Dec-16	Dec%
R04	32	0.9	23	0.8	11	0.3
R07	1709	48.0	1322	44.2	2000	58.0
R10	15	0.4	29	1.0	20	0.6
R22	24	0.7	3	0.1	18	0.5
R25	1323	37.2	1004	33.6	969	28.1
R28	16	0.4	55	1.8	11	0.3
Pad	439	12.3	553	18.5	417	12.1
Not defined	1	0.0	1	0.0	3	0.1
<b>Total</b>	<b>3559</b>	<b>100.0</b>	<b>2990</b>	<b>100.0</b>	<b>3449</b>	<b>100.0</b>

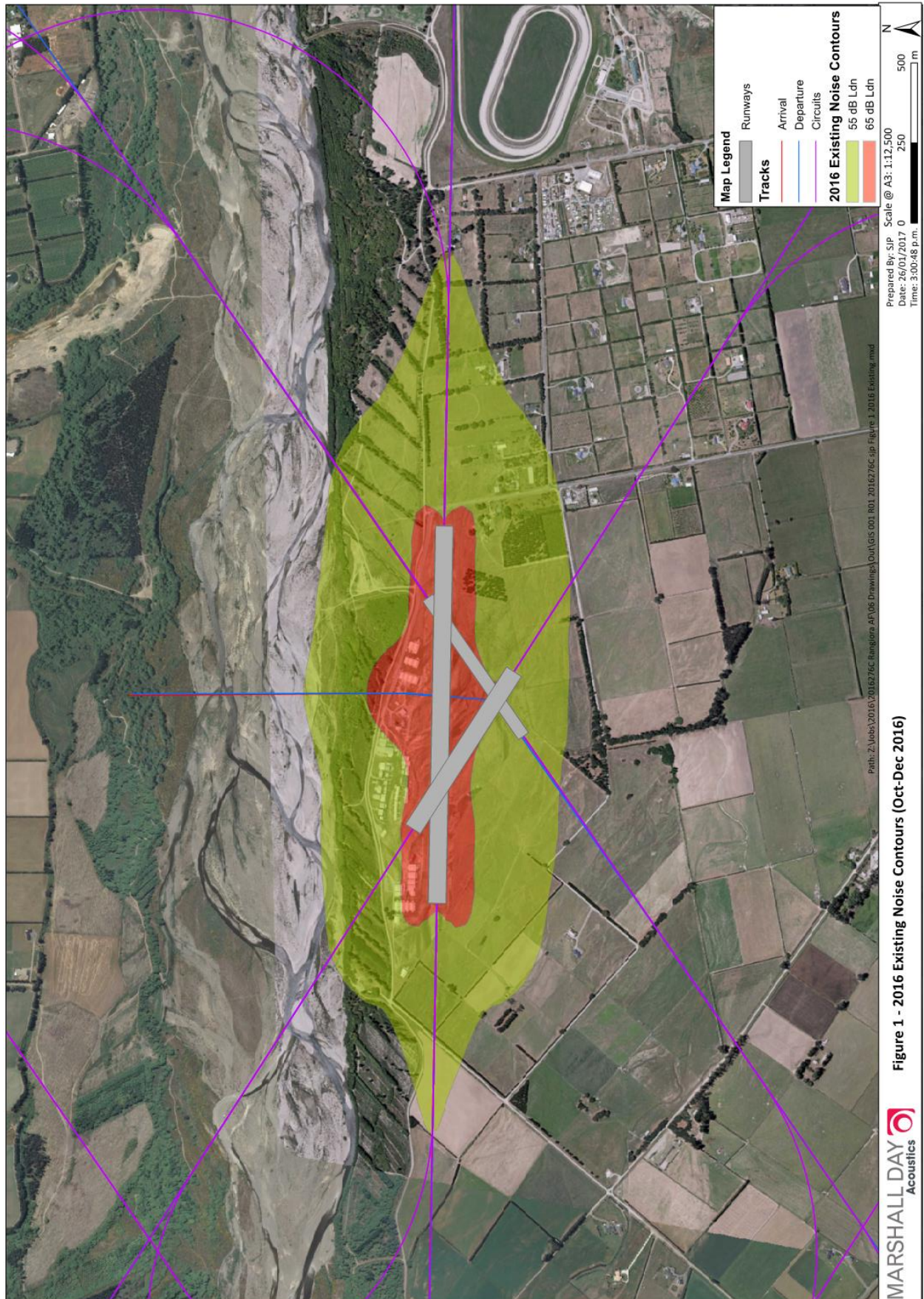


APPENDIX D AIP CHART FOR NZRT



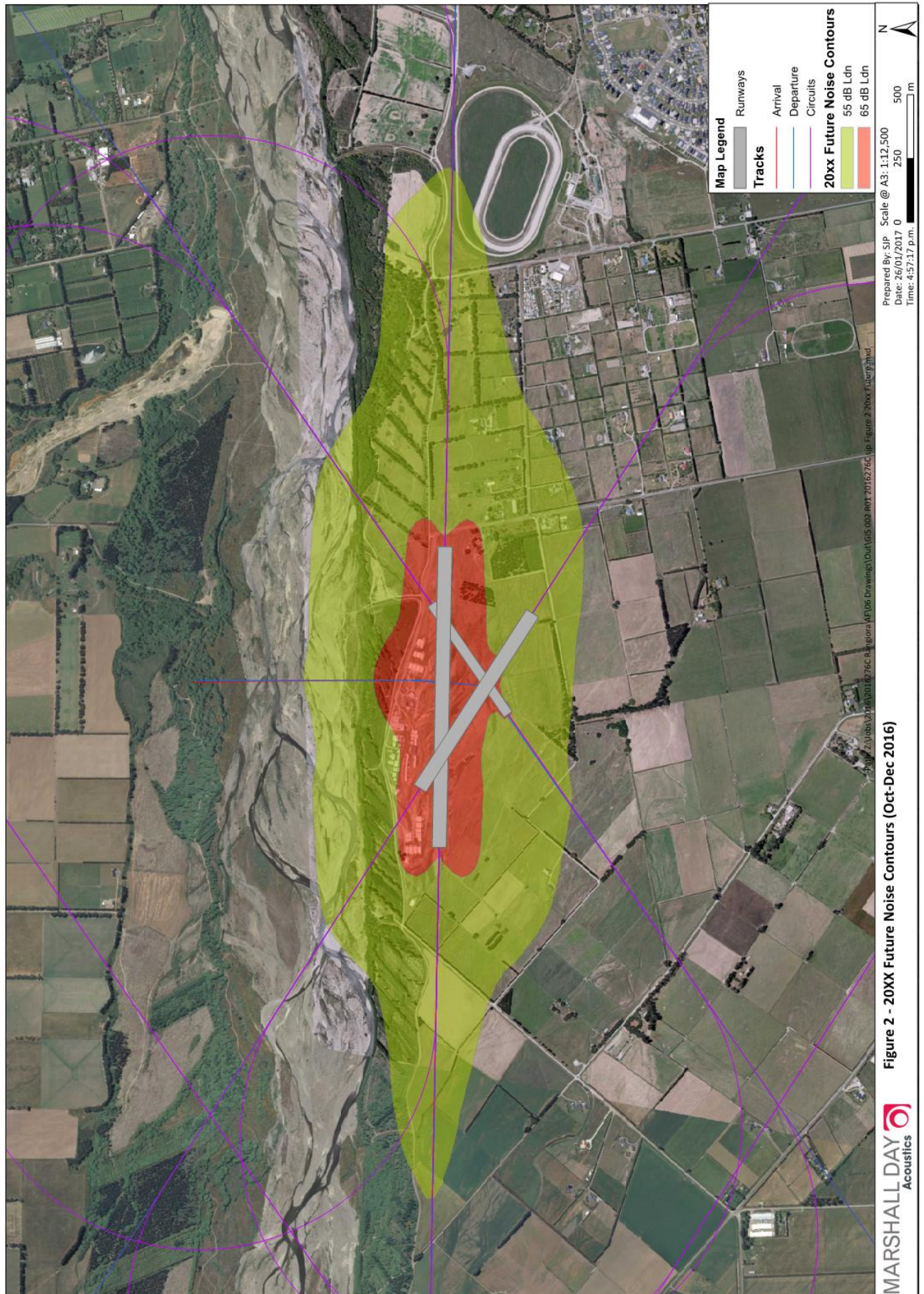
APPENDIX E RANGIORA AIRFIELD NOISE CONTOURS

E1 2016 contour (Present)









