Appendix A

Submissions to Environmental Assessment

Submission No 1

NSW GOVERNMENT
Department of Planning

RECEIVED 28/2/06 W.H.

17 February 2006

Phone: 02 9228 6415
Fax: 02 9228 6466
Email: keiran.p.thomas@dipnr.nsw.gov.au

Our ref: 9027381

Mr Rodney Ward
Delta Electricity
PO Box Q863
QVB NSW 1230

Dear Mr Ward

Proposed Gas Turbine Facility, Munmorah, Scenic Drive, Doyalson, Wyong LGA

In accordance with clause 75H (5) of the *Environmental Planning and Assessment Act 1979* (the Act), please find enclosed a copy of all submissions received during the public exhibition of the above proposed development (name and address withheld) and a copy of submissions from several government agencies and Wyong Council. Please note that the Department received copies of a similar submission from 416 residents in the area. One example of this submission has been enclosed.

In accordance with clause 75H (6) of the Act, the Director-General requires Delta Electricity to respond to all the issues raised in the submissions no later than close of business 3 March 2006, or as otherwise agreed with the Department. If the response requires changes to the project to minimise its environmental impact or affects the statement of commitments, the Director-General requires a preferred project report to be prepared and the statement of commitments to be revised.

Should the enclosed submissions raise any issues which you would like to discuss further or you have any other enquiries, please contact Chris Ritchie on 9228 6413 or via email chris.ritchie@dipnr.nsw.gov.au.

Yours sincerely

24.2.06

Chris Wilson
A/Deputy Director-General
Office of Sustainable Development Assessments and Approvals

Please note: 416 of these submissions were received.

ATTENTION: Keiran Thomas
Major Development Assessment
Department of Planning
GPO Box 39
SYDNEY NSW 2001

MAJOR PROJECT PROPOSAL:
PROPOSED MUNMORAH GAS TURBINE FACILITY

Application Ref No: (05_0195)
Location: Part Lot 61 DP1065038 Doyalson Wyong NSW
Proponent: Delta Electricity
Approval Authority: Minister for Planning

My general concerns are: Unacceptable **noise** levels, **Air pollution** concerns using distillate fuel & start-up, unacceptable **heat** generated **(40 cubic meters per second - at 500 deg C)**, increase **risk of fire** & explosion, adverse effects on my **property values**, adverse effects on my **peace & enjoyment of life**

In addition to my general concerns - I object to the Development Proposal made by Delta Electricity to erect a 4 Gas Turbine Facility at Lake Munmorah Power Station on the following grounds:

_____
_____
_____
_____
_____
_____
_____

I believe that **Proposed Site A** will have less effect on my home & lifestyle.

Signed ——

Signed ——

Name & Address ——
——
——

DATE:

Submission No 2

ATTENTION: Keiran Thomas
Major Development Assessment
Department of Planning
GPO Box 39
SYDNEY NSW 2001

MAJOR PROJECT PROPOSAL:
PROPOSED MUNMORAH GAS TURBINE FACILITY

Application Ref No: (05_0195)
Location: Part Lot 61 DP1065038 Doyalson Wyong NSW
Proponent: Delta Electricity
Approval Authority: Minister for Planning

I object to the Development Proposal made by Delta Electricity to erect a 4 Gas Turbine Facility at Lake Munmorah Power Station on the following grounds:

(Tick each item you are concerned about)

- ✓ Unacceptable noise levels
- ✓ Unacceptable heat generated (40 cubic meters per second - at 500 deg C)
- ✓ Increase risk of fire & explosion
- ✓ Increase risk of Plant sabotage
- ✓ Air pollution concerns using distillate fuel
- ✓ Adverse effects on my property values
- ✓ Adverse effects on my peace & enjoyment of life
- ✓ Adverse effect on my ability to sleep

Signed

Signed

Name & Address

DATE:

NB. This letter must be sent by the 7th of February – so that the Dept of Planning receives it BEFORE 10th Feb 06

Submission No 3

[redacted]

ARCHITECTURE • PLANNING • LANDSCAPE • ENVIRONMENT • URBAN DESIGN

Our Ref: CJR/93142/180106ltr

9 February 2006

Major Development Assessment
GPO Box 39
SYDNEY NSW 2001.

Received
14 FEB 2006
Major Development Assessment
OSDAA

Attention: Keiran Thomas

Dear Keiran,

RE: SUBMISSION ON BEHALF OF [redacted]
MUNMORAH GAS TURBINE FACILITY
ENVIRONMENTAL IMPACT STATEMENT

[redacted] owns land significantly affected by the proposed pipeline route associated with the Munmorah Gas Turbine facility. [redacted] is working with other owners of land in Precinct 4 of Wyong Shire Council to identify development options for [redacted] land at Spring Creek where it is proposed the pipeline route for the gas turbines will be located.

The following comments are made in relation to statements made in the Environmental Impact Statement (EIS), December 2005, prepared on behalf of Delta Electricity by Parsons Brinckerhoff.

1. Route option assessment

The selection criteria used in the identification of the preferred pipeline route, as listed in section 3.3.1 of the EIS, are considered inadequate as they do not include any assessment of the impact of the pipeline location on adjoining landowners.

2. Selected option

The preferred pipeline route, Option A, was chosen *'as it would not cause the severance or sterilization of the subject land…'* The [redacted] land bordering the existing electricity easement is significantly affected and severed by the addition of the pipeline to that easement. Development options are reduced by the additional constraints imposed by the pipeline's presence, and its possible buffer.

The EIS indicates that future land use for industrial or commercial purposes will not be compromised by the presence of the pipeline. Consultation with adjoining landowners during the preparation of the EIS would have identified residential development as a future land use in the vicinity of the Option A pipeline route.

3. Consultation

As an owner of land adjacent to the pipeline proposed in Option A, [redacted] should have been informed of the potential impact of the presence of the pipeline. [redacted] were not provided with that information nor consulted regarding their future land use plans.

