

BEFORE THE WELLINGTON CITY COUNCIL

IN THE MATTER OF of the Resource Management Act 1991

AND

IN THE MATTER OF The Wellington City Proposed District Plan

**STATEMENT OF EVIDENCE BY KIRSTY O’SULLIVAN ON BEHALF OF
WELLINGTON INTERNATIONAL AIRPORT LIMITED**

WRAP UP HEARING

(SUBMITTER 406, FURTHER SUBMITTER 36)

23 October 2024

1. EXECUTIVE SUMMARY

1.1 My name is Kirsty O’Sullivan.

1.2 This statement of evidence relates to the Wrap Up hearing.

Moa Point Seawall Reconciliation

1.3 The section 42A reporting officer has made various recommendations regarding the reconciliation of provisions relating to the Moa Point Seawall area. I largely support these recommendations, particularly the Council recommendation (through the Right of Reply for Hearing Stream 9 and confirmed via the Wrap Up hearing) that the Moa Point Seawall comprises infrastructure for the purpose of the Proposed Plan.

1.4 As part of the reconciliation process, the section 42A reporting officer is recommending that the seawall specific provisions that were originally recommended to be included in Natural Open Space Zone as part of Hearing Stream 7 are now removed. The rationale for this is that the Infrastructure chapter (and sub chapters) are standalone.

1.5 I understand that the introduction to the Infrastructure chapter of the Proposed Plan states that the “rules” of the zone chapters do not apply to infrastructure. This means the objectives and policies of the district wide and zone chapters of the Proposed Plan remain relevant.

1.6 Given the Natural Open Space Zone is not a good fit for the Moa Point Seawalls (as discussed during Hearing 7) and given that the otherwise narrowly framed objectives and policies from the Natural Open Space Zone do not complete large, artificial structures or works associated with the Moa Point Seawalls, I do not support the section 42A reporting officer’s recommendation. If, however, the introduction was amended to clarify that the objectives, policies and methods of the Proposed Plan do not apply (as I think was intended based on the section 42A reporting officer’s comment that the chapters are standalone),

then I would support the recommended removal of the seawall specific provisions from the Natural Open Space Zone.

Upgrading and Regionally Significant Infrastructure

- 1.7 The section 42A reporting officer has not recommended any amendments to the definitions of “upgrading” or “regionally significant infrastructure” in light of Wellington International Airport Limited’s (“WIAL”) submissions.
- 1.8 I acknowledge that it is not always appropriate to replicate, verbatim, provisions within higher order planning documents. However, given the potential for inconsistent interpretation around which elements of WIAL’s activities comprise “regionally significant infrastructure”, in my view, the definition should, insofar as relevant to WIAL, replicate the definition as set out in the Regional Policy Statement (Plan Change 1 decisions version).
- 1.9 With respect to upgrading, the challenges presented by that definition are largely a consequence of the drafting of provisions in the INF-ECO chapter. Specifically, excluding “renewals” from the definition of upgrading precludes the Southern Seawall Renewal Project from engaging provisions that otherwise relate to “existing” infrastructure. I have therefore recommended a minor amendment to this definition, however, acknowledge that this matter may be further addressed through the Right of Reply for Hearing Stream 11.

Bird strike Management

- 1.10 As detailed by Mr Howarth and Dr Anderson, bird strike is a significant safety risk which requires diligent management.
- 1.11 Mr Howarth demonstrates the measures that WIAL applies to manage potential bird strike risks at and surrounding Wellington International Airport (“the Airport”). The difficulty, as I understand it, is that beyond WIAL’s landholdings, these measures are largely implemented by the community through goodwill. There is no requirement for a landowner to manage the effects that increase the risk of bird strike, should they choose not to. This is a risk to the safety of aircraft, passengers and the community, should the worst happen.

- 1.12 Based on the key high-risk species present and the types of land use activities that tend to attract those species, I have recommended new bird strike management provisions be included in the Proposed Plan. These provisions seek to ensure that the activities listed as “bird strike risk activities” are not necessarily precluded from establishing within the defined mapped area, rather that potential developers carefully consider how their activity might generate bird presence and the measure that they employ to manage bird strike risk on an ongoing basis.
- 1.13 Inclusion of these provisions will ensure that WIAL can continue to manage bird strike risk at Wellington International Airport, and thus reduce the risk of potentially significant adverse effects on human health and wellbeing.

2. INTRODUCTION

- 2.1 My name is Kirsty O’Sullivan. I am a Partner at the resource management and environmental consultancy, Mitchell Daysh Limited.
- 2.2 I have appeared before the Independent Hearings Panel with respect to Hearing Streams 5 to 9 and 11 of the Proposed Wellington City District Plan (“Proposed Plan”) on behalf of Wellington International Airport Limited (“WIAL”). Within my brief of evidence for Hearing Stream 5, I set out my qualifications and experiences as an expert planning witness. I do not repeat that here.

Code of Conduct Statement

- 2.3 While this is not an Environment Court hearing, I nonetheless confirm that I have read the Code of Conduct for Expert Witnesses contained in the Environment Court Practice Note 2023. I agree to comply with the Code, and I am satisfied that the matters which I address in my evidence are within my field of expertise. I am not aware of any material facts that I have omitted which might alter or detract from the opinions I express in my evidence.

Scope of Evidence

2.4 This statement of evidence relates to the Wrap Up hearing. The scope of WIAL's submissions at this hearing are limited to:

- 2.4.1 The reconciliation of the Moa Point Seawall provisions. These provisions have arisen as a result of WIAL's submissions seeking to ensure the Proposed Plan provides a consenting pathway for the pending Southern (and future Western) Seawall Renewal Project;
- 2.4.2 The definition of upgrading¹ and regionally significant infrastructure;²
- 2.4.3 Plan integration and recognition of the effect of WIAL's obstacle limitation surface designation within the introduction of the Proposed Plan;³ and,
- 2.4.4 The inclusion of a bespoke planning framework to manage the potential for incompatible land use activities to give rise to an increase in the risk of bird strike at Airport.⁴

2.5 In this brief of evidence, I will:

- 2.5.1 Provide some further comments and observations regarding the section 42A reporting officer's proposed reconciliation of the Moa Point Seawall provisions;
- 2.5.2 Set out why, in my view, further changes to the definition of "upgrading" and "regionally significant infrastructure" are warranted; and,
- 2.5.3 Address WIAL's proposed new provisions to manage the potential effects of bird strike risk.

2.6 I do not address every submission point raised in WIAL's submission or further submission in relation to the Wrap Up hearing matters. My evidence instead

¹ Submission 406.45.

² Submission 406.41.

³ Submission 406.83 to 84.

⁴ Submission 406.11.

focuses on those key matters which will have the greatest bearing on WIAL's existing and future operations and therefore warrants further discussion. An absence of discussion with respect to a particular submission point should not be taken as agreement (tacit or otherwise) with the recommendations set out in the section 42A evaluation.

