

**Regional Policy Statement
Proposed Change No.1 (including Variations 1-4)
Hearing Evidence / Legal Submissions**

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Submitter Number(s): # 15

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IN THE MATTER of the Resource Management
Act 1991 (the Act)

AND

IN THE MATTER of submission on Plan Change 1 and
Variation 4 to Plan Change 1 to the
Regional Policy Statement

STATEMENT OF EVIDENCE OF M.J.G. GARLAND

1. My name is Michael John Graham Garland. I have a BA Degree, a postgraduate Diploma in Town Planning and I am a member of the New Zealand Planning Institute. I have 42 years experience in planning and resource management in both New Zealand and the United Kingdom. I am currently a director in the resource management consulting firm of Robson Garland Limited.
2. I confirm that I have read and agreed to comply with the Code of Conduct for Expert Witnesses (July 2006). This evidence is within my area of expertise, except where I state that I am relying on information received from another person. I have not omitted to consider material matters known to me that might alter or detect from the opinions I express.

SCOPE OF MY EVIDENCE

3. In my evidence I address the following issues:
 1. An outline of my relevant work experience.

2. some historical background to the issues related to airnoise at Christchurch.
 3. The NZ Standard 6805.
 4. The background to airnoise control and its purpose.
 5. The Regional/District interface.
 6. Variations from the Standard.
 7. 50 as opposed to 55 Ldn and points in between.
 8. Engine testing.
 9. consistency with other rules.
 10. a possible non-regulatory approach.
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4. I have experience in land use planning issues associated with aircraft noise and the interface between airports and other land use and I have been involved with Heathrow, Gatwick, Fairoaks, Redhill, Wellington, Palmerston North, Invercargill, Queenstown and Napier Airports as far as related airnoise and land use controls are concerned. In those situations I advised either the relevant councils or the local airport company.

 5. While working with Palmerston North City in the 1960s, I was engaged in research into the impact of evolution in aircraft types on land use planning needs in the Manawatu, in particular, the need for facilities for such types as the Lockheed L 500c (the prototype name for what has later been known as the Galaxy) and the Boeing 747. At that time the expected effects on local economic and social environments was a matter of concern to the Council. I was involved in research to put a case for expansion of the city boundary to the local Government Commission and also conducted much of the survey work necessary for the first review of the Palmerston North City Plan. At that time we took great care to avoid the potential confrontation between residential development and the airport, but we had no idea as to actual noise exposure levels and no technical rationale for doing so other than the sensible notion that generally it was not wise to allow residential activity to encroach upon the airport.

6. Between 1974 and 1976 I was a Principal officer in the County Planning Department of the Surrey County Council in Kingston-upon-Thames, England. I was the officer responsible for airport planning in the County. I attended a course on airport planning and design at the Cranfield Centre for Transport Studies – part of the Cranfield Institute of Technology. This position involved council input into the Master Plans for the major airports at Heathrow and Gatwick.
7. I represented the County on two working parties of the Standing Conference on London and South East Regional Planning. One working party dealt with the National Airport Strategy arising out of the controversy over attempts to find a site for a third London airport (eventually it led to the selection of Stansted). The other working party was concerned with the General Aviation National Strategy and the 28 minor airports around London.
8. A major part of my work involved the effects of aircraft noise and I worked with a system that replaced the old notion that one should simply keep houses away from airports with one having a proper scientific basis. We used the Noise Number Index in a manner similar to what is now advocated by New Zealand Standard 6805:1992 ("the New Zealand Standard") and that now used to control the effect of airnoise around most New Zealand airports.* I was involved with the administration of the Council's Noise Insulation Grants Scheme as it related to aircraft noise and in the original routing of Concorde flights in relation to noise sensitive activities. The Noise insulation grants scheme was implemented to deal with the situation of long established houses exposed to high levels of noise well in excess of that experienced within the 65 Ldn contour. This was the case for Heathrow which already had dense population close by before airnoise became a problem. Gatwick did not have this problem being a Greenfield area. As I recall,

* The system was similar to the NZ Standard in that two separate types of control were used. Firstly there was a noise control contour which the relevant airport was not permitted to exceed. Secondly, there was a development control contour to control the development of noise sensitive activities in given areas of noise exposure. The former control is the equivalent of the Airnoise Boundary (Composite 95sel/65 Ldn) and the second, the Outer Control Boundary (55 Ldn).

new housing was not permitted to establish closer than about 60 Ldn to that airport.

9. I have a particular familiarity with development in the vicinity of airports and in New Zealand have been able to use this knowledge to good effect working for both airports and owners of surrounding land.

BACKGROUND

10. I am familiar with the historic issues around airnoise in relation to Christchurch International Airport having been advisor to Messrs Eckroyd, Havard and Others in 1987. Their appeal was the catalyst for the Living 1C zoning of the land as shown in the Proposed District Plan. At the time the Waimairi District Plan was going through the process of public submission. The Plan made no attempt to control airnoise but it did contain an airport noise exposure line which took no account of the northwest runway. At that time, I advocated a system based on internationally recognised standards that I had been involved with in the United Kingdom but neither CIAL or Waimairi District Council were ready to adopt such a system.
11. Prior to 1992 there had not been a robust set of provisions either regionally or in district terms directly to discourage development near the airport either in the terms now promoted by the New Zealand Standard or in stricter terms. If anything, the airport was the coincidental beneficiary of other provisions. For instance, the Christchurch Regional Planning Scheme which was operative from 1959 included the area in the vicinity of the airport in a Special Rural Area and there was an urban fence based on a number of constraints such as agricultural qualities drainage, aquifer recharge, transport links and such like. The review of this plan made operative in 1971 showed little change. The Special rural Area is described on Page 2 in the description of the “purpose of the Scheme”. It reads in full:

“(d) Secure the protection of a special Rural Area wherein only those uses will be promoted which require large open tracts of land, which do not result in a congregation of residents or employees, and which have no likelihood or potential of attracting a congregation of residents or employees, so that the resources of the Regional, which area of great importance to both the Region and the Nation may be conserved and so that future urban development may be guided into localities most suited for urban purposes; and in particular to protect potential agricultural production of the are and to curb the tendency arising from subdivision of land to promote close settlement with the Special Rural Area.