The preferred pipeline location (Option A) has a negative impact on adjoining landowners and places significant restrictions on the future development of [redacted] land.

The criteria used in the assessment of pipeline locations were flawed in that they did not include an assessment of the impact on adjoining land owners.

Insufficient pipeline route options were considered to be able to conclude that Option A is the best option.

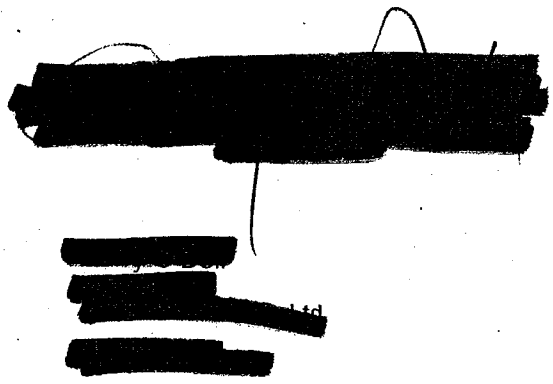
Consultation with owners of land affected by this proposal was inadequate.

5. Next Step

To facilitate a solution for the pipeline route, it is proposed that a meeting be arranged, perhaps through NSW Premier's Department.

If you have any queries in relation to this, please do not hesitate to contact me.

Yours faithfully



Encl.

Submission No 4a

URGENT

Submission deadline
10/2/2006
for Delta Electricity Proposed
Gas & Turbine Facility

TREAT AS A MATTER OF URGENCY
PLEASE READ & CONSIDER

Cc

Cr Bob Graham (Mayor)
Cr Greg Best
Cr Neil Rose
Cr Warren Welham
Cr Robyn Stewart
David Lemcke (Wyong Council)
Paul Crittendon (Local Member)
Keiren Thomas (Dept of Planning)
Cr Kath Forster (Deputy Mayor)
Cr Doug Eaton
Cr Ron Stevens
Cr Brenton Pavier
Cr Carl Veugen
Jill Hall (Local Member)
Milten Orkopoulos (Local Member)

January 25, 2006

MAJOR PROJECT PROPOSAL:

PROPOSED MUNMORAH GAS TURBINE FACILITY

Application Ref No:	(05_0195)
Location:	Part Lot 61 DP1065038 Doyalson Wyong NSW
Proponent:	Delta Electricity
Approval Authority:	Minister for Planning

We have major concerns about the noise and heat pollution that will be emitted from the proposed Gas Fired plant and **totally object to the proposal in its current format.** They seem to be making no effort to minimise these problems & see themselves as exempt because they are far enough away to only disturb a few people.

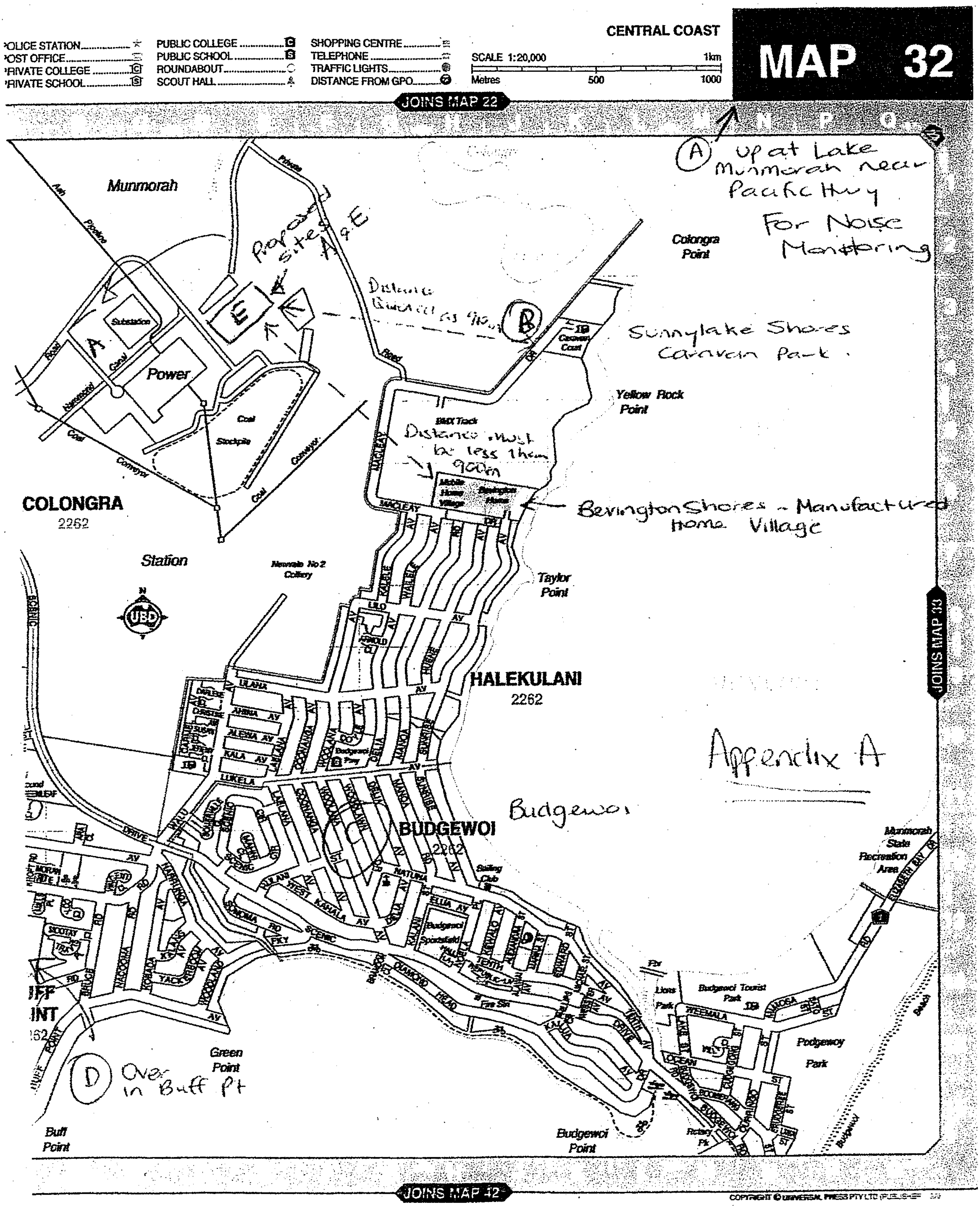
Their collection data is flawed and incomplete & their outcomes exceed EPA guidelines without any plans to comply.

