Andrew Gee MP

MEMBER FOR ORANGE

THE NATIONALS for Regional NSW

Our Ref: 14/08.42

The Hon Pru Goward MP
Minister for Planning
Minister for Women
Level 34 (WEST) Governor Macquarie Tower
1 Farrer Place
SYDNEY NSW 2000

Dear Minister

Please find **enclosed** a copy of correspondence from Mr Nat Barton of Wellington in relation to the Wellington Gas fired Power Station Project.

You will note that Mr Barton is has concerns about the process of noise measurement for the power station project.

I would be grateful if your office could investigate Mr Barton's claims and address the concerns raised by Mr Barton in his correspondence.

Yours faithfully

Andrew Gee MP
Member for Orange

September 2014

RECEIVED
1 OCT 2014
MINISTER GOWARD'S OFFICE
Ref:

123 Byng Street, Orange NSW 2800 ph 02 6362 5199 fax 02 6361 3922 orange@parliament.nsw.gov.au

Rosie Pritchard

From: Nat Barton <nba43079@bigpond.net.au>
Sent: Wednesday, 27 August 2014 3:37 PM
To: karen jones
Cc: Pru Goward; ElectorateOffice Orange; Dr Norm Broner; Professor Wayne Smith; Sarah Laurie
Subject: WELLINGTON GAS FIRED POWER STATION MP06_0315 MOD 2
Attachments: IMG.pdf

Dear M/s Jones,

Please see attached.

Yours sincerely,

Nat Barton

"Nanima",
7009 Goolma Rd.,
WELLINGTON NSW 2820
Ph: 02 68 451793
Email: nba43079@bigpond.net.au

M/s Karen Jones
Director, Infrastructure Projects,
NSW Department of Planning & Infrastructure,
SYDNEY NSW 2000
Email: karen.jones@planning.nsw.gov.au

Dear M/s Jones,

RE: WELLINGTON GAS FIRED POWER STATION PROJECT – MP06_0315 MOD 2

I refer to the Recommendations by M/s Diane Sarkies published on the Dept of Planning website.

Please see attached Ambient Noise Level Monitoring Results dated 13 June 2007 for Nanima House that resulted in the background noise being reported at **25dB(A)L90.** Why wasn't the actual measured value used as the reference background ?

I note that noise annoyance is determined by its character and its exceedance over the background.

As you are aware the Project was approved by the Minister for Planning on 4 March 2009 full well knowing that Nanima House had predicted noise levels of **43dB(A)**, an excess **18dB(A)** (see Table 4.1of Section 4.23.2 of the Submissions Report dated September 2008.)

In Table 1of Attachment B -Summary of Assessment **for MOD 1**, the modified predicted value without the 5dB(A) low frequency penalty with 4 x 155MW Turbines (the Noisier alternative) there is no listing of Nanima House but it could be assumed that the reading would have been **41dB(A)** given that Mount Nanima increased by 4dB(A) and Keston Rose Garden Café increased by 2dB(A). With 2 2 x 255MW Turbines the noise level is predicted as **38dB(A)** at Nanima House.

In Table 1 of MOD 2 the Maximum Allowable Noise Contribution is **35dB(A)**, however the proponents say that they have identified **34.5dB(A)** is achievable, as a plus 5dB(A) is not needed. No justification for this statement is disclosed.

I am confused as to why the predicted noise values at Nanima House have been reduced from 43 to 41 to 38 to 34.5dB(A) over the course of the Project Approval despite no published data supporting the assertions.

In the same Summary of Assessment for MOD 1 it states that *The proponent provided additional detail stating that the noise assessment was undertaken in accordance with DECCW's "Industrial Noise Policy" based on an assessment of the worst case noise*

levels in any 15 minute period, with an aim of not exceeding the background noise levels by more than 5dB(A) at the nearest receptors.

The exceedance with the two turbine proposal would have been 18dB(A) with the penalty being applied. Without the penalty it was 13dB(A) as stated in Table 1. With the four turbines it would have been 16 dB(A) without the penalty and 21dB(A) with the penalty.

As you are aware the EPA would not usually licence to noise levels more than 5dB(A) above the background and have not supported approval of these current modifications

The Noise Data is published data and as such has had a profound adverse affect on the property to the extent that is now blighted and valueless as a consequence of the Project Approval. The Department has chosen to ignore this fundamental reality and also the likely adverse affect on the residences in the town of Wellington, Bindawalla Hospital, Maranarthur Aged Care Facility , Wellington High School and Wellington Correctional Facility.

I would draw your attention to the judgment handed down in the Court of Appeal – *Bulga Milbrooodale Progress Association vi Minister for Planning & Infrastructure and Warkworth Mining Ltd [2013] NSWLEC 48* and in particular paras 336-338.

The Project Approval has lapsed and as such MOD 2 should not be approved as it exceeds the measured background noise so substantially. It is not "now within the maximum allowable noise contribution limit, thereby demonstrating that the Proponent has worked towards a resolution of the issue."

Yours sincerely,

Nat Barton

Cc Hon Pru Goward MP, Minister for Planning,
Hon Andrew Gee MP, Mewmber for Orange,
Dr Norm Broner,
Professor Wayne Smith
M/s Sarah Laurie BMBS (Flinders), CEO Waubra Foundation
Mr Alan Jones, 2GB Radio

64 Received 18/6/07

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ABN 80 078 004 798
NCSI Certified Quality System ISO 9001

Our reference: 2116720A/LT_5991/PG/ra

13 June 2007

Nat Barton
'Nanima'
Mudgee Road
Wellington NSW 2820

Dear Nat

Wellington Power Station – ambient noise level monitoring results

As you will be aware, ERM Power has engaged Parsons Brinckerhoff (PB) to undertake the environmental assessment, including community and stakeholder consultation, for the proposed Wellington Power Station project. On behalf of ERM Power we would like to thank you for allowing PB to place a noise logger on your property. The purpose of the 10 day monitoring program was to determine the existing noise environment within the area (the ambient noise level), as a first step in determining the noise impact of the proposed project.

The ambient noise levels at your property were measured and are provided below:

Attended monitoring:	8:12 am	L_{A90} = 35 dB(A)
Unattended monitoring:	7:00 am – 6:00 pm	L_{A90} = 30 dB(A)
	6:00 pm – 10:00 pm	L_{A90} = 26 dB(A)
	10:00 pm – 7:00 am	L_{A90} = 25 dB(A)

L_{A90} refers to the noise level present for 90% of the time (the background level).

These background levels will be used to determine the appropriate noise limits permissible for the project in accordance with the Environment Protection Authority (now the Department of Environment and Climate Change) Industrial Noise Policy.

PB and ERM Power appreciate your cooperation during the initial phases of this project. Please also find enclosed a copy of the latest newsletter. This newsletter provides details of the project, the planning and approval process, the current status of the project and contact details if you wish to provide comments on the project or request further information. ERM Power wants to ensure that community comment is considered during the environmental assessment. Your ongoing involvement and feedback during the project is important.

Once again, thank you for your cooperation

165

If you have any enquiries regarding the project, please don't hesitate to contact Paul Greenhalgh, the PB project manager (02 9272 5663) or Mary Diab, PB community consultation team leader (02 9272 5360).

Yours sincerely

Paul Greenhalgh

Principal Environmental Planner
Parsons Brinckerhoff Australia Pty Limited

Encl. June 2007 Newsletter

Rosie Pritchard

From: Nat Barton <nba43079@bigpond.net.au>
Sent: Sunday, 10 August 2014 2:11 PM
To: ElectorateOffice Orange
Cc: Pru Goward
Subject: WELLINGTON GAS FIRED POWER STATION - MP 06_0315 MOD 2
Attachments: IMG.pdf

Hon Andrew Gee MP
Member for Orange
123 Byng St.,
ORANGE NSW 2800

Dear Andrew,

RE: WELLINGTON GAS FIRED POWER STATION - MP 06_0315 MOD 2

Many thanks for your many representations on my behalf concerning this matter.

I refer to the statements made by Hon Pru Goward MP, Minister for Planning that you copied to me by letter dated 24 July 2014.

The Minister says ;-

"Let me assure you the Department of Planning and Environment will undertake a rigorous merit based assessment of the proposal. The Department will carefully consider all of the issues raised in submissions, including those identified by Mr Barton prior to determining the application."

The Department has made an assessment and recommended to the Director of Infrastructure Projects, M/s Karen Jones that she approve the modifications. In making the Recommendation M/s Diane Sarkies says ;-

"With regard to low frequency noise, which has not previously been considered, the Department notes that the predicted noise impact is lower than that required of a similar proposal, and is therefore considered to be appropriate. Notwithstanding, the Department has recommended an additional condition of approval, to include low frequency noise limits and noise modifying factors, to ensure that low frequency noise is managed to intended limits."

Regretfully, the Recommendations seem to be in contradiction of members of Emeritus Professor Bruce Armstrong's National Health and Medical Research Council ("NHMRC") - Wind Farms and Human Health Reference Group.

As you are aware the NHMRC are funded by the Federal Government and this particular reference group is made up of a host of distinguished Health Professionals and experts including acousticians.

