



AWARD

***MADE UNDER THE ENERGY OMBUDSMAN ACT 1998
s 21(c)***

COMPLAINT

**MS F AND MR G
AGAINST AURORA ENERGY PTY LTD**

Energy Ombudsman Act 1998

Complaint by Ms F and Mr G against Aurora Energy Pty Ltd

AWARD

1. This award is made under s 21(c) of the *Energy Ombudsman Act 1998*. It relates to a complaint made to me by Ms F and Mr G (the complainants) on 22 February 2010, against Aurora Energy Pty Ltd.
2. The award requires Aurora to pay Ms F and Mr G compensation in the amount of \$6029.91.

Background

3. The complainants live at a property they purchased in July 2007.
4. A large transformer owned by Aurora is situated just outside the complainants' property, to the eastern side of their back garden, on the nature strip. The complaint related to noise from this transformer. The complainants sought to recover various costs associated with addressing the noise problem – specifically: the cost of the materials used to construct an acoustic fence to protect themselves from the noise; the cost of planning and building approval fees paid in getting permission to build the fence; and the cost of retaining a noise consultant to advise them on the noise problem, including on the design of the fence.
5. The complainants were aware of the existence of the transformer when they purchased the property. In their words, they “assumed the level of noise would be acceptable within a residential area”. They say that shortly after they moved in “it became apparent that the noise being transmitted by the transformer was excessive, and particularly noticeable during the evening and night”.
6. They engaged the noise consultant in November 2007, and he undertook his first testing on the property on the night of 29 November 2007, providing a report to them dated 14 February 2008. He said that the transformer was generating 47 dB(A) at the boundary fence, and 30.3 dB(A) at the complainants' bedroom window. He also noted a significant tonal component to the noise produced, at 200 Hz. He observed: “Unfortunately, tones at low frequencies tend to penetrate many conventional dwelling constructions.” He mentioned a few options – the construction of a double-skinned Colorbond acoustic barrier fence, at least 2.1 m high¹; better enclosure of the transformer; and redesign of the walls, windows and ceilings of the house.

¹ The fence adjacent to the transformer was then a little higher than half the height of the transformer.

7. According to the complainants, the consultant undertook to contact Aurora about the noise problem, and to assist with a redesign of the transformer housing to achieve a reduction in the noise emitted.
8. Thereafter, according to details which they have provided to me, the complainants had numerous dealings with representatives of Aurora over the noise problem. In summary, these were as follows –

June 2008	Aurora officer visited the property and told Mr G to write to Aurora requesting action, and to obtain a quotation for a noise abatement fence.
12/6/2008	The complainants wrote to Aurora, outlining the noise problem, attaching a copy of their consultant's report of 14 February 2008, and commenting on the three options that he had suggested. They provided quotations for various types of acoustic barrier fence; agreed that better enclosure of the transfer would be valuable, but stated their concern that this option alone "would not provide the sustained reduction in nuisance noise" that they desired; and said that redesign of their home was not "a practical or realistic option" for them.
13/10/2008	<p>A meeting was held on site, attended on the one side by Ms F, her father and Mr G, and on the other by two officers from Aurora. The meeting resulted in agreement on a three-stage approach to the noise problem which was confirmed in an email sent by one of the Aurora officers to Ms F at 4:29 pm on 5 November 2008, replying to one from Ms F sent at 9:02 am on 3 November 2008. The agreed three-stage approach to the noise problem consisted of –</p> <ul style="list-style-type: none"> • blocking the vents on the side of the transformer adjacent to the complainants' fence • putting up a shield around the transformer • proceeding to the acoustic barrier fence solution recommended by the complainants' consultant. <p>It is evident from the email exchange that Aurora had embarked on the first of these stages, but due to airflow requirements could not block off the vents entirely. The email also indicated that Aurora intended to proceed to the second stage, but had decided to attach the screen to the transformer, rather than have it free-standing. As to the third stage, the Aurora officer made the following comment–</p> <p><i>Following on from this is Stage 3 if required. Aurora has agreed to contribute towards a new portion of fencing to be added to your existing fence line, however depending on the cost Aurora has not agreed to fully fund this change.</i></p>

