Before an Independent Hearings Panel
appointed by the Waimakariri District Council

under: the Resource Management Act 1991

in the matter of: Submissions and further submissions in relation to the proposed Waimakariri District Plan, Variation 1 and Variation 2

and: Hearing Stream 10A: Future Development Areas, Airport Noise Contour, Bird Strike and Growth policies

and: **Christchurch International Airport Limited**
Submitter 254

Summary of Evidence of John Kyle (Planning)

Dated: 21 February 2024

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SUMMARY OF EVIDENCE OF JOHN KYLE

INTRODUCTION

1 My name is John Clifford Kyle and I am a founding director of Mitchell Daysh Limited, which practices as a planning and environmental consultancy throughout New Zealand.

2 I prepared a brief of evidence addressing the relief sought by Christchurch International Airport Limited (*CIAL*) on the proposed Waimakariri District Plan and Variations 1 and 2. This statement provides a summary of key points and briefly responds to the evidence and legal submissions of submitters.

SUMMARY OF EVIDENCE

3 This hearing (Hearing Stream 10A) considers a number of topics relevant to CIAL's interests in the PDP and IPI, including Development Areas, Airport Noise and Bird strike related matters.

4 My evidence:

4.1 Sets out the overarching policy framework insofar as relevant to CIAL's submissions;

4.2 Provides an overview of "best practice" land use planning within an airport's aircraft noise boundaries;

4.3 Addresses the use of a 50dB Ldn aircraft noise boundary, including recent remodelling of the contour and its potential use as a qualifying matter;

4.4 Considers the identification of noise sensitive activities within the 50dB Ldn aircraft noise boundary, including within Development Areas of the PDP and the Council proposal to apply a "certification" process to open up new land areas to enable additional housing opportunities;

4.5 Evaluates the overall approach to aircraft noise management within the PDP and IPI; and,

4.6 Addresses proposed provisions seeking to manage the potential effects of bird strike risk.

5 Relevant regional and operative district plan policies are quite clear and directive about the need to protect regionally significant infrastructure such as the Airport, from incompatible land uses and activities. The 50dB Ldn Air Noise Contour is a key measure that has been adopted in the Canterbury region for identifying where reverse sensitivity effects are most likely to arise. As a result, I hold the

opinion that great care needs to be exercised when evaluating proposals to rezone or upzone land within the 50dB Ldn Air Noise Contour as a result of this policy backdrop.

6 In my experience, noise is typically one of the key land use planning issues associated with airports throughout New Zealand. The nature of the issue is typically two fold – firstly, how the airport manages its' effects on the community arising from (predominantly aircraft) noise and secondly, how suitable planning controls can be put in place to best protect the amenity values of those who live close to airports, and in so doing reduce the prospect of reverse sensitivity effects which can (and do) undermine the ongoing use and development of airports.

7 Reverse sensitivity issues are a prominent issue at most large commercial airports and the issue becomes particularly prevalent where there is ongoing pressure to enable or intensify residential development within close proximity to airports.

8 It is important to appreciate that the level of aircraft noise exposure within the aircraft noise boundaries experienced today will not be the same in 10, 20 or 30 years time. While residents may not be exposed to aircraft noise that causes them to be "annoyed" now, this will change in the future as the frequency of noise exposure increases over time.

9 In dealing with various plan changes and resource consenting matters over the last decade, it is evident to me that there is ongoing pressure to provide for the intensification of residential land use surrounding various airports. I also accept that there are a number of pressures brought to bear on Councils in high growth areas in particular, to intensify such uses for a variety of reasons, including the policy directives of the NPSUD.

10 However, I remain of the opinion that enabling the intensification of noise sensitive activities within the contours is inherently undesirable and land use planning decisions should proactively avoid the potential for reverse sensitivity effects to arise in the future. Allowing urban intensification to occur in locations that effectively bring people to the effect has a high potential to lead to compromise and ultimate constraining and/or curtailment of aircraft activity over time.

11 The 50dB Ldn Noise Contour has a long-established provenance within Policy Statements and Plans that apply to land around Christchurch Airport. Historically this has led to what I would consider to be a very effective land use management response to address the potential reverse sensitivity on the Airport and conversely, to manage potential amenity effects from aircraft noise on the community. The method is accepted in the CRPS and has

long been accepted within the various Plans that apply to the land around the airport and various Councils appear to support its ongoing application.

12 As the most up-to-date and "best available evidence" of the actual potential noise effects arising from aircraft operations at the Airport, it is my view that the remodelled contours referred to by Ms Smith and Mr Hawken should attract considerable weight in the PDP and IPI process.

13 As notified, the PDP has introduced two new "Kaiapoi Development Areas" to the northeast of the existing Kaiapoi.

14 The PDP also seeks to provide for intensification of existing residentially zoned areas within Kaiapoi, as well as within the existing West and east Kaiapoi Development Area.[1]

15 CIAL's submissions opposed (in part) the proposed new Kaiapoi Development Areas to the extent that they provide for the development of noise sensitive activities within the 50dB Ldn Noise Contour. CIAL's submission also opposes the intensification of noise sensitive activities within the 50dB Ldn Noise Contours.

16 In response to CIAL's submission, the "Kaiapoi exemption" within Policy 6.3.5(4) of the CRPS is relied upon as justification for why residential intensification within the 50dB Ldn Noise Contour is appropriate. I have a different view on how Policy 6.3.5(4) of the CRPS should be interpreted.

17 In particular, it is my view that a careful interpretation of the policy is required, and this is quite different to the starting presumption applied by the section 42A report officers. My primary evidence includes a good deal of detail about how I have conducted this interpretive exercise. In my view, when this alternative lens to the intensification of noise sensitive activities within the 50dB Ldn Noise Contour, there is clear policy dissuasion against such activities. When coupled with the evidence of Ms Smith, Ms Hampson and Mr Sellars, it would appear to me that any intensification of noise sensitive activities within the 50dB Ldn Noise Contour would cut across the grain of both best practice and the policy directive set out in Policy 6.3.5(4) of the CRPS.

18 As notified, the PDP does not appear to include any provisions that seek to manage the effects of bird strike risk activities. While I understand the likelihood of bird strike risk within the overlay area is of low statistical probability, the consequences of an event are

[1] As summarised in section 3 of my statement of evidence.

very likely to be significant, with considerable risk posed to human health and safety.

19 In my view, it is therefore imperative that such effects are recognised and managed in the PDP, to minimise, the extent practicable, the potentially significant and adverse effects on human health and safety, as well as the community more broadly.

20 In my view, CIAL's proposed bird strike management framework recognises that for many of the bird strike risk activities can be appropriately managed, through careful management of the activities being undertaken on site. This is reflected in those activities that can be undertaken subject to a bird strike management plan. For other activities, such as those that create artificial waterbodies or waste management facilities, a more detailed evaluation is required, as reflected by the activity status, to ensure the potential effects can be appropriately considered and effects avoided, remedied or mitigated commensurate with the risk.

21 CIAL filed a number of submissions seeking greater recognition of the significance of the Airport and the need to protect it from the incompatible land use and development, with respect to residential expansion and intensification and to a range of other proposed zone provisions. I address each of these submission points in **Appendix B** of my primary statement of evidence.

MARKED-UP PROVISIONS

22 **Appendix A** to this summary statement contains a set of marked-up provisions which I consider gives effect to CIAL's relief and reflects matters set out in my primary evidence. I have only included provisions relevant to CIAL's relief to ensure the document is as succinct as possible.

RESPONSE TO SUBMITTER EVIDENCE

23 I have reviewed and provide a response to the evidence of:

23.1 Ms Mitten for the Canterbury Regional Council;

23.2 Messrs Lindenberg and Liggett for Kainga Ora;

23.3 Ms Harte and Mr Putt for Momentum and Mike Greer Homes Limited.

24 I have also reviewed the legal submissions for the four parties referred to above. Where it is within my expertise to do so, I also comment on some of the matters raised there.

