

## Submissions table – Draft Ōtūkaikino Stormwater Management Plan, June 2023

### Organisations / Businesses

ID	Name - Organisation	Submitter feedback	Staff response to questions or concerns (if applicable)
50946	Jason Middlemiss - Waimāero Fendalton-Waimairi-Harewood Community Board	<p>The Board fully supports the Ōtūkaikino Stormwater Management Plan and thanks staff for all their hard work putting it together.</p> <p>If the Council holds hearings on this consultation, the Board would like to speak.</p> <p>The Board is interested in the discouragement of copper building cladding. Do residents currently know of the environmental risks when using copper as a building material? Perhaps on the council website there could be a list of building materials that highlight the positive and negative environmental impacts – this helps residents be fully informed through the building process and are encouraged to make more environmental friendly decisions.</p> <p>The Board recommends that education should include practical and tangible tips. For example, rather than saying “avoid washing your car on the road” provide a better alternative i.e. “instead, wash your car on the grass” – giving alternative solutions not only educates residents but empowers them to make better decisions.</p> <p>The Board would like more information around what the “flood models and knowledge on flood risks” will involve. For example, how will residents be kept in the loop with this information? Especially those residents impacted by flooding. Is there a specific strategy in place and goals and milestones to reach? Will the impacts on climate change be included in this? More detail would be helpful to understand the breadth on this.</p>	<p>The SMP Team thanks the board for its support.</p> <p>It is likely that a few well-informed residents and professionals know of the environmental risks when copper is used as a building material. The Asset Planning – Stormwater Team has an information brochure in preparation.</p> <p>The Board’s recommendation that education should include practical and tangible tips will be referred to the Community Waterways Partnership programme team.</p> <p>Staff generally view flood models as part of normal business in the same way that wastewater and water supply network models inform design and operation. However, if flood modelling is of special interest the Asset Planning – Stormwater Team could deliver a presentation on request.</p>
50822	John White – Isaac Group Ltd	CCC to give feedback on the goal 1 of "investigation to reduce the environmental effects of sediment discharges – by 2023".	There are investigations under way to better quantify the benefits of street sweeping and catchpit filters in Christchurch.
51132	Christine Hetherington – Boffa Miskell Limited, on behalf of Christchurch International Airport Limited (F Hayman)	<p>(See submission attachment 51132)</p> <p>See attached file</p>	<p>To be answered separately.</p> <p>Paul Dickson has met with the submitter. Each point in the submission has been discussed and Paul has indicated which requests will be incorporated into the SMP. The CIAL is invited to provide bird strike mitigation proposals for inclusion as an appendix to the SMP.</p>