One of the members of the Reference Group is Dr Norm Broner. Dr Broner has published many papers on the subject of infrasound noise and the adverse health impacts associated with it. Dr Broner concludes in his 2012 paper - Power to the People (attached) that **Gas Fired Powered Power Stations should not be built within 1.5km to 2 km of residences.(page 9).**

My historic property, **Nanima is located within 700m of the proposal.**

In an address to the Planning Assessment Commission ("PAC") concerning AGL's Dalton proposal in 2012, the Hon Katrina Hodgkinson, Member for Burrinjuck said ;-

"There are five gas turbine stations in the state and the most comparable to AGL's, Uranquinty Gas Fired Power Station, has never been able to meet the noise restrictions, set by the State Government, despite what the company said during the application process.";

"Origin Energy reportedly paid millions of dollars in litigation to the plant's neighbours and forced up to 10 families to leave their properties.' ;

"The only major difference between Uranquinty and Dalton is that the township of ***Uranquinty is located 2.4 km*** *from the power station whilst the centre of the village of Dalton is 4 km removed from the proposed site."; and*

"The Department of Planning recommended the approval of Uranquinty stating that it would meet the standards of NSW Industrial Noise Policy. It is obvious they got it wrong then."

Uranquinty *Gas Fired* Power Station was built by ERM Power in partnership with Babcock & Brown under the name NewGen Power and sold to Origin.

M/s Diane Sarkies has recommended ;-

(i) No Noise Wall to be designed **now** despite the Approval lapsing on 4 March 2014;

(ii) No Statement of Heritage Impact **now** so that a full appraisal of the proposed works can be ascertained ;

(iii) No immediate acquisition of adversely impacted properties ; and

(iv) No compensation for damage already done to those adversely affected ; and

(v) No Hazard Control plan to be submitted now ; and

(vi) No management plan for the proposed 43ha Buffer Zone.

The Department has produced no evidence that property devaluation has not already occurred despite overwhelming evidence that Nanima is blighted and valueless. There were no bids when the property was put to Auction on 28 October 2011 and no subsequent offers. Further, the Department has accepted ERM's submission contained in the December 2013 PB Memo that states that Nanima is noncompliant with noise.

There is no evidence that ERM are prepared to "negotiate" with me, in fact my own submissions show that the opposite is true.

This is an unacceptable and reprehensible situation and is designed to bankrupt me AND ERM POWER LTD HAVE KNOWN OF THIS POSSIBILITY SINCE 2005. The Noise Data is published information.

A Trustee has already been appointed.

Could you please alert Minister Goward of this very serious situation.

Many thanks,

Nat Barton
"Nanima",
7009 Goolma Rd.,
WELLINGTON NSW 2820
Ph: 02 68 451793
Email: nba43079@bigpond.net.au

15th International Meeting
on
Low Frequency Noise and Vibration and its Control
Stratford upon Avon UK 22nd – 24th May 2012

Power to the People

Norm Broner SKM, 452 Flinders Street, Melbourne, 3000, Australia
Email: nbroner@globalskm.com

Summary

Peaking power plants are being developed around Australia to supplement electrical power demand and often are located quite close to either commercial or residential areas both in cities and in rural areas. Low Frequency Noise (LFN) from these plants need to be controlled in order to ensure that neighbours are not acoustically impacted. This paper will report on the experience of one plant where the LFN from the exhaust stacks of two OCGT's caused nausea and headaches in office workers in a building some 50 metres away from the exhaust stacks. It will also report on another site where a residence was over 1 km away and the residents were experiencing significant LFN annoyance. The solutions required and the implications will be described.

Introduction

Complaints about the effect of Low Frequency Noise (LFN) in the form of rumble, a "feeling of pressure" and resultant headaches and nausea have been known for decades (eg Broner 1976, Leventhall 2003). It can be said that the effects of LFN are broadly similar to those of high frequency noise in the sense that any unwanted sound is potentially annoying. However, LFN exhibits itself in the form of "rumble" and "pressure" and the sound level fluctuations can exacerbate the annoyance reaction when compared to higher frequency noise.

It is well known that gas turbines and boilers can produce LFN which can result in feelings of annoyance due to vibration induced rattle, nausea, headache and uneasiness. In Australia, there has been increasing reliance on the use of peaking power plants which utilise Open Cycle Gas Turbines (OCGT's) to supplement the daily power demand. Figure 1 shows a typical peaking plant. Without noise control, these plants are often a source of high level LFN which can result in complaints at neighbouring farms or residences if they are not carefully designed to achieve LFN attenuation. Generally, these plants are located away from residential areas, but even in rural areas where the background noise levels are generally low, there can be problems at the nearest houses or farms due to LFN. Indeed, some of these peaking plants are located near to industrial estates in rural towns and have the potential to cause LFN annoyance either at the nearest residential locations or at the nearest factories and office buildings. Figure 2 shows A-weighted noise levels

predicted around a peaking plant and potentially impacting on a residential area as well as some commercial premises at the edge of a rural town. The question that then arises is how close to existing residential (or commercial) areas can these plants be placed without causing any adverse acoustical impact?

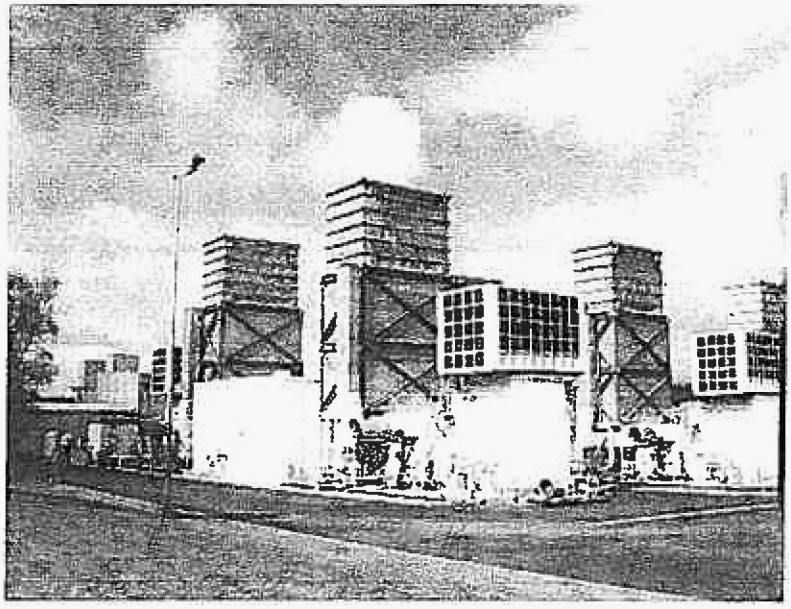

Figure 1 Typical peaking power plant

Figure 2 Power Plant Located Near an Industrial and Residential Area in a Rural Town

Low Frequency Noise Annoyance

Prediction and assessment of annoyance due to LFN is not simple. What is very clear and well known is that the A-weighted SPL alone is not successful in assessing

the response to LFN. Indeed, it is known and recognised that the primary effect due to LFN appears to be annoyance which is much greater than would be expected based on the A-weighted level alone, eg. Berglund et al. 1996, Broner 1976, 1978, 1980, Broner and Leventhall 1983, Bryan 1976.

A review of case histories indicates that very annoying sounds often have rather low A-weighted SPLs but nevertheless cause significant annoyance. This is due to the presence of an unbalanced spectrum (as would normally be experienced indoors due to an external noise source and due to the high frequency acoustic filtering of the house façade), and additionally may have an amplitude and/or temporal fluctuating characteristic.

For sounds with "tonal" low frequency content below 50 Hz and for infrasound (< 20 Hz), particularly where the sound level is perceptibly fluctuating or throbbing, annoyance and loudness are treated differently in terms of perception and that this perception difference may increase with time (Hellman and Broner, 2004). As the loudness adapts more rapidly with time than the annoyance (i.e. the perceived loudness decreases more rapidly with time than the perceived annoyance), the effect is to effectively increase the annoyance with time. This effect would be worse for infrasound where the sound is not so much heard but is rather perceived as a feeling and sensation of pressure.

The perception of annoyance is particularly dependent on the degree of amplitude modulation and spectral balance eg Bradley (1994) and Bengtsson et al (2002). As a result, it is considered that there is a significant limitation in the long term averaging of LFN noise levels, as this approach results in the loss of information on fluctuations e.g. Broner and Leventhall, (1983) and Blazier and Ebbing, (1992).

Empirical evidence shows that where the imbalance is such that the difference between the Linear and A-weighted SPL is at least 25 dB, the sound is likely to cause annoyance. Broner and Leventhall (1983) and DIN 45680-1997 suggested that a difference of 20 dB can result in an unbalanced spectrum which could lead to LFN annoyance. Others suggested that a difference of only 15 dB was a good rule of thumb to identify a potential infrasound LFN problem situation e.g. Kjellberg et al (1997). In Australia, the New South Wales Industrial Noise Policy recommends that a +5 dB modifying factor be added to the outdoor measured/predicted noise when the (C - A) difference is 15 dB or greater. This latter approach is currently being reviewed as it has resulted in limiting power station developments where residential areas are some kilometres away and where due to distance alone, the (C-A) for difference exceeds 15 dB. The New South Wales Department of Planning therefore adopted the Broner (2010) overall C-weighted criteria to determine the acceptability of new power station developments. The (C – A) level difference is an appropriate metric for indicating a potential LFN problem but that its predictive ability is of limited value (See also Leventhall 2003).