- 2.7 In preparing this statement of evidence, I confirm that I have read the following documents:
- 2.7.1 WIAL's submission and further submission;
 - 2.7.2 The Mitchell Daysh Limited memorandum dated 17 September 2024, prepared in response to Minute 57;
 - 2.7.3 The Proposed Plan Wrap Up Hearing report prepared under section 42A ("the section 42A report") of the Resource Management Act 1991 ("the RMA" or "the Act") and the associated appendices.
 - 2.7.4 The statements of evidence prepared by Dr Anderson, Senior Ecologist at Bioreserches and Mr Howarth, Wildlife Officer at WIAL.
 - 2.7.5 Civil Aviation New Zealand Circular AC139-16 Wildlife Hazard Management at Aerodromes;
 - 2.7.6 WIAL's Wildlife Hazard Management Plan; and,
 - 2.7.7 The relevant provisions of the Greater Wellington Regional Council Plan Change 1 to the Regional Policy Statement decision ("Proposed RPS").

3. MOA POINT SEAWALL RECONCILIATION ACROSS CHAPTERS

- 3.1 In the Right of Reply for Hearing Stream 9 (Infrastructure), the section 42A reporting officer recommended that the Moa Point Seawall be considered and treated as Infrastructure in the Proposed Plan.

3.2 As a result of this recommendation, the section 42A reporting officer for the Wrap Up Hearing has sought to reconcile references to the Moa Point Seawall throughout the Proposed Plan. As part of this exercise, the section 42A reporting officer has recommended removing the Moa Point Seawall specific provisions from the Natural Open Space Zone. In doing so, he notes that the Infrastructure and Infrastructure - Coastal Environment chapters are standalone and zone provisions do not apply.

3.3 However, I note that paragraph 5 of the Introduction to the Infrastructure chapter (Wrap Up hearing version) states (my emphasis added):

“The provisions within the chapter apply on a City-wide basis. As such the rules in the zone chapters do not apply to infrastructure unless specifically stated within an infrastructure rule or standard. Likewise, the rules in the following overlay chapters do not apply to infrastructure unless specifically stated in an infrastructure rule or standard: ...”

3.4 Based on my interpretation of the above, it is only the rules in the zone chapters and overlays that do not apply. The objectives and policies of the relevant zone chapters and overlays therefore potentially remain relevant depending on the effects of a particular activity.

3.5 On the basis that the Southern Seawall Renewal Project requires resource consent for a discretionary activity under INF-CE-R34, and because the introduction of the Infrastructure chapter only precludes the zone rules from applying, all relevant objectives and policies of the Proposed Plan become relevant. This includes the Natural Open Space Zone provisions (among others).

3.6 For the reasons set out in my evidence for Hearing Stream 8, it is important in my view for the Natural and Open Space Zone to include objectives and policies that recognise the importance of the Moa Point Seawall in what is otherwise a poorly fitting land use zone for this area. It is for this reason that I do not support the section 42A reporting officer’s recommendation to remove the Moa Point Seawall related objective and policy from the Natural Open Space Zone.

3.7 Alternatively, if the Infrastructure introduction is updated to reflect that the provisions (i.e. the objectives, policies and methods) of the wider plan do not apply, then the need for policy recognition within the Natural and Open Space Zone diminishes. I have previously proffered drafting around these amendments as part of my Hearing Stream 9⁵ evidence and therefore do not repeat here.

4. DEFINITIONS - UPGRADING AND REGIONALLY SIGNIFICANT INFRASTRUCTURE

Upgrading

4.1 WIAL filed a submission in opposition to the definition of the term “upgrading” as notified, citing that the definition requires broadening to encapsulate the range of activities that are involved with the upgrade of infrastructure.⁶

4.2 The section 42A reporting officer has recommended rejecting WIAL’s submission, noting (my paraphrasing):⁷

4.2.1 While standardisation of definitions between the plans prepared under the RMA is beneficial, there is a nuance between them that can mean a definition used in one plan may not be appropriate in another.

4.2.2 The Proposed Plan definition of upgrade can achieve the same outcome as the Proposed RPS and Natural Resources Plan (“NRP”) definition of “upgrade” and “extension” without exact replication of the definitions. Additionally, there does not appear to be any apparent need for the Proposed Plan to treat upgrades and extensions separately. The key test is in the section 42A reporting officer’s view is whether the piece of infrastructure exists or is new.

⁵ Appendix A, Statement of Evidence of Kirsty O’Sullivan, dated 27 May 2024.

⁶ Submission 406.45 and 46.

⁷ Paragraphs 58 to 64, Wrap Up Hearing section 42A report, dated 15 October 2024.

- 4.2.3 Aligning the definition with the NRP definition could result in misalignment with certain standards of the Proposed Plan that provide a permitted envelope for some works.
- 4.2.4 While one option would be to include a new definition for extensions to infrastructure and subsequent references within the rules, this approach is unnecessarily complicated.
- 4.3 I acknowledge the section 42A reporting officer’s response and agree, that at times there can be a local nuance that means that it is difficult or sometimes inappropriate to duplicate definitions across regional and district planning documents. As identified in my Hearing Stream 11 (Indigenous Biodiversity) evidence, there are also nuances within the regional policy and planning documents that need to be carefully considered when promulgating District Planning provisions. While I do not intend to revisit those matters, for the purposes of this hearing, I note that:
- 4.3.1 As currently drafted, the Proposed Plan definition of “upgrading” excludes renewals. The ordinary dictionary definition of “renewal” usually connotes stating again. The imminent works on the Southern Seawall Renewal Project therefore could be considered to be included within the definition of a “renewal” as they are being completely replaced (although not replicated). This could well preclude the works from being considered “upgrades” and the project would be considered “new” infrastructure in the Proposed Plan, despite the Seawalls already being existing. This would preclude the project from benefiting from engaging the upgrading specific INF-ECO policy, as discussed further below.
- 4.3.2 The NRP and Proposed RPS include provisions (both policies and methods) that apply to the upgrading and extension of existing regionally significant infrastructure. Importantly, these provisions provide regionally significant infrastructure providers within the Wellington Region the opportunity to potentially “thread the needle”

insofar as Policy 11(a) and (b) and Policy 6 of the New Zealand Coastal Policy Statement (“NZCPS”) is concerned.

4.3.3 In response to my Hearing Stream 11 evidence around the need to ensure this pathway remains available in the Proposed Plan, the section 42A reporting officer for that hearing stream put forward some preliminary revised drafting for INF-ECO-P34.⁸ While that drafting goes some way to addressing the concerns raised in my Hearing Stream 11 evidence, the revised policy only maintains the pathway for “upgrades to existing regionally significant infrastructure”.