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### Individuals

ID	Name - Organisation	Submitter feedback	Staff response to questions or concerns (if applicable)
51012	Stephen East	Goal six should be prioritized as the most pressing goal. It is absolutely vital that Christchurch's flood management is updated and improved. Half our city was underwater in 2022! With the impacts of climate change only becoming more and more servre our city will be impacted worse than it was after the earthquakes if flood mitigation isn't prioritized. It is the most vital issue for Christchurch.	Flood management is a high priority for the Council and is an activity that the Council deals with effectively. There is government oversight in that the Department of Internal Affairs benchmarks the Christchurch City Council's response against other Councils. In some usually isolated areas the stormwater network does not operate as it should. The Council works to remedy these situations.
51021	Richard Rowe	Required rainwater storage for all new builds . Subsidised rainwater storage for existing houses. Make all new street gardens rainwater retention gardens	The Council does some of these things. New development and redevelopment where there is greater than 70% site coverage must mitigate the effects of development (i.e. store excess water); and new houses on the hills must install rainwater tanks. The Local Government Act does not appear to permit a Council to require rainwater storage for existing houses but a subsidy would be possible. Modelling in overseas situations indicates fairly reliably that rainwater tanks alleviate flooding up to a 5 year average recurrence interval (ARI) but not beyond. As the Council's stormwater network is designed for and generally handles a 5 year ARI storm the inconvenience and cost the Council is not greatly motivated to promote rainwater tanks, given the degree of inconvenience and cost.
50852	Cheryl Horrell	<p>(See submission attachment 50852)</p> <p>Draft Ōtūkaikino Stormwater Management Plan&lt;br&gt;&lt;br&gt; Goal six - Manage flooding&lt;br&gt;&lt;br&gt; Our goals are&lt;br&gt;&lt;br&gt;</p> <ul style="list-style-type: none"> <li>• To limit the quantity of stormwater from all new development sites to pre-development levels, and minimise stormwater increases from re- development sites through consent conditions.&lt;br&gt;&lt;br&gt;</li> <li>• To protect houses from flooding during and after development by having controls on new floor levels.&lt;br&gt;&lt;br&gt;</li> <li>• Continue to improve flood models and our knowledge of flood risks.&lt;br&gt;&lt;br&gt;</li> </ul> <p>I note that Council proposes to protect future homes from stormwater flooding but nothing in Council's proposal will protect existing homes from increased stormwater run-off from multiple housing units being built on surrounding properties. Flooding Management Council proposes to protect future homes from stormwater flooding in Woolston but nothing in Council's proposal will protect existing homes from increased stormwater run-off from multiple housing units being built on surrounding properties. You intend "To limit the quantity of stormwater from all new development sites to pre-development levels, and minimise stormwater increases from re-development sites through consent conditions." This proposal will purportedly "Protect houses from flooding during and after development by having controls on new floor levels. [And] continue to improve flood models and [your] knowledge of flood risks." I do not see however how the proposal will prevent flooding from encroaching onto streets and footpaths and overflowing existing drainage systems which have repeatedly proven to be inadequate over the past 10 years. Several single home sites are under development in Woolston at present and all but one (52 McKenzie Ave) are being replaced by four or five</p>	<p>This submission raises the issue that limiting the quantity of stormwater from new development sites to pre development levels does not necessarily alleviate additional flooding caused by intensification. Stormwater planners do not believe this is a significant problem in the Styx catchment, because older residential areas are not zoned for intensification. However, its significance in other parts of the city, for example Woolston, is acknowledged.</p> <p>Development intensification in some residential zones is allowed through the District Plan. The Plan imposes some limitations on development, for example a proposed Tsunami Management Area that extends within and around the Woolston area and where intensification is to be avoided. (Refer to the black hatched area on the map attached below, which is extracted from Plan Change 14). However, there is a high evidential threshold if the effects of intensification are to be dealt with directly by restrictions in the District Plan. Further technical work including modelling is required to support any change limiting intensification due to stormwater effects. It can be that stormwater effects remain to be dealt with at a later time.</p> <p>Submissions received on Plan Change 14 (Housing and Business Choice) are now being reviewed including Ms Horrell's submission. Following further submissions, officers will prepare recommendations to an Independent Hearings Panel on the submissions, and submitters have the opportunity to be heard. A stormwater/flood model of the Heathcote catchment is due for completion c August 2023. The model will provide good, reliable desktop estimates of the effects of intensification. The writer (Paul Dickson) would be happy to discuss the model and other stormwater issues in our offices if the submitter would like to visit. In the medium term there is the intention to investigate for inclusion, for Council approval in the 2024 Long Term Plan, an allowance to mitigate capacity problems such as those raised in this submission. In the longer term it is hoped that the model will allow a better understanding of the consequences of development at the time of future district plan reviews.</p> <p>Ms Horrell is thanked for her submission, which raises an issue that stormwater planners have been aware of for some time.</p> <p>Tsunami threat is not able to be dealt with through a SMP submissions process. The Council has a coastal hazard adaptation planning programme which is looking into coastal and sea level-related hazards. Information</p>

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		<p>individual units. Your proposals to manage flooding by raising housing floor levels do not stand up to scrutiny; five new houses will undoubtedly contribute more stormwater pressure on existing systems than the original one home surrounded by permeable land.</p> <p>Development taking place in Woolston in late 2022 and early 2023 contain multiple units, up to five homes per section (six in one Smith Street development) on land originally consented for one residential dwelling. These multiple units are surrounded by impermeable surfaces which are likely to contribute to increased surface flooding which will not prevent new homes from being flooded, even on higher foundations. Existing Smith Street residents have already experienced severe flooding which may not have entered homes but damaged vehicles, garages and everything else outside the homes. Flooding is flooding, residents are trapped in their homes unable to go to work or attend medical or other appointments. Council has a responsibility to try to prevent flooding not raise the floor levels of new homes and abandon existing, long term residents to floodwaters.</p> <p>New regulations on three storied apartments with lots of shared permeable spaces to provide gardens and social areas have been corrupted in Woolston by fast, cheap building to make a quick buck from the lack of adequate protections. Someone will have to pay for this business as usual botch-up and if local residents have any say in the matter it will be the authorities, local and central government, who will have to fix the mess that is occurring on their watch. We know enough now to stop building in places and in a manner that will leave residents living in flood prone homes as the impacts of global warming increase. This year's flooding from Cyclone Gabrielle should be a warning to councils and central government not to ignore the needs of residents who find themselves stranded in flood prone areas.</p> <p>Low Lying Land</p> <p>Fear of being surrounded by cheap rental complexes is upsetting enough but the major threat to homes in Bluebell Lane is our vulnerability to flooding. Post earthquake LiDAR readings identified that our lane had sunk relative to surrounding properties. The Earthquake Commission [EQC] made lump sum offers to buy out our increased flooding risk. I attempted to negotiate on the issue on the grounds that the buyout was not sufficient to raise our homes above the new flood levels. EQC refused to bargain and when I raised the matter with the Minister for Earthquake Recovery she told me the issue had been settled. It was certainly not settled with me or my neighbours but EQC sent their offer to my bank which was still mentioned as an “interested party” in my property after I had paid my mortgage off years earlier. I instructed the bank to invest the money while I waited for a fair offer to raise my home above the newly designated flood levels. That money remains as a separate investment in my bank. Council has overlooked this planning opportunity to protect homes on sunken land which should be identified as a “Qualifying Matter” under the MDRS for Woolston.</p>	<p>about the programme and contact details can be found on the CCC website by typing “coastal hazard” in the search bar.</p>