We are the owners of [redacted] situated between the Shores of Lake Munmorah & the Delta Electricity land behind the rear of the village.

We are a "Mature Aged" village, with 181 permanent homes located on the village land, and all of our 243 residents are over 55, with many considerably older – up to 93 years of age, with the vast majority between 70 -80 years of age. Many are frail, many have chronic asthma, emphysema, and other chronic breathing difficulties. Others have schizophrenia, high blood pressure, major heart problems, sleeping difficulties, & all the other complaints associated with old age. All these complaints are exacerbated by stress and lack of sleep.

Delta Energy (DE) has made its' Environmental Assessment of the proposed new Munmorah Gas Turbine Facility, available for public scrutiny at a number of locations. I went into Wyong Shire Council Chambers and read my way through the 2 volume edition – over a period of many hours. I was not allowed to purchase a copy, to purchase any photocopies - & was only able to take pages of notes. These documents are thousands of pages long, & of course, technical in nature - & I am sure that the majority of the general population would not have been able to understand the problems which are buried within the document.

The following map shows where the village is located and where the Noise Collection Areas were located:


CENTRAL COAST
MAP 32
POLICE STATION
POST OFFICE
PRIVATE COLLEGE
PRIVATE SCHOOL
PUBLIC COLLEGE
PUBLIC SCHOOL
ROUNDABOUT
SCOUT HALL
SHOPPING CENTRE
TELEPHONE
TRAFFIC LIGHTS
DISTANCE FROM GPO
SCALE 1:20,000
1km
Metres
500
1000
JOINS MAP 22
JOINS MAP 33
JOINS MAP 42
A Up at Lake Munmorah near Pacific Hwy For Noise Monitoring
Munmorah
Proposed sites A & E
Distance quoted as 900m
B
Colongra Point
Sunnylake Shores Caravan Park.
Power
Substation
Coal Stockpile
Coal Conveyor
Yellow Rock Point
Distance must be less than 900m
BMX Track
Mobile Home Village
Bevington Shores - Manufactured Home Village
COLONGRA
2262
Station
Newvale No 2 Colliery
Taylor Point
HALEKULANI
2262
Appendix A
Budgewoi
BUDGEWOI
2262
C
Munmorah State Recreation Area
Budgewoi Tourist Park
Podgewoy Park
Green Point
D Over in Buff Pt
Buff Point
Budgewoi Point
COPYRIGHT © UNIVERSAL PRESS PTY LTD

I have several Major Concerns including Noise Pollution, Heat, and Air Pollution & Risk Management:

Issue 1. Noise:

While the construction noise levels are predicted as higher than the long term operating noise levels – we understand that this will only last for 8 or more months. It is the long term 24/7 noise generated that is of major concern.

DE's Environmental Assessment Report predicts **Operational Noise Levels** for the proposed 4 Gas Turbine Plant are listed as the following 3 main sources:

SOURCE	NOISE LEVEL
Air Intake (height 15m)	103 dBA's (Decibels)
Turbine/ generator noise radiated from enclosure	85 dBA's NB there will be 4 of these turbines
Duet noise from exhaust stacks (4 @ 35m)	98 dBA's NB there will be 4 stacks @ 30m height

The report gave no comparisons of other noise levels, including the noise generated by the normal coal fired facilities, or other noisy things.

Please look at the attached sheet from www.greenpac.rec.org (Appendix B), to give comparative noise levels (which DE) did not supply. These levels are taken standing beside the items:

- Sensation of complete silence 0-20dB
- Calm urban areas in **cities** 2am – 4am 40dB
- Slight rustling leaves 30dB
- Indoor Conversation 50dB
- Idling car 50dB
- Motorbike at 50km/h 75-100dB
- Steam train at 100kms 100dB
- Disco 85 103dB
- Electric train at 300kms 110dB
- Standing beside a jet aeroplane at take off 110dB
- Military low level fights 105-120dB
- Hearing damage possible 120 – 140dB

Of course all these noises are normally short lived. They come, disturb the people around them, and are normally gone in a matter of minutes. They are not running constantly 24 hours a day, 7 days a week, and 365 days a year!

In the DE proposal a study was taken of the ambient noise levels of the surrounding area. Six catchment areas were used & the resulting information was included:

(Ambient noise levels)

Area	Suburb	Dist to Gas Plant	Day	Night	Lowest	Accepted Level	Operational Levels
A	Lake Munmorah	2.25kms	38dBA's	37dBA's	35dBA's	40dBA's	43BA's
B	Sunnylake Caravan Pk	910m	- missing	- missing	- missing	37BA's	41BA's
C	SE Budgewoi	1.2m	36dBA's	34dBA's	32dBA's	32dBA's	37dBA's
D	Buff Point	1.65km	37dBA's	36dBA's	33dBA's	38dBA's	42dBA's
E	San Remo	1.45km	39dBA's	34dBA's	33dBA's	38dBA's	65-70dBA's
F	Doyalson	1.65km	missing	missing	missing	38dBA's	65-70dBA's
G	Bluehaven	2kms	missing	missing	missing	40dBA's	65-70dBA's
H	Bushells Ridge		missing	missing	missing	40dBA's	65-70dBA's

You can see from the above table that Sunnylake Caravan Park was the closest Noise Collection point – even though Bevington Shores is actually located closer to the proposed site. When you look at the Data Area B has no Ambient Noise levels recorded. Only Noise catchment areas A,C,D,&E were reported.

