

## ANNEXURE 3 – ASSESSMENT OF ENVIRONMENTAL EFFECTS

### 3.1 INTRODUCTION

3.1.1 The following is a summary of the actual or potential environmental effects that are likely to arise from the expansion of the Aerodrome:

- Positive Effects
- Economic Benefits
- Effects on natural conservation values
- Traffic effects
- Visual impact effects/ effects on the landscape
- Noise
- Construction

3.1.2 This NOR seeks to designate land north, northwest and southeast of the Wanaka Airport runway for Aerodrome purposes. This additional land is required in response to projections of aircraft and passenger activity at the Airport for the next 20 year period and master planning of the most suitable means of accommodating this increased activity, as described in **Annexure 2** attached.

3.1.3 The Wanaka Airport Master Plan (attached as **Appendix D**) makes recommendations as to the facilities that might be required at Wanaka Airport. While designation of the land will allow for a range of Airport related activities, this Assessment of Environmental Effects (AEE) has been undertaken on the basis of the effects from the activities proposed in the Wanaka Airport Master Plan. The Master Plan proposes activities that are likely to take place at this location pursuant to the designation and so allows the likely effects of the designation to be considered.

3.1.4 The NOR also seeks to introduce obligations relating to the management and monitoring of aircraft noise and engine testing at Wanaka Airport.

### 3.2 POSITIVE EFFECTS

3.2.1 It is appropriate to evaluate all matters which relate to effects, including any benefits that may arise from the activity. The key benefits of the proposed alterations to the Aerodrome designation include:

- (a) The maintenance and enhancement of operating capacity at the Airport, particularly to maintain and enhance capabilities to accommodate increased air services to and from Wanaka Airport;
- (b) Allowing the airport to operate as an alternate for certain aircraft types unable to land at Queenstown Airport because of weather conditions;
- (c) Enabling sustainable future use of the Airport particularly to accommodate the ongoing growth in general aviation activities;

- (d) Meeting international aviation standards and Civil Aviation Authority (CAA) rules in relation to runway lengths and airport operational requirements;
- (e) Providing the community with certainty as to the long-term form of development at the Airport;
- (f) Requiring regular monitoring of aircraft noise at the Airport to ensure noise limits are not breached;
- (g) Ensuring aircraft noise at Wanaka Airport is appropriately managed.

3.2.2 Wanaka Airport is recognised in the District Plan as an important physical resource<sup>1</sup>. The Airport is also recognised as making a significant contribution to the Wanaka basin economy and tourism in particular, as well as providing a transport link for residents, business travellers and tourists to and from Wanaka. The proposed alteration to the designation is therefore appropriate as it protects the long term efficient use of the Airport and safeguards its ability to grow as a transportation hub and revenue generator for the local and regional economy.

### **3.3 ECONOMIC EFFECTS**

#### **Economic Benefits**

- 3.3.1 A figure of the economic contribution that an expanded Wanaka Airport would make to the district and regional economy has not been empirically assessed at this stage. However, the Wanaka area of the Queenstown Lakes District is experiencing one of the highest growths in permanent population and tourist numbers of any area in New Zealand. While this is in part due to Wanaka's proximity to Queenstown, it is also a reflection of the nature of its own tourist attractions, including Lakes Wanaka and Hawea and the nearby ski fields.
- 3.3.2 International visitors made 289,400 visits to the Lake Wanaka Regional Tourism Office (RTO) in 2008. These trips generated 562,200 visitor nights. Domestic visitors made 425,900 visits to the Lake Wanaka RTO in 2008, generating 731,000 visitor nights. The Wanaka RTO attracted 715,400 international and domestic visitors in 2008 and total expenditure generated by visitors to the Wanaka RTO in 2006 was \$143m.
- 3.3.3 According to the New Zealand Regional Tourism Forecasts (2009 - 2015), total visits to Lake Wanaka RTO are expected to increase by 16.1% from 2007 – 2014. This is predicted to be the result of 29% international visitor growth and 3% domestic visitor growth. Total visitor nights in Lake Wanaka RTO are expected to rise 14.6% between 2007 and 2014 as a result of 27.5% international visitor night growth and 3.4% domestic visitor night growth. New Zealand Tourism Forecasts (2007 – 2013) expect total Tourism Expenditure in the Lake Wanaka RTO area to reach \$203m in 2013.