12. The Special Rural Area was described as being determined by three factors:

- (a) Land where the soils have a high potential for agricultural production;*
- (b) Land where development involving a concentration of people, as might be expected from residential, commercial or industrial activity, could adversely affect the efficient operation of the Christchurch International Airport as a major communication’*
- (c) Land where the amenity and recreational value, both existing and potential, of such physical features as the Port Hills, the Coastline and the Riverbanks are of major importance and the environmental contrast which such features afford to an urban population are considered essential to the community from a health and convenience point of view.*

13. This scheme included reference to the need to protect the airport among a much larger number of factors including such things as the protection of versatile soils for the production of food.

14. The Second Review of the Regional Scheme contains an objective 14.2(f) under Settlement Distribution which is directed at protecting the Airport from encroachment by urban development and to safeguard its development potential.

The attached policies made it clear that the erection of further dwellings should not be permitted in the Green Belt area where these would tend to create a nucleus for the expansion of urban or rural settlements.

15. None of these plans nor any of the district plans prepared concurrently sought to control airnoise. The Paparua District Plan however did have a development control at 55 Ldn and the Waimairi District Plan had one at a calculated 85 PNdB contour.
16. With the advent of the RMA, as we know, the Green Belt Concept was discarded. Shortly thereafter, in 1992 the NZ Standard was adopted for both control of airnoise on one hand and development control on the other.
17. By the time local body amalgamation had occurred in 1990 and the NZ Standard 6805 had been adopted in 1992, the appropriate modelling work was able to be carried out and that is why the Proposed District Plan now contains Ldn and Single Event contours.
18. Currently the Regional Policy Statement contains Policy 4 of Chapter 12 Settlement and the Built Environment. Relevantly it states:

“The use of land for urban development and the physical expansion of settlements should be discouraged where such use would adversely affect the operation, efficient use and development of Christchurch International Airport, Timaru Airport, the Ports of Lyttelton and Timaru, other network utilities, telecommunication facilities and military establishments for defence purposes.”
19. The relevant part of the explanation to it is:

Policy 4 recognises the need to reinforce the use of Air Noise and Outer Control Boundaries along with compatible land use planning principles in areas adjacent to major airports to ensure continuation of their efficient operation (see NZ Standard 6805:1992).”

20. The Regional policy Statement is presently silent on the question of 50 Ldn versus 55 Ldn – and the Court in the Robinsons Bay case accepted that it is neutral on that issue.

THE NZ STANDARD 6805

21. As you can imagine I received the adoption of the New Zealand Standard 6805 with a great deal of enthusiasm because it is exactly the sort of system I was advocating in 1987. The Council, unwilling to adopt such a system in 1988 included the modelled contours in its district plan at first as a development control in June 1995 and much later (May 2006) it introduced an airnoise control for the first time (at the direction of the Environment Court). I am a strong supporter of the adoption of the Standard and its proper use by local authorities. I am a very strong advocate of its use in this case and of Councils and airports who do so.
22. The introduction of part of the standard (the development control part) into the Regional Policy Statement in the way now proposed, ie directing both the location of the contour by showing it on the planning map and directing the policy response – to restrict urban development within the 50 Ldn) is novel because it is effectively a rule rather than a policy. Putting aside questions as to whether this is justified, its adoption has some interesting flow on effects for district planning which I will discuss later. Such flow on effects have either not been contemplated by the authors of the Change and its variations or have been brushed to one side.

THE AIRNOISE CONTROL

23. Before the advent of airnoise controls we had a history of airports becoming surrounded by housing and this led to a demand for restrictions such as night curfews. Airports such as Heathrow, Hong Kong, San Diego and many others had housing and sometimes schools at levels well above 65 Ldn. It also led to a strategy that sought to keep development away from airports altogether. Such an

approach could not work forever and it became essential to develop a rational system such as we now see in NZS6805.

24. As I have said I am a strong supporter of such controls having advocated for them in New Zealand since 1976. To be effective, such controls must be correctly implemented in the plan. I will now explain the concept as thoroughly as I can keeping it completely in lay rather than technical terms.

25. The concept of controls on air noise based on predicted aircraft noise footprints and linked with control of land use activities is by no means new. It has its origins in work carried out in the United States and Europe in the 1960s and early 1970s. Three or four very similar systems emerged. By and large the differences between them were as to the way the noise contours were derived whether, for instance they were night weighted or taken as an average over a whole year or perhaps a shorter period. The outmoded Noise Number Index we worked with in the UK is slightly different from the Ldn in terms of that sort of detail. The concept, however, is the same: a given contour represents a level of noise exposure comprised of the numbers of noise events and the loudness of the noise events. In the case of Ldn there is a weighting given to night time noise because such noise is more sensitive at night. It represents a quantity of noise which could be made up of a large number of moderate events or a smaller number of louder events. Once actual footprints have been calculated the acceptability of the noise level is examined via a complex series of social surveys and analysis of the data obtained. I was involved with such analysis conducted in conjunction with Stratfords, a firm of consultants working for the Surrey County Council. Such surveys were conducted around many of the significant airports in Western Europe and much of North America. The data obtained probably represents hundreds of millions of dollars of work.

26. Although the technique has been advocated in New Zealand for many years, for some reason it was not adopted until 1992 with New Zealand Standard 6805. The New Zealand approach is akin to that adopted in much of North America. The

technique can be said, however to be derived from an enormous amount of research world wide and this shows in the acknowledgement on page 3 of the published volume containing NZS 6805.

27. My concern relates almost entirely to what I see as a departure from the intent of the New Zealand Standard and from the intent of the Resource Management Act in this instance.