Ms Mitten/Ms Dickson – Canterbury Regional Council.

Policy 6.3.5 CRPS

25 At paragraph 43, Ms Mitten addresses Policy 6.3.5 of the CPRS. She concludes that *"there is no exemption for noise sensitive activities in FDAs and any development would therefore need to comply with Policy 6.3.5".* And *"in essence, noise sensitive policies apply to any FDA within the airport noise contour".* For the reasons set out in my evidence, I agree with Ms Mitten's interpretation in this regard.

26 I note that this matter has been the subject of a number of questions from the panel primarily with a view toward determining whether the FDA at Kaiapoi is subject to the exemption in Policy 6.3.5(4) or not. In my interpretation of Chapter 6 of the CRPS there is a distinction made between Greenfield Priority Areas and FDA's. Map A is a useful start point. It makes a distinction between the two areas.

27 At a policy level Policy 6.3.12 relates specifically to FDA's and in my opinion, this serves to further emphasise the distinction. This policy guides the enablement of development in the FDA's identified on Map A, and sets out a range of pre-requisite circumstances that need to apply to bring these areas "on line" to be developed. Pre-requisite (1) requires the demonstration of need for further feasible development capacity, whilst pre-requisite (2) requires a demonstration that development would promote the efficient use of urban land and support the pattern of settlement and principles for future urban growth set out in earlier policies. Subsection (3) requires the timing and sequencing of development to be appropriately aligned with the provision and protection of infrastructure. Subsection (4) requires that development occur in accordance with an outline development plan. Subsection (5) requires that the circumstances set out in Policy 6.3.11(5) are met; and Subsection (6) requires that the effects of natural hazards are avoided or appropriately mitigated.

28 In my opinion, this separate and specific FDA related policy demonstrates that the original plan drafters applied a deliberate distinction between Greenfield Development Areas and FDA's. This bears prominently in terms of what comprises part of the "Kaiapoi Exemption" within Policy 6.3.5(4), and what does not.

29 There are a range of other policies which also distinguish between Greenfield Priority Areas and FDA's which supports my opinion in this respect.

Certification

30 Both Ms Mitten and Ms Dickson also address the proposed certification" approach to enable the release of land for development. The concerns raised by Ms Dickson at paras 27 to 39 with respect to the workability (and legality) of the method are consistent with my own experience in Queenstown (*Queenstown Airport Limited vs Queenstown lakes District Council,* [2014] NZEnvC 93).

31 Ms Mitten's evidence regarding the proposed Kaiapoi New Development Areas raises associated concerns with the lack of effectiveness the certification process might have in assessing whether land can be suitably released for development. I note that at the hearing, in response to further evidence from the s42A writer that Ms Mitten expressed more comfort that there is an appropriate consenting method available in lieu of the certification process to manage the effects arising from the release of additional development land.

32 In my view, the First Schedule process remains the best available method for upzoning land. This process would enable the fulsome assessment of matters necessary to determine that land is ultimately suitable for development, including how land might be affected by current noise contours and how best to mitigate hazard risk. In terms of hazard risk Ms Mitten identifies that the Kaiapoi FDA land is noted for its susceptibility to hazard risk and that "*given these particular constraints, in my view the Panel should give careful consideration as to whether a certification-type process is appropriate for this area, or whether it would be more appropriate for this land to be released through a rezoning process, which would enable holistic consideration of the relevant hazards and development constraints, and also allow necessary amendments to be made to other District Plan provisions that apply within this area if required"*.

33 To better understand the relevant development constraints affecting the said land I have interrogated the ECan GIS database. I attach as **Appendix B** to this summary statement a series of maps of the area showing the various matters that have been identified by the Regional Council with respect to the said land.

The Remodelled Contours

34 I note that Ms Dickson (paragraphs 18 to 25) comments on the process that has been undertaken to remodel the air noise contours. She says that *"the remodelled contours will inform the upcoming review of the CRPS (scheduled to be notified at the end of 2024)"*. And *"the pWDP cannot seek to predetermine the outcome of this future planning process regarding the CRPS by including the*

remodelled contours at this point in time". Similarly, Mr Whittington for Kainga Ora suggest that any reliance on these remodelled contours at this juncture would amount to *"a substantial breach of natural justice* (paragraph 3.1)".

35 The remodelled contours are the best current state of knowledge with respect to predicting the future impact of aircraft noise in the region. This is why I suggested that in deliberating on the intensification and rezoning matters at issue, the panel should have particular regard to this most current information.

36 However, given the concerns raised about placing reliance on these contours and given the indication from the Regional Council that this latest information is set to be run through a RPS review process I suggest that decisions on the matters before this panel could be deferred until such time as the RPS process associated with the remodelled contour has completed. Doing so will enable the efficacy of the approach to setting the contour and how associated land use management methods are to be set down in the three district plans affected by the contours to be tested via the Schedule 1 process. Moreover, that process would also enable arguments about whether land use management should be based on a 50dBA Ldn airport noise contour or a 55dBA Ldn airport noise contour (or something else) to be resolved, which is a matter raised in the evidence of Mr Lindenberg, Ms Harte and Mr Putt (see below). Deciding critical rezoning or intensification matters ahead of the resolution of how airport noise should be managed in the region runs the risk of development occurring in this district only for it to later cut against these newly established measures, with the commensurate exposure of people to the long term effects of aircraft noise, where this could have been avoided in the first place.

37 I note that the planning witness for the Christchurch City Council (Ms Oliver) suggested a similar approach with respect to Plan Change 14 (the City's equivalent to Variation 1). In her rebuttal evidence dated 9 October 2023 Ms Oliver suggested that *"whilst the NPS-UD directs changes to the District Plan to give effect to Policy 3, there is no great urgency from a practical sense to provide for any greater enablement, particularly for higher density living, as the city does not have a housing capacity sufficiency issue. I understand that the change to the CRPS will be notified in December 2024, with decisions possible by end of 2026. Once a decision on the policy and contour is reached, the District Plan can be changed accordingly (either retaining the status quo zoning in areas confirmed to fall within the contour or upzoning to medium or high density for areas confirmed to fall outside the contour) to align with this new direction".*

38 And *"until a decision is reached, I recommend that the Updated 50dBA Contour is used as the basis for a "Provisional Airport Noise*

Qualifying Matter" noting that airport noise contours generally will be subject to the CRPS review process. Furthermore, I recommend that the area impacted by the Provisional Airport Noise QM retains the Operative District Plan zoning. This can be revisited via a plan change after decisions on the CRPS confirm any changes to the airport noise policy, Map A and any related provisions".

Mr Liggett/Mr Lindenberg/Mr Whittington-Kainga Ora.

Reverse Sensitivity

39 With respect to reverse sensitivity, Mr Liggett has suggested that there is no evidential basis for establishing a reverse sensitivity effect on the activities at Christchurch Airport.

40 Mr Lindenberg has recommended reframing various provisions in the Proposed Plan to remove reference to reverse sensitivity effects. Mr Lindenberg also suggest that there is no need to avoid residential intensification and/or expansion within the 50dB Ldn Noise Contour and instead measures such as insulation of buildings and provision of ventilation comprise a better strategy as these measures will mitigate the effects of aircraft noise on residential occupants. I agree with him that such measures are an important corollary to manage the effects of aircraft noise on sensitive receptors.