	<p><i>I can assure you that Aurora personnel are fully committed to working with you to find a satisfactory solution to this matter.</i></p>
Just prior to Xmas 2008	<p>The shield was installed, in the form of a thick plywood panel attached to the transformer. A photo provided by the complainants with their complaint shows that this was very unsightly. Not surprisingly, and by reason of the fact that it was attached to the transformer, the panel (in the words of the complainants) “accentuated the noise with the “shield” acting as a drum”.</p> <p>Frustrated by this turn of events, the complainants contacted Aurora’s External Relations Advisor.</p>
January/ February 2009	<p>Aurora then engaged a consultant of its own to do noise measurements, and he carried out measurements at the property on 19 January 2009, producing a report dated 11 February 2009. Like the complainants’ consultant, he found that the noise from the transformer was strongly tonal, with a marked peak at 200 Hz. Even adjusting for the strong tonal nature of the noise, however, he found that the noise detected 3 m from the back wall of the house, roughly at its centre point, and 10 m from the transformer, was only 30 dB(A)_{adj}, and thus less than the minimal acceptable noise emissions under the DPIWE 2003 Draft Noise Policy.</p> <p>Aurora’s consultant recommended an improved acoustic barrier, if Aurora sought a reduction in the noise from the transformer at the complainants’ house, and noted: “The barrier should NOT be connected to the transformer in any way.”</p> <p>Aurora followed its consultant’s recommendations by detaching the shield from the transformer (reusing the original material), and by adding a small return wall on the northern side of the transformer.</p> <p>According to the complainants, this “modification did not improve the noise problem – it actually altered the effect of the noise within the house.”</p>
24/2/2009	<p>The complainants received a report from their consultant, commenting on the Aurora consultant’s report. He sought to explain the differences in their respective calculations, which he thought might be attributable to a lighter load on the transformer at the time when Aurora’s consultant visited, or to a lack of calibration in his measuring equipment. The complainants’ consultant went on to recommend modifications to the shield, or the more complete type of acoustic barrier fence proposed in his original report.</p>

	<p>Aurora then made some modifications to the shield, by increasing its height and installing a top return, as the complainants' consultant recommended.</p>
30/3/2009	<p>The complainants' consultant carried out further measurements, at the complainants' request. He found that the 200 Hz pure tone had decreased, but that there was increased nuisance noise at 50 and 100 Hz.</p>
6/5/2009	<p>Ms F wrote by email to Aurora pointing out that the noise problem persisted, and referring to the previous email of 5 November 2008 in which reference was made to proceeding to Stage 3, if required. Ms F made the following comments:</p> <p><i>I request your serious consideration of making a financial contribution towards the cost of our installation of a sound proofing fence along our side boundary. Following discussions with our noise expert, we are of the view that this is the only way that the noise will be reduced to a tolerable level.</i></p>
4/6/2009	<p>Aurora did not immediately reply to this email, or to a reminder, but Ms F received a reply on 4 June 2009. Aurora agreed that Stage 3 had been proposed as a possibility in the email of 5 November 2008, but went on to say –</p> <p><i>However since that agreement [on the three-stage approach] and at the recommendation of both ... our sound engineer and [the complainants' consultant] a number of alterations have been made to the screen and doing so Aurora has spent a considerable amount of money in a further attempt to assist with the noise levels.</i></p> <p><i>In the site visit in mid February it was discussed that there would need to be a point where Aurora's involvement would cease. It was our understanding that following the last change to the screen that Aurora would not be looking to provide any further assistance.</i></p> <p><i>Therefore at this stage Aurora is not looking to provide a financial contribution towards the cost of the installation of the sound proofing fence along the side boundary of your property.</i></p> <p><i>If you are not satisfied with our response or the process that has been followed you do have the right to refer the issue to the independent Energy Ombudsman on 1800 001 170.</i></p> <p>The complainants then went on to design and construct the acoustic barrier fence themselves, in accordance with advice from their</p>