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		<p><b>Tsunami Risk</b>  Bluebell Lane is also inside a “Tsunami Management Area” It is irresponsible to allow infill housing in that same zone thus allowing new homes to be built in the path of a tsunami. Perhaps councillors and staff should lose their indemnity so they can be held personally liable for the consequences of poor planning decisions. The potential danger to existing homeowners could be exacerbated if increased housing density is allowed in a tsunami management area. Bluebell Lane and other Woolston residents must depend on council to protect our homes and communities from floods and tsunami. We also need our local communities to remain functionally connected and not disrupted by mass rental housing. I submit that Council is ignoring the plight of existing home owners who had liquefaction flood onto their properties from surrounding land following the 2010 and 2011 earthquakes. Council has also failed to address the issue of land that sank during the earthquakes and left existing home owners vulnerable to flooding from surrounding properties. Indeed Council has concealed the increased flooding vulnerability behind higher foundation requirements for new or rebuilt homes leaving existing homes increasingly vulnerable to flooding on foundations lower than Council considers safe from flooding.</p> <p><b>Lack of Council Communication</b>  Although council maps show our area as requiring new higher foundation levels Council has not contacted home owners to advise them of how existing homes might be protected from flooding or tsunami. Council has an obligation to clearly identify any flooding vulnerability to existing homes; and to mitigate the possibility of surrounding new homes on higher foundations and less permeable surrounding land channelling floodwater into lower lying areas. Residents on flood vulnerable land must be able to rely on Council to protect them. It is arguable that owners of houses sitting below safe floor levels should retreat, surely we have learnt that much post Cyclone Gabrielle. Combine our lower flooring levels with our homes being in a tsunami management area and the fact that ground water in Woolston is just below the surface, I am stunned that Council has not seen the need to, if not retreat from this area, at least restrict more housing. It is possible we may not need to retreat if any further infill development was restricted in this high risk area. Ignoring this issue and proposing increased housing density with higher foundations is irresponsible in the circumstances. I appreciate the work performed by Council post earthquakes to provide holding ponds to alleviate flooding but as Council’s own proposals indicate, new houses crammed together on impermeable land need to be built with higher foundations than we and other existing homes in this area have. It seems inevitable that we will be flooded when the waters rise. What existing residents need is much better drainage, less crammed in housing and more permeable surfaces if we are not to slip under future floodwaters. Existing home owners cannot do anything about their land having slumped but it would be a grave injustice if our homes were to be flooded because greater housing density contributed to water flooding into</p>	



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		lower lying houses. Council has this one chance and the responsibility to protect residents from future disasters by identifying Bluebell Lane and other land that has sunk as a “Qualifying Matter” due to it being a “...High Flood Hazard Management Area [and] Flood Ponding Management Area...”. In addition to addressing existing drainage problems, the high water table, and ensuring the retention of adequate surrounding permeable land, Council needs to restrict housing density in Woolston around homes already experiencing increased flooding vulnerability.	