Case History – An Upset Administration Office

A peaking plant consisting of two OCGTs had been built in an industrial area and started commissioning tests. Immediately, workers in the administration area of a plant across the road started complaining that the noise was causing them nausea and headaches and increased absenteeism was occurring. The owners of the adjacent plant, with the office area located only some 50 metres from the two open cycle 150 MW gas turbine plant exhaust stacks, complained to the plant owners.

Figure 3 shows a view from the Board Room of the administration office block towards the exhaust stacks while Figure 4 shows the noise spectra measured in two internal rooms (the Board Room and an office) in this block. The hearing threshold curves from the ISO and ANSI and DIN Standards are shown for comparison and it can be seen that most of the low frequency energy could be quite audible. During a noise survey, it was noted that the external windows (seen in Figure 3) were visibly shaking and some rattling of wall panels was also occurring.

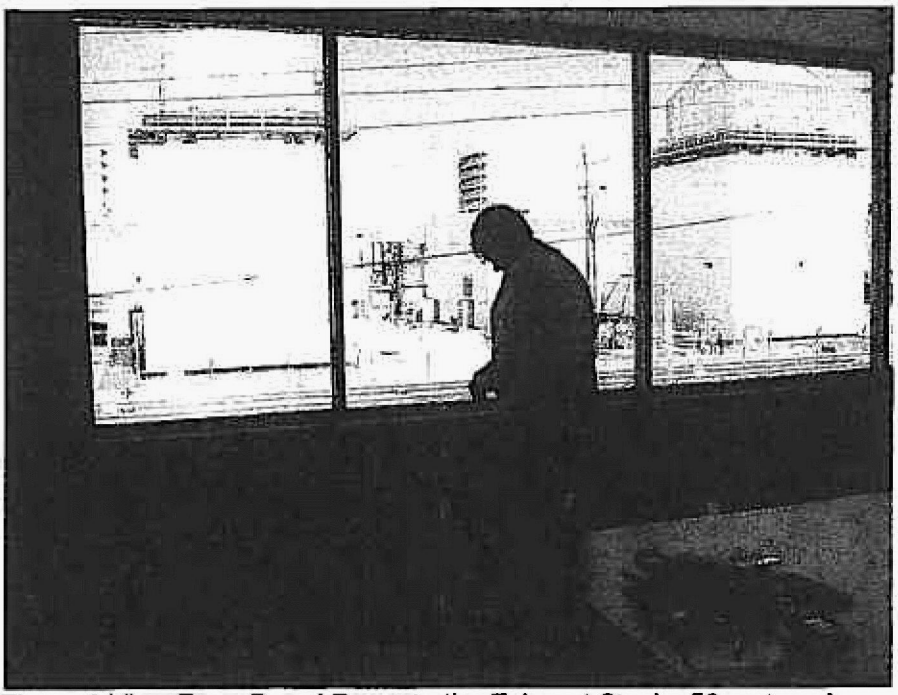

Figure 3 View From Board Room to the Exhaust Stacks 50 metres Away.

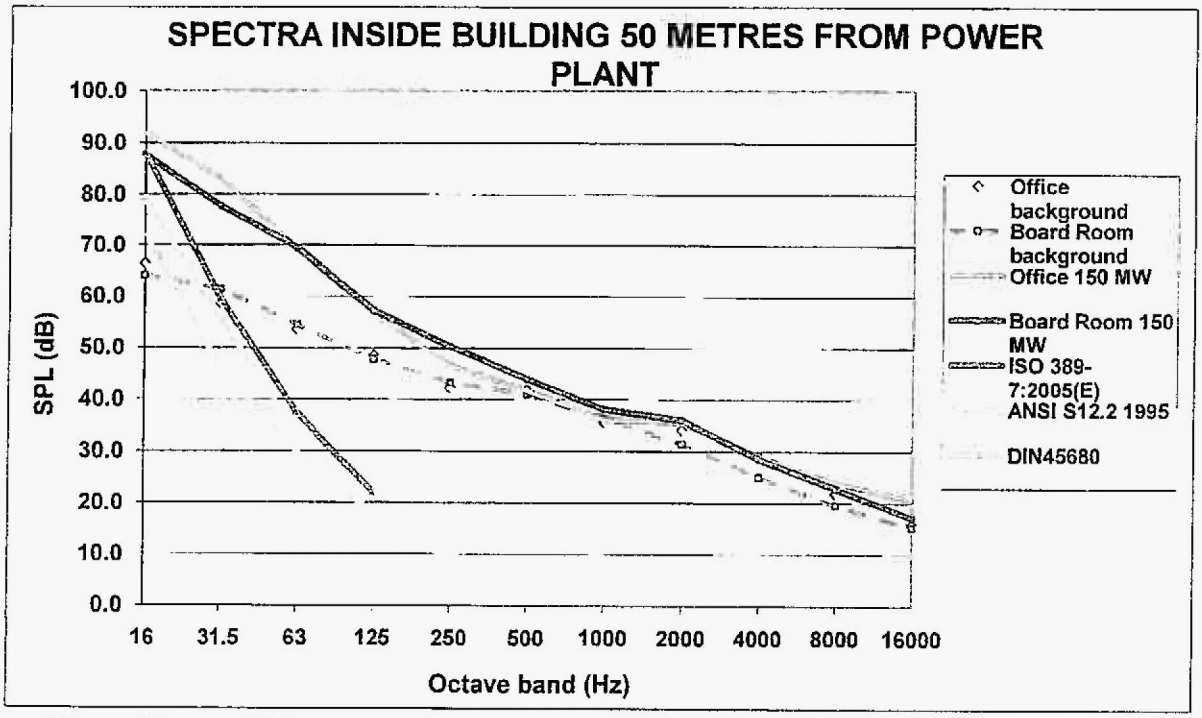

Figure 4 $L_{Aeq,1sec}$ Noise Spectra Measured in a Board Room and Office While the Gas Turbines Were Operating and When They Were Shut Down

The A-weighted SPL in the Board Room and Office area was 48 dBA and 46 dBA respectively while the C-weighted SPL was 84 dBC and 82 dBC respectively. It can be seen from the comparison of background noise level versus the operational noise level that there was a significant increase in low frequency energy when the plant was running. Various acoustic testing was conducted at the power plant and in the office area and it was determined that the stack exhaust noise was the main source of the LFN annoyance..

The peaking plant owners investigated various methods of reducing the stack exhaust noise level using computer modelling such as CFD modelling (Hetzel and Putnam, 2009). The end solution was based on the design of a perforated plate between the gas turbine diffuser and elbow to provide a more uniform flow distribution and to create a spin breaker behind the perforated plate to reduce the swirl in the flow. Further, guide vanes were to be added inside the elbow to enhance uniformity of the exhaust gas flow in the upper stack and to remove the sharp corner and abrupt area changes.

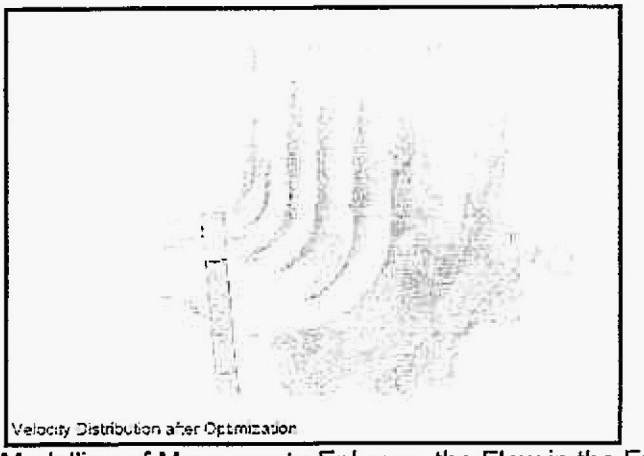

Figure 5 CFD Modelling of Measures to Enhance the Flow in the Exhaust Stack

While the end "fix" was being engineered a quick temporary fix was initiated. It was decided to stack a series of shipping containers three rows high in close proximity to the front of the building to act as a noise barrier to the offices behind. Figure 6 shows the barriers being placed along the front facade of the building which faced the exhaust stacks located on the other side of the road.