	<p>consultant. The fence is 3 m high, and 26 m in length. They used their own family skills in doing so, to keep costs to a minimum. Some materials were donated by Mr G's father. Aurora's shield was left in place when the new fence was constructed.</p> <p>Thereafter, as indicated, they came to me to complain. Their purpose, as expressed in their letter to me of 22 February 2010, was to obtain compensation from Aurora "for the costs ... incurred in the installation of" the fence.</p>
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9. The costs which the complainants have sought to recover are as follows –

Consultant's fees	\$850
Fence posts	\$506
Colorbond sheeting	\$3,408.91
Concreting materials	\$270.10
Planning and building approval fees	\$664.30
TOTAL	\$6029.91

Subsequent developments

10. My office wrote to Aurora following receipt of the complaint. In its response, Aurora relied upon its consultant's report of 11 February 2009 in saying that it did not propose to pay any more than it had done towards the cost of resolving the noise problem. Its case was, in essence that –
- the transformer had been in place when the complainants purchased the property;
 - its consultant had shown that the noise from the transformer was within statutory guidelines; and
 - under the circumstances it considered that it had already invested sufficient time, effort and money in attempting to resolve the issue.
11. I then proposed arranging for conciliation of the complaint, but Aurora did not wish to take this step.
12. Aurora then arranged for its consultant to undertake more noise testing at the property. This further testing was carried out between 27 and 29 July 2010, by placing the meter 2.5 m from the back wall of the house, adjacent to a window. In his report of 11 August 2010, the consultant noted that the noise had been attenuated by both the shield and the acoustic barrier fence in combination, and measured the reduction in noise from the transformer as being 2 dBA. He also noted that "the transformer noise is now only at 100 Hz, the harmonics of it are now insignificant", and provided a figure (Figure 4) which shows this very clearly. He said that, on a theoretical basis, the results which had been achieved could have been achieved by the shield alone, without the fence.

13. The Aurora consultant's report was then submitted to the complainants' consultant, for his advice. He visited the property on 7 April 2011, to make further measurements of his own, but his measurements seem to have been of little value, perhaps in part because of wind at the time. He then sent an email to my case officer, on 13 May 2011, in essence pointing out that the acoustic barrier fence (in combination with the remaining shield) had been effective in protecting against the tonal quality of the noise from the transformer. Drawing on the Aurora consultant's report, he said that the "narrow band spectra on p 3 [showed] an improvement in the 200 Hz of about 14 dB but the 100 Hz tone has increased by 5 dB". He commented:

"The comparative spectral content of the noise, outside the bed room and close to the transformer, show that the transformer hum frequencies 63 – 500 Hz 1/1 octave band are greatly reduced in front of the bedroom. Above 1 kHz, the spectra have similar slopes and are not greatly different in sound pressure levels."

14. This latest report was sent to Aurora by my case officer, in effect, an invitation to the company to reconsider its position. The company replied by letter dated 14 June 2011, in which it reiterated that it considered that it had already invested sufficient time, effort and money in attempting to resolve the problem.
15. This response made it clear that I would have to determine whether an award of compensation under s 21(c) of the Act should be made.
16. I met with the complainants and Ms F's father on 1 September 2011. They took me through the history of the matter. My file note of the meeting includes this passage –

The noise was such that they felt that it was resonating in their bodies. She [Ms F] was unable to sleep on that side of the house, and they ended up moving their bedroom to one of the front rooms. She also found that it was impossible to sit in a chair in the living room and concentrate on reading a book. They were conscious of a special effect in their bedroom, which [the complainants' consultant] explained as arising from the shape and size of the room. What occurred was that a "standing wave" arose in the bedroom, such that the noise was particularly troubling in some parts of the room. You could move to another part of the room, and feel some relief. The effect of the noise was "literally physical".