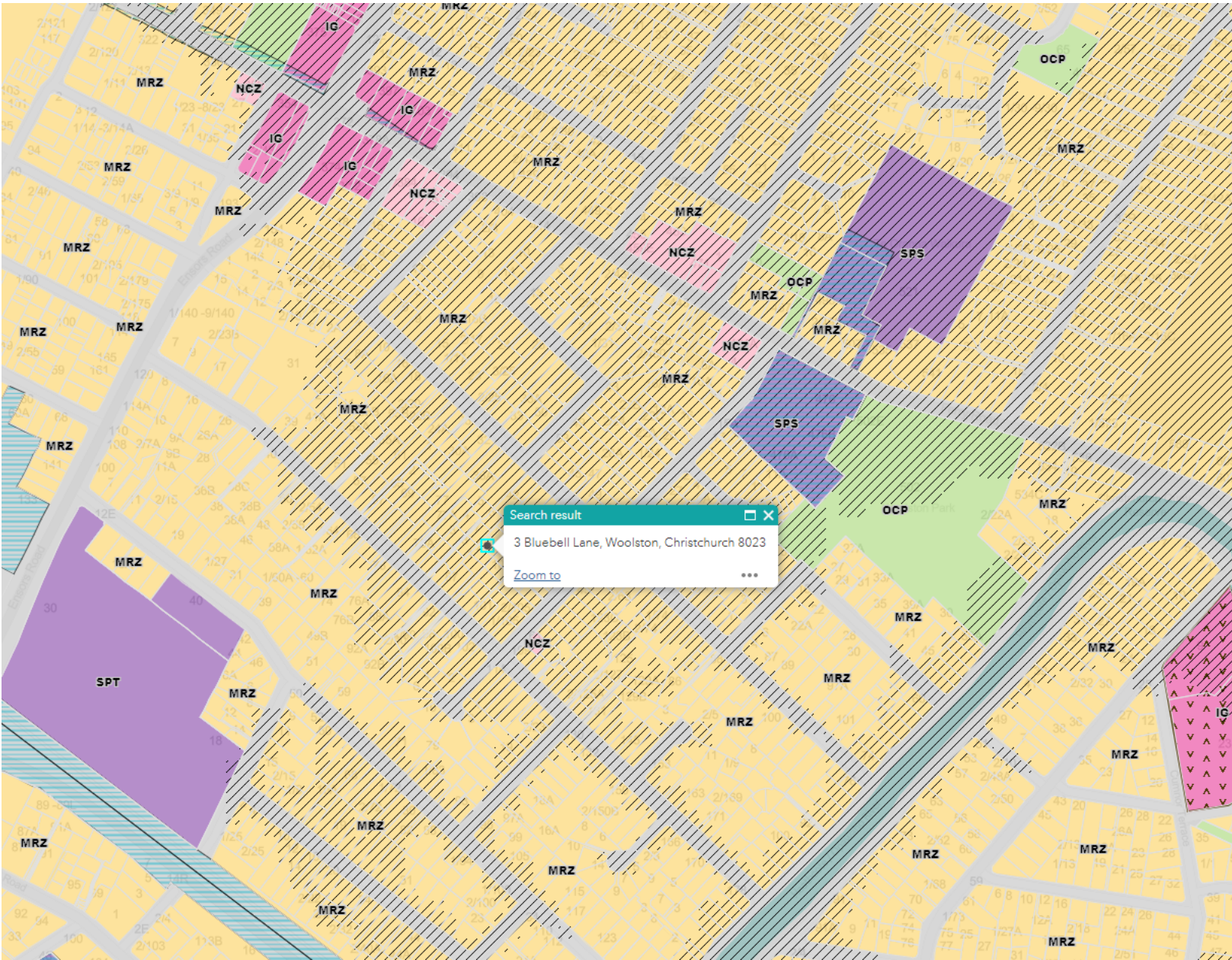


Figure 1: Proposed Tsunami Management Area (black hatching) within part of Woolston



Supporting Documents – Cheryl Horrell



1. 6 Manning Place.



2. 5 Manning Place.



3. 38 Wildberry Street.



4. 54 & 56 Wildberry Street.



5. 79 Wildberry Street.

6. 100 Wildberry Street, No photo as yet.



7. 112 Wildberry Street.



8. 456 Ferry Road, no photo.



9. 6, 8, & 10 Hopkins Street



10. 15 Hopkins Street.



11. 18 Hopkins Street.





**12. 22 Hopkins Street.**



**13. 24 Hopkins Street.**

**14. 5 Findlay Place, no photo.** 15.

**52 McKenzie Ave, no photo.**



**16. 84 Richardson Terrace.**



**17. McKenzie Ave Footbridge.** Home for a growing family of rats.

**Written Submission on Draft Ōtūkaikino Stormwater Management Plan**

**To: Christchurch City Council**

- 1. Name of submitter:** Christchurch International Airport Limited (“CIAL”)
- 2.** This is a submission on the **Draft Ōtūkaikino Stormwater Management Plan (Draft OSMP) 2023.**

**3. Submitter Details:**

Christchurch International Airport Limited  
PO Box 14001,  
Christchurch 8544  
Attention: F Hayman, Environment and Planning Manager.  
Phone: 027 201 2330.  
Email: felicity.hayman@cial.co.nz

**Signature:**



**Dated:** 2 May 2023.



process of investigating future land use options for this site. Rough calculations are that this area comprises approximately 7% of the area covered by the draft OSMP (estimated to be 6,200 ha). The location of this area is shown on the plan contained as **Attachment 1 to Appendix A**.

## **Bird Strike**

### *Introduction*

Bird strike is defined in the Christchurch District Plan as when a bird or flock of birds collide with an aircraft. This can cause damage to the aircraft, which compromises safety and, in many instances, forces an emergency landing. It is of particular concern in the Ōtūkaikino catchment, which lies immediately to the north of the main Christchurch Airport runway and is within the Bird Strike Radii.

### *Bird Strike Risk*

Bird strike risk is increased by flocks of birds flying across flight paths between different parts of the city. Birds fly across the city every day between roosting areas, feeding areas, and areas of standing water. The more activities / sites near the Airport that attract birds, the more likely it is that birds will fly across flight paths between these activities / sites and increase the risk that bird strike will occur at or near the Airport. New activities which will attract birds may need to be managed to ensure that they will not increase bird strike risk at the Airport. There are three main elements to how an off-airport bird attracting land use contributes to strike risk:

- a) *Identification of air space aircraft share with bird (3, 8 and 13km radii)*
- b) *Identification of high – risk bird species (size and behaviour of species), and*
- c) *Identification of where there is potential for collision with aircraft.*

Given Ōtūkaikino's location directly within flight paths, and close distance to the Airport, planes and birds in this area will share airspace. Therefore, it is critical for the safety and function of CIAL's operations that bird strike risk within the Ōtūkaikino catchment is managed appropriately, and any risk is avoided and minimised as far as possible.