4.3.4 An inconsistency therefore arises between the regional and district plan, whereby the Southern (and future Western) Seawall Renewal Project is provided with a pathway to address and navigate NZCPS Policy 11(a) and (b) where it falls within the CMA, but not landward of that point. In the context of a seawall which straddles the CMA and “land”, this inconsistency results in a particularly difficult and inconsistent consenting environment.

4.4 While I do not have any particular difficulty with the Proposed Plan adopting a different definition to the NRP, I do have difficulty with this approach when it results in inconsistent application of the policy framework. In my view, a reasonably easy ‘fix’ for this is to remove the exclusion for renewals from the definition of “upgrading”. As shown below:

Upgrading: as it applies to infrastructure, means the improvement or increase in carrying capacity, operational efficiency, security or safety of existing infrastructure, but excludes maintenance and repair and renewal.

4.5 I acknowledge that there may be other alternative approaches available to address the concerns set out above and in my evidence for Hearing Stream 11

⁸ Paragraphs 88 to 99, Supplementary statement of planning evidence of Adam McCutcheon, dated 3 September 2024.

and anticipate that these may be presented in the Council’s Right of Reply for that hearing stream at a later date.

Regionally Significant Infrastructure

4.6 WIAL supported the notified definition of “regionally significant infrastructure” insofar as it relates to the Airport, citing that the definition is consistent with the RPS.⁹

4.7 The section 42A reporting officer notes that the Proposed Plan definition essentially relies on the Proposed RPS definition and acknowledges that the consistency between the Proposed RPS and the district plan definitions of regionally significant infrastructure was emphasized by submitters during Hearing Streams 1 and 9.¹⁰ The section 42A reporting officer then goes on to state that:

In my opinion the definition of RSI does not need to provide an endless list of all components of each subset of infrastructure and additional detail should be included where there is an existing gap or lack of clarity.

4.8 As the Panel will be aware, there has been some debate during the Proposed Plan review process regarding whether or not the Moa Point Seawall comprises “infrastructure”. Initially, the section 42A reporting officer for Hearing Stream 9 reached the view it was not, however changed his view in light of the Proposed RPS Right of Reply where substantial changes were made to the definition of regionally significant infrastructure insofar as it relates to the Airport.

4.9 In my view, given that this matter has previously been the subject of debate, the definition (insofar as it relates to the Airport) is one area where clarity is justified. It will also avoid future potential questions around why some elements of the regionally significant infrastructure definition mimic the Proposed RPS verbatim, while others do not, and whether that inconsistency was an intentional and material omission, or simply a stylistic decision.

⁹ Submission 406.419.

¹⁰ Paragraphs 136 and 137, Wrap Up Hearing section 42A report, dated 15 October 2024.

4.10 I therefore consider that, for the sake of consistency, the regionally significant infrastructure definition should be updated to account for the full Proposed RPS definition of regionally significant infrastructure (insofar as it relates to WIAL) as follows:

Means regionally significant infrastructure including:

....

j. Wellington International Airport including infrastructure and any buildings, installations, and equipment required to operate, maintain, upgrade and develop the airport located on, or adjacent to, land and water used in connection with the airport. This includes infrastructure, buildings, installations and equipment not located on airport land;

4.11 In my opinion, the above amendment will ensure the provisions relating to the Airport are applied consistently, leading to efficient plan implementation and administration, as well as effective implementation of the policy outcomes sought relating to regionally significant infrastructure.

5. BIRD STRIKE MANAGEMENT

5.1 WIAL filed submissions seeking that the Proposed Plan establish a bespoke framework for the management of bird strike risk at the Airport.¹¹

5.2 In response to this submission, a Minute was issued (Minute 57) which directed WIAL to provide further information regarding its proposed bird strike management framework.¹² This information was provided to the panel on 17th September 2024.

5.3 In summary, the proposed framework:

¹¹ Submission 406.11.

¹² Specifically, the proposed provisions, an associated map, a section 32AA evaluation and a section 77J evaluation (if required) were requested.

- 5.3.1 Draws policy direction from proposed INF-O3 and INF-P7, as recommended by the section 42A reporting officer for Hearing Stream 9;
- 5.3.2 Introduces a new definition for “Bird Strike Risk Activity”;
- 5.3.3 Establishes a rule cascade, whereby bird strike risk activities” are:
 - 5.3.3.1 A permitted activity between 3km to 8km from the Airport subject to a Bird Strike Management Plan being in place;
 - 5.3.3.2 A restricted discretionary within 3km of the Airport; and
 - 5.3.3.3 A discretionary activity where the activity is a landfill within 13km of the Airport.
- 5.4 In response to WIAL’s submission, the section 42A reporting officer has indicated that insufficient evidence has been provided to demonstrate the potential adverse effects of bird strike in Wellington to justify the proposed land use planning response.¹³
- 5.5 As set out by Mr Howarth and Dr Anderson, bird strike is a significant safety risk which requires diligent management. Part of this management requires WIAL to work with local government and surrounding landowners to ensure the effective maintenance of a safe operating environment for aircraft using the Airport. This includes both working to minimise potential bird strike risks both within and beyond the airport environs.
- 5.6 Furthermore, Civil Aviation Authority (“CAA”) regulation 139.71 requires aerodrome operators to have an environmental management programme for minimising or eliminating wildlife hazard.
- 5.7 Mr Howarth demonstrates the measures that WIAL applies to manage potential bird strike risks at and surrounding the Airport. The difficulty, as I understand it,

¹³ Paragraph 45, Wrap Up Hearing section 42A report, dated 15 October 2024.

is that beyond WIAL's landholdings, these measures are largely implemented by the community through goodwill. There is no requirement for a landowner to manage the effects that increase the risk of bird strike. Should a scenario arise in the future whereby a landowner does not wish to manage land use activities with a high propensity to attract birds in a way that is compatible with aircraft operations, WIAL really has no ability to address the issue. This is a risk to the safety of aircraft, passengers and their crew as well as the community should the worst happen.

- 5.8 WIAL applies the Allan Risk Assessment Method to identify wildlife species risk severity.¹⁴ This matrix considers the probability / likelihood of an incident per year and the consequence of a strike. Applying this assessment tool, it is notable that WIAL's risk classification for SBBG is "extreme" due to a combination of the likelihood of an incident in any given year and the potential consequence that could result due to the size of such birds. The other key species within the Wellington area (geese species, spur winged plover, rock pigeons and mallards) are ascribed a "high" risk classification.
- 5.9 For each of the five top risk species for WIAL, Dr Anderson has identified the types of features that comprise an attractant for those species. The key identified attractants generally correlate with the activities included in the definition of "bird strike risk activity". Notably, this definition is a further refined list to that included in the CAA guidance material and has been tailored to specifically relate to the Wellington context.
- 5.10 While I acknowledge that the size of the management areas proposed by WIAL is reasonably significant, it is founded on regulatory guidance. It also reflects the range of the key bird species present and is similar to the way Christchurch International Airport manages bird strike risk (as discussed later in my statement of evidence).