41 However, in my opinion, his approach is at odds with the CRPS. I have referred extensively to Policy 6.3.5 of the CRPS in my evidence. This is the policy that is primarily relevant to addressing issue 6.1.3 "Transport Effectiveness" which identifies the need to safeguard existing key transport hubs such as airports and ports within the Greater Christchurch area. Subsection 4 is directive where it states: *Only providing for new development that does not affect the efficient operation, use, development, appropriate upgrading and safety of existing strategic infrastructure, including by avoiding noise sensitive activities within the 50dBA Ldn airport noise contour for Christchurch International Airport, unless the activity is within an existing residentially zoned urban area, residential greenfield area identified for Kaiapoi, or residential greenfield priority area identified in Map A (page 6-28).*

42 The explanation to this policy justifies this strategy on the basis that it is better to select development options where reverse sensitivity constraints do not exist. Avoidance is indeed a key measure to address Mr Whittington's comment at his paragraph 2.5.

43 The concept of reverse sensitivity is firmly encapsulated by the CRPS and insofar as managing the effects of aircraft noise is concerned, avoidance of noise sensitive activities within the 50dBA Ldn airport noise contour is the assigned method for achieving this.

44 When preparing District Plans, it is important in my view that the provisions assist plan users by applying "regional" outcomes and policy directives to a local (district) level context. Inclusion of broad terms or phrases such as "incompatible new subdivision, use and development" as Mr Lindenberg suggest does not further assist plan users understanding about specifically what it is that makes subdivision, land use or an activity incompatible.

45 In my experience, it is common for district plans to recognise the concept of reverse sensitivity. Recognising this concept is important and the inclusion in district plans of methods that preclude sensitive development "coming to the effect" is equally as critical.

46 It is also important to acknowledge that reverse sensitivity, as a concept, is an inherently forward looking one and relates to effects that may arise in the future but at the same time based on events and effects that have happened in the past. That said, it does not diminish its significance or relevance and is based on sound evidence and examples of situations whereby an authorised activity has been constrained or curtailed as result of new or additional sensitive activities choosing to locate adjacent to, or within proximity to the authorised activity, and then expressing concern about its operation and associated effects.

47 Given the critical importance of Christchurch Airport to the region and the nation it is my opinion that the concept of reverse sensitivity should be properly addressed in the Proposed Plan, as should methods that appropriately recognise and address the concept. Such an approach also has the benefit of addressing some of the matters identified by Mr Liggett and Mr Lindenberg in their respective statements of evidence around managing health and amenity effects, which in my experience are two of the key issues often raised by sensitive receivers who express concern about existing authorised activities.

48 Moreover, to provide clarity and to address Mr Whittington's criticism of my evidence at his paragraph 2.7, my suggested approach to the development proposals within areas of Kaiapoi that fall within the FDA is to avoid the increased development of noise sensitive activities within the 50dBA Ldn airport noise contour. Within existing residential zones, I have suggested that development density for activities sensitive to aircraft noise should not be increased but preserved to match the operative plan.

Ms Harte/Mr Putt-Momentum, Mike Greer Homes

Policy 6.3 5

49 Ms Harte addresses CRPS Policy 6.3.5(4) commencing at paragraph 22. I address this policy reasonably extensively in my evidence and

above in commenting on the evidence of Ms Mitten. I note with interest Ms Harte's comment at paragraph 23 that *"the reference to avoiding noise sensitive activities within the 50dBa contour, in my opinion, provides a possible method of maintaining efficient operation etc of strategic infrastructure, but is not a requirement."*

50 I agree with Ms Harte to a point, that there are a range of suitable methods that need to be applied to successfully manage the effects of aircraft noise around airports, including those that she refers to (ventilation, insulation, covenants[2] etc). However, it is important to understand the management hierarchy that derives from NZS6805, which is explained by Ms Smith. This hierarchy applies an avoidance strategy at its apex and only where existing development has occurred within an Airport OCB does it then recommend the application of the other methods set out in the evidence of Ms Harte and others (such as Mr Colegrave). This explains why all three district councils around Christchurch Airport have for many years included sensitive development avoidance strategies inside this contour, which is consistent with Policy 6.3.5.

51 At paragraph 23 Ms Harte suggests that Policy 6.3.5(4) creates a "*dilemma as it appears to provide for development in identified new residential areas including Future Development Areas, but then does not refer specifically to future development areas in clause 4 which provides an exception for development in Kaiapoi to compensate for residential land lost in the earthquakes".* In my opinion (which finds support from the Regional Council planning witness Ms Mitten) there is no dilemma in this respect. It is incorrect in my opinion to conflate the terms "greenfield priority area" and "future development area" for the purpose of interpreting this policy. They are different which bears on the applicability of the subsection (4) exemption.

Qualifying Matters

52 At paragraph 40 Ms Harte suggests that *"the NPS-UD Objectives and Policies do not require or prioritize protection of strategic infrastructure when making planning decisions which contribute to well-functioning urban environments and enable a variety of homes the meet the people's needs in terms of type, price and location of households". Rather Objective 6 requires local authority decisions on urban development to be "integrated with infrastructure planning and funding decisions" and Policy 10(b) simply requires engagement with providers of infrastructure*".

53 I disagree with this statement. The NPS-UD include provision for qualifying matters including *"a matter required for the purpose of*

[2] Although my own experience with covenants at other airports is that they are not particularly effective.

ensuring the safe or efficient operation of nationally significant infrastructure". This clearly recognises that the safe and efficient operation of such infrastructure needs to be afforded appropriate priority.

Reverse Sensitivity

54 Commencing at paragraph 53, Ms Harte deals with reverse sensitivity. In her opinion to demonstrate adverse reverse sensitivity *"the adverse effects would have to be substantial and result in a high level of complaints/concerns to reach the point where an activity will have to be abandoned or seriously compromised. It is not enough that noise sensitive activities are anticipated to occur in an area as is frequently referred to in the CIAL submission requests".*

55 It is notable from the evidence of Ms Smith that the area of Kaiapoi within the 50dBA Ldn airport noise contour is currently exposed to aircraft noise emitting between 43dBA Ldn and 48 dBA Ldn. As Ms Smith describes the future exposure levels in this part of Kaiapoi will progressively increase and it can reasonably be expected that levels of annoyance will also increase.

56 As I say above, reverse sensitivity is an inherently forward-looking concept and relates to effects that may arise in the future but at the same time based on events and effects that have happened in the past. Certainly, my own experience at other New Zealand Airports confirms that adverse and strong reactions emanate when a tipping point is reached and what can start as an isolated adverse reaction to airport operations and aircraft noise can rapidly escalate into a groundswell of ardent opposition. This opposition can manifest itself in a number of ways but very commonly it results in pressure (often very considerable pressure) to curtail activity.

50 dBA Ldn contour vs 55

57 In terms of Mr Putt's evidence, he suggests at paragraph 28 that "*It is, in my opinion, an exaggeration to suggest that the potential for people to raise complaints about aircraft noise in a situation where they live between the 50-55Ldn contours, can sensibly be regarded as a threat to the safety or efficiency of Christchurch International Airport".* He suggests that any airport related management response should only commence at the 55 dBA Ldn contour. Professor Clark agrees with this proposition.

58 In my opinion, dispensing with the 50 dBA Ldn contour would comprise a significant departure from Policy 6.3.5 of the CRPS and the land use management practices subsequently adopted by all three territorial authorities within their respective district plans to this point in time. I suggest that rather than utilise this

forum to seek such a relaxation, the RPS review process (which is clearly pending) is the appropriate forum to test the arguments for and against continuing to utilise this contour, or whether another contour should be utilised as a basis for land use management. The matter will be relevant to all three of the councils in the Greater Christchurch area and addressing this in isolation could lead to a piecemeal approach. The approach suggested by Ms Oliver (see above) insofar as the City is concerned seems to me to be a sensible one.

Dated: 21 February 2024

John Kyle

APPENDIX A

Strategic Directions Chapter

Base chapter is the Waimakariri District Council Right of Reply version of the Strategic Directions Chapter.