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<sup>1</sup> Chapter 14, page 14-11; Explanation and Principal Reasons for Adoption.

- 3.3.4 Overall visitor growth (as projected by the QLDC Growth Management Study) for the period 2006 to 2021 is 4.2% per annum.
- 3.3.5 Most visitors currently arrive to the Region by car or bus although a growing percentage arrives via Queenstown Airport. The introduction of scheduled air services at Wanaka Airport has also resulted in nearly 12,000 scheduled passenger movements direct to/from Wanaka during 2006. As permanent population and tourist numbers continue to grow, notwithstanding the possibility of Queenstown Airport becoming increasingly congested, the importance of Wanaka Airport as a flight destination at either the beginning or end of a tourist's trip is likely to increase. Accordingly, the ability to accommodate more frequent scheduled air services in the future will have significant economic benefits for the Wanaka area and the wider Region.

#### **Economic Costs of the Proposed Designation**

- 3.3.6 The proposed designation site is situated within the Rural Zone of the District Plan where activities of a rural nature, such as agriculture, viticulture or horticulture, are anticipated.
- 3.3.7 While part of the land proposed to be designated is currently used as pasture land, it does not form part of a viable working farm. The land is not of a sufficient size to form a viable farm and the land surrounding is in a number of different ownerships, so it is unlikely the land would ever be assembled and farmed as a single unit.
- 3.3.8 Notwithstanding this, the use of the site as pastureland could continue until the land is required to be used for aerodrome purposes.
- 3.3.9 Overall it is considered that the economic benefits of designating the land for Aerodrome purposes would far outweigh any potential economic costs.

#### **3.4 EFFECTS ON NATURAL AND CONSERVATION VALUES**

- 3.4.1 An assessment of ecological values of the proposed designation site was undertaken by Natural Solutions for Nature Limited. A copy of this report is contained as **Appendix G** attached. The assessment was undertaken to determine whether there are any habitats or species of significance that would be adversely affected by the proposal and what measures would be appropriate to avoid, remedy or mitigate these effects.
- 3.4.2 The ecological assessment was undertaken in three stages; field preparation, fieldwork and assessment of data collected in the field.
- 3.4.3 A vegetation survey targeted areas of the property that were most likely to contain ecological values and be affected by development associated with the proposed designation. A total of 9 locations were selected for the collection of ecological data. Observations of fauna seen or heard were made during the site visit. Faunal values other than those observed during the site visit have been inferred based on knowledge of the species known to be present in the area and habitats encountered.

- 3.4.4 The ecological significance of vegetation communities and fauna habitat values were assessed against the criteria provided in Appendix 5 of the District Plan:
- Representativeness
  - Rarity
  - Diversity and Pattern
  - Distinctiveness/Special Ecological Character; and
  - Ecological context.
- 3.4.5 In addition, the values identified on the site were compared against the four national priorities for the protection of rare and threatened native biodiversity on private land as set out by a joint Ministry for the Environment and Department of Conservation statement published in April 2007. These national priority goals are:
- 1) To protect indigenous vegetation associated with land environments that have 20% or less remaining in indigenous cover;
  - 2) To protect indigenous vegetation associated with sand dunes and wetlands; ecosystem types that have become uncommon due to human activity;
  - 3) To protect habitats of acutely and chronically threatened indigenous species.
- 3.4.6 In terms of this assessment, existing vegetation communities and faunal habitats were considered significant if they satisfied any one of the above criteria.
- 3.4.7 The assessment found that the vegetation on the site is predominantly exotic pasture grasses and weeds. Twenty-six of the plant species recorded were introduced and three were endemic (these were isolated specimens of *Discarnia toumatou* (Matagouri), *Melicytus alpines* (porcupine shrub) and *Muellenbeckia axillaris* (Creeping pohuehue). One paddock was under a crop of lucerne and another had recently been sprayed with herbicide and disc sown for summer/autumn crop.
- 3.4.8 Two rows of shelter belt plantings comprising *Pinus radiata* (Radiata pine) and *Pseudotsuga menziesii* (Douglas fir) were present at the northern end of the site.
- 3.4.9 No threatened species were seen or known to occur within the area of the proposed designation.
- 3.4.10 In terms of fauna, no threatened species were identified as present or potentially present. It is also highly unlikely that there are avifauna species of conservation significance likely to be affected by the proposed designation.
- 3.4.11 No lizards were observed during the site visit, although the timing of the site visit was not optimal for detecting lizards. The site is within the range of a

