

**SUPPLEMENTARY REPORT OF THE
GENERAL MANAGER STRATEGIC DEVELOPMENT**

1. BIRD STRIKE RISK AT FLAT WATER FACILITY (LAKE ISAAC WATERSPORTS PARK)

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The purpose of this report is to provide the Council with information regarding the matter of bird strike in relation to the airport and issues associated with the Lake Isaac proposal.

INTRODUCTION

A seminar held on 18 February 2004 heard from a number of presenters promoting the concept and the benefits that the Lake Isaac Water Sports facility would bring to Christchurch.

The Community and Leisure Committee, at its 18 February meeting, considered research on the proposed Lake Isaac Water Sports Park and subsequently recommended to the Annual Plan Subcommittee as follows:

1. *That funding be allocated for this proposal for the Lake Isaac Watersports Park because it is necessary and appears to be the best proposal to support flat water sports as follows:*

2004/05	\$630,000
2005/06	\$3,400,000
2006/07	\$3,400,000
2007/08	\$3,570,000

subject to the following:

- (a) *The Council being able to fund the proposal through the capital programme.*
 - (b) *A satisfactory resolution to the nuisance bird management issue and a completed bird management strategy.*
 - (c) *Council funding being made available for Stage 1 once other funding has been raised by the Trust.*
 - (d) *All other environmental and resource management issues being resolved.*
2. *That the funding detailed in recommendation 1 be included in the draft Long Term Council Community Plan for consultation.*

The above recommendation when put to the Annual Plan Subcommittee meeting was declared **lost** by 6 votes to 4.

The Annual Plan Subcommittee requested staff to report further to the Council on a number of matters associated with the Lake Isaac proposal, including legal issues, bird strike risk, shingle extraction, including impact on local market. The report will be separately circulated prior to the Council meeting. The following recommendation was passed by the Annual Plan Sub-Committee.

“That staff be requested to work with the Lake Isaac Watersport Trust to investigate alternative options for the location of a flat water sports facility”.

This report provides a framework around the issue of bird management and in particular bird strike in relation to aircraft. The report provides a summary of the issues that have been identified around the specific issue of bird strike and also provides a summary of responses from key players.

BIRD STRIKE BACKGROUND

There are two distinct aspects to the issue of managing birds. There is a long term and a short term strategy required. These are defined below:

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Long Term Strategy:

The Council's Greenspace Unit has identified the need to establish an overarching strategy to deal with nuisance birds in Christchurch and surrounding areas. It is intended to commence development of this strategy later this year as part of the overall Biodiversity strategy for the city. It is expected that the strategy would include, fouling of public waterways and private properties and other areas, increasing populations of some species displacing other more desirable species and the risk posed to various commercial operations such as market gardens and airways.

The Airport, North Canterbury Fish and Game, Department of Conservation and Environment Canterbury support the development of a strategy to control nuisance species.

Short Term Strategy:

In relation to the current issue of bird management and the risk of bird strike at the airport, there is a short term need to identify the problematic species and then define the issues arising out of the specific issue related to aircraft bird strike.

Nuisance species identified by the airport by strike or near miss are:

- Black-back gulls
- Spur-wing plovers
- Starlings (in flocks)
- Hawks
- Magpies
- Sparrows/flitches (in flocks)

Species identified in growing numbers in general vicinity of Christchurch International Airport and its flight paths. The airport has been advised that these species also pose increasing bird strike risk:

- Canada Geese
- Ducks (all species)
- Swans
- Feral Pigeons
- Cormorants (Shags)
- Pukeko

In September 2002 Phil Shaw, Principal Biologist of Ecosure Pty Ltd, a specialist in the field of bird risk management at and around airports, was commissioned jointly by Christchurch International Airport Limited (CIAL) and Christchurch International Rowing Centre Charitable Trust (CIRCCT) to conduct a report on bird strike risk associated with the proposed Lake Isaac.

Ecosure has been commissioned by the Council to update that 2002 assessment and produce a full risk report. The full report will be available by the end of May this year. This full report will be peer reviewed by Professor David Elms of Canterbury University a resident expert in risk management.