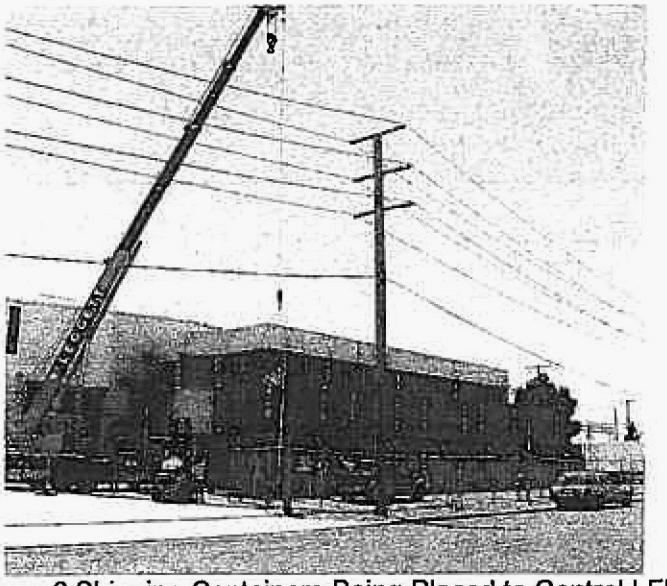
Figure 6 Shipping Containers Being Placed to Control LFN

Unfortunately, this approach was not very successful due to the containers being energised themselves and due to flanking of the LFN via the light weight roof of the building.

The exhaust fix was finally implemented at a cost of some $20 million and a reasonable LFN was achieved.

Case History – An Upset Residential Neighbour

A peaking power plant had been built in a rural area with the nearest farm residencelocated approximately 1.2 Km away. Two 150 MW open cycle gas

turbines were to operate to provide power when demand required. On commissioning of the plant, the residents at the nearest house began to complain about the LFN from the plant. Figure 7 shows the $L_{Aeq,5min}$ noise spectra measured outside the residence at four separate times when the complainants stated that the LFN was "very bad". The A-weighted SPL was of the order of 40 dBA while the C-weighted SPL varied between 60 – 73 dBC. The hearing threshold curves from the ISO and ANSI and DIN Standards are also shown for comparison and it can be seen that most of the low frequency energy could be quite audible. Note that the characteristic fluctuations in SPL at low frequencies are not well represented in these spectra as the measurement was conducted in terms of the $L_{Aeq,5min}$ metric which would have averaged the fluctuations. To fully appreciate the potential LFN problem at this location, the noise level metric chosen by the consultant should have been the $L_{Aeq,1sec}$.

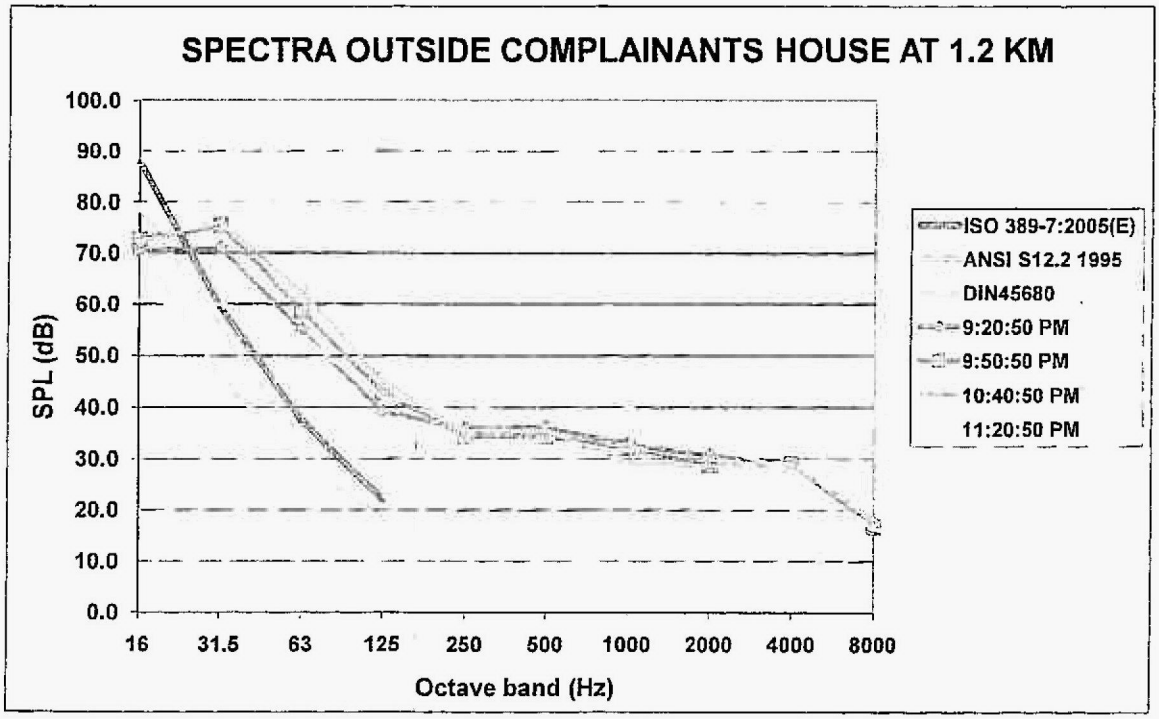

Figure 7 $L_{Aeq,5min}$ Noise Spectra Measured Outside the Nearest Residence 1.2 km Away

This plant is in the process of rectifying this problem.

Discussion

It seems clear based on the above case histories and others that most cases of LFN annoyance occur when an unbalanced spectrum occurs with a decreasing Sound Pressure Level as the frequency increases. LFN generally needs to be above the threshold for annoyance to occur but there is a very small percentage of the population that may be more sensitive to LFN than most i.e. they have relatively low LFN thresholds and thus reduced tolerance to LFN.

Ideally, LFN criteria should be set for indoors where the LFN complaints normally occur. However, in planning terms, it is much easier to set criteria for the outside of

residences where artefacts of the measurement do not play such a big role and where there is no need to enter a person's premises after start-up to confirm compliance with an outdoors noise level specification. Similarly, an overall noise level criterion may be preferred to one relying on an octave band or third-octave band analysis and calculation. As a result of these considerations and based on empirical case history data (site noise level and annoyance/complaint data), Broner (2010) set the following criteria for assessment of LFN.

TABLE 1 CRITERIA FOR ASSESSMENT OF LFN

Sensitive Receiver		Range	Criteria L_{eq} (dBC)
Residential	Night time or plant operation 24/7	Desirable	60
		Maximum	65
	Daytime or Intermittent (1 – 2 hours)	Desirable	65
		Maximum	70
Commercial/ Office/ Industrial	Night time or plant operation 24/7	Desirable	70
		Maximum	75
	Daytime or Intermittent (1 – 2 hours)	Desirable	75
		Maximum	80

On the other hand, it is possible to have two spectra with the same overall SPL but with a different spectral makeup resulting in a different perception for the two cases. So the 'jury' is still out as to the best way to characterise and assess LFN problems. One thing is clear. It is very important to ensure that any noise character involving level/spectral fluctuations and any amplitude modulation is captured and assessed.

Where Should Power Plants Be Located?

It seems that in order to prevent low frequency noise complaints due to OCGT's, it is necessary to consider all acoustic energy down to at least the 16 Hz octave band noise level and to also limit the noise levels outside the nearest residences to the order of 60 – 65 dBC maximum and outside commercial/industrial premises to the order of 70 - 75 dBC maximum.

What does this mean in terms of the siting of power plants "near" to residential areas or other noise sensitive receivers?

Unfortunately, there are many variables that need to be considered when wanting to recommend a minimum distance away for the nearest residence. These include:-

- The power generation equipment itself
- Its size and the number of units
- The package configuration

- Most importantly, the level of "standard" noise attenuation provided by the manufacturers. Most "standard" packages may reduce some low frequency noise but would not be aimed at achieving a significant noise reduction at 31.5 Hz and certainly not at 16 Hz, due to cost and size requirements.
- The local meteorological effects – e.g., temperature inversions may be a common occurrence in an area and can significantly increase the sound pressure level from the plant at the residence(s).
- Which way the wind blows and for how long and at what speed?
- The background noise level in the area of the residence(s) – the background noise might help to mask noise from the plant.

As a rule of thumb based on case histories and Sound Power Level considerations, in practice, we would recommend that for OCGT plants with a total Sound Power Level in the range 115 – 120 dBA, the minimum distance to the nearest residential premises should be no closer than the order of 1,500 – 2,000 metres away.
For commercial/office buildings, the power plant should not be located any closer than 350 – 500 metres.

Conclusion

With increased use of Open Cycle Gas Turbine power plants to provide electrical power when demand peaks, there is a need to consider low frequency acoustic energy not only down to the 31.5 Hz octave band but also to include energy in the 16 Hz octave band. People are much more aware of noise in general and are much more ready to complain if their work or living environment is affected by noise, especially by LFN. To prevent low frequency noise complaints, the noise level outside the nearest residences should be limited to the order of 60 – 65 dBC maximum. In practice, this means that OCGT power plants with a Sound Power Level of the order of 115 – 120 dBA should be sited so that they are at least of the order of 1,500 – 2,000 metres away from the nearest residential premises. For commercial/office buildings, the power plant should not be located any closer than 350 – 500 metres.