The CAA data (which includes a review and update to include CIAL's records) shows monthly strikes and near strikes at CIA from 2013 to June 2021. Statistics for the three years ending 31 December 2020 indicate that Christchurch has higher levels of bird strike than Auckland or Wellington airports<sup>1</sup>.

### *Management of Bird Strike Risk*

Bird strike is a significant safety risk which requires diligent management and CIAL collaboration with local government and surrounding landowners. CIAL has a responsibility (including legal duties as in CAA Rule 139.71) to provide a safe airport operating environment and therefore must actively work to minimise the threat and incidence of bird strike around Christchurch Airport as well as on the airfield and land controlled by CIAL. Bird strike that occurs, for example through the creation of water bodies, refuse dumps, landfills, sewage treatment and disposal and agricultural activities, will affect the ability of CIAL to provide this safe environment.

The Council is required under the CSNDC to manage bird strike risk. Condition 28 of CRC 231955 states:

*'To ensure the risk of bird strike is minimised, the following design requirements shall apply to facilities within 3 kilometres of Christchurch International Airport:*

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<sup>1</sup> Evidence of F Blackmore, Hearings on Proposed Selwyn District Plan, September 2021.

- a) *Stormwater infiltration basins shall fully drain within 48 hours of the cessation of a 2% AEP stormwater event;*
- b) *Sufficient rapid soakage overflow capacity shall be provided to minimise the ponding of stormwater outside of the infiltration area(s); and*
- c) *Landscape design shall limit attractiveness to birds through the use of suitable nonbird attracting species’.*

Condition 6 of this consent, which prescribes the purpose of Stormwater Management Plan (SMP’s), requires Council to *‘Implement the conditions of this consent as they apply to each catchment, including the best practicable option for weed management in the Puharakekenui/Styx River as determined under Schedule 4(x)’.*

CIAL consider that Condition 28 expressly requires CCC, through this SMP, to ensure that the risk of bird strike is minimised through appropriate acknowledgement and reflection of Condition 28.

In addition, Condition 7 of the consent requires that SMPs shall include, but not be limited to, the information set out in Schedule 2. Schedule 2(t) states *‘Procedures, to be developed in consultation with Christchurch International Airport Limited, for the management of the bird strike for any facility owned or managed by Christchurch City Council within 3 kilometres of the airport’.*

#### *National Airports Safeguarding Framework*

The Australian Government has developed a National Airports Safeguarding Framework (NASF)<sup>2</sup> which is considered to be the most comprehensive guide to incompatible land uses around airports. This categorises land use types into wildlife attraction risk categories (high, moderate, low and very low) and determines actions (incompatible, mitigate, monitor, no action) for existing and proposed developments within radial distances from the aerodrome (3, 8 and 13kms).

The 13-km circle was originally based on a statistic that 95% of bird strikes occur below 2,000 ft, and that an aircraft on a normal approach would descend into this zone at approximately 13-km from the runway. An assumption was made that birds would remain overhead the attraction (at up to 2,000 ft) and that overflying aircraft would be at risk. In essence, this only looks at the site risk which is only one of the three elements of an off-airport hazard. Like the site risk, the flight path risk will generally become greater the closer the bird attracting habitat is to the airport<sup>3</sup>. CIAL considers that the NASF guidelines provide appropriate guidance for the management of the risk of bird strike. **Attachment 1 to Appendix A** outlines these radii as they relate to the area covered by the draft OSMP (and is a slightly enlarged version of Figure 12 contained in the Draft OSMP).

To this extent the CCC District Plan includes specific planning provisions to assist with managing off airport bird strike risk. CIAL has also worked with CCC in the development of a CCC internal practice note which is intended to provide assistance to planning staff and application of the birdstrike provisions within the CDP. It outlines the need, and how to consider bird strike when processing applications within proximity of CIAL, for the types of land uses that have the potential to create or increase bird strike risk.

#### **Conclusion**

CIAL consider it an integral part of its function to be involved in matters relating to bird strike risk in a strategic manner, to minimise the development of land uses (such as stormwater retention basins)

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<sup>2</sup> DIRD [Department of Infrastructure and Regional Development, Australian Government] (2012) NASF Guideline C. [https://www.infrastructure.gov.au/aviation/environmental/airport\\_safeguarding/nasf/nasf\\_principles\\_guidelines.aspx](https://www.infrastructure.gov.au/aviation/environmental/airport_safeguarding/nasf/nasf_principles_guidelines.aspx) Accessed 19/7/21 (as referred to in the evidence of P Shaw, referenced above).

<sup>3</sup> Source: Extracts of Evidence of P Shaw, Hearings on the Proposed Selwyn District Plan

which can be an attractive habitat to birds. CIAL are happy to work with CCC and landowners/ developers in this area to manage any bird strike related risks appropriately.