E2 20XX contour (Future)



## APPENDIX 4:

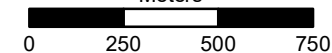
### Waimakariri District Plan Map 145

-  Take Off Climb and Approach obstacle limitation surface
-  Noise Sensitive Activities and Aircraft Risk Designation
-  Airport Purposes Designation
-  Noise Contours in dBa

NOTE:  
Disclaimer - refer to map legend sheet.



Meters

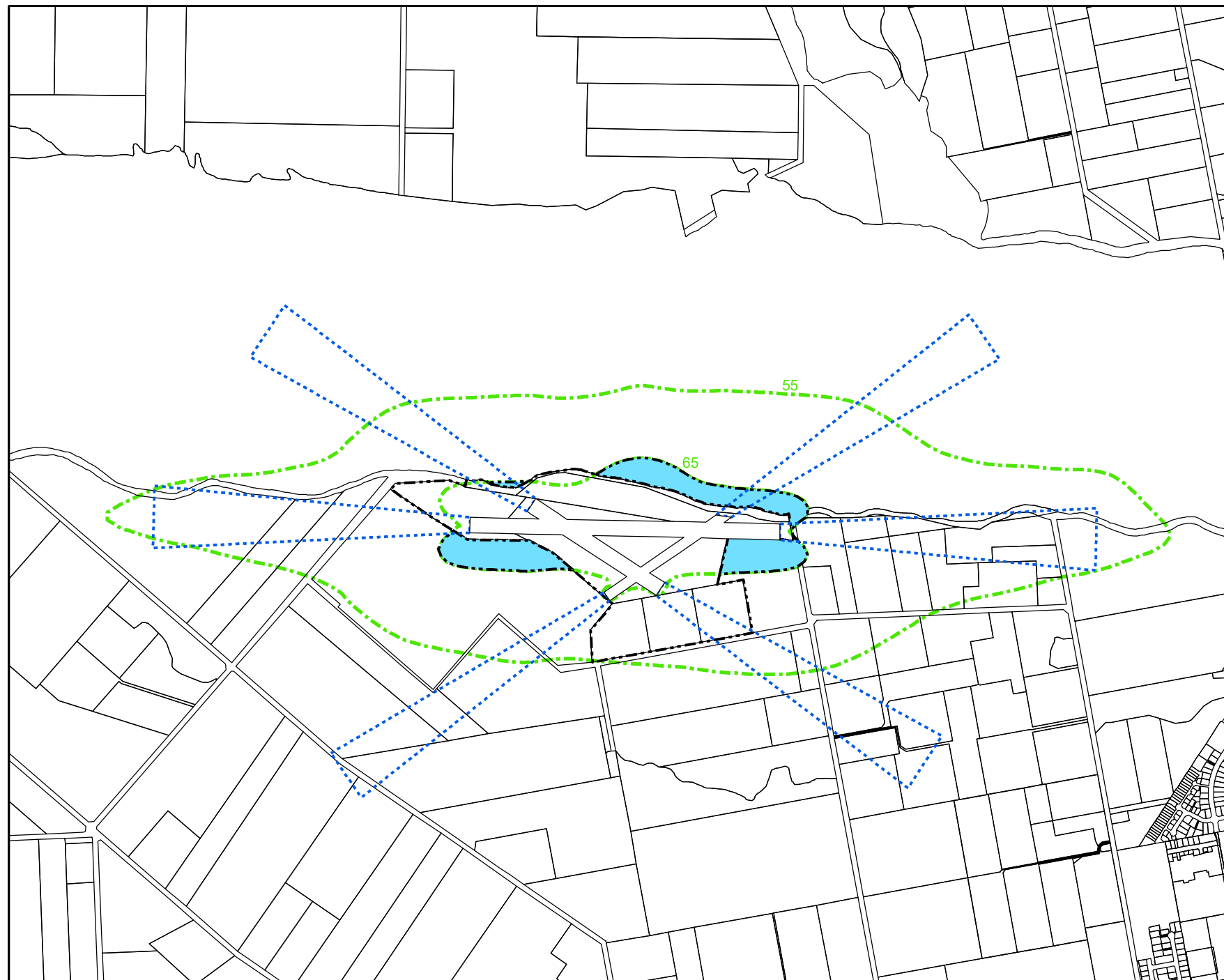


Scale 1:20,000 (A4)