- I believe that this study is flawed and that DE should be required to supplying the missing data for the missing areas, and conduct a similar study at the rear of our Village – as we are closer and lie almost directly to the East of the proposed plant, & have 181 homes with 253 elderly residents to be considered.
- All the sound studies look at noise that comes and goes during the day & night & averages the sound. This is a lot less intrusive than constant relentless noise.
- The Noise collection was also undertaken in August when there are the most winds. We normally have strong southerlies & south westers blowing – which would increase the ambient sound reading. The greatest disturbance from noisy industries is noticed on quiet, still nights when the sound generated appears to scream constantly.

The DE proposal states that the Noise Guidelines (EPA – I would imagine) state:

- "For periods of 4 weeks or less L_{A10} levels should not be exceed L_{A90} for more than 20 dBA's
- For periods greater that 4 weeks and less than 26 weeks the L_{A10} levels should not exceed more than 10 dBA's
- Industry Noise Policy – in intrusiveness should not exceed the Rating Background noise level by more than 5 dBA's measured over 15 minutes".

The study then went on to say that:

"* Noise levels under worst-case adverse meteorological conditions are predicted to exceed the night time intrusiveness criteria at 3 of the residences to the east and south east of the noise catchment areas B & C"

They also say " a detailed assessment of more extreme adverse (worst-case)

meteorological conditions indicates exceedance up to 4dBA are possible at a number of residential areas – located east and south east of the proposed gas turbine facility.

[redacted] began in 1954 and lies slightly south of due east from the proposed site & has 181 permanent homes located within the village. Each home is owned by the residents and they rent the land, (the site), from the village. We maintain the common areas, & roads, sewage, drainage, electricity & all other services. The Residential Parks Act requires us to supply "quiet peace & enjoyment" to our residents. **YET - DE chose to ignore us as a test site.**

The major problem is that this DE Environmental Assessment Report proposes a plant that makes no detailed effort to meet EPA guidelines and describes itself as an:

"Open cycle gas turbine facility. A peak load Power Station supplying electricity at short notice during periods of peak power supply. With 4 Gas turbines producing 600mwatts using Natural Gas & distillate fuel (back-up fuel)".

They state that they will operate during hot summer days and during the nights as a 24 operation as required. Of course, this means that they will operate mostly in "adverse meteorological conditions" – when they will exceed the guidelines.

During the hot weather the wind normally blows in from the west – often at high wind velocities and Bevington will be most affected by the plant at these times. Not only will they have to struggle with the heat – but they will also have the constant noise of 4 massive turbines and stacks to contend with. These are the extreme days when elderly residents die.

Their report states: "Under typical adverse meteorological conditions, noise levels typically increase by 2-3 dBA but still achieve the criteria at all noise catchment areas with the exception of the closest residents in Noise Catchment Area B located on Macleay Street. Given that the exceedance is only marginal (1dBA) and the facility would rarely operate in the middle of the night, it is considered that noise levels would exceed the criterion less than 10 percent of the time in any one season and the overall impacts would therefore be considered negligible."

Reading between the lines..... this proposal outlines that it will be operating mainly in "adverse weather conditions" when it will exceed EPA guidelines – therefore, they initially expect to exceed acceptable noise guidelines whenever operating.

While the proposal discusses a plant that is anticipated to operate only 500 hrs a year, initially. They do advise that the approval is to allow the plant to operate 24 hrs a day, 7 days a week, and 365 days per year. As demand for power increases over the years, the plant will be used more often to cope with the increases.

Any approval should be granted with this in mind as DE is submitting this proposal & justifying it's lack of compliance on the limited operating hours it initially estimates – saying that this will therefore, cause limited inconvenience to the local community. Once approved they can increase the operating hours, (without any further approvals), until it operates 24/7, and say that they had always been upfront on likely increases, and that the general public should have had Environmental Controls put in place when the initial approval was granted.

Frankly, I do not believe their estimates & I believe that their data is over simplified.

When they look at the ambient levels they average out the noise around. A fast car may go past at 50 decibels– spiking the noise level for a minute or so, the noise level then drops back down & you relax again. Their equipment makes an average of these two levels and records the mean. This is nowhere near as annoying as a high level noise that never lets up day or night – 24 hours a day relentlessly– without any relief – ever – until they turn it off & silence returns. As we are normally so quiet – the difference is exaggerated, especially in the quiet of the night time, & when the weather is already unbearably hot and nerves are already frayed. Their figures look at non compliance within 15minute windows – when they acknowledge that the noise and disruption to life will be 24 hours a day during operation.

While the noise levels of the 3 sources can't just be added together to be 103+85+85+85+85+98+98+98+98 decibels. It is also not correct to assume that the total noise will only reach the highest noise generated eg. the 103dBA. I am not a specialist in this field but do understand that the noise of 5 people talking - is not 5 times louder than only person talking in a room. The total volume is, however, still considerably higher than the single voice alone. In a restaurant with poor acoustics, the noise becomes more and more unbearable as the number of patrons and the volume of their combined voices join together to become intolerable.

At [redacted] we are on a dead end road. [redacted] ends in the front of the village. [redacted] (mentioned as one of the adversely affected areas), runs beside our back, (western), boundary. In fact, the section of [redacted] near the village is considerably closer than at the northern end where Sunnylake is located and where the Sound Collection Point, (with no data), was collected. Suburbia ends along our southern boundary & as we have no passing traffic, mostly the silence here is absolute. The noisiest things here are the birds or the wind.

We have owned the village for over 8 years and over that time the coal fired Power Station of Lake Munmorah has hardly been used. It has operated as a "A peak load Power Station supplying electricity at short notice during periods of peak power supply", (which is what this new plant is being described as), ie a back up station for that time & I read in some of their literature that it was only used 6 times over the past 2 year period.