#### **CIAL's Detailed Submission**

CIAL's detailed submission is contained as **Appendix A**.



### Appendix A: CIAL's Detailed Submission

Text changes to the draft OSMP (Draft Ōtūkaikino Stormwater Management Plan) sought as part of this submission are shown as ~~strikeout~~ for text to be deleted and **bold underlined** for text to be added. CIAL also request that any other related and appropriate amendments are made to the Plan to give effect to this request.

Chapter / provision	CIAL's reasons for submission	Relief sought
Overall	CIAL is a nationally significant facility located within the area covered by the provisions of the draft OSMP. CIAL requests that further recognition of the airport and its environs, and matters relating to its ongoing operation (namely bird strike) are provided within the Plan, and that the Plan should be amended to clearly reflect this.	Amend the Plan as outlined below.
Executive Summary	<p>CIAL request that specific reference is made to bird strike in the Executive Summary to the document.</p> <p>CIAL also request that the description of the catchment be amended to better reflect existing and potential land uses within the catchment, noting that these are subject to change throughout the life of the plan.</p>	<p>Add new sentence at the end of the third paragraph of the Executive Summary as follows:</p> <p><i>'Stormwater from new developments will pass through detention basins to mitigate new contaminant generation. Pre-existing development will also be treated. Recognising the relatively high values of the waterways, the Stormwater Management Plan proposes that all urban stormwater be treated through basins and wetlands before it is discharged. <b><u>Considered design of these facilities within the vicinity of CIAL and/ or within the identified Bird Strike Radii is required to ensure that these do not increase the risk of bird strike for aircraft use associated with Christchurch International Airport</u></b>.'</i></p>

Chapter / provision	CIAL's reasons for submission	Relief sought
		<p>Amend the last sentence of the second paragraph as follows:</p> <p><i><u>'Whilst the majority of the catchment is <del>predominantly</del> predicted to remain rural, <del>land use within the Catchment may change over the ten year life of the Plan (including with the exception of the an expanded</del> Belfast urban boundary'.</u></i></p>
2.2 Regional Planning Requirements		<p>Add a reference to the Comprehensive Stormwater Network Discharge Consent within Section 2.2.2 Land and Water Regional Plan before the existing paragraph, as follows:</p> <p><i><u>'The Land and Water Regional Plan 2015 contains objectives, policies and methods relating to stormwater management. The CSNDC gives effect to the outcomes sought in both the Land and Water Regional Plan and CPRS'.</u></i></p>
2.5 The District Plan	CIAL considers that specific reference should be made to policy provisions of the Plan relating to bird strike in the context of stormwater disposal.	<p>Add a paragraph immediately prior to the paragraph titled 'District Plan Policies 8.9.22 e.' as follows:</p> <p><i><u>'The Plan also includes specific policies relating to bird strike. These include Policy 6.7.2.1.3, which states: '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'.</u></i></p>

Chapter / provision	CIAL's reasons for submission	Relief sought
3. Principal Issues	As above.	<p>Add the following sentence add the end of the second paragraph:</p> <p><b><u>'This needs to occur whilst ensuring that other significant land uses, such as Christchurch International Airport, are not adversely affected by the solutions adopted. Bird strike is a significant issue which should be considered in locating and designing proposed stormwater facilities within the Ōtūkaikino catchment'.</u></b></p>
7.2.2 Industrial Growth	The draft OSMP contains information which is not considered to be accurate relating to the Specific Purpose (Airport) Zone.	<p>Delete the following sentence as shown below:</p> <p>'Part of the Specific Purpose (Airport) (SPA) Zone contains the equivalent of heavy industrial activity. <del>However approximately half of the SPA zone is expected to remain as grassy runoff areas around runways.</del></p>
New section 7.2.3 Other Growth	CIAL requests that the Plan specifically recognise the role of the airport and the projected growth of such.	<p>Add a new section 7.2.3 'Other Growth' as follows:</p> <p><b><u>'CIAL owns and operates Christchurch International Airport (Christchurch Airport). Christchurch Airport is the largest airport in the South Island and the second largest airport in New Zealand. CIAL are also the owner of a significant land parcel (approximately 420ha) within the area covered by this Plan (the future use of which has not been established)'.</u></b></p>
11.1 New Development	CIAL supports the inclusion of reference to the design of basins to minimise bird strike risk on aircraft (Section 11.6.1), however	Add a sentence following 'The minimum standards for stormwater detention and