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H.G. Leventhall, A review of published research on low frequency noise and its effects, Dept. Environment, Food and Rural Affairs (DEFRA), UK, Research Project Report (2003)
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C. Roberts, "A guideline for the assessment of low-frequency noise" *Acoust. Bulletin*, 33, 31-36, Sep. Oct. 2008
New South Wales Industrial Noise Policy. Environmental Policy Branch, NSW Environment Protection Authority January 2000

130 Gobolion St.,
WELLINGTON NSW 2820
Ph: 02 68 451546
Email: martinsannikka@bigpond.com

24 September 2014

M/s Karen Jones
Director Infrastructure Projects,
NSW Department of Planning & Enviroment,
GPO Box 39,
SYDNEY NSW 2001
Ph: 02 9228 6150
Email: karen.jones@planning.nsw.gov.au

Dear M/s Jones,

RE:OBJECTION TO WELLINGTON GAS FIRED POWER STATION – MP06_0315 MOD 2

Further to my letter to you dated 2 September 2014 I wish to make it clear that I object to the Power Station at this site. I do not object to the Power Station provided it complies with NSW Industrial Noise Policy L90 measured background requirements, ie 25dB(A)

It has been brought to my attention by Mr Michael Tolhurst , General Manager, Wellington Council when I made a courtesy visit to him on 23 September 2014, that ambient measured noise level results of 25dB(A) were not disclosed to him prior to the submissions by Wellington Council re MOD 2 being made.

In its Submission to the Department of Planning dated 20 March 2014 Mr Michael Tolhurst, General Manager, Wellington Council states;-

"I have read the summary of the report by Parsons Brinkerhoff Australia Pty Ltd provided in the Memo by Aaron McKenzie on 20 December 2013 and have reviewed the additional information regarding noise. I note the proposed use of two 4000F gas turbines is within the Project Approval modification made on 7 September 2010. I understand this approval observed the modification around gas fired capacity allowed the station to operate as an intermediate as well as peaking plant with a modified annual capacity factor of 40%."

Apropos the PB Memo dated 20 December 2013 ;-

(a) Item No.2 specifies five penalties available (tonality, impulsiveness, intermittency, irregularity and dominant low frequency) because they cause greater annoyance. PB have used none or only one in all of their assessments.

(b) Item No.3 of PB Memo – For example, in Attachment B of MOD 1 Submissions Attachment B (page 39) PB have been willing to use low frequency penalty for fin fan noise of

73dB(A) when it is meaningless but it is not added to generator noise of 96dB(A) where it is essential and the penalty is justified.

(c) Items No.3 & No.4 of the PB Memo - In Table 1 adverse conditions includes 5dB(A) penalty. In Table 2 without the 5dB(A) penalty, when added it doesn't match Table 1 where it is already included. eg Nanima in Table 2 of 34.5dB(A) plus 5dB(A) does not equal 37.5dB(A) as stated in Table 1. This is just one example of how they have fiddled figures.

(d) Item No.5 of the PB Memo - C weighting assessments are normally used for loud noises like hearing protection ear muff evaluations not quiet noises like annoyance.

In the Wellington Power Station Assessment – MOD 1 dated 5 March 2010 the total sound power level is not disclosed instead they list various components that contribute to the total. In Attachment B 1/1 Octave Band Source Noise Levels (page 39) the Exhaust Stack Tip Noise Levels are quoted at 101 dB(A) At page 42 the Power Station Revised Propagation modelling noisiest components at Nanima House are split into smaller contributions when added up do not match the original high value eg 101dB(A) exhaust stack where it is split into two areas of 95.3dB(A) (95.3 + 95.3 = 98.3).

In the Noise Barrier Investigation dated September 2008 that was incorporated into the original project approval submissions, Table 3.1 – Predicted noise levels with barrier adjacent to Nanima House it is stated at 43dB(A). How can this be known without knowing the total sound power level of the source ?

The width of the proposed noise barrier is stated at only 10m whereas it is said in the Scope of works section ; –

It should be noted that in reality, careful consideration to barrier placement would be required and it is expected that the length of the barrier would need to be at a minimum twice the length of the building façade.

Effects relating to flanking barrier top edge/side edge reflection and transmission coefficients have not been accounted for in the original assessment. These effects would be considered in the detailed design phase.

In other words, if they do not know the total sound power level of the source and they do not know where the barrier should be placed and the width and the material, how can it be known if it would be compliant. ? If it is 43dB(A) in front of the barrier and the barrier drops the noise by only 8dB(A) how can it meet the measured background noise of 25dB(A) and not to exceed it by EPA requirement of 5dB(A).

Yours sincerely,

M Sannikka

Cc Hon Pru Goward – Minister for Planning
Hon Andrew Gee MP – Member for Orange
Dr Norm Broner – Accoustician
Mr Michael Tolhurst , General Manager, Wellington Council,
M/s Sarah Laurie, CEO Waubra Foundation

67 Received 18/6/07

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ABN 80 078 004 798
NCSI Certified Quality System ISO 9001

Our reference: 2116720A/LT_5991/PG/ra

13 June 2007

Nat Barton
'Nanima'
Mudgee Road
Wellington NSW 2820

Dear Nat

Wellington Power Station – ambient noise level monitoring results

As you will be aware, ERM Power has engaged Parsons Brinckerhoff (PB) to undertake the environmental assessment, including community and stakeholder consultation, for the proposed Wellington Power Station project. On behalf of ERM Power we would like to thank you for allowing PB to place a noise logger on your property. The purpose of the 10 day monitoring program was to determine the existing noise environment within the area (the ambient noise level), as a first step in determining the noise impact of the proposed project.

The ambient noise levels at your property were measured and are provided below:

Attended monitoring:	8:12 am	L_{A90} = 35 dB(A)
Unattended monitoring:	7:00 am – 6:00 pm	L_{A90} = 30 dB(A)
	6:00 pm – 10:00 pm	L_{A90} = 26 dB(A)
	10:00 pm – 7:00 am	L_{A90} = 25 dB(A)

L_{A90} refers to the noise level present for 90% of the time (the background level).

These background levels will be used to determine the appropriate noise limits permissible for the project in accordance with the Environment Protection Authority (now the Department of Environment and Climate Change) Industrial Noise Policy.

PB and ERM Power appreciate your cooperation during the initial phases of this project. Please also find enclosed a copy of the latest newsletter. This newsletter provides details of the project, the planning and approval process, the current status of the project and contact details if you wish to provide comments on the project or request further information. ERM Power wants to ensure that community comment is considered during the environmental assessment. Your ongoing involvement and feedback during the project is important.

Once again, thank you for your cooperation

If you have any enquiries regarding the project, please don't hesitate to contact Paul Greenhalgh, the PB project manager (02 9272 5663) or Mary Diab, PB community consultation team leader (02 9272 5360).

Yours sincerely

Paul Greenhalgh

Principal Environmental Planner
Parsons Brinckerhoff Australia Pty Limited

Encl. June 2007 Newsletter

Rebecca Mackay 14/09.51

From: Nat Barton <nba43079@bigpond.net.au>
Sent: Thursday, 11 September 2014 12:38 PM
To: karen jones
Cc: Pru Goward; ElectorateOffice Orange; Sarah Laurie; Martin Sannikka
Subject: WELLINGTON GAS FIRED POWER STN - MOD 2

Dear M/s Jones,

RE: WELLINGTON GAS FIRED POWER STN - MOD 2

I refer to our telephone conversation earlier today concerning the timeframe and decision maker re the proposed Modifications. You will appreciate that the Project has been on foot since 2005 and has caused and continues to cause untold damage to myself and others directly affected. Our property rights are lost, developers are gone and our properties are valueless and bankruptcy is a real possibility.

You will recall that you said that a decision was not imminent (ie not within the next two weeks) and that the proposal may be referred to the Planning Assessment Commission ("PAC") under the delegated authority of the Minister for Planning.

I submit that the proposal should not be referred to the PAC because as stated in previous correspondence to you from myself on 31 July 2014 & 27 August 2014, M/s Sarah Laurie, CEO of the Waubra Foundation on 6 August 2014 and Mr Martin Sannikka dated 2 September 2014 and emailed on 5 September 2014;-

(i) the PAC determined MOD 1 and could not have done a due diligence on the figures provided by the proponents because the ambient background noise levels (ie 25dB(A)) have not been used in any of their modelling (see my email dated 27 August 2014) ;

(ii) there is no plan for annoyance abatement for the town of Wellington or other affected residences ;

(iii) the figures provided to the PAC for MOD 1 by the proponents do not accurately reflect the noisiest component at the source ; and

(iv) the impact zone of the Project has not been accurately disclosed by the proponents.

It would appear to me that the PAC do not have the technical knowledge to evaluate the proposal and have not demonstrated that they have the expertise to properly examine conflicting advice

In my view this Project approval should be determined by the Minister for Planning and if necessary, after consultation with other Cabinet Ministers whose portfolios are very likely to be directly affected. The Project has been tainted by substantial Political Donations throughout the Planning process and Departmental officers full well knew of the unfolding debacle at Uranquinty (a similar proposal by the same company) when this Project was approved on 4 March 2009. Corrupt conduct is being rewarded.

The Department has relied on a 2010 paper by Dr Broner in their Recommendations, yet in 2012 Dr Broner has categorically said that Gas Fired Power Stations should not be built within 1.5 to 2km of rural residences.

The Minister and those who give her advice need to be held responsible for whatever decision is made and the advice which they give.