Changes are shown as follows:

- Black text is the notified version of the Strategic Directions Chapter.
- Stream 10A Airport Hearing recommendations by John Kyle are shown in green (with underline and ~~strikeout~~ as appropriate).

SD - Rautaki ahunga - Strategic Directions

...

SD-O3 Energy and Infrastructure

…

2. the social, economic and environmental and cultural benefits of infrastructure, including strategic infrastructure, critical infrastructure and regionally significant infrastructure:

    a. is recognised and provided for, and its safe, efficient and effective development, upgrading, maintenance and operation is enabled; ~~is able to operate efficiently and effectively~~; and
    b. strategic infrastructure, critical infrastructure and regionally significant infrastructure are protected by avoiding adverse effects from incompatible development and activities, including reverse sensitivity effects.
    c. is enabled, while:

    …

3. the adverse effects of strategic infrastructure, critical infrastructure and regionally significant infrastructure on the surrounding environment are managed, having regard to the economic benefits and practical, technical and operational needs of that infrastructure.

Energy and Infrastructure Chapter

Base chapter is the Waimakariri District Council Right of Reply version of the Noise Chapter.

Changes are shown as follows:

- Black text is the notified version of the Energy and Infrastructure Chapter.
- Energy and Infrastructure s42A recommendations are shown in red text (with underline and ~~strike~~ ~~out~~ as appropriate); and
- Stream 10A Airport Hearing recommendations by John Kyle are shown in green (with underline and ~~strikeout~~ as appropriate).

EI - Pūngao me te hanganga hapori - Energy and Infrastructure

Introduction

…

Policies	
EI-P6	**Effects of other activities and development on energy and infrastructure** Manage adverse effects, including reverse sensitivity effects, of incompatible ~~other~~ activities and development on energy and infrastructure, including by the following: … 3. with respect to Christchurch International Airport by ensuring that: a. the intensification of, or establishment of new noise sensitive activities within the 50dB Ldn Air Noise Contour is avoided; and, b. activities that have the potential to cause bird strike on aircraft using Christchurch International Airport are appropriately managed;

Urban Form and Development Chapter

Base chapter is the Waimakariri District Council Right of Reply version of the Urban Form and Development Chapter.

Changes are shown as follows:

- Black text is the notified version of the Urban Form and Development Chapter.
- Urban Form and Development s42A recommendations are shown in red text (with underline and ~~strike~~ ~~out~~ as appropriate); and
- Stream 10A Airport Hearing recommendations by John Kyle are shown in green (with underline and ~~strikeout~~ as appropriate).

UFD - Āhuatanga auaha ā tāone - Urban Form and Development

UFD-P1 **Density of residential development**

…

e. avoid intensification of noise sensitive activities that are incompatible with, or adversely affect the efficient operation, use and development of strategic infrastructure.

UFD-P2 **Identification/location of new Residential Development Areas**

…

~~i.~~ avoids adverse reverse sensitivity effects on the efficient operation, use and development of strategic infrastructure.

UFD-P3 **Identification/location and extension of Large Lot Residential Zone areas**

…

d. …; ~~and~~

e. is informed through the development of an ODP~~.~~ ;and.

f. avoids reverse sensitivity effects on the efficient operation, use and development of strategic infrastructure.

…

UFD-P10 **Managing reverse sensitivity effects from new development**

…

1. Avoid residential activity and development that has ~~the potential to be impacted by or limit~~ adverse effects on, or is incompatible with, the

efficient, ~~and~~ effective and safe operation, maintenance, repair, development and upgrade of critical infrastructure, strategic infrastructure, and regionally significant infrastructure, including avoiding noise sensitive activities within the Christchurch Airport Noise Contour, unless within a~~n existing~~ Residential Zone in Kaiapoi which was in existence at the time this plan was made operative. In these zones density is to be retained at one unit per 300m^2 or 600m^2 in those areas identified on the planning maps;

Transport Chapter

Base chapter is the Waimakariri District Council Right of Reply version of the Transportation Chapter.

Changes are shown as follows:

- Black text is the notified version of the Strategic Directions Chapter.
- Stream 10A Airport Hearing recommendations by John Kyle are shown in green (with underline and ~~strikeout~~ as appropriate).

TRAN - Ranga waka - Transport

Introduction

…

Land use and subdivision is managed to protect Waimakariri District's land transport corridors and infrastructure from incompatible activities that could undermine the provision of an integrated, safe, responsive, and sustainable land-based transport system, which includes the Strategic Transport Network and relevant infrastructure.

Subdivision Chapter

Base chapter is the Waimakariri District Council Subdivision Chapter as notified through Variation 1.

Changes are shown as follows:

- Black text is the notified version of the Subdivision Chapter.
- Stream 10A Airport Hearing recommendations by John Kyle are shown in green (with underline and ~~strikeout~~ as appropriate). Note the recommended relief is the same for both the PDP and IPI.

SUB - Wāwāhia whenua - Subdivision

Introduction

…

Objectives	
SUB-O1	**Subdivision design** Subdivision design achieves an integrated pattern of land use, development, and urban form, that: 1. …; 3. supports protection of cultural and heritage values, conservation values; ~~and~~ 4. supports community resilience to climate change and risk from natural hazards; and 5. Does not facilitate development that gives rise to adverse effects on strategic infrastructure.

…

Policies	
SUB-P1	**Design and amenity** Enable subdivision that: 1. … 4. avoids noise sensitive activities intensifying or establishing within the 50 dBA Ldn Air Noise Contour so as not to compromise the efficient operation of Christchurch International Airport or the health, well-being and amenity of people; 5. …

…

SUB-P6	**Criteria for Outline Development Plans** Ensure that new Residential Development Areas, new Large Lot Residential Zones, new Commercial and Mixed Use Zones and new Industrial Zones shall not be subdivided until an ODP for that area has

	been included in the District Plan and each ODP shall: i. show how other potential adverse effects on ~~and/or~~ from ~~nearby~~ existing or designated strategic infrastructure (including requirements for designations, or planned infrastructure) will be avoided, remedied or appropriately mitigated, recognising the functional need for infrastructure to be located in particular places; j. show how reverse sensitivity effects on infrastructure will be avoided, acknowledging that in some cases the utilisation of that infrastructure may increase over time; k. …

…

Activity Rules

SUB-R11	**Subdivision resulting in an allotment that is less than the minimum allotment size for the zone ~~4ha~~ within the 50dBA Ldn noise contour for Christchurch International Airport**	
~~Rural Lifestyle Zone w~~Within the 50 dBA Ldn Noise Contour for Christchurch International Airport	**Activity status: NC**	**Activity status when compliance not achieved: N/A**

Subdivision Standards

SUB-S1 Allotment size and dimensions	
1. All allotments created shall comply with Table SUB-1.	**Activity status when compliance not achieved:** 1. **…** 2. **Within the 50dB Ldn Air Noise Contour: NC** 3. **…**

Table SUB-1: Minimum allotment sizes and dimensions

Zone	Minimum allotment area	Internal square	Frontage (excluding rear lots)
Residential Zones			
…	…	…	…
General Residential Zone	500m^2	15m x 15m	15m
General Residential Zone within the 50dB Ldn Air Noise Contour	600m^2		

Medium Density Residential Zone	200m^2 No minimum for multi-unit residential development where the design statement and land use consent have been submitted and approved	n/a	n/a
Medium Density Residential Zone within the 50dB Ldn Air Noise Contour	300m^2		
…	…	…	…
Special Purpose Zone (Kaiapoi Regeneration)	500m2	n/a	n/a
Special Purpose Zone (Kaiapoi Regeneration) within the 50db Ldn Air Noise Contour	600m2		
…			

SUB-S3 Residential yield	
1. Residential subdivision of any area subject to an ODP, except in the Large Lot Residential Zone or where located within the 50dB Ldn Air Noise Contour, shall provide for a minimum net density of 15 households per ha, unless there are demonstrated constraints then no less than 12 households per ha.	**Activity status when compliance not achieved: NC**

Noise Chapter

Base chapter is the Waimakariri District Council Right of Reply version of the Noise Chapter.