¹⁴ Refer to Dr Anderson's evidence for further detail.

- 5.11 It is important to note, in my view, the proposed management areas will not generally preclude bird strike risk activities from establishing within the defined area, only it requires potential developers to carefully consider how their activity might generate bird presence and requires that they employ suitable tools to manage bird strike risk on an ongoing basis.
- 5.12 WIAL's involvement in Wellington City Council's Sludge Minimisation Project, Southern Landfill Extension and Miramar Golf Course redevelopment are recent examples of how such activities can be managed to minimise bird strike risk.
- 5.13 It is also important to note that for the most part, bird strike risk activities will require resource consent under the Proposed Plan zone provisions as a discretionary or non-complying activity in any event.
- 5.14 WIAL's proposed provisions are therefore not the only consent trigger for such activities. Given this activity status, I have turned my mind to whether the existing incompatible land use activity policy (INF-P7) or an alternative bird strike management policy could also effectively address the concerns raised by WIAL. While I reached the view that they could (and note this is the approach that has been settled recently in the Selwyn District, but with associated assessment matters), I am concerned that without elevating the matter through rules, bird strike management may be overlooked.
- 5.15 In my view, WIAL's proposed provisions are an effective and efficient way to assist WIAL to manage its obligations under relevant CAA guidance insofar as bird strike is concerned. The approach is founded on those bird species that pose highest risk. The associated definition of bird strike risk activity also reflects this. This should go some way to addressing the section 42A reporting officer's request that WIAL provide evidence confirming that in a New Zealand / Wellington context, these listed activities have a greater potential than most other activities to increase bird strike hazard.¹⁵

¹⁵ Paragraph 49(e), Wrap Up Hearing section 42A report, dated 15 October 2024.

- 5.16 While I acknowledge that there are a range of other activities that may increase bird strike hazard at a more granular level (for example, the placement of rubbish bins, the types of plant species used in a development, the use of land for agricultural purposes), it is not practical for a District Plan to seek to manage every potential bird attracting activity. The proposed approach therefore focuses on the key attractants as an efficient and effective way of reducing any potential increase in bird strike risk.
- 5.17 Managing birds in this way will also ensure that the safety, operation and functionality of the airport is protected from incompatible land use and development – an outcome that is consistent with Policy 8 of the RPS.
- 5.18 I have also considered whether the listed “bird strike risk activities” require further definition in the Proposed Plan, as per the section 42A reporting officer’s request.¹⁶
- 5.19 Having reviewed the list of activities, I do not consider that these activities require further definition. In my view, their plain dictionary meaning should be sufficient for plan users to ascertain whether or not their activity comprises a “bird strike risk activity”. I note that a number of the terms are either fully¹⁷ or partially defined¹⁸ in the Proposed Plan or are already identified as a subset of another activity type¹⁹ without further definition.
- 5.20 I also note the section 42A reporting officer’s request that further consideration of the detail required to be included in the Bird Strike Management Plan and how Council would determine (if required to) whether a submitted plan is of an appropriate standard (noting that there is no proposed requirement to obtain Council’s approval of a submitted Bird Strike Management Plan to be considered permitted, simply that one is provided).²⁰

¹⁶ Paragraph 49(e), Wrap Up Hearing section 42A report, dated 15 October 2024.

¹⁷ For example, landfill.

¹⁸ For example, sewage.

¹⁹ For example, abattoir, waste management facility and composting facility are all subsets of a “heavy industrial activity”.

²⁰ Paragraph 49(f), Wrap Up Hearing section 42A report, dated 15 October 2024.

5.21 I acknowledge the section 42A reporting officer’s comments. While a similar rule structure has been sought by another airport with respect to such matters, I recognise that the method may be difficult to administer, as plan users would not know what the Bird Strike Management Plan needs to include until it consults with WIAL. Furthermore, if there were disagreement as to what it should contain, there is limited recourse for WIAL (or the Council) as all that is required is for the plan to be prepared “in consultation with” WIAL.

5.22 In light of the above, I have reconsidered this method and consider that all bird strike risk activities (excluding landfills) within an 8km radius should require resource consent as a restricted discretionary activity, as set out below. While I acknowledge this departs from the permitted activity approach for activities in the 3km to 8km radius, as previously discussed, all of the defined bird strike risk activities will most likely require resource consent as a discretionary or non-complying activity under other rules of the Proposed Plan in any case.

INF-R25	Bird strike
All Zones	<p>1. Activity status: Permitted</p> <p>Where:</p> <p>Any Bird Strike Risk Activity is proposed between a 3km and 8km radius of the thresholds of the runways at Wellington International Airport (as shown on the planning maps), a birdstrike management plan (BSMP) prepared in consultation with WIAL has been provided to the Wellington City Council Planning Manager prior to the activity establishing and accepted (within 10 days of receipt).</p> <p>An updated plan shall be provided to the Wellington City Council if the activity expands.</p>
All zones	<p>Activity status: Restricted Discretionary</p> <p>Where:</p> <p>Any Bird Strike Risk Activity is proposed within an 3km to 8km radius of the thresholds of the runways at Wellington International Airport (as shown on the planning maps); or</p> <p>Compliance with INF-R25(1) cannot be achieved; or</p> <p>The matters of discretion are:</p>

		<ol style="list-style-type: none"> 1. <u>The extent to which the proposed activity will be designed, operated and managed to avoid attracting bird species which constitute a hazard to aircraft.</u> 2. <u>Whether a bird management plan has been prepared by a suitably qualified ornithologist that describes how the activities will be managed on site to minimise potential bird strike risk at Wellington International Airport, and whether consultation has been undertaken with the Airport Authority and feedback integrated into the bird management plan;</u> 3. <u>The matter set out in INF-P7.</u>
	<p><u>All other Zones</u></p>	<ol style="list-style-type: none"> 2. Activity status: Discretionary <p><u>Where:</u></p> <ol style="list-style-type: none"> 1. <u>The Bird Strike Risk Activity is a landfill proposed within a 13km radius of the thresholds of the runways at Wellington International Airport, as shown on the planning maps.</u>

5.23 While for the most part, the section 32AA evaluation provided on the 17th September 2024 is still relevant insofar as this drafting amendment is concerned, the key difference is the revised approach will ensure clear and consistent administration of the bird strike provisions. While an additional cost will arise from the introduction of a new consenting requirement for bird strike risk activities within a 3 to 8km radius of the Airport, as previously noted, such activities are likely to require consent in any case.

Comparison to other Airports

5.24 I note that the section 42A reporting officer has drawn attention to three other plan review processes which “*illustrates how the broad approach to the management of bird strike hazard proposed by WIAL may not be appropriate in the New Zealand context*”.²¹

5.25 While ultimately, the Panel will need to be satisfied that the provisions are necessary in a Wellington context irrespective of the approach undertaken in

²¹ Paragraph 49, Wrap Up Hearing section 42A report, dated 15 October 2024.

other areas of New Zealand, I can provide some insight into the three examples noted by the section 42A reporting officer.

