Wagerup Alumina Refinery Noise Amelioration Plan

Consultation Outcomes

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## Document control

### Document version history

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<td>19/08/14</td>
<td>John Macpherson Principal Noise Regulation Officer</td>
<td>Draft</td>
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### Corporate file information

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  Wagerup Alumina Refinery Noise Amelioration Plan

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Purpose
This report documents the decision of the Chief Executive Officer (CEO) of the Department of Environment Regulation (DER) in relation to the *Wagerup Alumina Refinery Noise Amelioration Plan* (NAP) and associated public consultation process.

Introduction
Alcoa of Australia Ltd (Alcoa) applied for approval under regulation 17 of the *Environmental Protection (Noise) Regulations 1997* (the Regulations) in relation to noise emissions from its Wagerup Alumina Refinery in 2002. The *Environmental Protection (Wagerup Alumina Refinery Noise Emissions) Approval 2012* (original approval) was published in the *Government Gazette* on 29 June 2012. A number of appeals were received against this approval and the subsequent Appeals Committee’s report resulted in the gazettal of an amended approval on 10 December 2013.

The publication of the 2013 amended approval created a new start date for the approval, triggering a requirement that the NAP – specified in the original approval – be submitted to the CEO of DER by 10 March 2014.

Clause 6 of the approval is reproduced below:

6. **Noise Amelioration Plan**

1. Alcoa must submit to the CEO within 3 months of the start day a noise amelioration plan in respect of noise-affected land.

2. The noise amelioration plan must contain the following –
   
   (a) an acoustic amelioration programme setting out procedures for the provision by Alcoa of noise insulation for buildings, on noise-affected land, that are directly associated with a noise-sensitive use;

   (b) a land management plan setting out the procedures for the purchase by Alcoa of noise-affected land;

   (c) any other matter that the CEO may require.

3. At any time after receiving a noise amelioration plan from Alcoa, the CEO may, by notice in writing, request Alcoa to provide a revised noise amelioration plan that addresses the matters specified in the notice.

4. A revised noise amelioration plan requested under subclause (3) must be provided within 14 days of the request or within such longer period as the CEO specifies in the written notice.

The original approval defines ‘noise-affected land’ as follows –

**noise-affected land** means land on which there are noise-sensitive premises that receive, at any noise-sensitive location on the premises, noise emitted from the Wagerup Alumina Refinery at a level that is likely to exceed the standard prescribed under regulation 7(1)(a) in respect of noise received at a noise-sensitive location.

A ‘noise-sensitive location’ is defined as follows –
noise-sensitive location means a location on noise-sensitive premises that is within 15 metres of a building directly associated with a noise-sensitive use.

On receipt of the NAP, DER sought public submissions on it, in order to provide interested parties with an opportunity to identify any matters that they may seek to have the CEO request Alcoa to revise the NAP to include. The period for submissions closed on 9 May 2014, with submissions from the following five parties being received:

1. Community Alliance for Positive Solutions Inc. (CAPS);
2. Mr T A and Mrs S M Cockerham;
3. Primary Business Services Pty Ltd (on behalf of Mr A Ferraro);
4. Mr P Ferraro; and
5. Mr E and Mrs K Walmsley.


On 20 August 2014, the CEO met with a number of the parties who made submissions to discuss the main issues raised in their submissions and DER’s proposed responses.

This report presents a summary of the main features of the NAP, followed by a summary of the main issues raised in the submissions with DER comments and responses. DER also requested Alcoa’s comments on a draft set of recommendations to address issues raised by the submissions. In conclusion, a series of final recommendations is presented that will form the basis of DER CEO’s formal response to the NAP.

The noise amelioration plan


The NAP addresses clause 6 of the original approval, utilising as a basis for compliance with clause 6(2)(a) and (b) its existing Residential Acoustic Treatment Program and Land Management Plan, respectively. These programs were implemented by Alcoa independently of regulatory requirements and have been in operation since 2002.