Changes are shown as follows:

- Black text is the notified version of the Urban Form and Development Chapter.
- Stream 10A Airport Hearing recommendations by John Kyle are shown in green (with underline and ~~strikeout~~ as appropriate).

NOISE - Te orooro – Noise

Introduction

…

There are provisions in this chapter and in other parts of the Plan which apply to activities within the Air Noise Contours. This includes residential density controls on land within the 50dBA Ldn Air Noise Contour (which is the outer control boundary for aircraft noise in Greater Christchurch), and, within the 55dBA Ldn Air Noise Contour, additional acoustic mitigation requirements in addition to the requirements applicable to the 50dBA Ldn Air Noise Contour.

…

Objectives	
NOISE- O3	**Rangiora Airfield and Christchurch International Airport** The avoidance of noise sensitive activities within the 65dBA and 55dBA Ldn Noise Contours for Rangiora Airfield and within the 50dBA Ldn Air Noise Contour for Christchurch International Airport.
Policies	
NOISE- P4	**Airport Noise Contour** Protect Christchurch International Airport from reverse sensitivity effects by: 1. avoiding noise sensitive activities within the 50 dBA Ldn Noise Contour by: a. limiting the density of any residential unit or minor residential unit to a maximum of: i. 1 residential unit or minor residential unit per 600m^2 within Area A of the General or Medium Density Residential Zone in Kaiapoi; ii. 1 residential unit or minor residential unit per 300m^2 within Area B of the General or Medium Density Residential Zone in Kaiapoi; iii. 1 residential unit or minor residential unit per

	4ha in the Rural Lifestyle Zone; iv. 1 residential unit per 20ha in the General Rural Zone; b. Avoiding the development of all other noise sensitive activities (not otherwise provided for in NOISE-P4(1)(a)); ~~, except within existing Kaiapoi Residential Zones, greenfield priority areas identified in Chapter 6 - Map A of the RPS (gazetted 6 December 2013) or any residential Development Area; and~~ c. requiring noise insulation for new buildings and additions to existing buildings within the ~~50 dBA Ldn and~~ 55 dBA Ldn Noise Contour for Christchurch International Airport.

Activity Rules

NOISE-R14	Buildings in the 55 dBA Ldn Noise Contour for Christchurch International Airport	
55 dBA Ldn Noise Contour for Christchurch International Airport	**Activity status: PER** Where: 1. any new building or any addition to an existing building for an activity listed in Table NOISE-1 within the 55 dBA Ldn Air Noise Contour for Christchurch International Airport, shown on the planning map, shall be insulated from aircraft noise to ensure indoor sound levels stated in Table NOISE-1 are not exceeded~~, when windows and doors are closed~~, and: 2. windows and doors need to be closed to achieve the internal noise levels specified in Table NOISE-1, an alternative ventilation system shall be provided which satisfies clause G4 of the New Zealand Building Code and provides satisfactory internal thermal conditions. ... d. ~~if required by the District Council,~~ in conjunction	**Activity status when compliance not achieved: NC**

	with the final building inspection…	

Table NOISE-1: Noise Contour Indoor Design Levels* refer to Advice Note 2

NOISE-R17	**Noise sensitive activities**	
50dBA Ldn Noise Contour for Christchurch International Airport Limited	**Activity status: PER** Where: 1. the activity is a residential activity or residential unit located within Residential Zones, a Rural or Rural Lifestyle Zone and complies with the relevant density rules for that zone; ~~or~~ and 2. ~~any~~ the residential activity meets the indoor sound levels stated in Table NOISE 1, when windows and doors are closed.	**Activity status when compliance not achieved: RDIS** **Matters of discretion are restricted to:** NOISE-MD2 - Management of noise effects NOISE-MD3 – Acoustic insulation **Notification** An application for a restricted discretionary activity under this rule where compliance is not achieved with NOISE-R17 (1), shall be limited notified only to Christchurch International Airport Limited.
	Activity status: RDIS Where: 1. all other noise sensitive activity in any Residential Zone; and 2. activity meets the indoor sound levels stated in Table NOISE 1, when windows and doors are closed. **Activity status: NC** Where: 1. all other noise sensitive activity not in a residential zone.	**Activity status when compliance not achieved: RDIS** **Matters of discretion are restricted to:** NOISE-MD2 - Management of noise effects NOISE-MD3 – Acoustic insulation RES-MD[xx] – Christchurch International Airport

	Advisory Note • The 55 dBA Ldn Air Noise Contour applies as an additional layer over the 50 dBA Ldn Air Noise Contour. For the avoidance of doubt, any property lying within the 55 dBA Ldn Air Noise Contour is also subject to the rules applicable to the 50 dBA Ldn Air Noise Contour. • ~~Noise insulation calculations and verification shall be as follows:~~ ○ ~~Building consent applications shall be accompanied with a report detailing the calculations showing how the required sound insulation and construction methods have been determined.~~ ○ ~~For the purpose of sound insulation calculations, the external noise levels for a site shall be determined by application of the air noise contours Ldn and LAE. Where a site falls within the contours the calculations shall be determined by linear interpolation between the contours.~~ • ~~If required by the District Council, in conjunction with the final building inspection the sound transmission of the façade shall be tested in accordance with ISO 16283-3:2016 to demonstrate that the required façade sound insulation performance has been achieved, and a test report is to be submitted to the District Council's Manager, Planning and Regulation. Should the façade fail to achieve the required standard then it shall be improved to the required standard and re-tested prior to occupation.~~

Advice Notes

NOISE – AN2	1. Noise insulation calculations and verification shall be as follows: • Building consent applications shall be accompanied with a report detailing the calculations showing how the required sound insulation and construction methods have been determined. • For the purpose of sound insulation calculations, the external noise levels for a site shall be determined by application of the air noise contours Ldn and LAE. Where a site falls within the contours the calculations shall be determined by linear interpolation between the contours. • In conjunction with the final building inspection the sound transmission of the façade shall be tested in accordance with ISO 16283-3:2016 to demonstrate that the required façade sound insulation performance has been achieved, and a test report is to be submitted to the District Council's Manager,

	Planning and Regulation. Should the façade fail to achieve the required standard then it shall be improved to the required standard and re-tested prior to occupation.

Matters of Control/Discretion

NOISE- MD2	**Management of noise effects** 1. … 6. ~~The reasonableness and effectiveness of any legal instrument to be registered against the title that is binding on the owner and the owner's successors in title, containing a 'no complaint' clause relating to the noise of aircraft using Christchurch International Airport.~~

General Objectives and Policies for all Residential Zones

Changes are shown as follows:

- Black text is the notified version of the General Objectives and Policies for all Residential Zones Chapter, as notified through Variation 1.

- Stream 10A Airport Hearing recommendations by John Kyle are shown in green (with underline and ~~strikeout~~ as appropriate). With the exception of RESZ-P15 which applies to the Variation only, the recommendations are the same for both the Variation 1 and PDP.

RESZ – Whaitua Nohonoho – Residential Zones
General Objectives and Policies for all Residential Zones

Introduction

…

Within the Christchurch International Airport 50 dBA Ldn Air Noise Contour residential density is also controlled in order to avoid adverse reverse sensitivity effects on the Airport and to avoid adverse amenity effects on residents. These controls are contained in both the Noise chapter and the Residential Zone and reference should be made to both.

Objectives	
RES-O1	**Residential growth, location and timing** Sustainable residential growth that: 1. … 3. enables new development, as well as redevelopment of existing Residential Zones; and 4. allows critical infrastructure, regionally significant infrastructure, and strategic infrastructure to operate without being compromised by reverse sensitivity effects.