Rangiora Airfield

145

Operative Date



## APPENDIX 5:

### Economic Benefits Report

**WAIMAKARIRI DISTRICT COUNCIL'S RANGIORA AIRFIELD NOTICE OF  
REQUIREMENT AND PROPOSED PLAN CHANGE**

**ASSESSMENT OF ECONOMIC EFFECTS**

**Mike Copeland  
Brown, Copeland & Co Ltd**

**19 July 2017**



## 1. INTRODUCTION

### Background

- 1.1** The Rangiora Airfield is located on Mertons Road, approximately 3 kilometres northwest of Rangiora township. It is owned and operated by the Waimakariri District Council (the Council) and is predominantly used for light aircraft<sup>1</sup> movements for recreational, training and agricultural purposes. Council owned facilities on the airfield land are limited to fences and minor roads but private sector interests own 90 hangars as well as other aircraft related facilities on the airfield's land leased from the Council.
- 1.2** There are currently around 37,000<sup>2</sup> aircraft movements per annum at the airfield. The number of movements per annum has grown in recent years as small aircraft movements from Christchurch International Airport (CIA) have migrated to Rangiora as a consequence of the growth in larger aircraft movements at CIA. The continuation of this trend and population and economic growth within the Waimakariri District and Greater Christchurch are expected to contribute to ongoing future growth in aircraft movements at the Rangiora airfield.
- 1.3** To safeguard the existing level of operations and to provide for their future growth, the Council wishes to:
- (a) Notify a requirement for a designation (NoR) for the whole of the airfield site owned by the Council, as well as the adjoining privately and Crown owned land within the 65dBA noise contour. The purposes of the designation are:
    - (i) For the land owned by the Council to be recognised for providing efficient and effective airport facilities and operations; and
    - (ii) For development on the balance of the land within the identified 65dBA noise contour to be restricted so as to protect the efficient and effective airport operations. For this land the

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<sup>1</sup> Up to 5,700 kg.

<sup>2</sup> The figure is derived from AIMM data over an 8 months period during 2016/2017 ('Aimm' (Automated Intelligent Movement Management), is an Intelligent Airspace and Movement Monitoring and reporting system)

purpose is more constrained and does not extend the airport activities or associated works onto this land.

- (b) Proposing a Plan Change (the PPC) which will:
  - (i) Require any new, alterations to, or additions to rural dwelling houses within the 55dBA noise contour to be insulated from aircraft noise;
  - (ii) Restrict noise sensitive activities within the 55dBA noise contour; and
  - (iii) Prohibit dwellings and other noise sensitive activities within the 65dBA noise contour.

Note: Noise sensitive activities are defined in the District Plan to cover residential activities other than those in conjunction with rural activities that comply with the rules of the plan;<sup>3</sup> education activities including pre-school places or premises; travellers' accommodation, and hospitals, healthcare facilities and elderly persons housing or complexes.

## Report Objective

- 1.4 The objective of this report is to assess the economic effects of the NoR and PPC sought by the Council. The report will form part of the Assessment of Environmental Effects to be lodged in relation to both the NoR and PPC applications.

## Report Format

- 1.5 This report is divided into 5 parts (in addition to this introductory section). These are:
  - (a) A consideration of the relevance of economic effects under the Resource Management Act (RMA);
  - (b) A description of the economic significance of the Rangiora Airfield;
  - (c) An assessment of the economic benefits from the NoR and PPC;

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<sup>3</sup> The land is zoned rural and subdivision into 4 hectare lots is permitted in the District Plan.

- (d) An assessment of potential economic costs from the NoR and PPC; and
- (e) Some overall conclusions.