28. It is apparent that some people believe the airnoise boundary and outer control boundary are both devices to protect the operational capacity of the airport rather in the manner of the runway approach fans or obstacle limitation surfaces. I believe that is far from their purpose. If that were so the ANB and OCB could be the subject of a requirement to designate in the district plan. Quite rightly they are not designated. In 1987 I advocated the use of a technique which was rejected by the planning authorities because it was purely to protect people from noise but provided little strategic protection for the airport. In NZS 6805 we now have that very technique – for doing both but not in the way advocated for the Regional Policy Statement.

29. What is an Airnoise Boundary for? The concept is well described in New Zealand Standard 6805 Airnoise Management and Land Use Planning. The foreword to that document explains (my emphasis):

“This standard is concerned with land use planning and the management of aircraft noise in the vicinity of an airport or aerodrome for the protection of community health and amenity values. It is intended to ensure communities living close to the airport are properly protected from the effects of aircraft noise whilst recognising the need to be able to operate an airport efficiently.”

30. It is important to note the use of the conjunctive “whilst” rather than “while”. As you know Section 5 of the Act uses the latter, meaning “at the same time as.” The use of whilst means “although simultaneously.” The same wording appears again

in the body of the Standard where the Airnoise Boundary is described on page 10. It is clear that the standard is intended to control aircraft noise but not at the expense of airport efficiency.

Part 1 of the standard itself is even more starkly clear:

“The standard is for the control of airport noise. It provides a guide for territorial authorities wishing to include appropriate land use controls.”

The Airnoise Boundary concept is: (my emphasis)

“a mechanism for local authorities to establish compatible land use planning and to set limits for the management of aircraft noise at airports”.

“The approach advocated is a recommendation of the implementation of practical land use planning controls and airport management techniques to promote and conserve the health of people living and working near airports, without unduly restricting the operation of airports.”

31. In other words the text of the standard illustrates the Airnoise Boundary concept as something which does nothing for airports but restrict their operations in the interest of people living or working nearby. These people are also restricted as to what they can do, largely in their own interest. The whole thing should be done so as to avoid undue restriction of the airport and that is achieved by making a realistic long term prediction of Ldn levels using the appropriate model allowing for growth. In other words these contours need to be so placed that the operation and future development of the airport will not be unduly restricted. At the same time, the standard recommends that development of noise sensitive activities be prohibited within the Airnoise Boundary. It is in the long term strategic interest of

the airport to have such a system in place and to allow for predicted growth because once the airnoise boundary at 65 Ldn is established the standard does not envisage that it (ie, level of protection afforded by the Airnoise Boundary) will be downgraded (Clause 1.1.4 of the standard). This means that once the Airnoise Boundary is established, the NZ standard does not envisage that it will be extended out to include further land. Speaking generally of RMA jurisprudence, unacceptable levels of environmental noise are expected to be contained or to reduce and the NZ Standard is in accord with that principle.

THE REGIONAL/DISTRICT INTERFACE

32. You may be wondering why I am even mentioning the Airnoise Boundary at 65 Ldn (or, in the case of Christchurch the Composite 95 sel/65 Ldn) where it is only the Outer Control Boundary we are concerned with here. The point is that the contours are derivative. If you move the Outer Control Boundary, of necessity the Airnoise Boundary has to move as well. I know that the 65 Ldn contour that derives from the same data as the now proposed 50 Ldn contour has been plotted. To this will have to be added the single event data if the noise control is not to be downgraded.

33. I question whether the use of the contour for amenity purposes is a regionally valid justification (i.e. usurping role of district plans). The present provisions of the RPS go far enough in that they refer solely to the need to protect the strategic operation and development of the airport from curfews etc. The Court has said that 55 Ldn is satisfactory for that. The usual course is for such policies, if they are related to land use, to be exercised in a specific sense by mechanisms in plans, particular where the only valid justification is for amenity and not to protect against curfews. I comment on that later. To be consistent with the NZ Standard Airnoise contours should be included in the district plans as an Airnoise Boundary at 65 Ldn (or a combination of that with a single event level) and as an Outer Control Boundary at 55 Ldn (although in this case 50 Ldn has been selected). The contours are derived from the same noise modelling data so that if the data change both contours will change. If the new modelling exercise produces a new Outer

Control Boundary it must of necessity produce a new Airnoise Boundary. We have seen the entire set already. It is the airnoise boundary that is used for noise control purposes and the New Zealand Standard does not envisage a downgrading of existing noise controls. The modelling exercise has produced a new 65 Ldn contour which is quite similar to the present composite 65 Ldn/95 sel. If the new Airnoise Boundary is not a composite one (which it should be) or it extends over property other than that already covered by the existing one, it will be a downgrading of the existing control because it will be allowing more environmental noise to be produced than the existing controls allow.

34. The contours will have to be introduced to the District Plan through a plan change which carries with it objection and appeal rights.
35. If the Regional Policy Statement becomes operative including the newly modelled Outer Control Boundary (whether at 50 or 55 Ldn) the district plans will be required to comply. Being derived from the same data, a new composite Airnoise Boundary will have to be introduced, otherwise the Outer Control Boundary will have no basis in air traffic movements. As a new composite Airnoise Boundary will be subject to objection and appeal and as it seems likely to be a downgrading of an existing noise control, it might well not survive.
36. This situation illustrates a disconnection between the regional and district functions under the Resource Management Act. The broad regional policies in a Regional Policy Statement are expected to be exercised through the district plans. When regional policy re development becomes as specific as this, the only way for a district plan to comply is to echo it precisely. When the flow on effect of this process will inevitably lead to the result that a noise control will need to be downgraded through subsequent changes to the district plan, and where no member of the public could envisage that this would be the outcome of these hearings on the change to the regional policy statement, this will compromise people's ability to object and appeal through that further process. I do not think that this sort of situation can have been envisaged by the legislature or the Act.

