

NOISE MITIGATION PROGRAMME

REPORT No 1

OCTOBER 2003

1.0 INTRODUCTION

Under Condition 10 of the Airport Designation, AIAL is required to offer acoustic treatment to the owners of various ASANs in noise impacted areas around Auckland International Airport. Also under Condition 10 (Condition 10A) AIAL is required to provide a written report to Council within 12 months of the designation becoming operative (and thereafter every six months) setting out in detail the mechanisms for giving effect to the Noise Mitigation Programme discussed in Condition 10 (of the designation). This report is intended to satisfy AIAL's obligation under Condition 10A(a), ie to report firstly within 12 months.

The report assumes that the reader is familiar with the terminology used in the Airport Designation and for that reason definitions and terms from the designation and from the operative Manukau District Plan are used without further definition in this report. In general in this report, definitions (from those sources, and when significant to this report) are shown in Capitals and terms (when first used) are shown in *italics*.

2.0 AIAL's OBLIGATION TO OFFER ACOUSTIC TREATMENT

In essence AIAL is required to offer acoustic treatment to three different categories of ASAN owners

AIAL is required to offer

1. acoustic treatment to the owners of Existing Buildings when the predicted noise level from aircraft operations reaches specified levels
2. acoustic treatment to the owners of Existing Buildings (subject to engine testing noise) within the Ldn 57 dBA Area.
3. to fund acoustic treatment to new school buildings at existing Educational Facilities and new public Educational Facilities within the noise areas around AIA.

3.0 EXISTING BUILDINGS SUBJECT TO NOISE FROM AIRCRAFT OPERATIONS

3.1 Types Of Existing Buildings

The Airport Designation categorises three types of Existing Buildings

- ✍ Educational Facilities
- ✍ Registered Pre-schools
- ✍ Others

The “other” type includes child centers, hospitals, rest-homes etc but is predominantly household units (ie residential dwellings).

3.2 Affected Site Survey, AANCs & Residential Dwellings

In accordance with Condition 10(a) of the Airport Designation, AIAL has completed a survey of Existing Buildings located on affected sites. Almost all the Existing Buildings are residential dwellings. The survey identified that the number of dwellings between the various FANCs is below

FANC INTERVAL	No of DWELLINGS
60 – 61	780
61 – 62	700
62 – 63	610
63 – 64	695
64 – 65	330
65 – 66	110
66 – 67	95
67 – 68	170
68 - 69	35
69 – 70	3
70 – 71	5
71 - 72	2
72 – 73	2

Under Condition 10 of the Airport Designation AIAL is required to make an offer for acoustic treatment before any part of an affected site falls within a published AANC.

At the time of writing this report the AANCs to be made publicly available in October 2003 had not been finalized but it appeared that those AANCs would be some 5dBA behind the FANCs. In other words the Ldn 65 AANC is expected to lie close to Ldn 70 FANC. The FANCs are in fact the contours (or AANCs) expected in 2030, or in 26 to 27 years time. On that basis the AANCs could be expected to move 1 FANC every five

or so years. In other words the Ldn 65 AANC to be made public in 2008 could be expected to lie close to Ldn 69 FANC.

It needs to be noted at this time that the AANCs to be made public in October 2003 are based on limited measured noise, as the noise monitoring system (required under Condition 6 of the designation) has only recently become fully operational. There should be a higher level of confidence in the AANCs to be made public in the following year as at that time there will be more than 12 months of measured noise data available, and also more than 12 months of actual track data.

Never-the-less, using the approximations in the paragraph above the one above, it is possible to gain an appreciation of the likely numbers of dwelling owners who will be eligible for offers of acoustic treatment over the next 7 or 8 years. Those numbers are shown in the table below.

Treatment Package on Offer	1 st AANCs Publish Oct 03 Offers Apr 05	2 nd AANCs Publish Oct 04 Offers Apr 06	3 rd AANCs Publish Oct 05 Offers Oct 06	4 th AANCs Publish Oct 06 Offers Oct 06	5 th AANCs Publish Oct 07 Offers Oct 07	6 th AANCs Publish Oct 08 Offers Oct 08	7 th AANCs Publish Oct 09 Offers Oct 09	8 th AANCs Publish Oct 10 Offers Oct 010
Ldn 60	413	65	65	65	65	65	132	132
Ldn 65	9	1	1	1	1	1	7	7

In regard to the above table it needs to be noted also that Condition 10(n) of the Airport Designation allows AIAL to effectively delay by 18 months offers required to be made in the first three years after the designation becomes operative. Hence offers relating to the AANCs to be made public in October 2003 can be delayed to April 2005 and the offers relating to the 2004 AANCs can be delayed till April 2006. The implications of Condition 10(n) have been built into the above table.