The land management plan

Alcoa’s land management plan (LMP) is a voluntary scheme that aims to enable residents to make their own decision to remain in the area or relocate. The LMP operates over two areas known as Area A and Area B:

- **Area A** – the area immediately surrounding the refinery, based on property boundaries delineated to the north and south by the 35dB(A) noise contour and to the west by future expansion of the residue storage area. People residing in Area A may receive noise levels exceeding the $L_{A10}$ assigned level in the Regulations for the night period.
• **Area B** – incorporates the townships of Hamel to the north of Area A and Yarloop to the south. Refinery noise, though audible at times, is expected to comply with the Regulations in Area B.

Under the LMP, Alcoa offers purchase of properties in Area A at 35 per cent above unaffected market value, and contributes $7,000 towards relocation costs. Properties in Area B are purchased at unaffected market value – while these properties may be re-sold to support the townships, Alcoa only buys them once.

The NAP sets out the procedures related to implementation of the LMP.

The NAP discusses Alcoa’s approach to taking ‘best endeavours’\(^1\) to purchase properties in Area A, through its commitment to consistency with the LMP and respecting individual wishes of the neighbours.

**The residential acoustic treatment program**

The residential acoustic treatment program (RATP) is a voluntary scheme whereby residents in Area A who wish to remain in the area may have noise insulation measures incorporated into the home at Alcoa’s expense as a means of reducing indoor noise levels. Implementation of the RATP does not affect a future decision to sell under the LMP.

**The refinery noise emissions management program**

The NAP reiterates Alcoa’s intention to ensure that the level of noise emitted from the refinery complies with the Regulations at all noise sensitive premises outside of Area A. If there is a belief that residences outside of Area A are receiving noise above the assigned levels, Alcoa has committed to conduct noise monitoring/modelling to determine if the noise is attributable to the refinery. If noise above the assigned levels is attributed to the refinery, Alcoa has committed to implement a works program to reduce the noise emissions back to within the assigned levels.

The NAP indicates that Alcoa would not intend to modify the LMP or the RATP in the interim period while the works program is in progress.

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1 In the supplementary report by the Environmental Protection Authority (EPA) on the noise regulation 17 application by Alcoa (EPA Report 1365, August 2010), the EPA recognised the difficulties in reducing noise emissions to any significant extent, and considered that Alcoa should make ‘best endeavours’ to purchase the remaining properties in Area A.
## Summary of issues and responses

DER’s analysis of the main issues raised in the five submissions received is summarised below:

<table>
<thead>
<tr>
<th>Issue raised</th>
<th>Submission</th>
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<tr>
<td><strong>1. The 35% premium in the land management plan (LMP) for Area A does not cover loss of enjoyment of property.</strong></td>
<td>CAPS: ☑</td>
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<td></td>
<td>Cockerham: ☑</td>
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<td>A Ferraro: ☑</td>
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<td>P Ferraro: ☑</td>
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<td>Walmsley: ☑</td>
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<td><strong>2. Alcoa should compensate for the loss it has caused to the amenity of the area (social, visual, odours, noise, etc).</strong></td>
<td>CAPS: ☑</td>
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<td></td>
<td>Cockerham: ☑</td>
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<td>P Ferraro: ☑</td>
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<td><strong>3. Alcoa’s gain in land assets should be reflected in compensation.</strong></td>
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<td><strong>4. Compensation should respect the moral rights of residents who are not at fault.</strong></td>
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<td><strong>5. The presence of the refinery causes properties to be undervalued.</strong></td>
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<td><strong>6. Alcoa’s concern about precedents if it varies the LMP is irrelevant, and individual circumstances need to be addressed.</strong></td>
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<td><strong>7. Use of ‘best endeavours’ in the NAP is not clear.</strong></td>
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<td><strong>8. The NAP does not address noise-affected land outside Area A.</strong></td>
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<td><strong>9. The noise insulation plan in the NAP is not effective in older buildings or outdoors.</strong></td>
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Wagerup Alumina Refinery Noise Amelioration Plan – Consultation Outcomes
**Issues 1 to 6 – implementation of land management plan**

**Issue**

1. The 35 per cent premium in the Land Management Plan for Area A does not cover loss of enjoyment of property if the owner is not keen to sell.