37. The Court in the Robinsons Bay case described the imposition of the 50 Ldn contour as opposed to the 55 Ldn contour as being for the purpose of amenity rather than the strategic protection of the airport. The airport say now that the arguments have always been twofold but a perusal of their evidence in earlier cases shows that their case was only ever about curfews – it turned in to one about amenity after the courts findings in Robinsons Bay case. The airport seems to be still running the argument on the basis of both amenity and curfews despite the courts’ findings in Robinsons bay about the risk of curfews being very unlikely.
38. This raises interesting issues. First I doubt if it can be said that amenity in the sense discussed in Robinsons Bay is of regional significance[†]. I note that the functions of a Regional Council ii section 30(1)(b) are the preparation of objectives and policies in relation to any actual or potential effects of the use, development, or protection of land which are of regional significance.
39. The complementary provisions relating to the contents of a District Plan is sections s74(2) and 75(3). S74(2) states that: “a Territorial Authority shall have regard to a proposed Regional Policy Statement, or any proposed Regional Plan of its region in regard to any matter of regional significance or for which the regional council has primary responsibility under Part 4. S75(3) requires a District Plan to give effect to any Regional Policy Statement.

[†] This will be raised as a jurisdictional point but significantly, the meaning of the term “regional significance” as used in the RMA is outlined in chapter 20 of the Canterbury Regional Policy Statement (20.4 on page 287). The explanation notes that firstly, in section 30(1) (b) it is not areas of land (or any values that are associated with that land) that must be of regional significance, but the effects of the use, development or protection of land. Secondly, in section 62(1) it is matters from Part II of the Second Schedule to the Act (as described as “matters related to districts”) that must be of regional significance before being provided for in the Regional Policy Statement. The chapter contains a list of criteria labelled “matters” and a list of effects labelled “Regionally significant effects” which I have attached as Appendix 1. These may be either to make possible:

(i) the identification of areas of land, or in some cases values that are considered to be regionally important; or
(ii) resolution of which matters form Part II of the Second Schedule to the Act should be provided for in the RPS in accordance with section 62(1).

I do not see that the issue of amenity in the area between 50 Ldn and 55 Ldn could be deemed to be a matter of regional significance.

40. The second related point is that it is for a District Plan to set an appropriate level of amenity for its district. Provided that the district plan is consistent with an RPS (i.e. gives effect to policies in this case to protect the strategic operation and development of the airport) there must be some flexibility as to how that is to be achieved in each of the districts and at the very least when it comes to issues of amenity alone - if found to be a regionally significant issue, the circumstances of the districts may well justify different approaches.

VARIATIONS FROM THE STANDARD

41. I believe the airnoise provisions of a plan, whether district or regional, should be very closely related to the New Zealand Standard given the weight of expert opinion and range of representation that went into formulating that document. Where they are not, this can do little but put the proposed controls into disrepute. I accept that people especially in rural areas expect to enjoy an outdoor living environment. In that respect, Christchurch does not enjoy a particularly good outdoor environment because of the prevailing easterly and occasional north-west ward, but it is a factor and that is one reason why we have a noise control in the form of the Airnoise Boundary. If I am to compare Christchurch Airport with Gatwick I would say that the outdoor environment around that airport in Surrey and Sussex is rather more to be valued outdoors because it is largely used for lifestyle living and the 50 Ldn contour is not used there.

42. The standard provides for a council to establish Airnoise and Outer Control Boundaries based on the projected 65 and 55 Ldn contours. It also provides for small adjustments to take in such things as title boundaries. These have to be very minor indeed if the method is to remain credible or indeed able to be justified in terms of Section 32. The Standard does not contemplate wholesale departure from the sort of footprint that could be produced from aircraft operating to normal procedures. The Standard, in Part I Clause 1.1.4 allows a local authority to determine that a higher level of protection is required in a particular locality. Invariably this would lead to tightening the airnoise boundary in order to reduce

the noise exposure for an area. As I have already explained, the airport has consistently interpreted it to allow a council to adopt a zoning system that limits or prevents noise sensitive activities from being established in a manner that goes beyond the recommendations of the Standard. I do not agree that this could be so because although it may prevent the arrival of new comers who might be affected by noise it would not give existing residents or occupants a greater level of protection. Such greater level of protection could be obtained only by a reduction in airnoise. In other words, the greater level of protection has to be achieved by a shrinking of the Airnoise Boundary and not by land use controls extending to the 50 Ldn contour.

43. The Standard (1.4.4.1) stipulates that:

“The airport operator shall manage its operations so that the 3 month (or such other period as is agreed) average 24 hour night-weighted sound exposure does not exceed the limit at or outside the airnoise boundary.”

and this is now reflected in the rules requiring monitoring and control of airnoise and implementation of a noise management plan through clauses 1.2.4.2 and 1.3.5 which were introduced in May 2006 at the direction of the Environment Court.

44. The Standard, as I understand it, does not have the force of a regulation: as I say, it is a guide. There is no doubt as to its substantial intent, however, with such a rule in place, the airport would receive strategic protection of a sort. As long as it is operating within such an ANB rule, under Section 319 of the Act the Environment Court may not make an enforcement order against one who is acting in accordance with a rule in a plan.

JUSTIFICATION FOR THE USE OF 50 LDN AS OPPOSED TO 55 LDN AS A LAND USE CONTROL

45. I believe sufficient rationale has not been developed to justify the proposed controls over land which go beyond the levels advocated by NZS 6805. Although land use planning in relation to noise from air transport has attracted lots of publicity it is an art which has received little practice in this country apart from an unspecific and unscientific approach which can be summarised in the general phrase:

“Everyone knows it is just not sensible to allow houses near an airport.”

46. This sort of approach is typical of those of us who still practice town and country planning. It should not be an attitude of those of us who practice resource management, however, and the difference is quite significant. Where is the line in the sand to be drawn? The recommendation in the NZ Standard is the product of much study and is consistent with good RMA practice.

47. Many still say we must learn from the mistakes at Los Angeles and Heathrow or Wellington where they have to have curfews. Such curfews are necessary because large numbers of people live in areas exposed to levels of around and above 75 Ldn. Wellington is a closer example of just that situation when that airport at Rongotai was extended to replace Paraparaumu large areas of housing had to be cleared away and the airport land is hard up against long established residential areas. These situations arose prior to the adoption of measures such as NZS 6805. The tension that arose between landowners and airport authorities led to a great deal of expenditure on studies and the development of rationally based systems. These are designed to replace the old notion of keeping development at arms length. In NZS 6805 we have a system that provides a fully rational alternative and it is this system that should be in place used as it is designed to be used. Then, the rules will be able to be justified.