Chapter / provision	CIAL's reasons for submission	Relief sought
	<p>considers that this needs to be placed in the context of earlier sections of the Plan.</p>	<p>treatment associated with new development follow in Table 10':</p> <p><b><u>'Specific consideration should also be given to design requirements of such facilities to ensure that the risk of bird strike is minimised'.</u></b></p>
<p>Section 11 – Mitigation Options 11.6.1</p>	<p>CIAL supports the inclusion of this section, however considers that the manner in which the information has been presented is confusing for the plan user. Section 11.6.1 deals with 'Designing Basins for Minimise Bird Strike on Aircraft' in the section on 'Mitigation Options', however bird strike has not been identified as an issue in the prior sections of the Plan. CIAL has made comments on earlier sections of the draft OSMP relating to this matter.</p> <p>Given the significance of this issue, CIAL also considers it appropriate to make specific reference to the relevant condition of the global consent which relate to bird strike (particularly given this SMP has is required and has been prepared with reference to that consent).</p> <p>Further, CIAL considers it preferable for Figure 12 (Bird Strike Management Zones) to be enlarged as it relates to the area covered by the draft OSMP. It is also requested that Figures 10 and 11 are removed from this section to avoid confusion (from initial reading they are not referenced to, nor relate to, Section 11.6.1).</p> <p>CIAL request that guidance material on the location and design of stormwater facilities to reduce the potential for bird strike risks is included within the Plan. It would appreciate the opportunity to</p>	<p>Amend Section 11.6.1. as follows:</p> <ul style="list-style-type: none"> <li>- Add the words '<b><u>In addition</u></b>' prior to the current first paragraph commencing 'Christchurch District Plan Policy 6.7.2.1.2 ..'</li> <li>- Add reference to condition 28 of the global consent at the end of the second paragraph as follows:</li> </ul> <p>"...must meet activity standards in Section 6.7.4.3 of the Christchurch District Plan (see Figure 12) and <b><u>Condition 28 of CRC214226. In summary:</u></b></p> <ul style="list-style-type: none"> <li>• <b><u>Stormwater infiltration basins must fully drain within 48 hours of the cessation of a 2% AEP stormwater event.</u></b></li> <li>• <b><u>Sufficient rapid soakage overflow capacity must be provided to minimise the ponding of stormwater outside of the infiltration area(s).</u></b></li> </ul>

Chapter / provision	CIAL's reasons for submission	Relief sought
	develop this material, in conjunction with CCC, for inclusion within this Plan. This material could be complimentary, but not replicate, the internal CCC advice note on bird strike.	<ul style="list-style-type: none"> <li>• <b><u>Landscape design must limit attractiveness to birds through the use of suitable non-bird attracting species</u></b>.</li> <li>- Relocate Figures 10 and 11 to other appropriate sections of the Plan.</li> <li>- Enlarge Figure 12 as it specifically relates to the draft OSMP spatial area generally in accordance with the plan contained as <b>Attachment 1</b>.</li> </ul> <p>[Note: specific plan to be developed in conjunction with CCC – but is intended to include the following information</p> <ul style="list-style-type: none"> <li>• Bird Strike Radii and associated runway threshold points</li> <li>• Ōtūkaikino Catchment Management Plan boundaries].</li> <li>- Amend the last sentence as follows and add an additional sentence:</li> </ul> <p><b><u>'Guidance material will be made available if/ when developed is contained as Appendix G. It is recommended that persons developing stormwater facilities within 13km of the airport runway thresholds identified in</u></b></p>

Chapter / provision	CIAL's reasons for submission	Relief sought
		<p><b><u>Figure X</u></b> [contained as Attachment 1 to this submission] <b><u>consult with CIAL</u></b>.</p> <p>[Note: Appendix G to be developed in conjunction with CCC].</p>
New objective	CIAL consider that the plan objectives do not give sufficient consideration to the issue of bird strike, nor the circumstances in which this may occur.	<p>Add a new Objective 5 as follows:</p> <p><b><u>'Our goals are</u></b></p> <ol style="list-style-type: none"> <li><b><u>1. To minimise the potential risk of bird strike to aircraft through consideration of the location and design of stormwater facilities.</u></b></li> <li><b><u>2. To collaborate with CIAL to ensure that (1) is achieved</u></b>.</li> </ol> <p>Add a new Action Plan for Bird Strike [included at the end of this submission – to be further developed in conjunction with CCC].</p> <p>Undertake consequential renumbering of objectives and any associated provisions.</p>
14 Conclusion	CIAL considers that recognition of bird strike should be made in the conclusion section of the document.	<p>Add an additional bullet point to the third paragraph as follows:</p> <ul style="list-style-type: none"> <li><b><u>'Reduce the threat of birdstrike through consideration of appropriate stormwater facility location and design</u></b>'.</li> </ul>
Appendices New Appendix G	CIAL request that guidance material on the location and design of stormwater facilities to reduce the potential for bird strike risks is	Add a new Appendix G titled <b><u>'Guidance Material Relating to Bird Strike</u></b> '.