2. Alcoa should compensate for the loss it has caused to the amenity of the area (social, visual, odours, noise, etc).

3. Alcoa’s gain in land assets should be reflected in compensation.

4. Compensation should respect the moral rights of residents who are not at fault.

5. The presence of the refinery causes properties to be undervalued.

6. Alcoa’s concern about precedents if it varies the LMP is irrelevant, and individual circumstances need to be addressed.

**DER comment**

The identified main issues 1 to 6 relate to the implementation of the LMP within the NAP. In particular, DER considers that they relate to the valuation methodology for offers to be made by Alcoa to property owners within the noise-affected area, described as Area A within the NAP.

DER notes that issues 1 to 4 express the desire of remaining residents to be compensated for loss of amenity and dignity, above and beyond what is offered in the LMP as it applies to Area A.

Issue 5 relates to ‘unaffected’ property values: the LMP indicates that property valuations are based on the ‘Harvey-Waroona Index’ which is intended to generate ‘unaffected’ property values.

Issue 6 was raised in all five submissions, and appears to be a key reason why some remaining landowners have not been able to reach agreements to sell in the past.

Alcoa states in the NAP that it ‘will not operate outside of the existing land management plan since this is not considered fair to those that have already sold property to Alcoa, and will erode the certainty that the program aimed to achieve since implementation began in 2002’.

The core of these seven issues is whether or not the LMP requires Alcoa to make fair and reasonable offers to acquire noise-affected properties within Area A. The land acquisition process through the NAP is not compulsory and Alcoa cannot forcibly acquire noise-affected properties. An alternative to land acquisition to address regulated noise levels would be for Alcoa to undertake noise reduction at the refinery.

A comprehensive evaluation of noise reduction measures for the refinery was undertaken between 2006 and 2009. The noise reduction assessment found that achieving a 4dB reduction overall may cost some $63 million, and it was estimated that completing the works required could take 15 to 20 years (EPA Report 1365, August 2010). DER acknowledges that the cost of material reduction of refinery noise is expected to be high and the benefit uncertain, hence the proposal for land acquisition.
Given the focus of submissions on the appropriateness of the valuation, DER has sought the advice of Landgate in its capacity of performing the functions of the Valuer General. Landgate’s advice is at Appendix 2. The approach taken was to benchmark Alcoa’s LMP to the well-established statutory rules for compensation with statutory authority under the *Land Administration Act 1997*.

There is no statutory authority or rules for compensation for Alcoa’s LMP. A point of difference between the *Land Administration Act 1997* and Alcoa’s LMP is the compulsory acquisition of land for a public work versus voluntary acquisition for a private benefit. Therefore, as a minimum, the valuation under Alcoa’s LMP would be expected to be greater than that under the Land Administration Act.

Landgate advised:

> It is explicitly stated in the LMP that the market value represents the value of the property unaffected by the presence of the refinery. Consequently the 35% premium paid needs only to reflect the consequential costs/out of pocket expenses, other than those covered by the $7,000 lump sum payment to comply with any statutory compensation claim. The quantum of a 35% premium, in the circumstances that can be envisaged, would ensure the recipient owner is most adequately recompensed for his property. There are possible scenarios/circumstances however when the 35% premium might be shown to be inadequate such as in the instance of a profitable business attaching to the property and as a result of relocation that business is totally extinguished. Accordingly on such occasions the situation in relation to the quantum of the compensation would need to be assessed on the facts and figures substantiated in each individual case.

> It is considered in general however, that the basis of purchase determined by Alcoa’s Land Management Plan from the owner/vendor’s perspective is “fair and reasonable”.

**Submission response**

Based upon the advice of Landgate, DER is of the view that in general the valuation methodology in Alcoa’s land management plan is fair and reasonable.

In relation to the Landgate advice, DER notes that relocation costs could be substantial for a business with significant plant and infrastructure, and would not wish to see negotiations fail on the basis that a profitable business might be materially impacted or extinguished because of relocation costs that the LMP did not sufficiently provide for.