3.3 Other Existing Buildings

As indicated previously, “other” Existing Buildings are predominantly residential dwellings so for convenience that type of Existing Building will be referred to hereafter as a dwelling.

There will be two treatment packages on offer for dwellings.

- A Just prior to an affected site (containing a dwelling) being subject to Ldn 60 dBA of noise from aircraft operations the owner of that property will be offered a package which essentially will comprise
 - ≠ A ventilation system to serve the living areas of the dwelling. This is likely to comprise of a fan/filter unit in the roof space and vents into each of the living rooms.

≈ Thermal grade ceiling installation, if not already installed and

≈ A kitchen extract fan, if not already installed.

The Ldn 60 offer is conditional on the owner paying 25% of the cost, and entering into a covenant not to later remove any of the acoustic treatment.

B Just prior to an affected site (again containing a dwelling) being subject to Ldn 65 the property owner will be offered a further package which essentially comprises

≈ The Ldn 60 package, if not already installed

≈ Whatever work that is necessary to the fabric of the building to achieve a specified internal noise environment. That work is likely to involve progressively (depending on the nature of the building and the external noise environment) sealing round window and door-frames, double glazing, additional linings of internal gib-board etc.

The Ldn 65 offer is conditional on a covenant only. There is no requirement for an owner contribution to cost, except if the owners wants enhanced treatment.

As much as possible AIAL will endeavour to offer the owners of the above residential dwellings *certified standard packages*. The development of these certified standard packages (CSP's) is discussed under Section 3.4.

The entitlement to be offered acoustic treatment will be determined by the location of AANCs which AIAL will make public annually, in October of each year.

As stated previously, AIAL is required to make an offer for acoustic treatment before any part of an affected site falls within a published AANC. However before AIAL can make a specific offer in respect to any Existing Building it needs to make a detailed inspection of the Existing Building to establish whether it would be appropriate to treat that building with a CSP, or whether an *individual package* needs to be developed.

In respect to residential dwellings, AIAL proposes to satisfy the offer requirement of Conditions 10 (b), (c), (d) and (e) by writing to property owners offering to install acoustic treatment, the exact nature of which would be determined after a detailed inspection of the property.

An issue still to be resolved in respect to the acoustic treatment of dwellings is the contractual arrangements between the dwelling owner, AIAL and the treatment contractor. Some similar schemes at overseas airports have had the main construction contract between the dwelling owner and a contractor with a side agreement between AIAL and the dwelling owner to make funding available to satisfy the owners obligation to pay the contractor.

On the basis of that contractual arrangement AIAL sees the following steps in effecting acoustic treatment to each dwelling

- ✍ Prepare AANCs
- ✍ Recognise that property is about to qualify for treatment offer.
- ✍ Identify owner.
- ✍ Write to owner offering unspecified acoustic treatment and request permission to inspect property.
- ✍ Publish AANCs
- ✍ Inspect property and determine whether a certified standard package would be suitable.
- ✍ If not, design an individual package.
- ✍ Prepare offer/covenant documentation.
- ✍ Forward offer to owner and (if accepted)
- ✍ Prepare tender/contract documentation.
- ✍ Call tenders.
- ✍ Select contractor & award contract.
- ✍ Execute covenant.
- ✍ Project manage work.
- ✍ Provide certificate from a *suitably qualified independent person* (sqip) to Council
- ✍ Forward funds to owner

3.4 Development Of Certified Standard Packages

Under Condition 10(q)(i) of the Airport Designation, AIAL is required to develop (effectively by 21 January 2004) as many “standard packages” for acoustic treatment as is practicable. Those standard packages are referred to as certified standard packages (CSPs).

Assuming that successive AANCs track as outlined in the preceding Section 3.3, most of the offers for acoustic treatment will be confined initially to the HANA. With the Ldn 60 AANC not expected to move out to Ldn 64 FANC till around 2008 there is likely to be only some 330 dwellings outside the HANA (specifically between the Ldn 65 and Ldn 64 FANCs) that will be offered acoustic treatment before 2008. Furthermore it could be another 8 or 9 years before a significant number of dwelling owners are entitled to an "Ldn 65" treatment package. For those reasons the development of CSPs has at this stage been confined to dwellings in the HANA.

The dwellings in the HANA are older and very varied. Never-the-less from the affected site survey three basic dwelling types were identified and then six dwellings which each best represented its particular type (18 dwellings in total) were chosen. The owners of those 18 dwellings were identified and each was written to asking them if they would be interested in participating in pilot trials. Not all responded but from the responses received 6 dwellings (essentially 2 for each of the three identified dwelling types) were selected for pilot trials.