Why is a new plant necessary when the existing coal fired plant sits there unused? What are the dBa's for the existing plant when operational? (It is very noisy and disturbs our residents while it is operational). Nowhere in the proposal submission does it list the operational noise levels of their coal fired facilities to give a comparative figure.

Why should any new business (Government, Semi Government or Private), be allowed to exceed guidelines? EVER!

The Environmental Protection Act 1993 includes noise under the definition of "Pollution". "This means that a person producing excessive noise could be in breach of the general environment duty under s.25. This could result in the issue of an Environmental Protection Order or civil enforcement proceedings against the person responsible for the noise emissions.

Noise pollution may cause environmental harm in which case the criminal offence

provisions could be applicable. There are two Environmental Protection Policies that provide more detail as to the types & levels of noise that are acceptable under the Act these are the Environmental Protection (Industrial Noise) Policy 1994 & the Environmental Protection (Machine Noise) Policy 1994".

- By selecting Proposed 'Site A' instead to Proposed 'Site E' the plant would be located slightly further west of our village & perhaps have a slight damping effect as the sound is deflected by the existing power station.
- By choosing a site further north west closer to Colongra Creek Ash dam the noise would be distributed more evenly throughout the surrounding bushland, and still not close enough to be heard by the Lake Munmorah residents. Of course, this suggestion would have to assume that the Approving Body would place a greater importance on 'people' and a lesser importance on 'bushland'.
- By building the new plant at one of Delta's other existing facilities they could chose a site without surrounding neighbours.

In my opinion all new DA's must comply initially, in every way.

- Otherwise we spend the next 30 years trying to make them retrofit compliance devices.
- Why would the Government accept anything less than total compliance?
- Why have a compliance standard and allow developers to break these standards at will?

In Sydney the Government was forced to soundproof all the homes under the airport flight path. I believe that DE should be forced to sound insulate their equipment to ensure that it does not cause undue stress to the surrounding suburbs, or build it closer to the gas fields where there is no existing population.

If this is not achievable then they should look at soundproofing all the homes within the effected area. I have included a copy of a type of glass called Pilkington's Comfort-Plus. (Appendix D). While not double glazing – it does cut down 33dBA's of noise & can be installed into existing window frames, (which is considerably cheaper than replacing all windows). Unfortunately, this does not help the outside noise & elderly people normally moved to the Central Coast to escape the hustle & bustle of the city – to live the "quiet life" the "Sea Change" in idyllic little towns like Budgewoi.

Issue 2 Heat.

My second major concern is the radiant heat to be released from the four 35m stacks.

DE's proposal advises that it uses open-cycle gas turbines. Draws in cooled, filtered air through the compressor where it is mixed with natural gas/distillation fuel and injected at high pressure into the combustion chamber. Hot exhaust gases are vented into the atmosphere at high velocity and temperature, (about 40 m^3/sec at 500 degrees C) via a 6 meter exhaust stack at the end of the gas turbine unit.

This is truly frightening! What was unclear is if this is then to be multiplied by 4 (as there will be 4 turbines).

Either way there will be either 40 cubic meters of super heated air... or 160 cubic meters released into the atmosphere every second!

Bevington sits less than 1km to the east of the site. We are probably located about 10m higher than the proposed DE site, (our highest Datum level is 22 meters above sea level at the rear of the village). By DE's own admission - the plan is to run the new plant on extreme weather condition days – when they experience the peak electricity consumption requirements.

Those stinking hot days are normally associated with hot westerly winds. If the hot westerly is blowing at 30km/h it will take only 2 minutes for that superheated air to be over the village. If the wind velocity is 60kms/h it will be only 1 minute. Higher speeds would be quicker.

- I would like to ask Delta how quickly super heated air at 500^{c} takes to cool down on a 40^{c} day? Less than 60 seconds? I think not!
- How many degrees will their 4 exhaust stacks increase the ambient air temperature in the surrounding area? 4, 5,6,7,8,9,10c?
- What environmental controls will be in place to ensure that my residents are not adversely affected by this rise in temperature?
- Can this superheated air cause instantaneous combustion of the dry bushland around?

Issue 3. Air Pollution

I understand that a Gas fired plant emits less pollution than a coal fired plant, however, Delta's Vales Point Station at Mannering Park often breaches Environmental Pollution Controls and it is extremely hard to find or access their reading levels. Once built it is too late to complain & we would then spend the next 30 years waiting for Delta to fix the problem (as they are now trying to do with tenders being called to bag the emissions from Vales Pt).

My concern is that the emissions are much higher, (almost double), if they switch to the alternate distillate fuel. What controls will be in place to limit the use of distillate & stop them swapping permanently without any further notification or controls?

During an emergency the report talks about "Gas Venting" to release dangerous pressure levels. Assuming again that this occurs on an "adverse weather condition day" ..... say a 40 – 53 degree day with scorching westerly winds blowing – how much gas would be released over our village? As my residents are elderly and many have health issues, as discussed, what is the likelihood of our residents being gased? (We had a day just like this in December 2005 where the temperature at 3.30pm peaked at 53 degrees Celsius!).

Lastly, what smells will be emitted from the plant?

Issue 4. Risk Management

Delta Electricity has already had threats made against its' power stations and I believe there is an increase risk to the surrounding public.

As the plant will be run at extremely high temperatures I would like to be reassured about possible explosions, plant fires, bush fires and be advised on the notification and

evacuation plans that are in place for the surrounding suburbs. I have an elderly population, many of whom have no transport, we have a village bus & have Bush Fire & other Risk Management Plans in place. However, I would expect help from Delta if they were directly responsible for an environmental catastrophe. I have never been approached by Delta about any of these issues.

In Conclusion:

This application should not be counted a 1 submission as I represent 243 people who live in 181 different homes within our village.

