

## Submission on Proposed Regional Policy Statement for the Wellington Region, 2009

Pursuant to Clause 6 of the first Schedule and Section 79 of the Resource Management Act 1991

**To:** Freepost 118112  
Proposed Regional Policy Statement  
Greater Wellington Regional Council  
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**Name of Submitter:** Airways Corporation of New Zealand Ltd  
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*(Note: Different address for service)*

### **1. This is a submission on the Proposed Regional Policy Statement for Wellington Region, 2009:**

1.1. Pursuant to Clause 6 of the first Schedule of the Resource Management Act 1991 (RMA), Airways Corporation of New Zealand Ltd (Airways) hereby lodges a submission on the Proposed Regional Policy Statement for Wellington Region, 2009 (RPS). Under the RMA Regional Councils are required to review their regional policy statements every 10 years. The Proposed RPS is the second Regional Policy Statement to be prepared by the Greater Wellington Regional Council (GW).

### **2. The specific provisions of the Proposed RPS that this submission related to are:**

2.1. Provisions in the Proposed RPS relating to discharges to air and regionally significant infrastructure.

### **3. Introduction:**

3.1. Airways has principal responsibility for facilitating the safe movement of air traffic in New Zealand airspace.

3.2. In the Greater Wellington Region Airways is responsible for the provision of air traffic management and aircraft navigation services, including aerodrome control at Wellington International Airport. These services are essential for the economic well-being and the continuing health and safety of the local and wider Greater Wellington community.

#### 4. Summary of issues:

- 4.1. Airways is concerned that no recognition or specific reference is made in the policies and rules of the Proposed RPS regarding the sensitivity of airports and aircraft flight paths to high velocity vertical discharges to air.
- 4.2. Airways is particularly concerned about:
  - Discharges to air from combustion or industrial processes with generating capacities exceeding 5 megawatts;
  - Discharges to air with vertical velocity exceeding 4.3 metres per second at 60 metres above ground level or penetrating the OLS; and
  - Discharges likely to produce significant smoke in the vicinity of airports.
- 4.3. Aircraft stability and safety can be adversely affected by high velocity vertical discharges generated by large-scale combustion and industrial processes.
- 4.4. Airways considers that it is a matter of public interest that Council demonstrates commitment to minimising potential danger to aircraft while in the air.

#### 5. Obstacle limitation surfaces:

- 5.1. Aircraft are required to travel at a minimum height of 300 metres above ground level except during descent to, or ascent from, an aerodrome.
- 5.2. The airspace above an airport or aerodrome is protected by 'obstacle limitation surfaces' (OLS) which are a series of imaginary surfaces that define the limits to which objects may project into the air.
- 5.3. These surfaces are necessary to enable aircraft to maintain a satisfactory level of safety while manoeuvring at low altitude in the vicinity of the aerodrome.
- 5.4. While only large scale discharges will have the potential to affect aircraft flying above 300 metres, aircraft within the OLS will have a greater sensitivity to such activities and therefore require appropriate protection.

#### 6. Civil aviation rules:

- 6.1. Civil Aviation Rule Part 77.7 contains a requirement:
  - a) *Each person proposing to use a structure shall notify the Director [of Civil Aviation] of the proposal in accordance with 77.13 if –*
    - (i) *The structure will or may discharge efflux at a velocity in excess of 4.3m per second through the obstacle limitation surfaces of an aerodrome; or*
    - (ii) *The structure will or may discharge efflux at a velocity in excess of 4.3m per second higher than 60m above ground level.*
- 6.2. Civil Aviation Rule Part 77.19 states that the Director shall determine any structure to be a "hazard in navigable airspace".
- 6.3. Airways seeks to eliminate the potential for such hazards and considers that the Proposed RPS should support and give effect to the Civil Aviation Rules.

## **7. Report on the velocity of thermal emissions:**

- 7.1. In 2005 Airways commissioned an engineers report from Opus International Consultants in order to verify the point at which heat output (MW) exceeds 4.3 metres per second (the Opus Report)<sup>1</sup>. This report was reviewed and confirmed by the National Institute of Water and Atmospheric Research<sup>2</sup>.
- 7.2. The Opus Report also provided details as to the rate at which the efflux velocity decreased as it was discharged into the air so that Airways was able to assess the likely impact of emissions discharged at different heights above ground level.
- 7.3. The Opus Report established that efflux velocity depends on the type of fuel being burned. The analysis was based on the assumption that the hypothetical chimney stack exit is located 20m above the ground level. In addition, the analysis was limited to heat outputs up to 15MW.
- 7.4. Of all the fuels tested only an incinerator burning waste/woodwaste or the like with a heat output of 5MW or more would produce a rate of thermal efflux of greater than 4.3 metres per second at 60 metres above ground (assuming a single stack situation).
- 7.5. All of the other fuels tested (e.g. natural gas, propane, oil) will reach the 4.3 metre per second threshold between 5MW and 9MW output but at heights below 60 metres above the ground level.
- 7.6. Should the stack height be greater than 25m above ground level or the heat output be greater than 15MW, there is the potential for other substances to become problematic.
- 7.7. Accordingly, it is not only the heat output of the proposed activity which is of concern, but also the height at which that discharge occurs.
- 7.8. This data concludes that the potential for discharges 5MW and over to affect aircraft safety is a real possibility which Airways seeks to avoid.

## **8. Visibility:**

- 8.1. Visibility for pilots of aircraft being flown under VFR can be severely affected by smoke. This becomes an issue close to airports where pilots of smaller aircraft tend to use VFR or when navigation aids are out of service.
- 8.2. It is important that any activity which is likely to produce a significant amount of smoke be considered by Council in terms of whether it has the potential to impact upon a pilot's visibility.
- 8.3. If, following consideration of these issues, an activity is allowed to go ahead, Airways should be informed of any potentially problematic discharges so that these can be marked on flight charts.