Alcoa notes that of the remaining privately owned properties within Area A, there are only two businesses, an abattoir and an engineering workshop, which are considered compatible uses. There are, however, 12 primary producers whose business value is primarily associated with land productivity and infrastructure.
Alcoa has stated that both productivity and infrastructure are taken into account during the land valuation process with the price per hectare dependent on land productivity and the owner could elect for the building replacement method of valuation which would provide them new value for old infrastructure. The 35 per cent premium is then applied over and above this valuation, with Alcoa then paying for settlement fees and $7000 for relocation.

**Submission response**

Alcoa should amend the NAP to expand on the procedure regarding property transactions involving primary producers to note that both productivity and infrastructure are taken into account during the land valuation process with the price per hectare dependant on land productivity and that the owner could elect for the building replacement method of valuation, hence providing new value for old infrastructure. It should also note that the thirty-five per cent premium is then applied over and above this valuation and that Alcoa will pay settlement fees and $7000 for relocation.

Several landowners raised the need for consideration of individual issues relating to the LMP in their submissions.

DER notes that Alcoa’s process (page 4 of the NAP) involves its Land Administrator organising one independent valuation of the property and the landowner another (Alcoa pays for both). The valuation is based on unaffected market value using the Harvey-Waroona index; the 35 per cent premium on market value; and building replacement value (optional at the request of the landowner).

The landowner can request another valuation at their own expense, and can review valuations to bring them within a margin of 10 per cent.

One suggestion to assist with the consideration of individual issues was that ‘a suitably qualified and rural based real estate agency be appointed to negotiate the property purchase…’. The submission suggested that the terms of the agency's appointment may need to include the reason for the purchase; how land is to be valued; compensation payable in addition to base land value; and calculation of additional payments to cover:

- stamp duty cost on relocation;
- cost of infrastructure required on replacement property;
- loss of production while relocating;
- loss of capital gains tax status; and
- relocation expenses (i.e. transport and cartage).

While DER does not validate or dismiss the above proposed valuation parameters, the use of a real estate agent may be beneficial, as it may assist the parties in their review of valuations to bring them within the 10 per cent margin, and ultimately towards agreement.
Submission response
Alcoa should amend the NAP to include a provision that a suitably qualified, rural-based real estate agency may be appointed to assist in the validation of property purchase offers.

Issue 7 – use of ‘best endeavours’

**Issue**

7. ‘Best endeavours’ in the NAP is not clear, e.g. how much contact can be expected, can the LMP be varied?

**DER comment**

Submissions raising issue 7 queried the extent to which Alcoa is committed to using ‘best endeavours’ to purchase noise-affected land around the refinery, and sought more clarity as to how this will be implemented. This concept appeared in the EPA’s supplementary advice of 2010 for the regulation 17 assessment (EPA Report 1365, August 2010). The EPA’s expectation was as follows –

*During the first (two-year) Approval, Alcoa would be expected to make best endeavours, within the ambit of the current Land Management Plan, to purchase the remaining properties that are within the 35dB(A) noise contour inside Area A.*

The EPA’s strategy was that Alcoa’s progress in purchasing the remaining properties in Area A would be evaluated by an independent audit of the negotiation process. This has been included in clause 10 of the amended approval, by requiring appointment of an independent auditor to submit a report within 21 months after the start day, i.e. by 10 September 2015, detailing for each year of the approval the numbers of offers and purchases made by Alcoa for noise-affected land, and containing an audit of Alcoa’s compliance with the LMP.

The NAP in section 3.2 refers to Alcoa’s ongoing commitment to purchase eligible properties in a manner that is consistent with the LMP, and to respect individual wishes of the neighbour by not pressurising them. DER considers the NAP provides limited commitment in regard to the measures Alcoa intends to take to ensure ‘best endeavours’ can be demonstrated. DER also notes that the amended approval, while providing information on the outcomes of negotiations after 21 months, may not give an indication as to the endeavours that have been made over this period.

While Alcoa has not identified a metric that can be used to describe ‘best endeavours’, they noted that publishing numbers of offers made and accepted will not provide an indication of this but considered that the detail of actual negotiations leading up to a neighbour whether to proceed with a valuation is required. However since the negotiations are confidential Alcoa suggests the appropriateness of publicly reporting this information needs to be considered.