5.26 My firm assists Christchurch International Airport Limited (“CIAL”) with respect to Plan matters. CIAL maintains an active participatory interest in the Christchurch City Plan, the Selwyn District Plan and the Waimakariri District Plan. CIAL has sought the inclusion of bird strike provisions similar to the ones I discuss above in all three of these Plans.

5.27 To assist the panel, I note:

5.27.1 The Operative Christchurch City Plan includes a broadly framed objective²² and associated policies²³ that seek to manage the risk of bird strike. Associated methods relate to management of fish processing or packing plants, abattoirs or freezing works, stormwater basins, water bodies and landfills within 3km of the runway thresholds at the Airport. A copy of the relevant provisions is attached as **Appendix A** for ease of reference.

5.27.2 The Proposed Selwyn District Plan is currently subject to appeal. This includes an appeal by CIAL relating to the inclusion of bird strike management provisions. I understand that this appeal has recently been resolved through mediation. It has been agreed by the parties to that appeal to include in the Selwyn Plan suitable bird strike provisions.

5.27.3 Submissions on the Proposed Waimakariri District Plan are currently being heard. CIAL has sought the inclusion of bird strike provisions similar to those originally forward by WIAL. No decision has yet been made on CIAL’s submission in that regard.

5.28 I also note that other plans, such as the Queenstown Lakes District Plan, include consideration of bird strike management with respect to activities such

²² Objective 6.7.2.1.

²³ Policy 6.7.2.1.2-3.

as water and irrigation races, stormwater ponds and wetlands and earthworks.²⁴

5.29 Given that two out of three plan review processes identified by the section 42A reporting officer include (or will soon include) bird strike management provisions, and one is still being considered through the hearings process, I am unclear how these processes demonstrate how the management approach proposed by WIAL may be inappropriate in the New Zealand context.

5.30 Rather, these processes show that inclusion of bird strike management provisions in District Plans is not without precedent and that local variations can be accommodated based on the types of land use and bird species present.

6. CONCLUSION

6.1 The scope of WIAL's submissions for the Wrap Up hearing relate to three primary matters:

6.1.1 Reconciliation of the Moa Point Seawall provisions

6.1.2 The definitions of "upgrading" and "regionally significant infrastructure"; and

6.1.3 The establishment of a new planning framework to manage the potential for incompatible land use activities to give rise to an increase in bird strike risk at the Airport.

6.2 While for the most part I support the section 42A reporting officer's recommendation (for both the Wrap Up hearing and Hearing Stream 9) that the Moa Point Seawalls comprise "infrastructure" for the purposes of the Proposed Plan, I have identified some further drafting amendments that are necessary to ensure the reconciliation process continues to provide a consenting pathway for the imminent Southern Seawall Renewal Project. It is for this reason that I

²⁴ Rule 30.5.1.13, Queenstown Lakes District Plan.

have also recommended further amendments to the definitions of “upgrading” and “regionally significant infrastructure”.

6.3 With respect to bird strike management, Mr Howarth and Dr Anderson have provided detail around the significant safety issue that bird strike poses for aircraft, passengers and their crew, as well as the wider community. While such risks require careful and diligent management, WIAL has limited tools to manage such risk off-site. The proposed new bird strike management provisions will ensure that WIAL can continue to effectively manage bird strike risk and to maintain safety of aircraft, passengers and crew and the wider community, while still ensuring a pathway is available for “bird strike risk activities” to establish in appropriate areas throughout the District.

Kirsty O’Sullivan

23 October 2024

APPENDIX A

Chapter 6 General Rules and Procedures

6.7 Aircraft Protection

6.7.1 Introduction

- a. This introduction is to assist the lay reader to understand how this sub-chapter works and what it applies to. It is not an aid to interpretation in a legal sense.
- b. Sub-chapter 6.7 Aircraft Protection seeks to provide for the protection of aircraft so they can safely and efficiently approach, land, take-off and depart from airports, airfields or helipads. The aircraft protection provisions in the sub-chapter relate to the Christchurch International Airport and the Wigram helipad only.
- c. The objectives, policies, rules and appendices in this sub-chapter provide for aircraft protection in the following forms:
 - i. Aircraft Protection Surfaces for Christchurch International Airport - These are defined surfaces in the airspace above and adjacent to the aerodrome (see [Appendix 6.11.7.1](#) and [6.11.7.2](#)). Activities that protrude through these protection shafts are restricted or prohibited to enable aircraft to maintain a satisfactory level of safety while manoeuvring at low altitude in the vicinity of the aerodrome.
 - ii. Runway End Protection Areas (REPAs) - These relate to four specific areas located at the end of the runways for the Christchurch International Airport (see [Appendix 6.11.7.3](#)). The provisions in the plan seek to avoid activities at the ends of runways that would interfere with the vision of a pilot, or exacerbate the effects of an aircraft accident. For example, the provisions seek to avoid unwanted light sources, the mass assembly of people, most buildings, and the use and storage of hazardous substances.
 - iii. Birdstrike Management Area (within 3 km of the thresholds of the runways at Christchurch International Airport) and new landfills - Activities that have the potential to attract birds are managed within a defined radius of Christchurch International Airport, to avoid or mitigate the potential for increased risk of birdstrike on aircraft taking off and landing (see [Appendix 6.11.7.5](#) for the extent of this area). Examples of activities the provisions seek to manage include the creation of new water bodies, fish processing plants and abattoirs within the Birdstrike Management Area, and new landfills within Christchurch District excluding Banks Peninsula Ward.
 - iv. Protection Surfaces for Defence Wigram - These relate to two defined surfaces located in the airspace above and adjacent to the Wigram helipad (see [Appendix 6.11.7.6](#)). The provisions in the plan seek to avoid activities that would protrude through these protection shafts to enable helicopters to maintain a satisfactory level of safety while manoeuvring at low altitude in the vicinity of the helipad.
- d. The provisions in this sub-chapter give effect to the [Chapter 3 Strategic Directions Objectives](#).

6.7.2 Objectives and Policies

6.7.2.1 Objective - Safe and efficient aircraft operation

- a. Aircraft are able to safely and efficiently approach, land, take-off and depart from airports, airfields or helipads.

6.7.2.1.1 Policy - Avoidance of physical obstructions

- a. Avoid physical obstructions that are not essential to aircraft operations in take-off, approach, landing or departure paths and in Runway End Protection Areas (REPAs).

6.7.2.1.2 Policy - Avoidance or mitigation of navigational or operational impediments

- a. Avoid or mitigate the potential effects of activities that could interfere with the safe navigation and control of aircraft, including activities that could interfere with visibility or increase the possibility of birdstrike.

6.7.2.1.3 Policy - Risk minimisation

- a. Avoid or mitigate activities at the ends of runways that would exacerbate the effects of an aircraft accident.