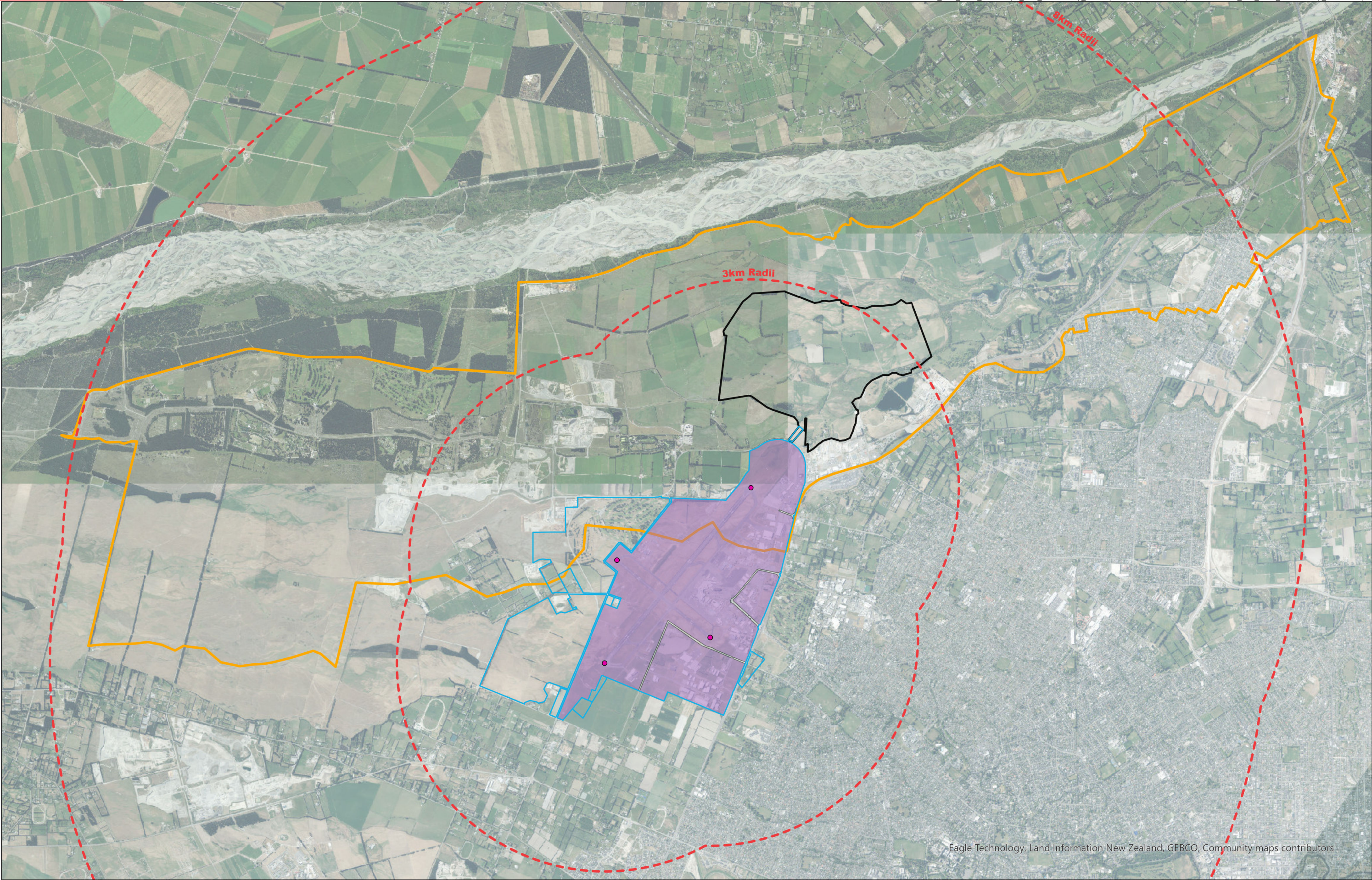
Chapter / provision	CIAL's reasons for submission	Relief sought
	<p>included within the Plan. Such material would provide additional certainty for the developers of stormwater facilities within the catchment, and enable the OSMP to operate closer to a 'one-stop-shop' for the design of stormwater facilities.</p> <p>CIAL would appreciate the opportunity to develop this material, in conjunction with CCC, for inclusion within this Plan. This material could be complimentary, but not replicate, the internal CCC advice note on bird strike.</p>	<p>[Note: this guidance material is to be developed in conjunction with CCC]</p> <p>Make provision for amendment/ updating of this practice note as and when required (ie as a result of associated changes within the District Plan/ as a result of changes in national regulatory planning framework).</p>

Action Plan for Bird Strike				
Goal	Action	Mechanism	Action Components	Timing
5.1	Incorporate guidance notes on bird strike in SMP	<p>Development of guidance notes.</p> <p>Referral of matters relating to stormwater facility design within 13km radii of airport runway threshold to CIAL.</p>	<p>Develop guidance notes on bird strike in partnership with CIAL.</p> <p>Keep records of stormwater basins developed within catchment area.</p> <p>Provide records to CIAL at annual intervals.</p>	Immediate and ongoing
5.2	Ongoing liaison with CIAL	Bi annual meetings with CIAL and ECan to		As above.

		discuss bird strike.		
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Attachment A





Eagle Technology, Land Information New Zealand, GEBCO, Community maps contributors