Responding to the Council's need to resolve funding for the Lake Isaac proposal prior to completion of the report in May, Ecosure were requested to provide an Interim Report outlining the key issues to be considered by Council. That Interim Report is attached to this report. The Council's ornithologist, Andrew Crossland, Christchurch International Airport (CIAL), Clearwater Resort and Lake Isaac Watersports Park Incorporated, have also been involved in bringing forward information for consideration by the Council.

ISSUES

The Interim Report from Ecosure (attached) covers the following issues and recommendations:

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1. An explanation of current international standards relating to constructed or enhanced wetlands in vicinity of airports. There are several international standards that relate to constructed or enhanced wetlands. On the basis of these international standards, it is necessary for a very thorough investigation to ensure bird strike risk is not elevated to unreasonable levels as a result of the proposed rowing course, which is located within all the distance thresholds set by standards.
2. The key findings and comments on the 2002 risk assessment report include:
 - The rowing lake will be attractive to substantial numbers of hazardous birds.
 - Consideration must be given to how the rowing course may draw bird populations closer to the airport.
 - The proposed third runway would have the effect of bringing aircraft closer to the birds at the rowing lake.
 - Despite proposed mitigation measures, the location of a lake of this size and design, this close to a growing international airport is not ideal.
 - With or without the rowing lake it would be prudent for Christchurch International Airport Limited and other agencies to pursue a Black Backed Gull management plan.
3. Issues arising since the 2002 report including:
 - There is a need for proponents of the rowing lake to indicate how they intend to incorporate all the design features into their proposal.
 - A proposed increase in lake depth may slightly reduce bird attraction.
 - The proposed airport extension and associated operational changes will increase the risk of bird strike beyond that identified in the 2002 report.
 - Increased bird numbers at Clearwater may increase the number of birds transiting through the aircraft flight paths as Clearwater and the proposed rowing lake are on either side of the extended runway. This change in potential risk needs to be evaluated.
 - Some methods of bird control may not be permitted/acceptable in the future yet the facility and responsibility for bird control and associated costs will remain.
4. Determining change in risk due to the proposed rowing lake.
 - It is difficult to determine the change in risk based on current data.
 - The strategy developed in 2002 to allow the project to proceed may now be unworkable.
 - Further risk analysis will be included in the May 2004 report.

Ecosure recommends to the Council that a four step process is followed prior to it committing funds. These steps are:

1. Ensure all efforts are made to determine the suitability of alternative sites.
2. Determine the validity of black-backed gull management as a risk compensation measure and if so then proceed to 3.
3. Establish the effectiveness of the gull management strategy, is it going to offset any increase in risk due to the rowing lake?
4. Determine whether or not the suggested management strategy is feasible and sustainable.

RESPONSES TO ECOSURE'S INTERIM REPORT

The Council's Ornithologist, Andrew Crossland, in his attached report:

- Provides an overview of birdlife in Christchurch.
- Analyses bird populations and distribution in North-West Christchurch.
- Agrees with the broad findings of the interim report by Ecosure.
- Considers it to be well researched, well written, and makes a sound assessment of most of the factors contributing to bird strike hazard in north-west Christchurch.

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- Provides some comments based on a larger set of bird census and distribution data than was available to Ecosure.
- Emphasises the importance of the lakes proposed location, close to the Waimakariri-Estuary bird migration flyway, as a risk factor.

Christchurch International Airport has responded to the issues and recommendations raised in the letter from Ecosure, letter attached. In summary the airports response states that they:

- Will continue to oppose the development of the proposed lake.
- Are concerned that their views were not sought when alternative sites were investigated.
- Reject Ecosure's recommendations 2 through to 4.
- Do not accept that the bird hazard risk can be controlled.
- If bird hazard measures are not successful then the airports long term business could be jeopardised.
- Expect that airlines operating at Christchurch would also come out very strongly against the proposal.

Subsequent to providing the above response the Airport were asked two additional questions. A full copy of their response is attached.

Q1. Is the airport happy (or not) with the work that Clearwater is doing with managing the birds?

Response: There is no short answer to this question and the following answer is made.