6.7.3 How to interpret and apply the rules

- a. The rules that apply to activities within the areas covered by Christchurch International Airport's Protection Surfaces, Runway End Protection Areas (REPAs) and Birdstrike Management Area, and to landfills within Christchurch District excluding Banks Peninsula Ward, are contained in the activity status tables (including activity specific standards) in Rules [6.7.4.1](#), [6.7.4.2](#) and [6.7.4.3](#).
- b. The rules that apply to activities within the areas covered by Defence Wigram's Protection Surfaces are contained in the activity status tables (including activity specific standards) in [Rule 6.7.5.1](#).

- c. Activities within the areas covered by Christchurch International Airport’s Protection Surfaces, Runway End Protection Areas (REPAs) and Birdstrike Management Area (and landfills within Christchurch District excluding Banks Peninsula Ward) , and Defence Wigram’s Protection Surfaces, are also subject to the rules in the relevant zone chapters.
- d. The activity status tables, rules and standards in the following chapters also apply to activities within the areas covered by Christchurch International Airport’s Protection Surfaces, Runway End Protection Areas (REPAs) and Birdstrike Management Areas (and landfills within Christchurch District excluding Banks Peninsula Ward) , and Defence Wigram’s Protection Surfaces, (where relevant):

- 4 Hazardous Substances and Contaminated Land;
- 5 Natural Hazards
- 6 The other sub-chapters of General Rules and Procedures;
- 7 Transport;
- 8 Subdivision, Development and Earthworks;
- 9 Natural and Cultural Heritage; and
- 11 Utilities and Energy.

- e. The Resource Management (National Environmental Standards for Electricity Transmission Activities) Regulations 2009 (NESETA) contain a separate code of rules for the operation, maintenance, upgrading, relocation or removal of National Grid transmission lines existing on 14 January 2010. The Regulations in the NESETA apply where such works penetrate the protection surfaces set out in Rule 6.7.4.4 and would otherwise be prohibited by Rule 6.7.4.1.6 (PR1).

6.7.4 Rules - Christchurch International Airport

6.7.4.1 Activity status tables - Protection Surfaces

6.7.4.1.1 Permitted activities

- a. Within the areas covered by Christchurch International Airport’s Protection Surfaces as specified in Rule 6.7.4.4 and shown on the diagrams in Appendix 6.11.7.1 and 6.11.7.2, the activities listed below are permitted activities.
- b. Activities may be controlled, restricted discretionary, discretionary, non-complying or prohibited as specified in Rules 6.7.4.1.2, 6.7.4.1.3, 6.7.4.1.4, 6.7.4.1.5 and 6.7.4.1.6.

Activity		Activity Specific Standards
P1	Any activity not specifically provided for as a restricted discretionary or prohibited activity in Rules 6.7.4.1.3 or 6.7.4.1.6.	Nil

6.7.4.1.2 Controlled activities

There are no controlled activities.

6.7.4.1.3 Restricted discretionary activities

- a. Within the areas covered by Christchurch International Airport’s Protection Surfaces as specified in Rule 6.7.4.4 and shown on the diagrams in Appendix 6.11.7.1 and 6.11.7.2, the activities listed below are restricted discretionary activities.
- b. Discretion to grant or decline consent and impose conditions is restricted to the matters of discretion set out in the following table.

Activity		The Council's discretion shall be limited to the following matters
RD1	<ul style="list-style-type: none"> a. Any alteration, relocation or replacement of a tower of a National Grid transmission line existing on 14 January 2010 that penetrates the Protection Surfaces. b. Any application arising from this rule shall not be publicly notified or shall be limited notified only to Christchurch International Airport Limited and the Director of the Civil Aviation Authority (absent their written approval). 	<ul style="list-style-type: none"> a. The extent to which any adverse effects on navigable airspace, representing a hazard to the safety or regularity of aircraft operations , are avoided or mitigated. b. The adequacy of consideration of possible alternatives.

6.7.4.1.4 Discretionary activities

There are no discretionary activities.

6.7.4.1.5 Non-complying activities

There are no non-complying activities.

6.7.4.1.6 Prohibited activities

- a. Within the areas covered by Christchurch International Airport's Protection Surfaces as specified in [Rule 6.7.4.4](#) and shown on the diagrams in [Appendix 6.11.7.1](#) and [6.11.7.2](#), the activities listed below are prohibited activities.

Activity	
PR1	<p>Any part of a building, structure, tree or utility that penetrates the Protection Surfaces (other than provided for by Rule 6.7.4.1.3 RD1), except for:</p> <ul style="list-style-type: none"> a. navigational aids for aircraft; and b. maintenance or repair works on any existing building, structure or utility, including minor upgrading of existing support structures for transmission lines or electricity distribution lines where this does not increase the height or external envelope of the utility.

6.7.4.2 Activity status tables - Runway End Protection Areas

6.7.4.2.1 Permitted activities

- a. Within the Runway End Protection Areas (REPAs) as shown in [Appendix 6.11.7.3](#), the activities listed below are permitted activities.
- b. Activities may be controlled, restricted discretionary, discretionary, non-complying or prohibited as specified in [Rules 6.7.4.2.2](#), [6.7.4.2.3](#), [6.7.4.2.4](#), [6.7.4.2.5](#) and [6.7.4.2.6](#).

Activity		Activity specific standards
P1	Any activity not specifically provided for as a prohibited activity in Rule 6.7.4.2.6 .	Nil

6.7.4.2.2 Controlled activities

There are no controlled activities.

6.7.4.2.3 Restricted discretionary activities

There are no restricted discretionary activities.

6.7.4.2.4 Discretionary activities

There are no discretionary activities.

6.7.4.2.5 Non-complying activities

There are no non-complying activities.

6.7.4.2.6 Prohibited activities

- a. Within the Runway End Protection Areas (REPAs) as shown in [Appendix 6.11.7.3](#), the activities listed below are prohibited activities.

Activity	
PR1	Any building or utility, excluding: <ul style="list-style-type: none"> a. navigational aids for aircraft; b. structures associated with upgrades for State Highway 1; c. maintenance or repair works on any existing building or utility; d. enclosed walkways associated with vehicle parking areas which are no greater than 2.4 metres in height and 1.8 metres in width; and e. the establishment or replacement of any underground utility.
PR2	Mass assembly of people.
PR3	The use or storage of hazardous substances in fuel storage facilities or for other industrial or commercial operations.
PR4	Production of direct light beams or reflective glare that could interfere with the vision of a pilot excluding: <ul style="list-style-type: none"> a. normal operational reflection from glass and mirrors used in motor vehicles; and b. normal operational light from motor vehicles. <p>Advice note:</p> <ol style="list-style-type: none"> 1. Refer also to Rule 6.3.4.5 with regard to rules applying to outdoor lighting within 500 metres of the threshold of a runway at Christchurch International Airport.