Yours sincerely,

Nat Barton
"Nanima",

Rebecca Mackay 14/09.51

From: Nat Barton <nba43079@bigpond.net.au>
Sent: Friday, 5 September 2014 4:17 PM
To: karen jones
Cc: Pru Goward; ElectorateOffice Orange
Subject: WELLINGTON GAS FIRED POWER STN MP06_0315 MOD 2 - EMAIL 2
Attachments: IMG_0003.pdf

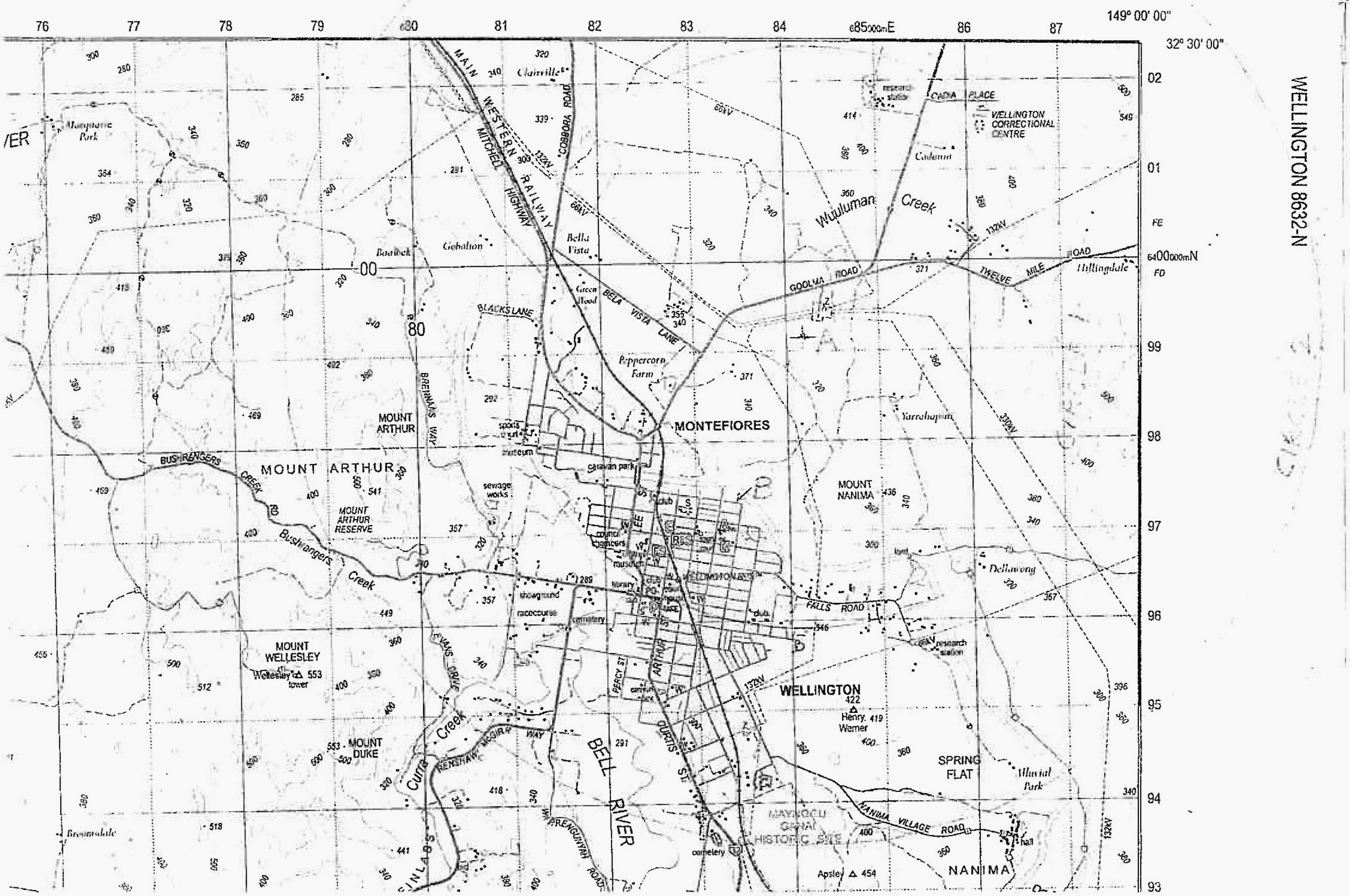
Dear M/s Jones,

I notice that the attached map and photograph to Martin Sannikka's letter sent to you at 12.42pm today are not very clear.

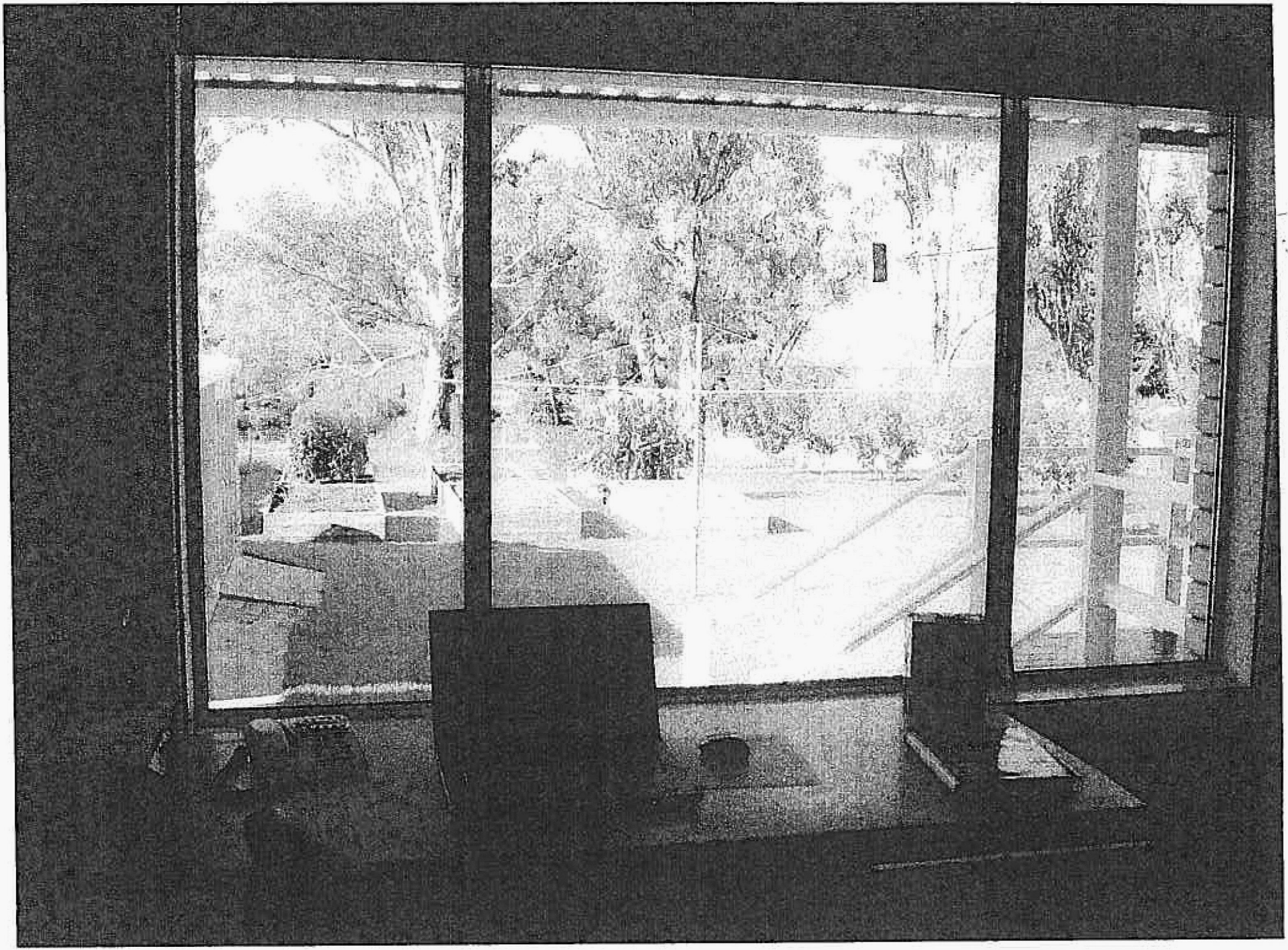
Please find colour scanned copy.