number of skinks and geckos, however, given the absence of rocks and the level of cultivation of the site these species are unlikely to be present. The abundance of rabbits on site also suggests that mammalian predators (e.g. cats and mustelids) are also likely to be present, which would further reduce the likelihood of lizards.

3.4.12 No specific survey for invertebrates was undertaken. The lack of indigenous vegetation and ongoing cultivation of the land is likely to have reduced the potential diversity of the site's indigenous invertebrate community.

3.4.13 In summary, the effects of the proposed designation of ecological value is considered to be no more than minor given the absence of any habitat or species of ecological significance on the site.

### **3.5 TRAFFIC EFFECTS**

3.5.1 Over time, traffic movements in and out of the airport site will grow in conjunction with airport growth. Prior to the extension of the runway or the installation of a parallel runway to allow for increased activity, the Airport operator will, in conjunction with the New Zealand Transport Agency, undertake a transportation study to determine and carry out any required access and roading improvements.

### **3.6 LANDSCAPE AND VISUAL EFFECTS**

3.6.1 Vivian + Espie Landscape Planning have prepared a Landscape and Visual Assessment which addresses the potential effects of the activities which form part of the two Notices of Requirement for Wanaka Airport. This report is attached as **Appendix H**.

3.6.2 The landscape assessment confirms the underlying zoning of the Airport site as Rural Zone but notes that Appendix 8B Map 1 (Landscape Categorisation in the Wanaka Area) of the District Plan does not extend as far as Wanaka Airport, leaving open the question of the appropriate landscape categorisation for the subject site. The landscape assessment therefore assesses and categorises the land subject to the NOR in accordance with Part 5.4.2.1 which outlines a three stage process in applying landscape assessment criteria. This includes an analysis of the site and surrounding landscape, a determination of the appropriate landscape category and the application of the assessment matters.

3.6.3 The landscape assessment concludes that Wanaka Airport occupies a flat and otherwise featureless alluvial terrace. Therefore, while adjacent areas of Rural General land within the wider context of Wanaka Airport have been categorised as either Visual Amenity Landscape (VAL) (the Wanaka Transport and Toy Museum site; vicinity of Pittaway property east of Stevenson Rd) or Outstanding Natural Landscape (ONL) (the north-west extent of Pisa Range), the extent of development within the airport precinct and the lack of characteristics and qualities indicative of higher level landscape and amenity

values indicates that the appropriate landscape category is 'Other Rural Landscape'.

3.6.4 This categorisation is attributed to the following developments:

- The nature and extent of existing aviation-related built development and infrastructure directly related to the aerodrome and its operations;
- The location of the Wanaka 'Project Pure' wastewater treatment plant, and the prospect of its further extension;
- The presence of tourism infrastructure, such as the Warbirds Museum, and the Wanaka Transport and Toy Museum;
- Light industrial and commercial development within the airport precinct, including a brewery and aviation-related businesses;
- Potential development within the adjacent Windermere Visitor Zone.

3.6.5 Given the nature and scale of aerodrome developments and activities, a level of landscape and visual effects is inevitable. At Wanaka Airport, such effects already exist and developments that will follow the NOR will lead to only a minor increase in these effects.

3.6.6 The likely landscape and visual effects stemming from the NOR have been considered against the QLDC assessment matters for 'Other Rural Landscapes'. The effects of a designation for aerodrome purposes are generally well outside of the range of developments to which the assessment matters are characteristically applied. As such, the assessment matters are either not applicable or will be inconsistent with the future development of Wanaka Airport. That said, the effects that are likely to arise will represent a minor increase in magnitude over the existing level of effects created by the airport and adjacent development.