6.7.4.3 Activity status tables - Birdstrike Management Areas

6.7.4.3.1 Permitted activities

- a. In the Birdstrike Management Area (within 3 km of the thresholds of the runways at Christchurch International Airport) as shown in [Appendix 6.11.7.5](#), the activities listed below are permitted activities if they meet the activity specific standards set out in the following table.
- b. Activities may be controlled, restricted discretionary, discretionary, non-complying or prohibited as specified in Rules [6.7.4.3.2](#), [6.7.4.3.3](#), [6.7.4.3.4](#), [6.7.4.3.5](#), and [6.7.4.3.6](#).

Activity		Activity specific standards
P1	Any activity not specifically provided for as a permitted, controlled, restricted discretionary or discretionary activity in Rules 6.7.4.3.1 - 6.7.4.3.6.	Nil
P2	Fish processing or packing plants, abattoirs or freezing works.	<ul style="list-style-type: none"> a. Storage, processing and disposal of all organic material takes place within enclosed buildings. b. There is no disposal of effluent onto land associated with the plant or works.
P3	<p>Creation of a new:</p> <ul style="list-style-type: none"> a. stormwater basin; or b. water body (including wastewater oxidation pond) which exceeds 500m² in area. <p>Except that This rule does not apply to any area of a water body covered by an aviary/s.</p>	<ul style="list-style-type: none"> a. The combined area of all stormwater basins and/or water bodies, that are wholly or partly within 0.5km of the proposed water body or stormwater basin's edge, shall not exceed 1000m². b. Any stormwater basin has been designed by a suitably qualified person, with experience in stormwater management systems, to the following standards: <ul style="list-style-type: none"> i. Stormwater infiltration basins shall be designed to fully drain within 48 hours of the cessation of a 2% AEP storm event; ii. Sufficient rapid soakage overflow capacity shall be provided to minimise any ponding of stormwater outside the infiltration area(s); and iii. Plant species used shall be limited to those listed in Appendix 6.11.9. c. Any water body has been designed by a suitably qualified person, with experience in stormwater management systems, to the following standards: <ul style="list-style-type: none"> i. Side slopes shall be at least as steep as 1H:4V except for: <ul style="list-style-type: none"> A. any side slope treated with rock armouring; or B. any area required for vehicle access, provided that such access has a gradient of at least 8H:1V: ii. No permanent island features shall be included, that could provide perching sites for birds; and iii. Plant species used shall be limited to those listed in Appendix 6.11.9.

6.7.4.3.2 Controlled activities

- a. In the Birdstrike Management Area (within 3 km of the thresholds of the runways at Christchurch International Airport) as shown in [Appendix 6.11.7.5](#), the activities listed below are controlled activities.

Activity		The matters over which Council reserves its control:
C1	<ul style="list-style-type: none"> a. Any activity listed in Rule 6.7.4.3.1 P2 that does not meet one or more of the activity specific standards. b. Applications must be accompanied by a birdstrike risk assessment from a qualified and experienced ornithologist, and that assessment must include recommendations for appropriate conditions for mitigation of birdstrike risk. 	<ul style="list-style-type: none"> a. Mitigation of birdstrike risk, including by design measures and operation or management procedures.

6.7.4.3.3 Restricted discretionary activities

- a. In the Birdstrike Management Area (within 3 km of the thresholds of the runways at Christchurch International Airport) as shown in [Appendix 6.11.7.5](#), the activities listed below are restricted discretionary activities.
- b. Discretion to grant or decline consent and impose conditions is restricted to the matters of discretion, as set out in the following table.

Activity		The Council's discretion shall be limited to the following matters
RD1	Any activity listed in Rule 6.7.4.3.2 C1 , where the application is not accompanied by the required birdstrike risk assessment.	<ul style="list-style-type: none"> a. Scale and significance of birdstrike risk likely to be created at the location proposed. b. Mitigation of birdstrike risk including by design measures, operation or management procedures, direct intervention practices and monitoring
RD2	Any activity listed in Rule 6.7.4.3.1 P3 that does not meet one or more of the activity specific standards.	

6.7.4.3.4 Discretionary activities

- a. The activities listed below are discretionary activities.

Activity	
D1	New landfills, excluding cleanfills, within Christchurch District excluding Banks Peninsula Ward (as shown in Appendix 2.1).

6.7.4.3.5 Non-complying activities

There are no non-complying activities.

6.7.4.3.6 Prohibited activities

There are no prohibited activities.

6.7.4.4 Protection Surfaces for Christchurch International Airport

- a. General explanation
 - i. The environs of Christchurch International Airport are protected by a series of protection surfaces - defined surfaces in the airspace above and adjacent to the aerodrome (see [Figure 6.7.1](#) below and [Appendix 6.11.7.1](#) and [6.11.7.2](#)).
 - ii. These protection surfaces are necessary to enable aircraft to maintain a satisfactory level of safety while manoeuvring at low altitude in the vicinity of the aerodrome.

- iii. These surfaces are in accordance with the Civil Aviation Authority of New Zealand Rule Part 139 Appendix E with surface dimensions as noted in Advisory Circular 139-6 (AC 139-6).

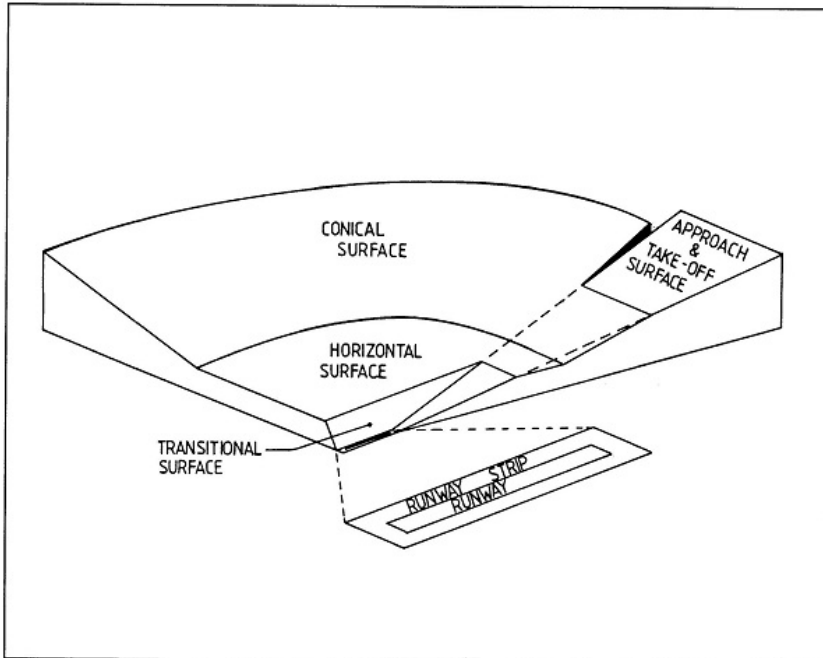


Figure 6.7.1: Illustration of categories of airport protection surfaces. From Civil Aviation Authority Advisory Circular Aerodrome Design AC139-6 Revision 4 (2011) p.55.