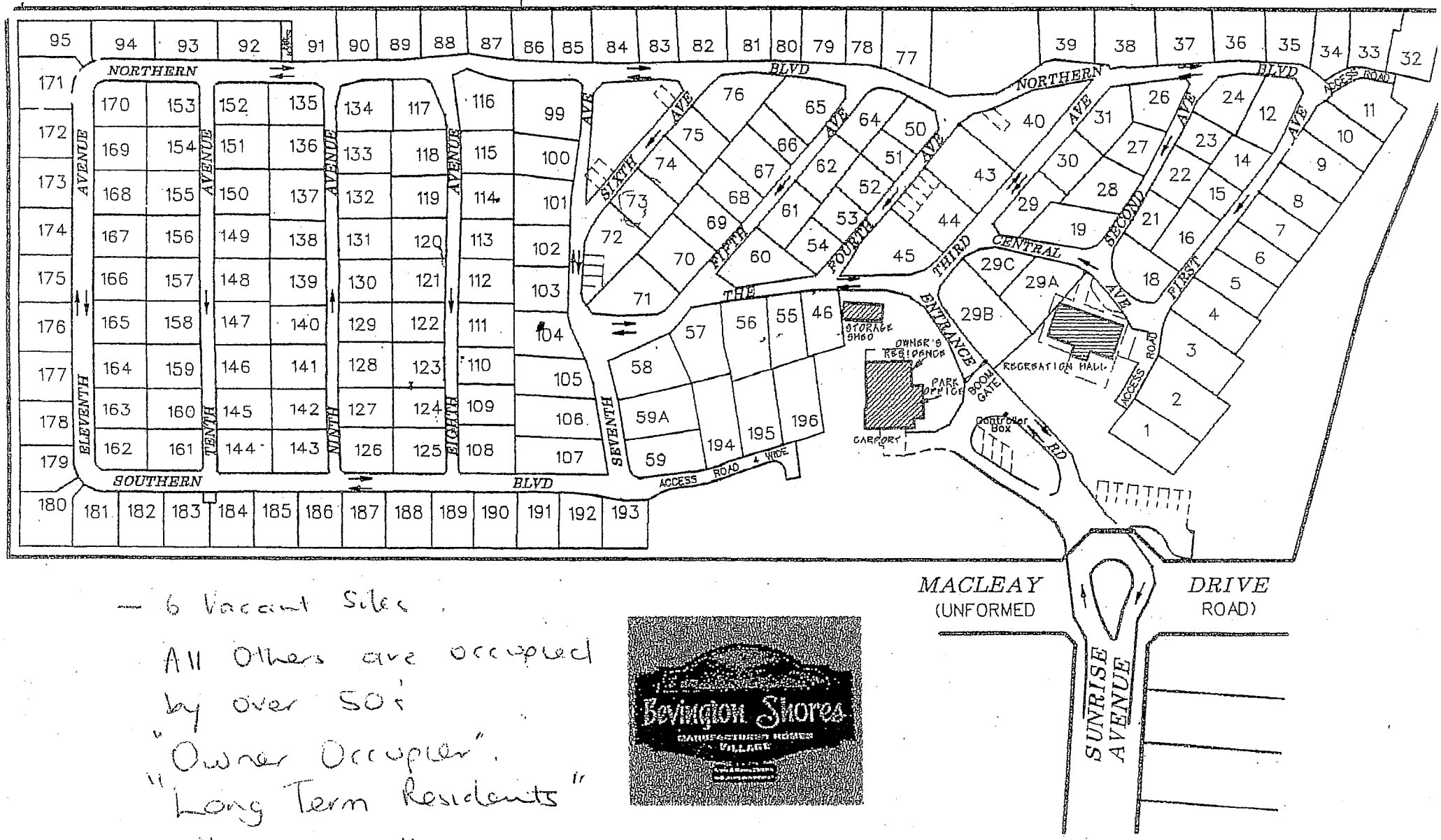
I am between a rock and a hard place as I am forced to confront the dilemma of upsetting my elderly residents by stirring them up and having them write individual letters of complaint or try to keep relative calm within the village.

I have already had 16 residents list their homes for sale – many citing that they need to sell now before there is no market at all for their homes. The Residents' property values will not just drop – but it may not be possible to sell them at all to other retirees. People retire for peace & quiet. If they don't like the noise, heat & fumes then they will just buy somewhere else.

I have raised may considerations that need to be addressed before any approval is granted. DE need to re measure the sound effect at our Village! & Recalculate their assessments!
I understand that this type of power station is on the State Government's agenda, but, the Government also has an obligation to be a good corporate citizen and comply with its own EPA standards at all times. It is in their own interest to consider the health and wellbeing of its' voting constituents and take all of these concerns into account.

Yours truly,

Appendix C



— 6 Vacant Sites.

All Others are occupied by over 50's "Owner Occupier". "Long Term Residents" Who own their own homes & rent the site from the

Bevington Shores
MANUFACTURED HOMES VILLAGE

BEVINGTON SHORES - MANUFACTURED HOMES VILLAGE.
186 SUNRISE AVENUE,
BUDGEWOI. NSW. 2262.

Appendix D

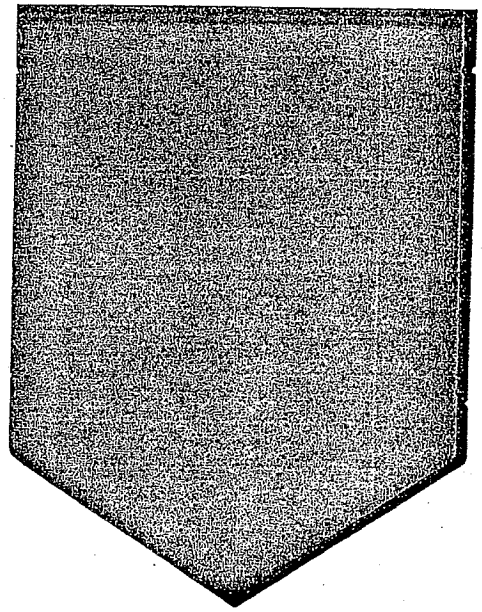
ENERGY MANAGEMENT

Benefits

- 6.38mm laminated glass Grade A Safety (AS2208)
- Light/neutral colour
- Eliminates 99% of ultraviolet light
- Reduces fading of furnishings
- Reduces heat loss – warmer in winter
- Reduces heat gain in summer – cooler in summer
- Reduces noise transmission – quieter all year round.