Once the fence was constructed, they no longer felt "plagued by this horrible noise". She had been terrified that the new fence would not work, but it turned out to be totally effective. Now she does not even notice the box unless she goes out for a walk, or unless she is standing very close to the machine. In effect, there is a very low background hum that does not interfere with their lives in any way at all.

17. I then wrote to Aurora's Manager, Customer Services Group, on the same date, inviting her, with or without other Aurora personnel, to come and discuss the case with me. I said that I had met with the complainants, and summarised what I had been told about the intolerable nature of the noise, and how the acoustic barrier fence had been a complete solution. I indicated that the next step for me was to consider whether an award should be made, and said that it was my current view

that the live issue was “whether an obligation should be seen as falling upon an electricity distributor such as Aurora Energy to take reasonable steps to ensure that its infrastructure, particularly in a suburban area, does not give rise to unreasonable detriment to the amenity of those who live in close proximity”.

18. I met with the Manager and another officer of Aurora Energy on 10 October 2010, to discuss the case. The position which they put to me was that –
 - according to the advice which they had received, the noise from the transformer met WHO standards, even before the improved shield had been constructed;
 - if they were to buy a new transformer, it would most likely produce noise of a similar kind;
 - the noise was troublesome for the complainants because of the configuration of their house (in giving rise to standing waves), which was something over which Aurora had no control;
 - Aurora had done everything reasonable to control the noise; and
 - one needed to ask whether it is reasonable under all the circumstances for the rest of Aurora’s customer base to have to cover the cost of the noise attenuation measures which the complainants decided to take.
19. Following this meeting, I met with the complainants’ consultant, to attempt to understand better the difference in view between him and Aurora’s consultant, in the separate assessments which they had made after the acoustic barrier fence had been built. I did so on 28 October 2011. This meeting not only enabled me to understand the science involved in measuring noise, but also emphasised for me the importance of Figure 4 in the Aurora consultant’s report of 11 August 2010, to which I have referred in paragraph 12 above.

Analysis

20. This is a difficult case, but in the end result I have come to some clear conclusions.
21. It has been implied at times (for example, see para 10) that the complainants in some way accepted the risk that the amenity of their property would be affected by the transformer, in that they knew of the existence of the transformer before they purchased the property. I do not accept that. It is the tonal quality of the noise from this transformer that has been the problem, and the complainants would have had no reason to expect that, from the normal level of inspection that precedes the purchase of a property.
22. Noise can affect different people in different ways. It might be thought that the complainants are super-sensitive, and that in effect the decision to construct the acoustic barrier fence was an unnecessary choice. This might be thought to be implied by the Aurora consultant’s conclusion in his report of 11 August 2010 that, on a theoretical basis, the improvement in noise attenuation measured after the

construction of the acoustic barrier fence was no greater than could have been achieved by the Aurora screen alone.