3.6.7 There will be visual effects arising from the possible construction of an airport control tower at a future date. Such effects are consistent with the purpose and function of a control tower and will not be adverse in nature but rather complementary. A control tower will complete the imagery of structures characteristically associated with an airport.

3.6.8 Mitigation in the sense implied by the QLDC assessment matters is generally inappropriate or impossible in an airport context. However vegetation could be used to positive effect for the purpose of visually integrating a range of utilitarian structures to create a higher degree of visual unity than currently exists. Any vegetation would need to be maintained at low heights in order to ensure it does not interfere with aircraft operations.

### **3.7 NOISE EFFECTS**

3.7.1 Noise at Wanaka Airport is currently managed by requiring compliance with a day/night level (Ldn) of 65dBA outside the Air Noise Boundary and 55dBA

outside the Outer Control Boundary as shown on the District Plan Maps. The anticipated increase in activity at Wanaka Airport is likely to effect a change to these boundaries.

- 3.7.2 Marshall Day Acoustics Limited has prepared a Noise Assessment (**Appendix F**) which addresses the potential effects of the increase in activity at Wanaka Airport as anticipated in the master plan.
- 3.7.3 The noise report provides details of the applicable regulatory noise rules, an analysis of the existing noise environment, details of the noise emission calculation procedures for aircraft operations and an assessment of the noise effects as a result of the proposal. The recommendations of the assessment will be brought forward through a Plan Change (lodged concurrently with this NOR) to amend the noise boundaries in the District Plan. The Designation will be updated to reflect the fact a detailed review of the noise boundaries has been undertaken.
- 3.7.4 As required by the existing restrictions on operations at Wanaka Airport, the NOR introduces monitoring obligations for Queenstown Lakes District Council to comply with in their capacity as a requiring authority for the Airport. The monitoring requirements will assist in ensuring aircraft noise is being managed to within acceptable limits. This will provide confidence for the community living around the Airport that the aircraft noise is being appropriately managed and monitored.

### **3.8 CONSTRUCTION EFFECTS**

- 3.8.1 Construction effects are likely to arise during construction of the extension to the existing runway; construction of the proposed new runway and construction of additional airside and landside facilities.
- 3.8.2 At the north western end of the proposed runway extension and proposed new runway ground level drops to approximately 3 metres below Airport Datum. In order to provide level ground for the construction of the runway and extension a total of 121,500m<sup>3</sup> of cut and 198,000m<sup>3</sup> fill will be required. It is anticipated that this fill will be sourced locally. If the local road network is required to transport the fill to site, a traffic management plan will be prepared in consultation with the Council and the New Zealand Transport Agency to ensure the effects of construction traffic are appropriately managed.
- 3.8.3 Actual construction of the runways would likely involve excavation and re-compaction of the sub-base and application of base course (screened gravel materials or the equivalent), chip sealed and with a cap seal overlay.
- 3.8.4 All construction works will be undertaken in accordance with a Construction Management Plan which will address issues associated with earthworks and dust/sediment controls.
- 3.8.5 All new terminal facilities, hangars, offices and associated airside support services would be erected on flat land requiring minimal earthworks.

- 3.8.6 Stormwater and wastewater discharges will be collected and treated in accordance with the appropriate Regional Council standards for an activity in a rural environment. It is also envisaged that a connection will, in future, be made to the proposed wastewater plant. Water for fire fighting and drinking purposes (treated to potable standard if required) will need to be provided from an existing bore or a new bore on the site or from reticulated water supply associated with the new wastewater treatment plant.
- 3.8.7 Once construction is complete (over a period of years) the physical effects of the landside activities on the surrounding land uses and the community are considered to be minor.
- 3.8.8 Overall the construction effects of the activities provided for through the proposed Aerodrome extension will be temporary in nature and will be managed through a Construction Management Plan. The effects are considered to be no more than minor.

### **3.9 CONCLUSION**

- 3.9.1 Overall the proposed alteration to the designation is likely to bring positive economic effects to the Wanaka area and potentially the wider region. While there may be temporary adverse effects during construction (which can be mitigated), the overall effects on the environment are considered to be no more than minor.