48. In developing the North American standard the US Environmental Protection Agency’s environmental goal for housing was 55-60 Ldn. The US Department of Housing and Urban Development identified the 65 Ldn and 75 Ldn levels as important. All residential sites lying below the 65 Ldn contour would experience

little adverse effect from aircraft noise and hence be considered “acceptable” based upon their standards. (The NZ Standard and other subsequent standards go much further and adopt the 55 Ldn level. I support that). For all sites lying above the 75Ldn contour, the acoustic treatment necessary to make the indoor environment habitable would be prohibitively expensive and therefore would not be acceptable.

49. The HUD had developed these DNL levels in anticipation that building noise reduction requirements would be seen as a complementary tool to screening the total noise an area experienced. The degree of annoyance could be further minimised, for example, by insulation, double glazing and sound proof roof design. Areas between the 65 and 70 Ldn contour, for instance, capable of infilling, would be expected to carry out sound attenuation to the order of 5dB.

50. The New Zealand Standard 6805 is only slightly different as to detail. It recommends that above 75 Ldn land should not be used for residential purposes. Above 70 Ldn existing homes should be purchased and land be zoned for non-residential purposes. Above 65 Ldn new residential, schools or other noise sensitive uses should be prohibited and existing houses insulated. Above 55 Ldn new residential, schools hospitals or other noise sensitive uses should be prohibited unless a district plan permits such uses subject to a requirement for acoustic insulation. Below 55 Ldn the standard is silent and I believe it cannot be singularly used to justify the use of any controls out to 50 Ldn as is proposed. I gather from Mr Bullen that the Australian Standard actually says that residential activity is acceptable at that level. The move to adopt the 50 Ldn contour as an Outer Control Boundary as opposed to the 55 Ldn contour is a truly enormous leap. The area between the 50 and the 55 Ldn is greater than the whole of the area inside the 55 Ldn contour including the airport.

51. Perhaps some may say it is a good idea to act on a precautionary principle if we have the opportunity. That is town and country planning thinking – not resource management. It is not as if we don’t know much about the effects of aircraft noise

on people. It is one of the most heavily studied phenomena. In any case I believe such caution would be an over reaction even in town planning rather than resource management terms. The reason I say this is that there is already a precautionary principle built in.

52. Firstly the Court in Robinsons Bay found (on the extensive evidence of the Airport) that 50 Ldn was not justified on the grounds of protecting the airport. This decision was made under the RMA taking account of the precautionary principle built into the Act.

53. Further, in this case, I gather that the expert panel agreed that 175,000 flights was a reasonable growth scenario taking into account a wide range of factors and assuming permission for certain runway improvements would be secured. Clause 1.4.3.2 of the Standard states as follows:

54. “Future airport operations should be projected in terms of:

- (a) *Aircraft types (current and future);*
- (b) *Flight frequencies by aircraft type, time of day, runway use and approach / departure tracks landing and take-off profiles and trip lengths;*
- (c) *Variations in airport operations within a year (e.g. due to seasonal effects);*
- (d) *Current and future runway capacity and any proposed airport development.*

55. As I understand it all these factors should be taken into account. This means that the airport has taken a very conservative position, one which would give it the most benefit. That is fine; it is what I would do if I was managing the airport. What this means is that the contours portray the worst case scenario in terms of noise exposure. It also shows that, even then, pretty well all the green areas in Plan Change 1 as first notified are comfortably within the levels where the Standard contemplates residential development.

56. As I have said, it is not a matter of simply doing what seems most sensible. The dim sited might say “If all things were equal, why would you expose people to this level of noise?” But all things are far from equal: the 50 Ldn noise level is not so high as to justify treating it as the single issue – within the 55 Ldn it is getting there and by 60 Ldn it is definitely a single issue. The question which must be answered is why should the owners of land between 50 and 55 Ldn be restrained from doing what they wish with the land for the single reason of amenity effects of noise given that only a small percentage will be highly annoyed and the majority will not be and when many other factors may be more important? I note that the Taylor Baines study found that in the area affected by transportation noise, more people were highly annoyed. Also in the control area, more people were affected by general neighbourhood noise likes dogs barking, etc.
57. Section 5 of the Act details its purpose as promoting the sustainable management of natural and physical resources. That means managing the use, development and protection of these resources, but there is a caveat: it must be done in a way or at a rate which enables people to get on with providing for their social economic and cultural wellbeing and for their health and safety. That wellbeing is not something actively to be provided for, it is something that should be allowed to happen. The Environment Court^{‡ 2 and 3} has confirmed that this enabling function is a passive one. Thus if we are to regulate we are constrained in doing so because we have still to be enabling at the same time as maintaining a benign environment (s.5(2)(a) (b) and (c)). It is not a case of the local authorities saying “we are the experts and we know what is best for you. The role of Councils under the RMA in relation to social, economic and cultural activities is passive. It is to enable people and communities to provide for their wellbeing not to direct how that is to be achieved.[§]

^{‡ 2} Terrace Tower (Nz) Pty Ltd v The Queenstown Lakes District Council, C111/200

³ Wakatipu Environmental Society Inc v The Queenstown Lakes District Council, C180/99, pp112-113