Yours sincerely,

N Barton



WELLINGTON 8632-N
149° 00' 00"
32° 30' 00"
685000mE
6400000mN
MAIN WESTERN RAILWAY
MITCHELL HIGHWAY
COBBORA ROAD
WELLINGTON CORRECTIONAL CENTRE
Wuuluman Creek
GOOLMA ROAD
TWELVE MILE ROAD
BELA VISTA LANE
BLACKS LANE
Peppercorn Farm
MONTEFIORES
MOUNT ARTHUR
MOUNT ARTHUR RESERVE
BRENNANS WAY
BUSHRANGERS CREEK RD
Bushrangers Creek
MOUNT NANIMA
Yarrabajam
Dellawong
FALLS ROAD
MOUNT WELLESLEY
Wellesley tower
MOUNT DUKE
EVANS DRIVE
RENSHAW McGIRR WAY
Curra Creek
BELL RIVER
WARRENGUNYAH ROAD
ARTHUR ST
PERCY ST
CURTIS ST
WELLINGTON
Henry Werner
SPRING FLAT
Alluvial Park
NANIMA VILLAGE ROAD
NANIMA
MAYNGGU GANAI HISTORIC SITE
Apsley
showground
racecourse
cemetery
sewage works
caravan park
museum
research station
Macquarie Park
Gobolion
Baalbek
Bella Vista
Clairville
Cadoma
Hillingdale
Broomdale



Rebecca Mackay

From: Nat Barton <nba43079@bigpond.net.au>
Sent: Friday, 5 September 2014 12:43 PM
To: karen jones
Cc: Pru Goward; ElectorateOffice Orange
Subject: WELLINGTON GAS FIRED POWER STATION MP06_0315 MOD 2
Attachments: IMG.pdf

Categories: Printed

Dear M/s Jones,

Please see attached letter from Mr Martin Sannikka objecting to the Department of Planning Recommendations that will be posted to you today.

Yours sincerely,

N Barton

2 September 2014

M/s Karen Jones
Director, Infrastructure Projects,
NSW Department of Planning
SYDNEY NSW 2000

Dear M/s Jones,

Re: Wellington Power Station

About 5 years ago I retired and moved to Wellington after working in Testing & Certification Australia in Sydney for 40 years. Now I live on a quiet north facing riverbank facing the proposed power station. See the attached photo taken from my living room 2 years ago.

I had heard rumours of building a massive noisy power station on the edge of the town.
Due to my noise background, the idea did not make any sense, so I dismissed it outright until 2 weeks ago, when I became concerned about future noise annoyance for the entire town.

I am writing to you as the Project does not cover how to deal with noise complaints.

Most part of my working life I was an authorised NATA (National Association of Testing Authorities) Signatory in Community Noise Assessments. I have been involved in over one hundred noise complaints against Energy Australia.

I have witnessed noise test on transformers at various manufacture's premises on behalf of Energy Australia covering almost all of their purchases. I also tested some zone transformers on behalf of Tasmanian Hydro Electric Commission and SEQUEB of Queensland.
During the early years, only arithmetic averages of pressure levels were calculated.
Nowadays quadratic means and more meaningful sound power levels are required.
Some manufactures even request frequency spectrums at various distances away.

In addition to the above witness testing, I have performed various field surveys on zone, kiosk and pole transformers. Some zone transformer surveys lasted several years due to volumes involved. The aim was to establish noise records of all zone transformers, especially the ones that had not been witnessed during the manufacturing phase.

A major portion of my work was noise annoyance testing, but I mention briefly having been involved in occupational hearing damage testing, impulse noise testing, ultrasonic noise testing, microphone testing, reverberation times, earmuff assessments, daily noise doses including allowable exposure times etc.

Justified annoyance complaints were usually against noises emanating from Distribution Zone Transformers, Roadside Kiosks Transformers, and Pole Transformers with or without platforms, Air Conditioning Units, Air Compressors and CLC (Customer Load Controller) Motor/Generator Sets used to inject the hourly signals to provide power to off-peak hot water tanks in various households. (There were also dozens of unjustified and marginally justified complaints)

Sometimes more than a single + 5 dB(A) penalty had to be used due to the character of the offending noise and occasionally, when several penalties were involved, various duration allowances were deducted for short lasting event contributions.

There was a brief period when EPA required L95 level background noise compliance. It was too hard to comply in practice and requirements were relaxed to L90 values.

To illustrate what happened with noise complaints over time, I created the following 'generic' story to make the point in layman's language without numbers, dates, places, people etc.:

'Power supplier' had to build a new substation due increasing load. They contemplated possible locations and asked a 'Test house' to perform 'Background noise' survey. 'Test house' found out that 'Location C' had the best 'Background A'. Now 'Power supplier' asked a 'Council', could we build a new substation at 'Location C', getting an answer: If you meet 'Background A', go ahead. 'Power supplier' asked a 'Manufacturer' can you make transformers suitable for 'Background A' that a 'Test house' will pass. They did. New substation was commissioned, everything was fine.

New houses were built closer to the substation. A few years later 'Power supplier' received a noise complaint and asked the 'Test house' to investigate. The result was that the noise complaint was justified. 'Power supplier' approached EPA, explaining that they were the first to arrive on the site, having done everything that was required, and now there is justified noise complaint, what can we do?. EPA answered that it makes no difference who was there first, and if there is a justified noise complaint, resolve it to complainant's satisfaction.

'Power supplier' told the 'Manufacturer' that the transformers you made earlier satisfactorily are no longer quiet enough. We have to move them somewhere else. Can you make quieter ones that the 'Test house' will pass? 'Manufacture' said yes, but best ones are very expensive. Quietest possible transformers were made and commissioned to the complainant's satisfaction.

Years passed, more houses were built closer to the substation. 'Power supplier' received a new noise complaint. 'Test house' found it justified. 'Power supplier' went to EPA, saying that we have a new justified noise complaint. We are using the quietest possible transformers and have satisfied the previous complaints. Can you give us some leniency? EPA said that it is your noise, you have to stop it. Construct brick walls around them! Walls were built and complaints stopped.

Now new high rise development started one street further away, behind the houses that had complained years earlier. New noise complaints were received from high rise residents. 'Test house' learnt that the 4-sided high brick walls reflected noise up, making noise complaints from high rise residence further away justifiable. 'Power supplier' asked EPA, what can we do now?. EPA answered that build a roof over the brick walls. It is your noise; stop it at the boundary, only 'Railways' are excused. 'Power supplier' couldn't build the roof due to heating transformers. The substation was mothballed and years later demolished and the land sold. ('Generic' end)

I was amazed how seriously Energy Australia took my evaluations and how fairly they complied with EPA requirements. Energy Australia changed their name several times, but the culture to improve quality of life stayed. Their senior engineers worked in various committees progressively improving and/or introducing new Australian Standards as technology advanced.

ERM Power Ltd has not disclosed the total sound power level of the source or used their own measured background level of LA90 = 25 dB(A) in any of their assessments.

ERM has disclosed sound pressure/distance from source information combination only for one location. Using that information, I calculated the probable sound power level of the source and estimated 2000m distance to my place and calculated that the offending noise at my place might exceed the background of 25 dB(A) by 9 dB(A)

On the attached map:

Position A indicates the location of the proposed site.
Position B shows where I live.
Inside Circle 1 Offending noises may exceed the background by more than 5 dB(A).
Inside Circle 2 In my opinion, offending tonal noises could be audible, as tonal noises can be heard below the background, hence the penalty. Older people, having lost the masking effect of the higher frequencies, could hear tonal low frequencies relatively louder, making the annoyance worse to them.

So far I have tried to convince you with illustrations, how powerful consequences even a single justified noise complaint may have.

In principle, noise assessment is easy. The most important thing is the background noise level, as the excess that determines the justification, is always referred to it. The science how noise decays with distance is well known. When the sound power level of the source and the background level into what it must decay are known, the circle of the justified complaints area can be drawn.

Please, look at Circle 1 carefully. There may be serious noise consequences anywhere inside it.