Description

Substance	6.38mm Laminate (Safety Glass)
Colour	Neutral
Shading Coefficient	0.61
SHGC	0.53
U-Value (Insulation)	3.9
Light Transmission	62%
Light Reflectance	10%
Solar Transmission	44%
Ultraviolet Elimination	99%
Sound Reduction (STC)	33dB



Pilkington **ComfortPlus**™

PILKINGTON

Submission No 4b

FAX TRANSMISSION

TO: Dept of Planning. **FAX NO:** [redacted]

ATTENTION: Keiran Thomas **FROM:** [redacted]

DATE: 1/2/06 **TOTAL PAGES** (INCLUDING HEADER)

MESSAGE:

Dear Keiran,

Please attach this ~~Addendum~~ to my original submission - by adding to the back sheets of the folder.

Thankyou for you help.

[redacted]

ADDENDUM TO FIRST SUBMISSION

February 1, 2006

MAJOR PROJECT PROPOSAL:
PROPOSED MUNMORAH GAS TURBINE FACILITY

Application Ref No: (05_0195)
Location: Part Lot 61 DP1065038 Doyalson Wyong NSW
Proponent: Delta Electricity
Approval Authority: Minister for Planning

This is my second submission on this matter as I have been studying the issues involved and discussing them with various experts in the field. My first submission was made from pages of hand written notes that I had made at Wyong Council chambers. I have now received a copy of the proposal and have had more time to reread and study the full proposal.

Added to our major concerns about the noise and heat pollution that will be emitted from the proposed Gas Fired plant, we have additional concerns relating to the Air Pollution and the likely rise in the water temperature of the surrounding lake systems.

We totally object to the proposal in its current format. They seem to be making no effort to minimise these problems, & see themselves as exempt - because they are far enough away to only disturb a few people, or hide under the "only 500 hrs/p/year" assumption.

Their collection data is flawed and incomplete & their outcomes exceed EPA guidelines without any plans to comply. **Again, we reiterate our demand for a full study into the effects on our Village –** [redacted] as we are located only 900 m to the east of the preferred site, (with 253 elderly, permanent residents), and study the area of suburbia closest to the proposed site. Additionally, the missing data from collection site B (Sunnylake Shores – Caravan Park – with over 55 permanent residents), should be supplied.

1. ADDITIONAL CONCERNS OVER NOISE POLLUTION

I have learnt a great deal about the sound over the course of my investigations. When sound is measured in Decibels it is actually an exponential scale. Each 3 decibels of noise is a doubling of the previous sound level.

EPA standards are for noise levels to not exceed 5 decibels above the ambient sound levels.

Read Section 10 in the Environmental Assessment paper & you will see a document full of

missing data, ambiguity and results which suddenly turn up again in later tables. In my opinion they are also based on very flimsy 'assumptions' of anticipated noise levels & collection data which averages short spikes, (in an otherwise low ambient noise level), to come up with an average noise level which is much higher than the true levels.

Their study "indicates exceedances of up to 4dBA are possible at a number of residential areas, located to the east and south east of from the proposed gas turbine facility".

This doesn't sound like much until you realise that this is more than twice the noise level (greater than 3 dBA), higher than the non-existent 'average' sound level of the area.

These predictions are also made for areas where they did not in fact bother to collect any ambient data, as neither Collection Sites B or C are the closest suburban points to the facility, and will no doubt be the most adversely effected.

At no point can I find any details of the PITCH of the proposed noise emissions. There are some noises – (like massive, high speed turbines that are much more annoying, and indeed unbearable to the human ear, especially when running 24 hrs a day, 7 days a week), other noises are less offensive and easier to live with.

The underlying presumption of this whole proposal is based on the false premise of short term operation (500 hrs), with an approval for 24/365 operation.

Their answer to any breach is summed up by Paragraph 10.4.2

"Although the concurrence of night time operation and adverse weather is likely to be rare, historical meteorological data was used to assess the proportion of time the criteria may be exceeded. When allowing for only occasional use of the facility, the exceedance would occur less than two percent of the time. On this basis, negligible impacts would be expected". **NB.** page 5 of the Summary, (at the beginning of their proposal), has the same paragraph but quotes "5 per cent of the time". WHO KNOWS WHAT THE TRUE ESTIMATE IS ?

PAGE **1.1.4 of the Overview of the Proposal** clarifies the true intent of the proposal: "Although the proposed gas turbine facility could operate 24 hours per day 365 days per year, (the assessment of the potential environmental impacts has been based on continuous operation), the gas turbine facility is likely to operate for about 500 hours per year, which is based on an approximates estimate of the projected cumulative annual peak power demand period".

2. Vibrations

At no point in the discussions on noise emissions has the likelihood of vibrations been discussed. My residents at the rear of the village say that when the current Coal plant operates (which has been very rarely over the past 7 years), their homes suffer from mild but annoying vibration, as the plant is fired up and then continues to vibrate during operation. They say that lying quietly in bed, trying to sleep, they can feel the constant vibrations & it drives them nuts.

- what efforts will be made to ensure that this is not an added impact of the new plant?

3. ADDITIONAL CONCERNS OVER HEAT EMISSIONS

In my last submission I was confused by the discussion of 30 meter stacks, 35 meter stacks and the 6 meter heat venting stacks discussed.

The report reads: The hot exhaust gases generated by the combustion process are used to drive an electrical generator to produce electricity. The hot exhaust gases are vented to the atmosphere at high velocity and temperature (about 40 meters per second and 500 degrees Celsius respectively) via a six meter diameter 35 meter exhaust stack fitted at the end of each gas turbine unit."