23. Having spoken with the complainants and considered the scientific data, I do not consider that they are super-sensitive. There is no doubt that the noise emitted by this transformer is strongly tonal, and that the acoustic barrier fence and the shield together achieved a significant reduction at 200 Hz, together with other frequencies in the 63 – 500 Hz 1/1 octave band.
24. It is also clear from what the complainants told me when I met with them on 1 September 2011 that the noise remained unendurable following the construction of the modified shield, to the extent that they felt it necessary to go to the trouble and expense of constructing the fence when faced with the risk that they might never recover a contribution to that cost from Aurora.
25. I am satisfied that the shield was not effective on its own to reduce the tonal emissions from the transformer to reasonable levels within the complainants' home, and that more needed to be done to achieve an adequate reduction.
26. On the evidence provided to me, I am not satisfied that any transformer with similar capacity, even a new one, would most likely produce similar noise – i.e. noise with similar tonal characteristics, capable of producing standing wave effects in an adjacent dwelling. I asked the complainants' consultant, with his long experience as a noise consultant, whether he had ever seen a similar problem with a transformer, and he told me that he had not. He also commented that he did not recall ever seeing the second harmonic produced by a transformer being greater than the first.
27. I do not think it is a sufficient answer to say that the problem lay in the geometry of the complainants' house, not with the transformer. From the photographs provided to me, the house is an unremarkable weatherboard house, of a kind which is seen throughout Tasmania. The problem lay in the production by Aurora's transformer of tonal sounds which had the capacity to produce standing waves in an adjacent dwelling.
28. I do not accept that Aurora did everything reasonable to control the noise. Certainly, it progressively made a number of attempts to control the noise, but it eventually closed its mind to an option which had been raised by the complainants' consultant at the outset, and which the company itself early on accepted might be necessary if Stages 1 and 2 were ineffective – the construction of a proper acoustic barrier fence in place of the existing fence to the property. As I have indicated, I am satisfied that the construction of such a fence was necessary to adequately control the tonal quality of the noise being emitted.
29. I observe at this juncture that the construction of the first shield, attached to the transformer, cannot in any way be considered to be a reasonable attempt to control the noise emissions from the transformer. It was patently unwise to attach the shield to the transformer, and it should have been obvious that this was only likely to accentuate the sounds being produced. Beyond this, the first shield was shoddily constructed, as if those who constructed it did not care about the result.

30. It is in my view irrelevant how much Aurora had spent trying to resolve the problem by the time that it had completed its modifications to the shield. It was not enough for it to say that it had expended a considerable amount of time, effort and money on attempting to fix the problem, if the problem remained unfixed, and was reasonably fixable. It may have been reasonable for it to attempt relatively cheap fixes at first, but it needed to remain open to the possibility that the cheaper fixes might not work, and that a more expensive option might have to be adopted. It was open to this possibility at the time of the onsite meeting on 13 October 2008, which led to Aurora's email of 5 November 2008, but seems to have closed its mind to it in the course of time.
31. I can understand Aurora's reluctance, particularly in the current climate of public disquiet about increasing energy prices, to incur costs in connection with improving the amenity of one household which will have to be passed through in some way to all of its customers. The whole community benefits from having a functional distribution system, however, and this means a distribution system composed of elements which do not unreasonably affect the amenity of those who live near them. The reasonable costs of attenuating noise from transformers, so that they do not unreasonably affect the amenity of those who live near them, are costs necessarily associated with having such a distribution system, and therefore costs to which customers as a whole must expect to contribute.
32. I have thus concluded that Aurora should contribute to the cost of the construction of the acoustic barrier fence. The remaining question is the size of the contribution which should be made.
33. It is necessary to weigh up a number of factors in this respect –
- the actual costs incurred;
 - the fact that Aurora would have had to pay much more for the fence if it had constructed it itself, or through contractors, because the complainants designed and built the fence themselves, and obtained all necessary approvals themselves, and some of the materials were given to them by Mr G's father;
 - the time taken to resolve the matter, during which the complainants have not had the use of the money expended;
 - the possibility that the fence has enhanced the value of the complainant's property; and
 - the possibility that a fence of lesser dimensions might have produced the necessary level of noise attenuation.
34. I also see it as relevant that the complainants underwent considerable aggravation, over more than two years, before the noise problem had been resolved – eventually by their own efforts.

35. Weighing up all of these factors, I conclude that I should require Aurora Energy to repay the complainants the full amount which they expended on constructing the fence, being \$6029.91, and acting under s 21(c) of the Act I award them that amount.
36. I do not currently see any need to award costs under s 24 of the Act, for I am not aware of any costs incurred by the complainants in pursuing their complaint.

Simon Allston
Ombudsman

30 January 2012