## 2. ECONOMICS AND THE RMA

### Community Economic Wellbeing

- 2.1** Economic considerations are intertwined with the concept of the sustainable management of natural and physical resources, which is embodied in the RMA. In particular, Part 2 section 5(2) refers to enabling “*people and communities to provide for their ... economic ... well being*” as a part of the meaning of “*sustainable management*”, the promotion of which is the purpose of the RMA.
- 2.2** As well as indicating the relevance of economic effects in considerations under the RMA, this section also refers to “*people and communities*” (emphasis added), which highlights that in assessing the impacts of a proposal it is the impacts on the community and not just the applicant or particular individuals or organisations, that must be taken into account. This is underpinned by the definition of “*environment*” which also extends to include people and communities.
- 2.3** Safeguarding the future operations of the Rangiora Airfield enables the residents and businesses of the Waimakariri District and wider Canterbury region to provide for their social and economic wellbeing.

### Economic Efficiency

- 2.4** Part 2 section 7(b) of the RMA notes that in achieving the purpose of the Act, all persons “*shall have particular regard to ... the efficient use and development of natural and physical resources*” which include the economic concept of efficiency<sup>4</sup>. Economic efficiency can be defined as:

*“the effectiveness of resource allocation in the economy as a whole such that outputs of goods and services fully reflect consumer preferences for these goods*

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<sup>4</sup> See, for example, in *Marlborough Ridge Ltd v Marlborough District Council* [1998] NZRMA 73, the Court noted that all aspects of efficiency are “*economic*” by definition because economics is about the use of resources generally.

*and services as well as individual goods and services being produced at minimum cost through appropriate mixes of factor inputs”.*<sup>5</sup>

**2.5** More generally economic efficiency can be considered in terms of:

- Maximising the value of outputs divided by the cost of inputs;
- Maximising the value of outputs for a given cost of inputs;
- Minimising the cost of inputs for a given value of outputs;
- Improving the utilisation of existing assets; and
- Minimising waste.

**2.6** Providing for the continued operations of the Rangiora Airfield activities is consistent with the efficient use of resources, especially in regard to the ongoing use of significant existing assets, enabling the future growth of businesses and employment located at the airfield and enabling the future growth in recreational use of the airfield.

## **Viewpoint**

**2.7** An essential first step in carrying out an evaluation of the positive and negative economic effects of the NoR and PPC is to define the appropriate viewpoint that is to be adopted. This helps to define which economic effects are relevant to the analysis. Typically a district (or city) or wider regional viewpoint is adopted and sometimes even a nationwide viewpoint might be considered appropriate.

**2.8** The Rangiora Airfield is located in the Waimakariri District and is owned and operated by the Council. The NoR and PPC will in the main impact on the District's businesses and residents. Therefore in this report the economic effects are considered from the viewpoint of the Waimakariri District. However the airfield's operations impact on businesses and residents located elsewhere within the Canterbury region and in fact the Rangiora Airfield is identified as 'regionally significant infrastructure' and 'strategic infrastructure for Greater Christchurch' within the Canterbury Regional Policy Statement (CRPS). Therefore the wider Canterbury regional viewpoint is also relevant.

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<sup>5</sup> Pass, Christopher and Lowes, Bryan, 1993, *Collins Dictionary of Economics* (2<sup>nd</sup> edition), Harper Collins, page 148.