CIAL was totally opposed to the development of water bodies at Clearwater Resort. The development was reluctantly agreed to subject to a Consent Order issued by the Environmental Court which amongst other things required bird numbers to be managed.

Clearwater has set up a Bird Management Program and is attempting to keep the water bodies free of birds with only limited success eg they have restricted birds from establishing long term territorial presence but migrant and itinerant birds are present at various times of day.

NB 80 waterfowl were observed there at 10.45 on 15/03/04.

Q2. What aviation standards do the airport align themselves with?

Response: CIAL observes the recommendations of ICAO and has a proven track record in this regard.

In its observation of this recommendation CIAL at present uses the US Civil Aviation standards with respect to distances although we are aware of other standards and will in due course consult with stakeholders with the aim of having a suitable control included in the City Plan.

Clearwater Resort has commented as follows on the issue of birds in relation to their development letter attached. In summary their comments are:

- Clearwater are required to carry out bird strike mitigation measures as a condition of resource consent for the Clearwater subdivision.
- Obligations are passed on to property owners by covenants on titles.
- Clearwater and CIAL have an agreement to share the cost of monitoring.
- Clearwater's annual cost for monitoring is approximately \$17,000 and bird management costs are estimated to be \$40,000 per annum.
- Clearwater would control nuisance birds regardless of airport constraints.

Lake Isaac Watersports Park Incorporated has commented on the interim report (attached). In summary they state:

The Lake Isaac trust has had limited opportunity to provide input, discuss or review the interim Ecosure report, and has not seen the data upon which it is based. They believe the report is flawed in some aspects (see the detail attached) and provides an unbalanced view of the bird strike risk and the potential for this to be managed within the current low risk levels.

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OTHER KEY PLAYERS AND THEIR INTERESTS

Department of Conservation

Under the Wildlife Act the Department of Conservation is responsible for the management and protection of native and game bird populations and habitats. The Department must be involved in any strategies developed to manage native species. Black-backed gulls and spur winged plovers are native and have both been identified as potentially problematic with regards air strike.

Environment Canterbury

- Has an interest(through the Canterbury Regional Policy Statement) in maintaining Christchurch's strategic infrastructure and as such are interested in any activities that may impact on the airports operations.
- Indicate that ECan is likely to support the airport's position in opposing developments with the potential to negatively impact on the operational capacity of the airport.
- Prepare and consult on a Regional Pest Management Strategy under the Biosecurity Act 1993 and run a Council Controlled Organisation, Target Pest Ltd which carries out contract pest control, including bird control for CIAL.
- ECan is the statutory authority in respect of groundwater management (quality and quantity) and are concerned about pathways for contaminants to groundwater that may occur through the creation of lakes. These issues to be dealt with under the forthcoming Proposed Natural Resources Regional Plan.
- ECan is the owner of land covering the margins and bed of the Waimakariri River, held under the Waimakariri River Improvement Act 1922.
- ECan is preparing a non -statutory plan for use of the bed and berms of the Waimakariri, including the area covered by the black back gull colonies.
- ECan is the local authority which administers the Waimakariri River flood control system and works with other councils to minimise flood damages from the Waimakariri River. Lake Isaac raises issues in relation to shingle removal and the effects of flooding.

North Canterbury Fish and Game

Responsible for the management of fish and game bird populations and habitats. Must be instrumental/party to any strategies developed to manage these species

EXCAVATED MATERIAL

The gravel that would be extracted in the formation of the lake belongs to the landowner, the Lady Diana Isaac Wildlife Trust. The material will not belong to the Lake Isaac Trust nor will it belong the Christchurch City Council. Final use of the excavated material is dependent on grading quality and market demand.

It is estimated that the formation of the lake will yield approximately 4 million cubic metres of material. The current regional demand for aggregate (gravel) is approximately 800,000 cubic metres per year. This material is obtained from a number of suppliers in the Canterbury region.

Material that is excavated would need to be stockpiled and subsequently graded to determine its final use.

Recommendation: For discussion.

CONSIDERED THIS 18TH DAY OF MARCH 2004

MAYOR