58. In the past the airport was protected by the green belt and to a certain extent this prevented the spread of suburbia into noise sensitive areas. The green belt policy framework was not a noise control in the sense that there was no restraint on the amount of noise produced by airport activities and the level of noise exposure at the green belt boundary or “line” could be exceeded so it had no relevance in terms of S.6805. Without rational guidelines it made some sense to hold development at arms length. However, it is important to understand that the green belt was primarily a method for urban containment and for the protection of productive land consistent with the functions of a Regional Planning Scheme and in particular, matters of national importance under the former Town and Country Planning Act. The boundary had no basis in airport protection.
59. The lack of rational guidelines was a lesson we felt we had learned from the mistakes made in places like San Diego and Los Angeles. However, now we have the Resource Management Act with Section 32 and Section 5. These mean that before we restrict the freedoms of a land owner we must have a good reason and the method adopted has to be the best method of achieving the purpose of the Act. We have to manage resources in such a way that we do not hinder people in their efforts to get on with life at the same time as avoiding, remedying and mitigating effects on the environment. We have to have done our background research and that has not become available in any direct form until the advent of NZS 6805. This provides a tool firstly to adopt rules or other methods to restrict the noise from an airport operation and secondly to control development within the affected environment.
60. The protection afforded by the green belt was much greater in area and purpose than that which would be afforded by a straight adoption of the NZ Standard. However, the people living within a greenbelt are entitled to as much protection as those living in an urban situation – perhaps even more. In that respect the NZ Standard is superior because there is now an effective and enforceable basis for controlling airport noise based upon adoption of the Airnoise Boundary and the

controls that flow from that which affords as much protection to those now in the rural zones formerly contained in the green belt as it does to those residing in urban zones. The airport has been conscious of its strategic position, feels it may lose some of this protection it has historically enjoyed and is therefore advocating standards in the plan which it considers will give it that greater protection from the risk of noise complaint. That is why it argues that historical levels of control should not be downgraded. However, there has been no airnoise control to downgrade until 2006. We already know that the risk of complaints leading to curfews within the 50-55 contour is very unlikely and it is not a function of a district plan to eliminate all complaints. All potentially nuisance causing activities have to live with some level of complaints and will have to develop a healthy relationship with their community for the purpose of managing those complaints. That is in part the function of the noise management plan that the airport is supposed to have in place – by virtue of the city plan. In advocating this higher level of constraint the airport and it would seem the Council as promoter of this change does not seem to realise that it has Section 32 to contend with. It is no longer valid to argue for the continuation of the ‘status quo’ without closer scrutiny under the rigours of that section. Following the recommendations contained within with the NZS 6805 is very sound because of the enormous body of research which lies behind it as a method. Any departure from it, particularly in a direction which further restricts the freedom of landowners will need the full backing of research to justify the difference. The weight of the research that I am aware of (i.e. Mr Bullen’s and Mr Fidells’ evidence) militates against any departure. The thorough nature of the research and survey work behind the standard makes it even more difficult for those advocating tougher standards. It has to be shown that the alternative method is a better method of achieving the purpose of the Act. Where is all that research? I know only of that by Taylor Baines which is nothing like the survey work I was involved with.

61. Some may say “why not keep a green belt buffer as generous as possible while we can?” The airport says exactly that. After all, by maintaining a bigger threshold

we will avoid adverse effects. However, under the Resource Management Act the question is always “why intervene?” rather than “why not?”

62. I was involved in the Robinsons Bay Trust** appeal where the use of the 50 Ldn contour as opposed to the 55 Ldn contour was considered. This hearing was remarkable in one sense because two of the three parties involved withdrew when they reached an agreement with Christchurch International Airport which allowed them to develop housing within the then projected 50 and 55 Ldn contours. As I recall, not all of the witnesses were then called (Messrs Reeves and Fidell for instance) and the hearing had to be completed by counsel for the remaining party who had one half day to prepare and who had not until then been present in court or taken any active role at all. Even though the Court heard from all the airports witnesses and despite the fact that the airport’s evidence largely went unchallenged, the Court’s findings were that 50 Ldn was not needed to protect the airport against curfews.
63. The Court’s findings had therefore to be based on incomplete testing of the airport’s evidence but they are, nonetheless, of interest. Central to the case was the question of whether the 50 dBA Ldn contour or the 55 dBA Ldn contour better provided for the purpose of the Act, the Regional Policy Statement and the undisputed policies and objectives of the Proposed Plan. It was accepted that either contour could be adopted without doing violence to either the Regional Policy Statement or the District Plan (in terms of Objectives and Policies),
64. As I have observed the information and expert opinion available was limited by the withdrawal of the most significant players but the Court heard enough to decide that in the circumstances the 50 Ldn contour was appropriate for development control for amenity purposes when it coincided with other controls. It was apparent that there were significant limitations on much of the land for reasons other than airnoise in any event so that the adoption of the 50 Ldn contour

** Robinsons Bay Trust; National Investment Trust; Christchurch International Airport Ltd Clearwater Land Holdings and Others; Suburban Estates Limited v Christchurch City Council, C060/04.

was only one of a number of measures controlling development over much the same area of land. The Court's discussion on section 32 was of particular interest, ie, there would be no cost to the landowner because of other restraints, even if there would be no real benefit to the airport. Airnoise, it seems was only one of a raft of reasons to control the peripheral expansion of Christchurch in that area.

- Notably, the Court was unable to conclude firmly from the evidence that any significant cost would be imposed upon the airport from the imposition of the 55 Ldn contour as opposed to the 50 Ldn contour. The proposition then put to the Court was that if there was to be a higher population between the 50 and 55 Ldn contours there would be more agitation for a curfew, but the Court found that this was unlikely to be the case.

65. It is clear that the Court did not see the 50 Ldn as a permanent arrangement and it acknowledged the possibility of different approaches in future. Now we have a different 50 Ldn contour based on new growth projections, I believe the whole issue should be re-examined. The Change to the RPS is doing just that, ie re-examining the policy framework for urban growth of the city and townships and rejecting the status quo. Why is it that when it comes to airport matters, the officers are happy to advocate for continued adoption of a status quo?