… **Policies**

NEW POLICY	Within the Christchurch International Airport 50 dBA Ldn Air Noise Contour, avoid residential units on sites under 300m^2 or 600m^2 in the areas of Kaiapoi identified on the planning maps.
RESZ-P15	**Medium Density Residential Standards** **Apply the Medium Density Residential Standards across all relevant residential zones in the District Plan except in circumstances where a qualifying matter is relevant ~~(including matters of significance such as historic heritage and the~~**

	~~relationship of Māori and their culture and traditions with their ancestral lands, water, sites, wāhi tapu, and other taonga)~~.

General Residential Zone

Base layer is the General Residential Zone as notified.

Changes are shown as follows:

- Black text is the notified version of the General Residential Zone.
- Stream 10A Airport Hearing recommendations by John Kyle are shown in green (with underline and ~~strikeout~~ as appropriate).

General Residential Zone

Introductions

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Activity Rules

…

Built Form Standards

GRZ-BFS1 Site density	
1. Outside of the 50dB Ldn Air Noise Contour, site ~~Site~~ density shall be a maximum of one residential unit per 500m^2 of net site area, which can be calculated over multiple adjacent sites. 2. Within the Christchurch International Airport 50dBA Ldn Air Noise Contour as shown on the planning maps the minimum net site area is as follows: a. Area A 600m^2 b. Area B 300m^2	**Activity status when compliance not achieved: NC**

Medium Density Residential Zone

Changes are shown as follows:

- Black text is the notified version of the Medium Density Residential Zone (PDP Version)
- Stream 10A Airport Hearing recommendations by John Kyle are shown in green (with underline and ~~strikeout~~ as appropriate).

Introduction

…

Activity Rules

…

Built Form Standards

MRZ-BFS1 Site density	
1. Outside of the 50dBA Ldn Air Noise Contour, site ~~Site~~ density shall shall be a maximum of one residential unit per 200m^2 of net site area, which can be calculated over multiple adjacent sites. 2. Within the Christchurch International Airport 50dB Ldn Air Noise Contour as shown on the planning maps, the following minimum net site area is as follows: a. Area A 600m^2 b. Area B 300m^2 3. Where a site is less than 200m^2, one residential unit is allowed. 4. This rule does not apply to any minor residential unit, or residential unit in a retirement village.	**Activity status when compliance not achieved: RDIS Matters of discretion are restricted to:** RES-MD2 - Residential design principles RES-MD[XX] Christchurch International Airport ~~**Notification**~~ ~~An application for a restricted discretionary activity under this rule is precluded from being publicly or limited notified.~~

Medium Density Residential Zone

Base layer is the Medium Density Residential Zone, as notified as part of Variation 1.

Changes are shown as follows:

- Black text is the notified version of the Medium Density Residential Zone (IPI Version)
- Stream 10A Airport Hearing recommendations by John Kyle are shown in green (with underline and ~~strikeout~~ as appropriate).

Introduction

…

Activity Rules

MRZ-R2 Residential unit	
Activity status: PER **Where:** 1. **Within the Christchurch International Airport 50dB Ldn Air Noise Contour as shown on the planning maps, the minimum net site area is as follows:** **a. Area A 600m^2** **b. Area B 300m^2**	**Activity status when compliance not achieved: ~~N/A~~ as set out in the relevant built form standards, with the exception of MRZ-R2(1), where NOISE-R17 applies**

Built Form Standards

MRZ-BFS1 Number of residential units per site	
	Notification **An application for the construction of residential units that does not comply with MRZ-BFS1 clause 1.a. shall be limited notified at least to Christchurch International Airport (absent its written approval).**

Matters of Discretion all Residential Zone

Changes are shown as follows:

- Black text is the notified version of the Matters of Discretion – All Residential Zones (PDP).

- Stream 10A Airport Hearing recommendations by John Kyle are shown in green (with underline and ~~strikeout~~ as appropriate).

Matters of Discretion for all Residential Zones

…

RES-MDXX	**Christchurch International Airport** 1. the extent to which effects on amenity, as a result of the sensitivity of noise sensitive activities to current and future noise generation from aircraft, are proposed to be managed; 2. whether reverse sensitivity effects that may limit the operation, maintenance or upgrade of Christchurch International Airport are avoided.

General Overview for all Rural Zones

Base layer is the General Objectives and Policies for all Rural Zone as notified.

Changes are shown as follows:

1. Black text is the notified version of the General Rural Zone chapter.

2. Stream 10A Airport Hearing recommendations by John Kyle are shown in green (with underline and ~~strikeout~~ as appropriate).

RURZ- Whaitua Taiwhenua – Rural Zones

RURZ - General Objectives and Policies for all Rural Zones

Introduction

…

Within the Christchurch International Airport 50 dBA Ldn Air Noise Contour residential density is also controlled in order to avoid adverse reverse sensitivity effects on the Airport and to avoid adverse amenity effects on residents. These controls are contained in both the Noise chapter and the Rural Zones and reference should be made to both.

Objectives	
RURZ—O1	**Rural Environment** An environment with a predominant land use character comprising primary production activities and natural environment values, where rural openness dominates over built form, while recognising: 1. the east of the District has a predominant character of small rural sites with a pattern of built form of residential units and structures at more regular intervals at a low density compared to urban environments; and 2. the remainder of the District, while having a range in the size of rural sites, has a predominant character of larger rural sites with a corresponding density of residential units and built form. 3. the importance of allowing critical infrastructure, regionally significant infrastructure, and strategic infrastructure to develop and operate without being compromised by reverse sensitivity effects or incompatible activities.
RURZ—P8	**Reverse sensitivity** Minimise the potential for reverse sensitivity effects by: 1. avoiding the establishment of any new sensitive activity near existing intensive indoor primary production activities, intensive outdoor primary production activities, waste management facilities, quarrying activities, mining activities, and rural industry in circumstances where

	the new sensitive activity may compromise the operation of the existing activities; 2. managing the establishment of new sensitive activities near other primary production activities; 3. ensuring adequate separation distances between existing sensitive activities and new intensive indoor primary production activities, intensive outdoor primary production activities, quarrying activities, mining and rural industry; and 4. avoiding quarry, landfill, cleanfill area, mining activities adjacent to urban environments where the amenity values of urban environments would be diminished. 5. managing adverse effects on strategic infrastructure, including through: a. avoiding noise sensitive activities within the 50 dBA Ldn Air Noise Contour and ensuring that, in this location, the density of residential units is kept to a maximum of 1 residential unit per 4 hectares in the Residential Lifestyle Zone and 1 residential unit per 20ha in the General Rural Zone; managing the risk of bird strike to aircraft using Christchurch International Airport;

General Rural Zone

Changes are shown as follows:

- Black text is the notified version of the Rural Lifestyle Zone chapter.
- Stream 10A Airport Hearing recommendations by John Kyle are shown in green (with underline and ~~strikeout~~ as appropriate).

General Rural Zone

Introduction

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Objectives

…

Policies

…

Activity Rules

…

GRUZ-R3 Residential unit	
This rule does not apply to any minor residential unit provided for under GRUZ-R4 or any bonus residential unit provided for under GRUZ-R16.	
Activity status: PER Where: 1. a residential unit shall be located on a site with a minimum net site area of 20ha per residential unit, except where provided for in (3), (4), (5), (6) and (7) below. These exceptions do not apply to land within the 50dBA Ldn Air Noise Contour;	

Rural Lifestyle Zone

Changes are shown as follows:

- Black text is the notified version of the Rural Lifestyle Zone chapter.
- Stream 10A Airport Hearing recommendations by John Kyle are shown in green (with underline and ~~strikeout~~ as appropriate).