Fortunately all of the owners of those dwellings agreed to make their homes available for the pilot trials and AIAL has now entered into formal agreements with those dwelling owners granting AIAL access to their dwellings for the purpose of conducting pilots and developing CSPs. It is not clear at this stage how many CSPs will evolve out of that process and it may well be that standard solutions for various situations evolve rather than whole CSPs that could then be offered to other dwelling owners. In any event it appears that, for the first 5 or so years of the Noise Mitigation Programme, offers will be confined largely to "Ldn 60" ventilation type packages. There is more likelihood of those packages being standardized than the full-blown Ldn 65 acoustic packages.

Attached as an appendix to this report is a Project Schedule for the development of the CSPs due for completion on 21 January 2004. The engineering consultants involved in the MMF have been retained for the project and Hawkins Construction are contracted to undertake the physical works in the six dwellings and to liaise with the owners.

3.5 Existing Educational Facilities

There are 7 existing schools in the HANA/MANA area around the Airport. Of those schools, part of the play-grounds at Puhinui Primary is in the HANA but otherwise the schools are in the MANA.

The highest FANC value of any part of those school properties is shown in the table below.

Also shown in the table is an estimate of when each school would qualify to be offered acoustic treatment, based on the logic outlined in the preceding Section 3.2.

SCHOOL	HIGHEST FANC VALUE	PROBABLE QUALIFICATION DATE FOR TREATMENT OFFER
Puhinui	65.8	Apr 2005
Papatoetoe South	62.3	Post 2010
7 Day Adventist	62.3	Post 2010
Redoubt North (south area)	64.2	Circa 2007
Redoubt North (north area)	63.3	Post 2010
Clover Park	64.2	Circa 2007
Chapel Downs	63.5	Circa 2010
Tyndale Christian	61.6	Post 2010

The treatment of each school will be dealt with on a case-by-case basis as and when each school becomes eligible for an offer.

Specific designs (or individual packages) will likely be created for each school.

3.6 Existing Registered Preschools

On the basis of the affected site survey there are 7 existing registered preschools in the MANA and none in the HANA. Hence it will be a few years before any is eligible for a treatment offer.

As for schools, the treatment of each preschool will be dealt with on a case-by-case basis as and when each preschool becomes eligible for an offer.

Specific designs (or individual packages) will likely be created for each preschool.

4.0 EXISTING BUILDINGS SUBJECT TO ENGINE TESTING NOISE

Under Condition 13A of the designation, AIAL is obliged to offer acoustic treatment to the owners of Existing Buildings within the Ldn 57 Area within 18 months of the designation becoming operative, ie by 21 April 2004.

There are 10 Existing Buildings in that area at the south end of Pukaki Road and a further 1 or 2 along Puhinui Road. All those Existing Buildings appear to be dwellings. Those Existing Buildings were not included in the affected site survey under Condition 10(a) as their sites are not affected sites in terms of Condition 10(a).

Given that the Existing Buildings are dwellings their owners would be entitled to be offered the Ldn 60 package outlined in Section 3.3. It is thus proposed to proceed with

offers along the lines outlined in Section 3.3 for dwellings. Hence AIAL is proposing to write to the owners of the dwellings by 21 April offering to install acoustic treatment the exact nature of which would be determined after a detailed inspection of the property. In general the dwellings appear to be of a similar age to those in the HANA so it is likely that following a property inspection those owners could be offered one of the CSPs being developed under Section 3.4.

5.0 NEW BUILDINGS AT EDUCATIONAL FACILITIES

Under Conditions 10(k) & 10(m), AIAL is obligated to offer funding for new noise sensitive buildings at both existing and new public Educational Facilities in the MANA.

The requirement to make those offers is conditional on certain certification from the Ministry of Education, so in essence AIAL's role is a reactionary one after advice from the MoE.

To date AIAL has been advised of new library facilities at Redoubt North and three new classrooms at Puhinui.

The advice regarding Redoubt North was after the event but AIAL has indicated that it would provide its "share" of the funding if the MoE provides the necessary certification and satisfies AIAL as to the reasonableness of the acoustic costs incurred. To date that information has not been provided by the MoE.

As regards Puhinui, due process is being followed there.

The MoE seems unable to forecast much in advance the requirement for new buildings, the acoustic treatment of which AIAL is obligated to fund in part under Conditions 10(k) & 10(m). Hence is not possible to provide further information regarding the Noise Mitigation Programme in respect of those buildings.

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