66. The Greenfield Outline Development Plan areas were identified after an exhaustive process and analysis of broad criteria including physical constraints, infrastructural planning and the position of key activity centres. The site selection process for these areas involved a mix of processes and documents, including:

- The Enquiry by Design Workshops and Technical Report.
- Council Area Plans (North West and South West).
- The City Plan.
- The Urban Development Strategy,

67. The process has been complex and it is clear that very many matters have been factored in, such as efficiency of transport, the need to nurture existing activity centres or to create new ones, the availability and the timing of extensions to infrastructural services, the avoidance of unconfined aquifers, stormwater and flooding, open space character, access to green space, population structure and the effects of airnoise. All these considerations to a greater or lesser extent, in balance led to the choice of the Greenfield Outline Development Plan areas. I observe, however that at the time Plan Change 1 was notified all these areas were clear of the existing 50 Ldn contour. Thus all these factors, considered in a mix of tension, harmony and compromise have led to the choice of the areas, there was no compromise over airnoise. In fact it did not really need to be factored in at all – consideration of that issue, in balance with other factors, was avoided altogether.
68. Now, in Variation 4 we have remodelled contours and they are to be treated as an absolute, pushing aside all other considerations made in that complex process I have described. The question must be asked as to why the issue of airnoise at its weakest least significant outer extreme edge should be uniquely applied in Christchurch to overturn so many other carefully applied considerations. If the planning exercise leading up to Plan Change 1 is to mean anything, just one factor seemingly at its last gasp should not be responsible for such a dramatic turn around.
69. Let us look at the facts. The areas otherwise identified for housing development but which would be excluded for airnoise reasons are as follows:
- A large portion of WK2 and WK3 to the north of Kaiapoi, much of it owned by Suburban Estates.
 - A portion of CN1 (although I understand that this land will be able to be developed).
 - Most of CN2.
 - A portion of CN3 including much of Mr Eric Lin's , the W K McDonald Family Trust's and Independent Fisheries; land.

- Much of CW1.
 - Half of CW2.
70. While I maintain there is no need to adopt the 50 Ldn standard at all, it must be readily apparent that the importance of airnoise in terms of residential amenity must diminish as exposure levels diminish. Thus, airnoise is less important at 50 Ldn than it is at 55 Ldn. I understand that a difference of 1 dB Ldn exposure is imperceptible to people and in any case probably lies within the margin of error for the modelling exercise. Clearly that last 1 Ldn has the very least importance when it has to be balanced against other factors. For that reason, it is worthwhile examining what the effect would be if 51 Ldn was adopted for development control purposes.
71. The most dramatic change is at the points in line with the end of the runway at the north end of Kaiapoi and, potentially at Rolleston. With 50 Ldn a large area of land in Kaiapoi has to be kept free of housing beyond which development can resume. This large area (most of which Suburban Estates Ltd has an interest in) would have to be leapfrogged by services and people further north would have to endure a physical disconnection from the established community and town centre. To fill such a large area with non residential activities would lead to a very peculiar community shaped by just one tiny issue among many which are arguably more important. That 1 Ldn should not be used to reshape the natural growth of the community of Kaiapoi and turn a potentially well-shaped community into something of a dog's breakfast. Nicole Lauenstein, an urban designer, will be enlarging upon this in her evidence produced for another party. I agree with her on this matter.
72. That same small shift of 1 Ldn would enable a significant amount of CN2 land to be developed. Furthermore the great majority of CN3 including all of Mr Lin's land most of the McDonald Family Trust land and much of the Independent Fisheries Ltd would be developable. Likewise much of CW1 and most of CW2

would not be held from residential development. If the 52 Ldn contour was to be adopted, apart from CN2, the issue almost disappears and 53 Ldn I believe the submitter would be satisfied. The airport would still have maintained protection superior to any other airport in the world and significantly better than envisaged by NZS 6805. Even that level cannot be justified in planning terms because good planning is not achieved on a single issue basis. The New Zealand Standard was not the product of consideration of a single issue but the choice of 50 Ldn for an Outer Control Boundary in lieu of 55 Ldn is redolent of single issue advocacy. In the context of this case, given the level of adverse affection, that should be anathema to planners and planning.

ENGINE TESTING

73. Engine testing at airports is often the cause of complaints. It is important to note that the airnoise contours are not based upon the dispersal of noise from engine testing. However, it is not a matter relevant to airnoise and cannot be controlled by the methods advocated in the NZ Standard. It is not a matter that can be considered in the context of the current Variations to Plan Change 1.

CONSISTENCY WITH OTHER NOISE RULES IN THE DISTRICT PLAN

74. It has been pointed out to me that for all living zones except Living 5 and the Rural Zone, the development standard for noise exposure is 50 dBA Ldn and the critical standard is 59Ldn^{††}.
75. Does that mean that there is a case for a consistent development standard relating to airnoise? The answer to that is no, for two reasons:
1. The Outer Control Boundary is not a noise control whereas the standards in the district plan are. The provisions in the plan control the noise at its source and they protect existing residencies in the Rural zones many of which are already well inside the 55 Ldn contour.

^{††} IF an activity is to exceed 50 Ldn a discretionary activity consent is required whereas if it is to exceed 59 Ldn it becomes non-complying.

2. Secondly, Policy 4.2.9 : Impacts of Noise, explains as follows:

“In terms of the City Plan, Standards set shall not apply to motor vehicles, trains, aircraft and a limited range of other activities. The reason for this exclusion is that the control of noise from these sources is unlikely to be effective through a District Plan, at least at current levels of practice and law, and would be best addressed through a national standard for these activities as their “effect” applies nationally.”

76. I observe that we have such a standard in NZS 6805 and that it is a workable approach to airnoise when applied as intended. I also observe that if consistency with other district plan standards is required the airport would have to ensure that its levels do not exceed 50 Ldn at a large number of dwellings in the Rural and Residential Zones. This would effectively shut down the airport.

A NON-REGULATORY APPROACH

77. I am not opposed to putting the 50 Ldn boundary on planning maps as long as the 55 Ldn is adopted for regulatory development control purposes. Non-regulatory methods could be used to manage the incidence of complaints between the 50 and 55 Ldn levels. Such a system would acknowledge that no person could demand or expect to be exempt from aircraft noise exposure and the airport could not expect to be exempt from complaints. The Environment and Community Action Plan for Sydney International Airport as described by Mr Bullen is such an example.