- b. Horizontal surface for Christchurch International Airport
- i. The horizontal surface consists of a surface located in a horizontal plane above the aerodrome and its environs and having its outer limits at a locus of 4000 metres measured from the periphery of the runway strip.
 - ii. The inner horizontal surface is located 83 metres AMSL (45 metres above the aerodrome elevation datum (RL 38.00 AMSL)).
- c. Conical surface for Christchurch International Airport
- i. The conical surface is a surface sloping upwards and outwards from the periphery of the horizontal surface.
 - ii. The lower edge is coincident with the periphery of the horizontal surface and rises upwards and outwards at a gradient of 1:20 to an elevation of 150 metres above the aerodrome datum level (RL 38.00 AMSL).
 - iii. The slope is measured in a vertical plane perpendicular to the periphery of the horizontal surface i.e. 5%.
- d. Approach surfaces for Christchurch International Airport
- i. Each runway has an inclined approach surface. The approach path is located within a defined area called the approach fan.
 - ii. The origin of the approach fan is an inclined plane originating at the end of the strip. The coordinates of the centre-line of the strip are shown in [Appendix 6.11.7.1](#).
 - iii. The fan is essentially a truncated triangle with a cut-off apex line called the inner edge. The width of this inner edge is 300 metres.
 - iv. The expanding sides of the approach fan diverge at a constant rate of 1:6.6 (15%, 8° 31'51") related to the distance from the end of the strip, and extend to a distance of 15,000 metres from the origin except that at any point on the Port Hills where the distance between the ground and the protection surface is less than 10m, the protection surface will be assumed to be at 10 metres.
 - v. The elevation of the inner edge of the approach fan is equal to the elevation of the midpoint of the threshold.
 - vi. The slope of the approach surface is 1:50 (2%, 1° 8' 45") and is measured in the vertical plane containing the centre line of the runway.
- e. Transitional surfaces for Christchurch International Airport
- i. Transitional surfaces originate along the side of the strip and part of the side of the approach surface that slopes upwards and outwards to the horizontal surface.
 - ii. From the sides of the strip and the approach surfaces, the transitional surfaces slope upwards and outwards at a gradient of 1:7, extending until they reach the horizontal surface.

f. Take-off surfaces for Christchurch International Airport

- i. Each runway has a take-off surface. The take-off path is located within a defined area called the take-off fan which originates from the end of the runway strip.
- ii. The take-off fan is essentially a truncated triangle with the cut-off apex line called the inner edge. The width of this inner edge is 180 metres. The distance from the inner edge to the runway ends is:

Runway end 02 (north)	432 metres
Runway end 11 (east)	60 metres
Runway end 20 (south)	60 metres
Runway end 29 (west)	300 metres

- iii. The expanding sides of the take-off fan diverge at a constant rate of 1:8 (12.5%, 7° 07' 30") related to the distance from the origin. It expands to a maximum width of 1,200 metres and then the sides remain parallel for a distance of 15,000 metres except that at any point on the Port Hills where the distance between the ground and the protection surface is less than 10 metres, the protection surface will be assumed to be at 10 metres.
- iv. The elevation of the inner edge of the take-off fan is equal to the elevation of the midpoint of the threshold.
- v. The slope of the take-off climb is 1:62.5 (1.6%) and is measured in the vertical plane containing the centre line of the runway.

6.7.5 Rules - Defence Wigram

6.7.5.1 Activity status tables - Protection surfaces

6.7.5.1.1 Permitted activities

- a. Within the areas covered by the Defence Wigram Protection Surfaces as specified in Rule 6.7.5.2 and shown on the diagrams in Appendix 6.11.7.6, the activities listed below are permitted activities.
- b. Activities may be controlled, restricted discretionary, discretionary, non-complying or prohibited as specified in Rules 6.7.5.1.2, 6.7.5.1.3, 6.7.5.1.4, 6.7.5.1.5 and 6.7.5.1.6.

Activity		Activity Specific Standards
P1	Any activity not specifically provided for as a prohibited activity in Rule 6.7.5.1.2 - 6.7.5.1.6	Nil

6.7.5.1.2 Controlled activities

There are no controlled activities.

6.7.5.1.3 Restricted discretionary activities

There are no restricted discretionary activities.

6.7.5.1.4 Discretionary activities

There are no discretionary activities.

6.7.5.1.5 Non-complying activities

There are no non-complying activities.

6.7.5.1.6 Prohibited activities

- a. Within the areas covered by the Defence Wigram Protection Surfaces as specified in Rule 6.7.5.2 and shown on the diagrams in Appendix 6.11.7.6, the activities listed below are prohibited activities.

Activity	
PR1	Any part of a building, utility or tree that penetrates the Protection Surfaces, except for navigational aids for aircraft.

6.7.5.2 Protection Surfaces for Defence Wigram

- a. General explanation
 - i. The environs of the New Zealand Defence Force (NZDF) land at Wigram are protected by two protection surfaces associated with the helipad safety area. The protection surfaces for the NZDF land at Wigram include two inclined approach and take-off climb surfaces with alignments suitable to different conditions (a northwest approach for use in strong northwest winds and a southwest approach that provides for safe operations during the predominant northeast wind).
 - ii. The protection surfaces are defined surfaces in the airspace above and adjacent to the helipad. These protection surfaces are necessary to enable helicopters to maintain a satisfactory level of safety while manoeuvring at low altitude in the vicinity of the helipad.
 - iii. These surfaces are in accordance with the [Civil Aviation Authority of New Zealand Advisory Circular 139-8 \(Revision 2, 2007\)](#), Chapter 4, paragraphs 4.1.1 to 4.1.2.
- b. Approach and take-off climb surfaces for Defence Wigram
 - i. The origin of the approach fans is an inclined plane originating at the edge of the helipad. The fan is essentially a truncated triangle with the cut-off apex line called the inner edge.
 - ii. The elevation of the inner edge of the protection surface is the same as the highest point on the helipad.
 - iii. The slope of the approach protection surfaces rise upwards at 1.8 (12.5%) from the centre edge of the helipad to an elevation of 152.4 metres.

Northwest Approach and Take-off Climb Surface

- i. The expanding sides of the northwest protection surface diverge at a constant rate of 1:6.6 (15% 80 31' 51") from the helipad and extend to a distance of 1225 metres.

Southwest Approach and Take-off Climb Surface

- ii. The southwest protection surface expands outwards at a gradient of 1:10 (day) and 1:6 (night) until it reaches the widths of 114.1 metres (day) and 163 metres (night). Beyond that point the sides extend parallel to a distance of 1225 metres from the helipad.