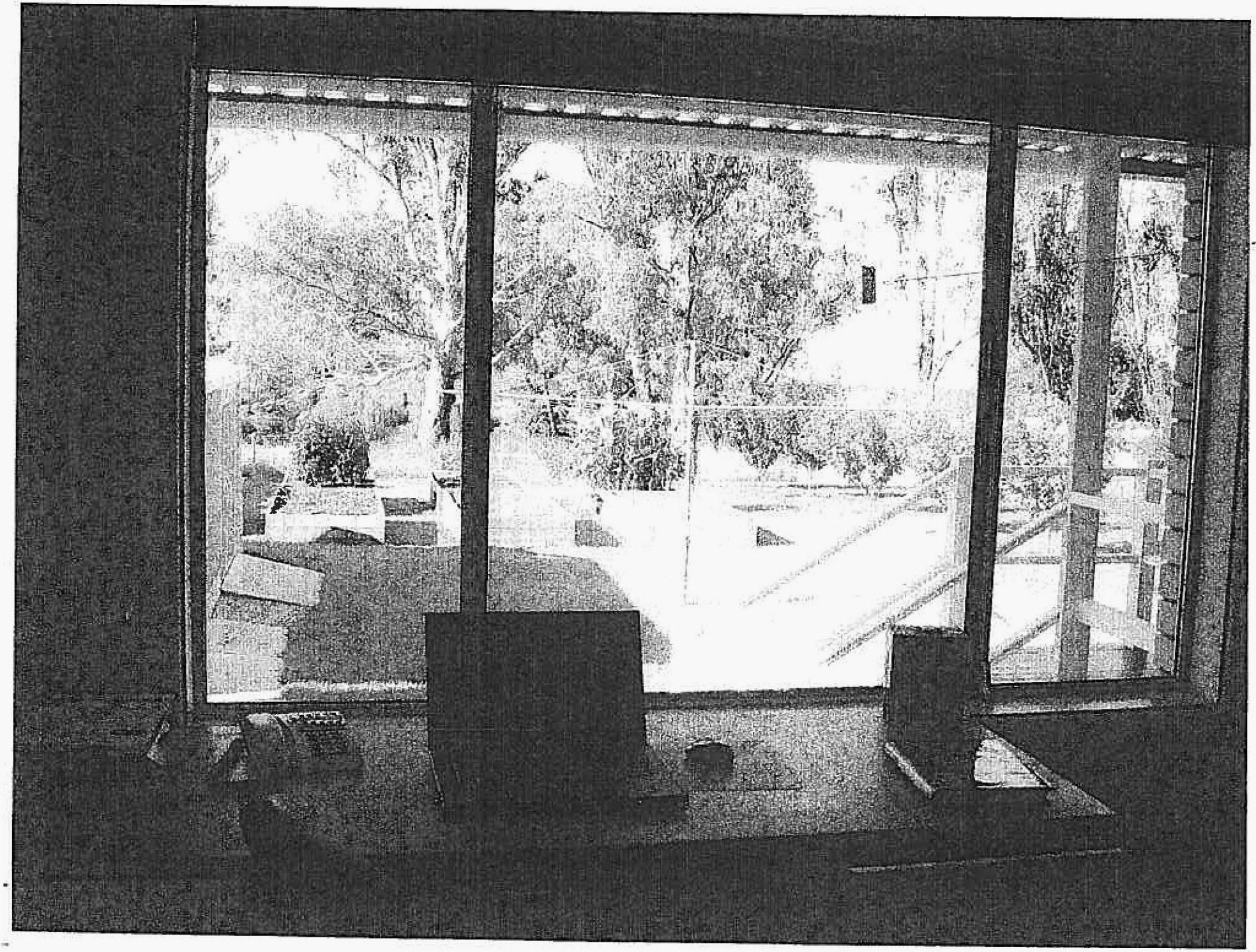
I appreciate how difficult it is to determine the total sound power level of an entire plant, that has not even been built yet. That is why the site location is vital. All I can tell you that, as for most of the town the background level is 25 dB(A) there will be problems. If the power station noise at end receiver is 30 dB(A) or less, the noise may be audible, but the noise complaints are unlikely be successful, if the values are higher than 30 dB(A) the complaints may be justified.

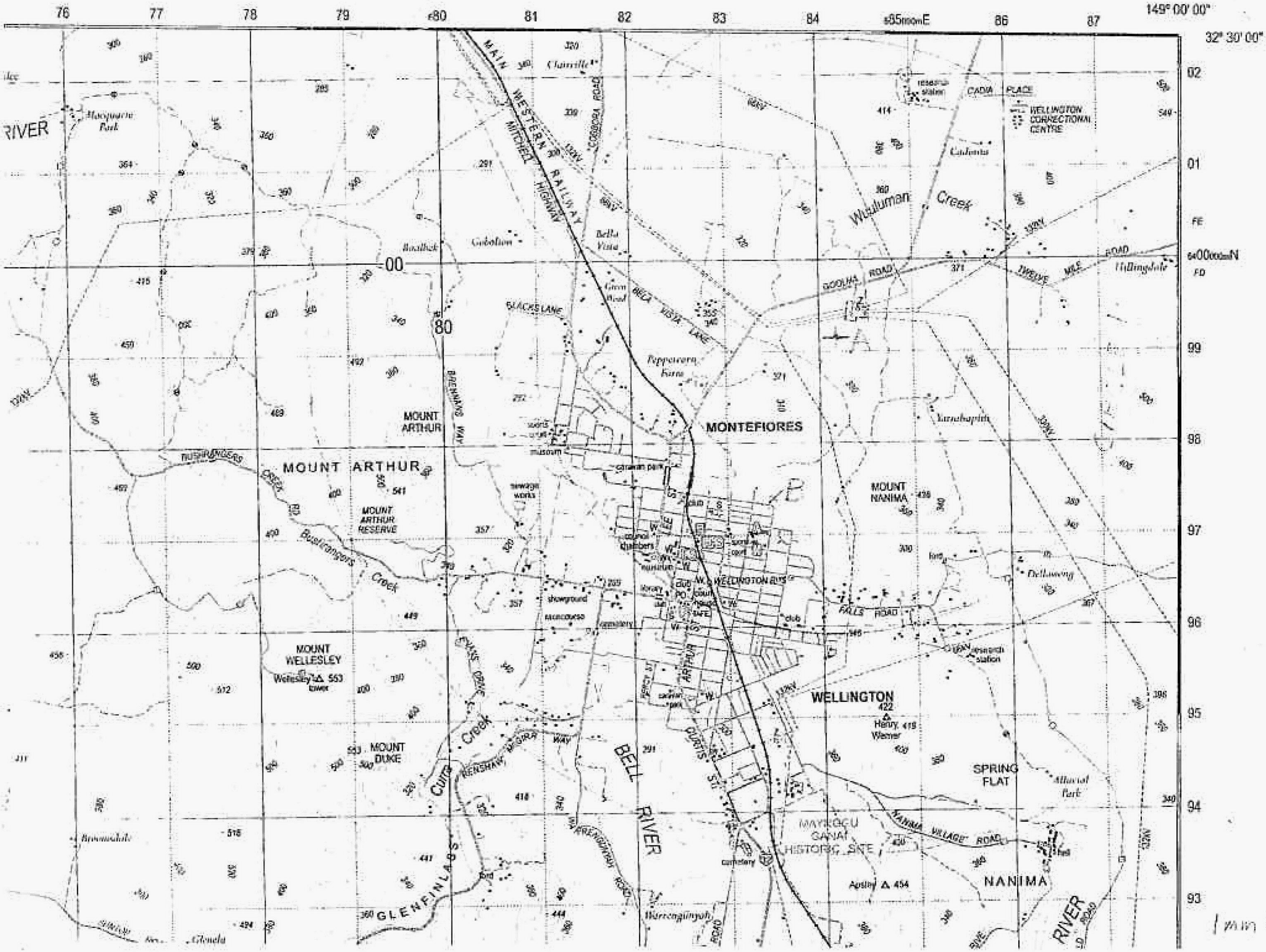
I would urge you not to approve the modifications and to let the Project Approval lapse.

Yours sincerely,

Martin Sannikka
130 Gobolion Street
WELLINGTON NSW 2820

cc Hon Pru Goward MP
Hon Andrew Gee MP





WELLINGTON 8632-N

1mm = 50m

Rebecca Mackay 14/09.51

From: Nat Barton <nba43079@bigpond.net.au>
Sent: Saturday, 20 September 2014 8:32 AM
To: ElectorateOffice Orange
Cc: Sarah Laurie; Martin Sannikka
Subject: WELLINGTON GAS FIRED POWER STATION - MP06_0315 MOD 2
Attachments: IMG.pdf

Andrew,

FYI.

Nat

NSW GOVERNMENT | Planning & Environment

Mr Nat Barton
'Nanima'
7009 Goolma Road
WELLINGTON NSW 2820

14/12860

Dear Mr Barton

I refer to your correspondence dated 26 July 2014 to the Hon Pru Goward MP, Minister for Planning, concerning the modification application for the proposed Wellington Gas Fired Power Station. The Minister has asked me to reply on her behalf.

I have noted your concerns about the potential impacts of the power station on noise levels, and property and heritage values at Nanima House.

The merits of the modification application are currently being considered by the Department of Planning and Environment in consultation with relevant authorities. This includes the Environment Protection Authority given the facility will need to be licensed under the Protection of the Environment Operations Act.

A copy of the Department's assessment report can be found on its web site (www.planning.nsw.gov.au). However, please note that no decision has been made at this stage.

I have also noted your reference regarding 'links to Obeid family'. The Department's role is to assess projects on their planning merits, not to investigate the company itself. However, if you have any evidence of corruption, I encourage you to refer that evidence to the Independent Commission Against Corruption for its consideration. I understand that you have already taken some action along these lines.

Should you have any further enquiries about this matter, I have arranged for Karen Jones, Director Infrastructure Projects at the Department of Planning and Environment to assist you. Ms Jones can be contacted on (02) 9228-6150.

Yours sincerely

16.9.14

Chris Wilson
Executive Director
Development Assessment Systems and Approvals

Andrew Gee MP
MEMBER FOR ORANGE

Our Ref: 14/09.28

The Hon Duncan Gay MLC
Minister for Roads and Freight
Level 35 [WEST]
Governor Macquarie Tower
1 Farrer Place
SYDNEY NSW 2000

Dear Minister

Please find **enclosed** correspondence I have received from Mr Derek Gosper of Manildra who has concerns about the delay in having the 50km speed sign moved further out the Gumble Road at Manildra.

You will note that Mr Gosper has concerns about the increase in traffic flow and safety along this stretch of road and is frustrated that RMS has not moved the signs despite promises that they would be moved.

I would be grateful for any assistance you could provide to Mr Gosper with respect to his enquiry.

Thank you for your assistance.

Yours faithfully

Andrew Gee MP
Member for Orange

September 2013

3 Byng Street, Orange NSW 2800 **ph** 02 6362 5199 **fax** 02 6361 3922 **orange@parliament.nsw.gov.au**