### 3. THE ECONOMIC SIGNIFICANCE OF RANGIORA AIRFIELD

- 3.1** As noted above, the Rangiora Airfield is included in the list of 'strategic infrastructure for Greater Christchurch' in the CRPS. The other examples of strategic infrastructure included in the CRPS are strategic transport networks, CIA, Port of Lyttelton, bulk fuel supply infrastructure including terminals, wharf lines and pipelines, defence facilities including Burnham Military Camp and West Melton Military Training Area, strategic telecommunications facilities, the electricity transmission network and other strategic network utilities. By definition infrastructure included in the CRPS as 'strategic infrastructure', including the Rangiora Airfield is considered as 'regionally significant infrastructure' for the entire Canterbury region.
- 3.2** Currently there are 8 businesses<sup>6</sup> located at the airfield employing an estimated 30 persons.<sup>7</sup> The businesses are involved in pilot training, fertiliser spreading and agricultural spraying, helicopter transportation of persons and freight (including fire fighting), aircraft parts retailing, and aircraft engineering and maintenance services. The airfield is home to 3 aero clubs – the Canterbury Aero Club, the Canterbury Recreational Aircraft Club and the Air New Zealand Sports and Social Club Southern. The first 2 of these clubs offer pilot training services, while all 3 provide recreational flying opportunities for their members, who primarily reside within Waimakariri District or elsewhere within Greater Christchurch. The Canterbury Aero Club currently has one fulltime instructor based at the airfield, whilst the Canterbury Recreational Aircraft Club has 3 part time instructors for micro-light aircraft based there.
- 3.3** The Council has 96 lots at the airfield, all of which are leased. Some of the lots have been combined to enable larger hangars to be built. There are 12 lots at the airfield still to be built on and in the 2016 calendar year there were 5 building consents issued for new structures. The existing 90 hangars house 120 aircraft that are permanently based at the Rangiora airfield. Other facilities belonging to

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<sup>6</sup> The businesses are: Way to Go Heli Services Limited (providing commercial, agricultural and aerial transport services as well as helicopter pilot training), Aerowork (a subsidiary of Ravensdown specialising in aerial applications such as fertiliser spreading and agricultural spraying), Aircraft Logistics Support (suppliers of aircraft parts and accessories), Rangiora Aircraft Engineering (providers of aircraft repair and maintenance services), Heli Skills Limited (providers of helicopter maintenance services and parts), North Canterbury Flight Training (pilot training), Canterbury Aero Club (pilot training) and Canterbury Recreational Aircraft Club (pilot training).

<sup>7</sup> Source: Enterprise North Canterbury.

private sector interests at the airfield include club rooms, two refuelling outlets for Avgas and Jet A1, fuel storage and aircraft servicing and maintenance facilities. It is estimated that approximately \$10 million has been invested by private sector interests in hangars and other facilities at the airport.<sup>8</sup>

**3.4** Because of the availability of fuel at the airfield, it is used by private plane owners based at locations within the general vicinity of Rangiora and who do not have their own refuelling facilities. It is also used by small planes on route between centres north and south of Rangiora for refuelling – e.g. planes flying between North Island centres and Queenstown.

**3.5** Aircraft movements<sup>9</sup> over the period September 2016<sup>10</sup> to April 2017 averaged 3,098 per month which if pro-rated provides for annual movements of around 37,176 per annum. The proposed NoR/PPC process has assumed that the existing annual movements are therefore around 37,000. It is noted that recently, there has been an increase in flight movements at the airfield as small aircraft movements have transferred from CIA to accommodate the growth in larger aircraft movements. This trend is expected to continue in the future and, together with general population and economic growth within the District and Greater Christchurch<sup>11</sup>, will contribute to an approximate doubling in aircraft movements at the Rangiora Airfield within the next 20 years.<sup>12</sup>

#### **4. ECONOMIC BENEFITS FROM THE NOR AND PPC**

**4.1** The NoR and PPC proposed by the Council will provide a range of economic benefits, including:

- (a) The retention and increase in the local expenditure, incomes and employment associated with the aviation related businesses currently located at the airfield and persons using the airfield. This will benefit not

<sup>8</sup> Source: Enterprise North Canterbury.

<sup>9</sup> An aircraft movement is one takeoff or landing.

<sup>10</sup> Accurate aircraft movements prior to September 2016 are not available. An electronic aircraft movement monitoring and billing system has been in use since September 2016.

<sup>11</sup> Population growth in the Waimakariri District over the period 2016 to 2043 is forecast to grow at an average annual rate of 1.1% per annum. For Greater Christchurch (Waimakariri and Selwyn Districts plus Christchurch City) population is forecast to grow at an average annual rate of 0.8% per annum. (Source: Statistics New Zealand, NZ Stat, sub-national 'medium' population projections.)