With this in mind, DER considers that a revision to the NAP may be appropriate, where Alcoa is required to include in the NAP a commitment to submit to the CEO interim reports outlining, for the period between the start day to 12 months after the
start day and the period between 12 months after the start day and 18 months after the start day following the gazettal of the approval, the measures Alcoa has taken to seek to progress negotiations over purchases of noise-affected land.

The reports should be submitted to the CEO of DER at the end of each of the interim periods, made available on DER and Alcoa websites, and would include the numbers of written offers made by Alcoa and the number of purchases of noise-affected land that have been made by Alcoa. DER notes that these requirements do not exceed what is required by the regulation 17 approval other than for the inclusion of interim reports.

**Submission response**

Alcoa should revise the NAP to include a requirement to prepare and submit to the CEO two reports outlining the measures Alcoa has taken to seek to progress purchases of noise-affected land. The first report shall cover the period between the 10 December 2013 (start day) and 10 December 2014 and be submitted within 35 days of written notice requiring a revised NAP. The second report shall cover the period between 10 December 2014 and 10 June 2015 and be submitted by 1 July 2015.

**Issue 8 – noise-affected land outside Area A**

**Issue**

8. The NAP does not address noise-affected land outside Area A.

**DER comment**

The two submissions that raised this issue both claim that noise emissions from the refinery exceed the 35dB(A) noise limit for night time in Yarloop outside Area A. The regulation 17 approval exempts Alcoa from having to meet the assigned levels, but requires that the NAP must address ‘noise-affected land’, i.e. where noise levels exceed 35dB(A) at night. Consequently, the submissions suggest that landowners outside Area A where noise exceeds 35dB(A) should qualify for the 35 per cent premium in the LMP in the same way as it applies inside Area A.

Various arguments are advanced in the submissions to support the case that noise exceeds 35dB(A) to the south of the refinery in Yarloop outside Area A; however, no hard data were provided with the submissions to support the claim.

DER’s noise monitoring of 2012 (DER Report EN01/14) at [www.der.wa.gov.au/noise](http://www.der.wa.gov.au/noise) showed that the refinery noise levels were not exceeding 35dB(A) outside Area A in Yarloop. DER’s monitoring to the south of the refinery supported previous noise verification work by Alcoa’s consultants of the noise model on which the 35dB(A) noise contour was based. The claim that there is noise-affected land outside Area A in Yarloop cannot therefore be supported.

The regulation 17 approval requiring the NAP authorises Alcoa to exceed the assigned noise levels under the Regulations. Accordingly, the focus of the NAP and
the LMP and the RATP is on noise-affected areas, i.e. those where Refinery noise levels are exceeding 35dB(A). Premises where Refinery noise levels are not exceeding 35dB(A) are not afforded further protections by the Regulations.

**Submission response**

DER considers that Alcoa, in order for the continuation of a regulation 17 approval, is not required to acquire land where refinery noise is not exceeding assigned levels allowable under the Regulations.

Notwithstanding this, monitoring by the Department in 2012 did find a small exceedence of the 35dB(A) limit outside Area A at a property in the Hamel town site to the north of the refinery. Clause 5 in the NAP indicates that Alcoa intends to ensure that the level of noise emitted complies at all noise sensitive premises outside of Area A. Further, if there is a belief that residences outside of Area A receive noise above the assigned levels, Alcoa has committed to conduct acoustic monitoring and/or modelling to determine if the noise levels are attributable to the refinery and, if so, will develop and implement a works program aimed at bringing the noise levels back into compliance. This will be developed in consultation with DER.