## **9. Airways submit on the following specific matters:**

### **Discharges to air:**

- 9.1. Airways notes the Objective and Policy directly related to discharges to air:

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<sup>1</sup> Velocity of Thermal Emissions from Point and Non-Point Sources, Opus International Consultants, May 2005.

<sup>2</sup> Review of Thermal Plume Dispersion Study for Opus International Consultants, NIWA, May 2005.

*Objective 1: Discharges of odour, smoke and dust to air do not adversely affect amenity values and people's wellbeing.*

*Policy 2: Reducing adverse effects of the discharge of odour, smoke, dust and fine particulate matter – regional plans.*

*Regional plans shall include policies and/or rules that:*

- a) protect or enhance the amenity values of neighbouring areas from discharges of odour, smoke and dust; and*
- b) protect people's health from discharges of dust, smoke and fine particulate matter.*

9.2. Objective 1 and Policy 2 focus on the impacts of discharges to air on reverse amenity and health. Airways considers that this Objective and Policy are too broad to give adequate protection to aircraft.

9.3. Airways has an interest in protecting flight paths from anything that may adversely affect aircraft operations. As highlighted above, this is of particular importance for aircraft being flown under VFR and in relation to hot air emissions.

9.4. Airways requests that Objective 1 and Policy 2 be expanded to cover the effects of discharges to air, both in terms of hot air emissions and smoke, on aircraft.

**Relief sought:**

9.5. That Objective 1 reads:

*Discharges of odour, smoke, dust **and high velocity vertical discharges**<sup>3</sup> to air do not adversely affect amenity values and people's wellbeing **or the safety of aircraft while in the air.***

9.6. That Policy 2 reads:

*Reducing adverse effects of the discharge of odour, smoke, dust, **high velocity vertical discharges** and fine particulate matter – regional plans.*

*Regional plans shall include policies and/or rules that:*

- a) protect or enhance the amenity values of neighbouring areas from discharges of odour, smoke and dust; and*
- b) protect people's health from discharges of dust, smoke and fine particulate matter; **and***
- c) **prevent discharges to air taking place within an Aerodrome Area, or outside an Aerodrome Area with a stack height of over 30m, without an aeronautical report confirming that it will not constitute a hazard in navigable airspace under Civil Aviation Rule Part 77.19(b) or (c)**<sup>4</sup>.*

**Regionally significant infrastructure:**

9.7. Airways notes the Objective and Policies directly related to regionally significant infrastructure:

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<sup>3</sup> Hot air emissions - where a vertical heat output is discharged as a result of burning fuels.

<sup>4</sup> 1. Any structure associated with a discharge must also comply with the Civil Aviation Rules.

2. 'Aerodrome Areas' cover that area within the obstacle limitation surfaces for the relevant aerodrome. They are usually referred to as flight protection areas within District Plans.

*Objective 10: The social, economic, cultural and environmental benefits of regionally significant infrastructure are recognised and protected.*

*Policy 6: Recognising the benefits from regionally significant infrastructure and renewable energy – regional and district plans.*

*District and region plans shall include policies that recognise:*

- a) the social, economic, cultural and environmental benefits of regionally significant infrastructure including:*
  - (i) people can travel to, from and around the region efficiently;*
  - (ii) public health and safety is maintained through the provision of essential services, supply of potable water and the collection and transfer of sewage;*
  - (iii) people have access to energy so as to meet their needs; and*
  - (iv) people have access to telecommunication services.*
- b) the social, economic, cultural and environmental benefits of energy generated from renewable energy resources including:*
  - (i) security of supply and diversification of our energy sources;*
  - (ii) reducing dependency on imported energy resources; and*
  - (iii) reducing greenhouse gas emissions.*

*Policy 7: Protecting regionally significant infrastructure – regional and district plans*

*District and regional plans shall include policies and rules that protect regionally significant infrastructure from incompatible new land uses or activities under, over, or alongside.*

*Policy 38: Recognising the benefits from regionally significant infrastructure and renewable energy – consideration*

*When considering an application for a resource consent, notice of requirement or a change, variation or replacement to a district or regional plan, particular regard shall be given to:*

- a) the social, economic, cultural and environmental benefits of regionally significant infrastructure and/or energy generated from renewable energy resources; and*  
*the nationally significant wind and marine renewable energy resources within the region and the need for electricity generation facilities to locate where these resources exist*

9.8. Objective 10 and Policies 6, 7 and 38 ensure that regionally significant infrastructure is recognised for the benefits it provides and is protected from development that would impact on the services it provides.

9.9. Airways notes that under the Proposed RPS the Wellington International Airport is listed as being regionally significant infrastructure and that strategic radio communication facilities (as defined in section 2(1) of the Radio Communications Act 1989) are listed as regionally significant infrastructure.

**Relief sought:**

9.10 That Objective 1 and Policies 6, 7 and 38 are retained in their current form without modification as they give protection to the Wellington International Airport and essential radio communication facilities.

**10. Conclusion:**

10.1. In conclusion Airways submits that:

- a) Large scale discharges to air have the potential to adversely effect aircraft safety;
- b) Risks to aircraft safety is a matter of public interest to which Council should have appropriate regard; and
- c) The relief sought by Airways is reasonably necessary in order to ensure aircraft safety.

10.2. Airways seek that the Proposed RPS be amended to include the matters outlined in the relief sought sections in the above submission.

10.3. Airways do wish to be heard in support of this submission.

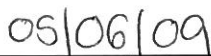


**Signed**

Laura Cameron (Opus International Consultants Ltd)

On behalf of

Airways Corporation of New Zealand Ltd.



**Dated**

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