RLZ - Rural Lifestyle Zone

Introduction

…

Activity Rules

…

RLZ-R3 Residential unit	
This rule does not apply to any minor residential unit provided for under RLZ-R4; or bonus residential unit provided for under RLZ-R17.	
Activity status: PER Where: 1. a residential unit shall be located on a site with a minimum net site area of 4ha per residential unit, except where provided for in (3), (4) and (5) below. These exceptions do not apply to land within the 50dBA Ldn Air Noise Contour; 2. …	**Activity status when compliance with RLZ-R3 (2)(b) or RLZ-R3 (2)(c) not achieved: DIS** **Activity status when compliance with RLZ-R3 (1), RLZ- R3 (2)(a), RLZ-R3 (3), RLZ-R3 (4), or RLZ-R3 (5) not achieved: NC**

General Objectives and Policies for all Commercial and Mixed Use Zones

Base layer is the General Objectives and Policies for all Commercial and Mixed Zone chapter as notified.

Changes are shown as follows:

- Black text is the notified version of the General Objectives and Policies for all Commercial and Mixed Use Zones Chapter, as notified through PDP. Note this chapter is not proposed to be amended as a result of Variation 1.

- Stream 10A Airport Hearing recommendations by John Kyle are shown in green (with underline and ~~strikeout~~ as appropriate).

CMUZ - General Objectives and Policies for all Commercial and Mixed Use Zones

Introduction

…

Within the Christchurch International Airport 50 dBA Ldn Air Noise Contour residential density is also controlled in order to avoid adverse reverse sensitivity effects on the Airport and to avoid adverse amenity effects on residents. These controls are contained in both the Noise chapter and the Commercial and Mixed Use Zone and reference should be made to both.

General Objectives and Policies for all Industrial Zones

Base layer is the General Objectives and Policies for all Industrial Zones chapter as notified.

Changes are shown as follows:

- Black text is the notified version of the General Objectives and Policies for the all Industrial Zones Chapter, as notified through PDP.
- Stream 10A Airport Hearing recommendations by John Kyle are shown in green (with underline and ~~strikeout~~ as appropriate).

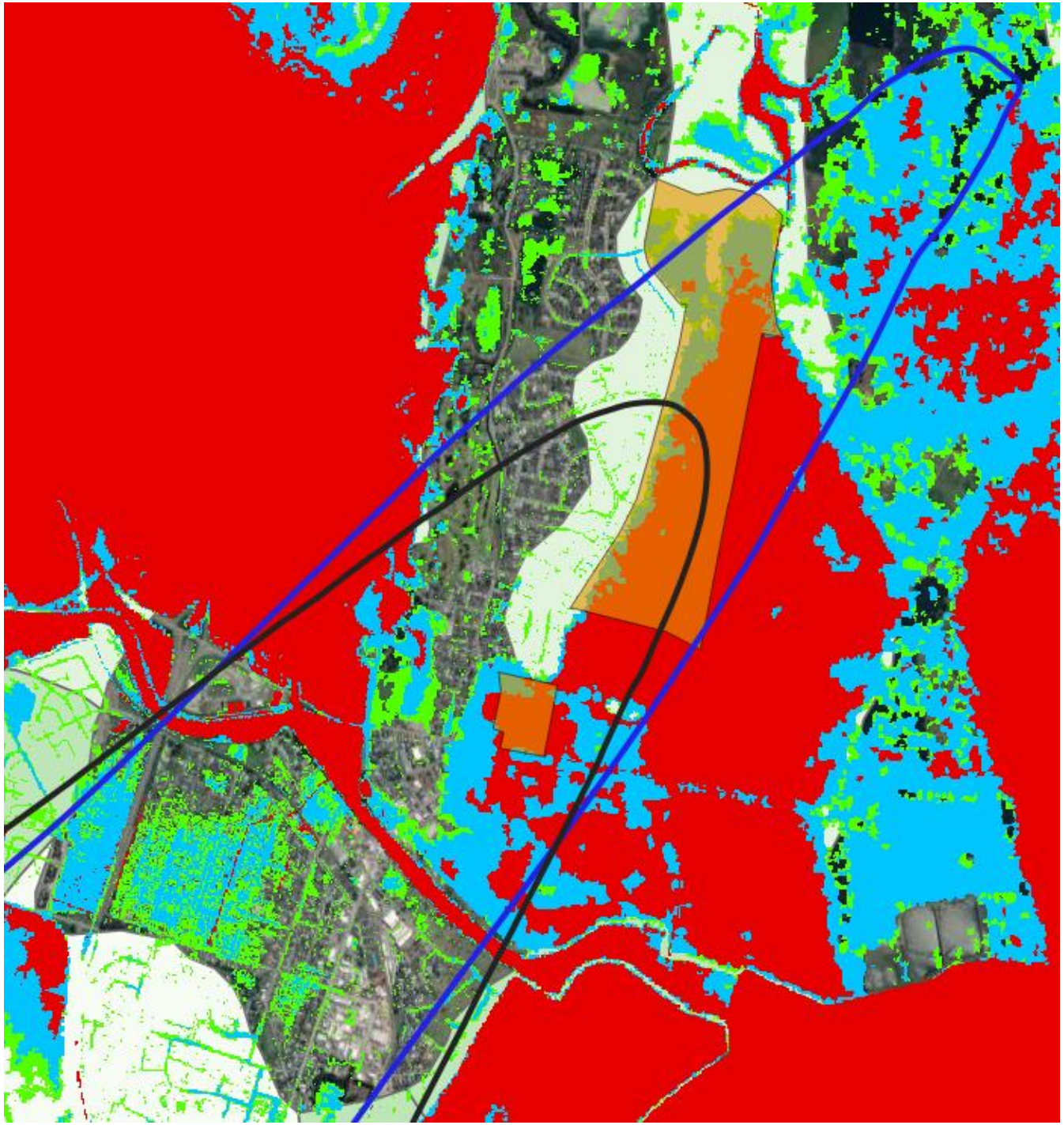
INZ - General Objectives and Policies for all Industrial Zones

Introduction

…

Within the Christchurch International Airport 50 dBA Ldn Air Noise Contour residential density is also controlled in order to avoid adverse reverse sensitivity effects on the Airport and to avoid adverse amenity effects on residents. These controls are contained in both the Noise chapter and the Industrial Zone chapter and reference should be made to both.