DER understands that Alcoa has commenced such investigation by conducting further monitoring in Hamel during mid-2014. Alcoa comments that the results of its monitoring causes Alcoa to come to the view that it has been confirmed that noise-affected land does not extend past the Area A boundary and hence there is no requirement for the NAP to address noise-affected land outside of Area A. DER, while detecting exceedences of the assigned levels, however recognise that the noise levels received in Hamel are dependent on meteorological conditions, and longer-term monitoring as undertaken by DER is necessary to better understand the noise impact. Accordingly, the CEO will request Alcoa to revise the NAP to account for the findings of DER’s report and for Alcoa to implement additional targeted monitoring in Hamel.
Submission response

Alcoa should revise the NAP to –

- contain a commitment to prepare a program detailing agreed monitoring at Hamel to be undertaken between 1 May 2015 and 30 September 2015 with a report on the results to be submitted to the CEO;

- include a program detailing the measures that will be needed to reduce the emissions to meet 35dB(A) in Hamel should the agreed monitoring indicate that land within the Hamel town site continues to be noise-affected – the program should be available by 30 November 2015; and

- extend the residential acoustic treatment program (RATP) into Hamel to those premises that have been found to be noise-affected, at least until such time as noise levels have been demonstrated to comply with the 35dB(A) limit.
## Issue 9 – effectiveness of RATP

### Issue

9. The noise insulation plan in the NAP is not effective in older buildings or outdoors.

### DER comment

The RAPT has been in place for some 10 years, with the objective of enabling residents to remain in the area if they so wished. DER accompanied an Alcoa employee on a series of visits to promote the program some years ago, and found it to be a worthwhile and well-run program. While take-up of the program has been modest, DER notes that seven residences had been treated up until 2010, with typical noise reduction indoors of 3-5dB(A) being achieved.

The submissions raised the limitations of insulation programs of this nature; that is, advised that they may be effective in reducing indoor noise levels in substantial dwellings, but are less effective in older, lightweight buildings. While outdoor noise levels can sometimes be reduced by provision of garden walls and the like, these treatments are also likely to be of limited effectiveness. Notwithstanding the above, the program is an important adjunct to the LMP, especially as it allows residents to remain in the area if they so wish.

### Submission response

DER considers that revision to the NAP is not required in relation to the Residential Acoustic Treatment Program.

### Revision of NAP

DER notes that clause 6(4) of the amended approval requires that ‘a revised noise amelioration plan requested under subclause (3) must be provided within 14 days of the request or within such longer period as the CEO specifies in the written notice’. Given the scope of the amendments outlined above, DER considers that a period of 21 days should be allowed for the provision of the revised NAP.
Recommendations

1. It is recommended that the NAP for the Wagerup Refinery should be revised to incorporate the following –
   
a) a commitment to prepare a program showing –

   (i) agreed noise monitoring at Hamel to be undertaken between 1 May 2015 and 30 September 2015 with a report on the results to be submitted to DER CEO; and

   (ii) a program detailing the measures that will be needed to reduce the emissions to meet 35dB(A) in Hamel should the agreed monitoring indicate that land within the Hamel town site continues to be noise-affected to be submitted to DER CEO by 30 November 2015;

b) a commitment to extend the RATP into Hamel to those premises that have been found to be noise-affected, at least until such time as noise levels in Hamel have been demonstrated to comply with the 35dB(A) limit;

c) a requirement to prepare and submit to the CEO two reports outlining the measures Alcoa has taken to seek to progress purchases of noise-affected land. The first report shall cover the period between the 10 December 2013 (start day) and 10 December 2014 and be submitted within 35 days of written notice requiring a revised NAP. The second report shall cover the period between 10 December 2014 and 10 June 2015 and be submitted by 1 July 2015. The measures should include the numbers of offers made and the number of purchases of noise-affected land that have been made by Alcoa, and the report should be made available on Alcoa’s website;

d) an expansion on the procedure regarding property transactions involving primary producers to note that both productivity and infrastructure are taken into account during the land valuation process with the price per hectare dependant on land productivity and that the owner could elect for the building replacement method of valuation, hence providing new value for old infrastructure. It should also note that the thirty-five per cent premium is then applied over and above this valuation and that Alcoa will pay settlement fees and $7000 for relocation; and

e) a provision that a suitably qualified, rural-based real estate agency may be appointed to assist in the validation of property purchase offers.

2. It is recommended that the CEO’s notice under Clause 6(3) of the amended approval should require that the revised Noise Amelioration Plan be submitted by a date not later than 28 days from the date of the notice.
References


Appendix 1

Wagerup Alumina Refinery Noise Amelioration Plan