<sup>12</sup> Source: Marshall Day Noise Assessment



only the businesses and employees based at the airfield but also other local businesses supplying goods and services to the airfield based businesses and their employees and users of the airfield;

- (b) The efficient ongoing utilisation of Council and private sector investment in the airfield, hangars and other buildings and facilities at the airfield;
- (c) Increased certainty for existing and new users of the airfield encouraging new investment, employment and incomes in the District;
- (d) The retention of, and increase in, local expenditure associated with recreational flying activities at the airfield. Should local residents (and others within Greater Christchurch) be required to use other airfields outside the District their associated expenditure would not be retained within the local economy;
- (e) The continued availability of the airfield for emergency uses – e.g. logistics following the Kaikoura earthquake and fire fighting;
- (f) The more efficient use of CIA's runway capacity – should Rangiora Airfield no longer be available for use by smaller planes or not be able to increase aircraft movements in the future there is likely to be increased congestion at CIA with more aircraft movements competing for its available capacity;
- (g) A reduction in the risk and social and economic costs involving aircraft movements at the airfield. The NoR and PPC propose to manage land use activities within the 55 and 65 dBA noise contours which pose a risk to ongoing or increasing aircraft movements at the airfield; and
- (h) A reduction in RMA process costs – the NoR and PPC are expected to reduce reverse sensitivity issues and therefore reduce Council's and private land owners' future costs in contested resource consent or plan change applications.

- 4.2** These economic benefits are consistent with *“the efficient use and development of natural and physical resources”* (Part 2, section 7(b) of the RMA) as well as enabling *“people and communities to provide for their economic and social wellbeing”* (Part 2, section 5(2) of the RMA).

## **5. POTENTIAL ECONOMIC COSTS OF THE NOR AND PPC**

- 5.1** The NoR and PPC sought by the Council will not result in a “scorched earth” outcome for land owners within the 65 dBA and 55 dBA noise contours – i.e. existing rural and associated residential use of the land within the contours are permitted with no requirement for existing structures to be removed or remediated. Proposed controls are only in relation to new rural residential buildings or extensions and alterations (where they are subject to acoustic insulation requirements within the 55dBA contour) or noise sensitive activities.
- 5.2** Within the 65 dBA noise contour new dwellings will not be permitted. However within the District Plan the land is zoned rural with subdivision into 4 hectare lots permitted. On privately owned land it will remain possible to subdivide the land into 4 hectare lots (if necessary), and provide a footprint for a dwelling outside the 65 dBA noise contour.<sup>13</sup> The publically owned land within the 65 dBA noise contour (the airfield owned by the Council and the Ashley River riparian area within the 100 metre setback from the river and owned by the Crown) is not appropriate for residential development.
- 5.3** Whilst the NoR and PPC will potentially impose some additional costs on new or existing residential development associated with rural activities and constrain certain activities within the 65 dBA noise contour, from a district-wide perspective there is little if any economic cost in terms of the overall extent of restrictions. The latest assessment of the availability of suitably zoned land for new development within the District does not identify any shortages. Within the District there is currently 426 hectares of vacant residential land estimated to yield 4,259 residential lots. There is also 107.5 hectares of vacant business land.<sup>14</sup> Therefore land owners elsewhere within the District will benefit to the extent that their land is

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<sup>13</sup> Source: Planz Consultants.

<sup>14</sup> For both residential and business development the land available exceeds expected uptake for at least 5 years. Source: Non-Financial Performance Measures 2<sup>nd</sup> Quarter of 2016/17 Financial Year; Report to Audit and Risk Committee, Waimakariri District Council; 14 February, 2017.

developed (or developed sooner) in preference to land within the proposed noise contours around the airfield. From a District perspective any net economic costs relate only to the additional costs of development and not lost development opportunities.

## **6. CONCLUSIONS**

- 6.1** Enabling people and communities to provide for their social and economic wellbeing and having regard to the efficient use and development of resources are relevant considerations under the RMA.
- 6.2** The Rangiora Airfield provides significant social and economic benefits to residents and businesses of the Waimakariri District and the wider Canterbury region. These benefits are expected to grow in importance in the future.
- 6.3** The Council's NoR and PPC are expected to provide a range of economic benefits to the District and wider Canterbury region.
- 6.4** From a District perspective, the economic costs associated with the NoR and PPC are negligible.
- 6.5** The net economic benefits of the Council's NoR and PPC will be significant.