…

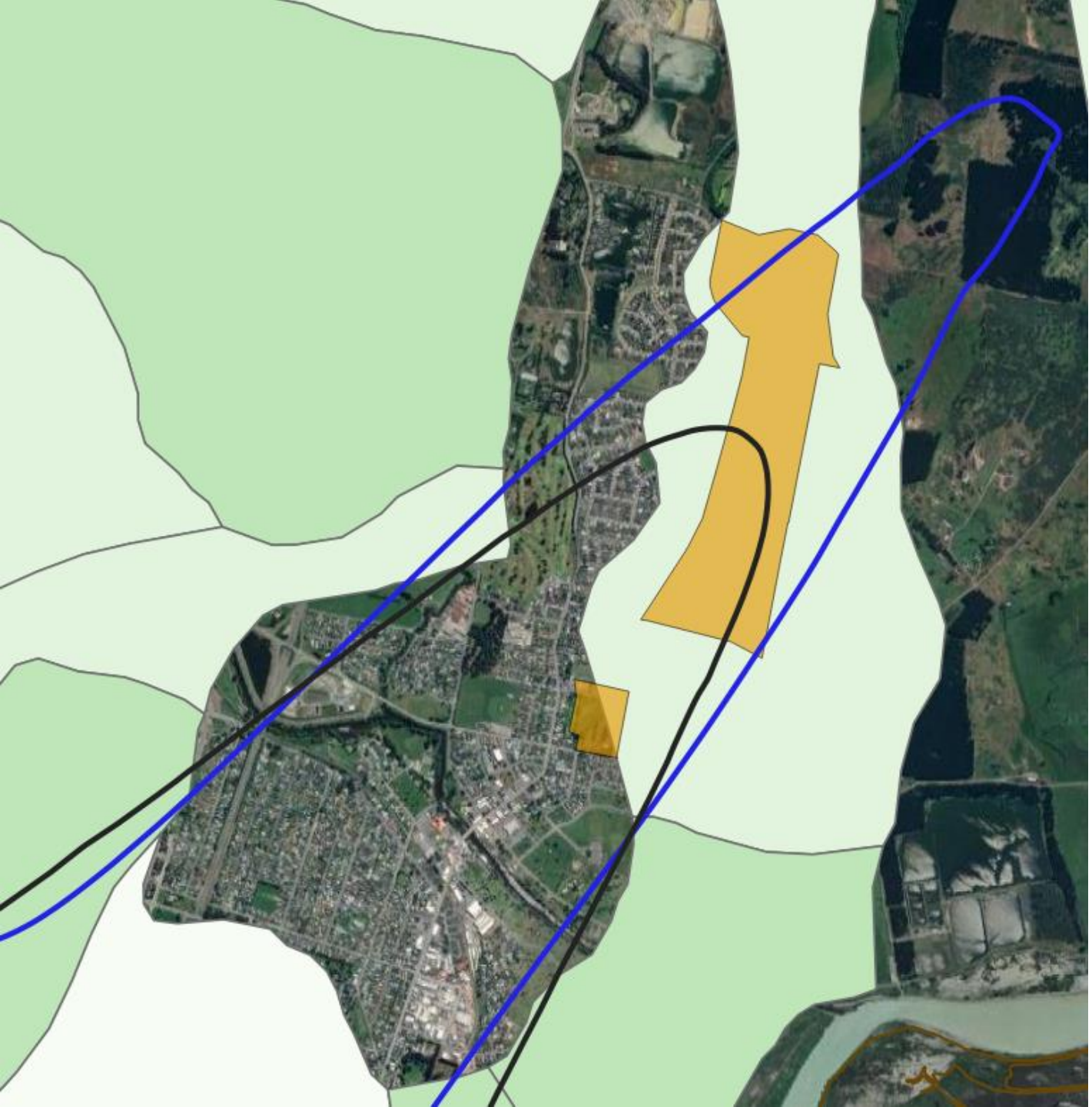


APPENDIX B

North Kaiapoi Overlapping Constraints

Legend

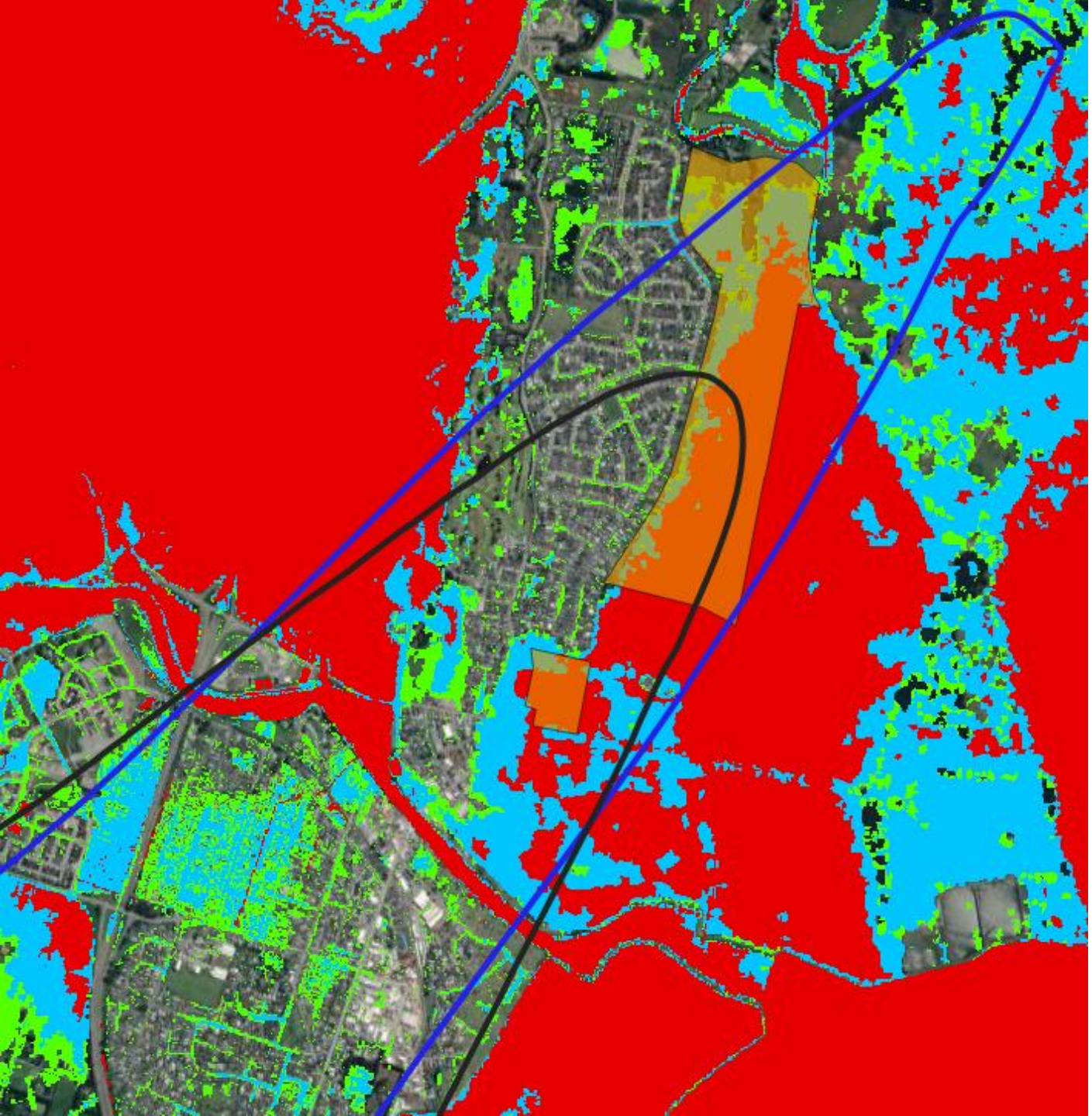
Symbol	Layer	Data source
	Operative 50dB L_{dn} Noise Contour	CIAL
	Outer Envelope 2023 50dB L_{dn} Noise Contour	CIAL
	Waimakariri High Flood Hazard (200 year)	ECan
	Waimakariri Medium Flood Hazard (200 year	ECan
	Waimakariri Low Flood Hazard (200 year	ECan
	Future Development Areas	ECan
	HPL category 1	ECan
	HPL category 1	ECan
	HPL category 1	ECan



North Kaiapoi Overlapping Constraints, Air Noise Contours and Highly Productive Land

Legend

Symbol	Layer	Data source
	Operative 50dB L_{dn} Noise Contour	CIAL
	Outer Envelope 2023 50dB L_{dn} Noise Contour	CIAL
	Future Development Areas	ECan
	HPL category 1	ECan
	HPL category 1	ECan
	HPL category 1	ECan



North Kaiapoi Overlapping Constraints, Air Noise Contours and Flooding Hazard (200 years)

Legend

Symbol	Layer	Data source
	Operative 50dB L_{dn} Noise Contour	CIAL
	Outer Envelope 2023 50dB L_{dn} Noise Contour	CIAL
	Waimakariri High Flood Hazard (200 year)	ECan
	Waimakariri Medium Flood Hazard (200 year	ECan
	Waimakariri Low Flood Hazard (200 year	ECan
	Future Development Areas	ECan