78. I understand that IFL has stated in its alternative relief that if the 50 dBA is to be included in a plan – it should be for the purpose of providing information as to the noise exposure from aircraft takeoffs and landings and not for the purpose of imposing land use restrictions. As an information device, persons interested in purchasing in that area would decide for themselves and if particularly sensitive to noise would use that information to inform them before making a purchase decision. However, amenity is the function of a district council. I would not see that the contour would be included in the RPS if it were to be used for that limited purpose.

79. Finally I have refrained from setting out the wording of actual amendments sought to the RPS in light of the various reliefs sought by the submitters. This is to be

dealt with in legal submissions where the non-regulatory methods in particular will be further discussed.

APPENDIX 1

(1) Matters

A matter is of regional significance when it concerns:

- (a) Species, communities and habitats that are predominantly endemic to Canterbury, or threatened or unusual within the region, or any other indigenous species, communities or habitats which, in the manner of their occurrence are or were recognisable as being unique to or characteristic of the Canterbury region;
- (b) Existing indigenous ecosystems and associated ecological processes that are or were unique to, characteristic of the Canterbury region;
- (c) Threatened (as determined by national criteria) species and communities of indigenous flora or fauna;
- (d) Essential habitat linkages, or connectivity between species, communities, habitats or ecosystems that meet criteria (a), (b) or (c) above.

In identifying these matters and those of (a), (b), (c) or (d) above, factors to be considered include whether a site, place or area is:

- (i) Identified as a Recommended Area for Protection in a Protected Natural Areas Report;
- (ii) A Special Site of Wildlife Interest identified in the SSWI database;
- (iii) A wetland identified in the Oceania Wetlands Inventory;
- (iv) An Area of Significant Conservation Value; or
- (v) An area of indigenous vegetation or habitat administered under the Conservation Act 1987 or any Act in its first schedule.

The fact that a particular site, place, or area is listed above will not necessarily mean that the site, place, or area is of regional significance. The Regional Council or other parties should take criteria (a) to (k) into account together with other relevant considerations, in deciding whether or not a site, place, or area is of regional significance. **It is acknowledged that some site information in data bases may have changed or contain inaccuracies and may require verification.**

- (e) Landscapes and natural features that are distinctive, unique to, characteristic of, or outstanding within the Canterbury region, including the processes that maintain them;
- (f) Soils of ecological or scientific value.

In identifying soils, landscapes and natural features, factors to be considered include whether a site, place or area is:

- (i) Identified as being a regionally outstanding landscape or natural feature in the Canterbury Regional Landscape Study;
- (ii) A geopreservation site of regional significance and/or identified in the Geopreservation Inventory of the New Zealand Geological Society;
- (iii) An area identified as an Area of Significant Conservation Value;
- (iv) An area identified as a Recommended Area for Protection in a Protected Natural Areas Report; or
- (v) In the sub-alpine or alpine zone.

The fact that a particular site, place, or area is listed above will not necessarily mean that the site, place, or area is of regional significance. The Regional Council or other parties should take criteria (a) to (k) into account together with other relevant considerations, in deciding Whether or not a site, place, or area is of regional significance. **It is acknowledged that some site information in data bases may have changed or contain inaccuracies and may require verification.**

- (g) Heritage sites, places or areas that contribute to or reflect the cultural or spiritual identity, or evolution of the Canterbury region, including the different stages of human occupation.

In selecting these heritage sites, places or areas, factors to be considered include:

- (i) The extent to which the place reflects important or representative aspects of Canterbury's or New Zealand's history;
- (ii) The association of the place with the events, persons, or ideas of importance in Canterbury's or New Zealand's history;
- (iii) The potential of the place to provide knowledge of Canterbury's or New Zealand's history;
- (v) The community association with, or public esteem for, the place;
- (vi) The potential of the place for public education;
- (vii) The technical accomplishment or value or design of the place;
- (viii) The symbolic or commemorative value of the place;
- (ix) The importance of historic places which date from periods of early settlement in Canterbury;

- (x) Rare types of historic place;
- (xi) The extent to which the place forms part of a wider historical and cultural complex or historical and cultural landscape;
- (xii) The integrity and state of preservation.

The fact that a particular site, place, or area meets these criteria will not necessarily mean that the site, place, or area is of regional significance. The Regional Council or other parties should take these criteria and criteria (a) to (k) into account together with other relevant considerations, in deciding whether or not a site, place, or area is of regional significance. **It is acknowledged that some site information in data bases may have changed or contain inaccuracies and may require verification.**

- (h) Values and natural and physical resources of recognised national or international significance;
- (i) Sites or places that have important recreational or other amenity value to the Canterbury region;
- (j) Structures and infrastructures that are necessary to the social, economic or cultural functioning of the Canterbury community, for example, the Port of Lyttelton; or
- (k) A resource management matter considered by Tangata Whenua to be of greater than local importance provided it is agreed that there will be a net benefit in dealing with it at the regional level.

(2) Regionally significant effects

An effect is of regional significance if it has the potential to materially enhance or detract from any matter in 20.4(1).

In determining what is material the following factors will be taken into account:

- (a) Whether there is likely to be substantial modification of identified values, including substantial damage, loss, restoration or enhancement;
- (b) Whether any effects are likely to be long term;
- (c) Whether any short term effects are likely to be widespread;
- (d) Whether ecological resilience is likely to be affected;
- (e) Whether, and to what extent, there is likely to be an increase or decrease in scientific or educational value to the regional or national community;
- (f) Whether any effects are of widespread public concern within the region;

- (g) Whether any effects which although minor, short term or infrequent, become material when taken cumulatively, including whether any effects are potentially of high probability, or, if potentially of low probability, have a high potential impact;
- (h) Whether any effects are of widespread concern to Tangata Whenua within the region;
- (i) Whether any effect is likely to lead to irreversible changes (other than minor changes); and
- (j) Whether there are likely to be any effects on the ability of structures and infrastructures to function in a safe and efficient manner.