This paragraph clarifies my confusion. The stack is 6 meters in diameter, 35 meters tall and one is located at the end of each gas turbine. This means that 6 x 40meters of superheated air (500 degrees Celsius) is released every second from each of 4 stacks. I would then calculate this to mean 240m^3 per second being released from each of 4 stacks! This is 960 cubic meters of super heated air being released into the atmosphere ever SECOND!! This is a much greater volume of super heated air than I had originally calculated and only exacerbates our concerns!

- What effect will this have on the ambient air temperature of the village when the hot westerly wind blows it over us within 1-2 minutes of discharging.
- It would seem to me that more effort should be made to cool this air and/or taller stacks would be needed to move this air into higher levels above the surrounding districts. I can not find any data supplied in their proposal.
- What heat do bushfires generate in comparison to these super heated discharges?
- At what heat levels does instantaneous combustion occur?

Issue 4. Air Pollution

While I concede that Gas fired plants release less pollutants than conventional Coal fired facilities. I have already expressed by concerns about the use to the alternate distillate fuel.

DE s proposal actually states that it is expected that they will use distillate for 75 hours out of the 500 hours of proposed operation. This equates to around 15% of the operating time.

- What limits will be imposed on the use of distillate?

Start-up Emissions

Deltas proposal says: " Table 11.6 provides information on the stack pollutant concentrations that have been estimated for the proposed gas turbine facility under normal operating conditions. The concentrations have been compared with the stack emissions set by the Protection of the Environment Operations (Clean Air) Regulations 2002. **Note that the limits set by the Protection of the Environment Operations (Clean Air) Regulations 2002 do not apply to start-up conditions, due to the relatively short start-up period associated with the proposed gas turbine facility (i.e. less than 30 minutes)".**

Below are the excerpts from Table 11.6 Page 11-8

Emission characteristics of proposed gas turbine facility used by dispersion model

Emission (grams per second)

	Natural Gas Fired		Distillate Fired	
	Normal	Start-up	Normal	Start-up
CO	4.4	895.6	35.6	1711.1
NO_x (as NO_2)	81.1	117.8	112.2	162.2
SO_2	4.9	2.2	6.1	13.1
PM_{10}	4.4	4.4	9.4	9.4

My understanding of these figures are that the Start-up faze releases much greater emissions than the normal operational faze of the plant.

Looking at CO for example Normal operation emits 4.4 grams per second into the atmosphere.

Start-up however, releases 895.6 grams per second.

How convenient that Clean Air controls won't apply, because, if we did the maths on the start up emissions we would find that they are very significant.

Lets look at the first gas used .... CO - Normal operation is 4.4 grams per sec X 60 seconds = 264 grams per minute X 30 minutes = **7920 grams over a 30 minute period.**

Start-up emissions are a whopping 985.6 grams per sec X 60 sec = 53,736 grams per minute X 30 minute start-up period = **1,612,080 grams over that start-up period.**

Normal plant operations of **203.5 hours would be needed to replicate those emission levels.**

Distillate has a much higher emission levels than natural gas. Over the same start-up in distillate, a rate of 1711.1 grams per second would release **3,079,980 grams during start-up.** Normal gas fired operation would take **388.9 hours normal operation to release the same levels of pollution.** I could go on through the other emissions – but I am sure you get the point!

- **Why do normal Clean Air controls not apply to start-up when a distillate start-up would emit the same levels of pollution as 388.9 hours of normal operation? Remember the proposal is for only 500 hrs per year!**
- How many start-ups will there be every year?
- We need guarantees in place that distillate will only be used on very rare occasions when there is a disruption to the natural gas supply. If natural gas is not resumed within a certain period of time the use of distillate should cease and the plant be shut down.
- Remember, these start-ups are likely during 'adverse conditions' when we are directly in the path of the Westerly or North Westers on a hot summers night. Even on the cold winter nights the prevailing wind is often a South Wester. Bevington Shores and Sunnylake Shores are going to be the most adversely effected by any emissions.

What is a Black Start?

The proposal does not explain this term. My industry sources say that a Black start is using diesel fuel. Is this correct? Is distillate a less emotive name for diesel? We have

experienced diesel start-ups at the existing Munmorah plant & Vales Point facilities, when the black smoke plumbes and the houses and cars around are covered with black crap.

- Because gas is considered a clean form of energy the plant will not have pollution controls built in.
- When the start-up uses distillate or even worse... diesel - unacceptable emission levels will be released into the atmosphere – using the excuse that it is OK because it will only be for a short period of time.
- With the health issues of my residents – what guarantees do I have that these people will not have a severe breathing reaction to these high levels of pollutions?
- 2 of my residents ended up being taken to hospital by ambulance after the Munmorah Coal plant was fired up in the past.
- What are the cumulative levels of all these pollutant gases when added to the fallout we are currently receiving from Deltas' Vales Point Plant?

All pollution controls should be initially installed to cover the worst operating conditions of the plant. Not just under optimum conditions and turn a blind eye to the exceptions.

Issue 5. Raising the water temperature of the Lake system

No where in this proposal does it discuss the effects of the releasing of the hot water used for cooling the plant. With Lake Munmorah coal fired plant being hardly used the lake temperatures are cooler now than when it ran full time many years ago.

My eldest daughter just won an award from the Hunter Valley Research Foundation for her research paper on the Effects of the increased water temperatures in Lake Macquarie – by Vales Point Power Station. Her report showed that Vales Point had increased the water temperatures in the southern end of Lake Macquarie by up to 4 or 5 degrees C.

This power facility would also have a similar effect on Budgewoi Lake & Lake Munmorah. This effect should be completely investigated and detailed. Not just on a 500 hour operation – but on the eventual 24/7/365 operation this Approval is seeking. What effect will it have on the sea grasses and fish within the lake systems.

There are other issues that could still be addressed, however, I believe that I have demonstrated the need for much more information, and much greater controls before this plant should approved.

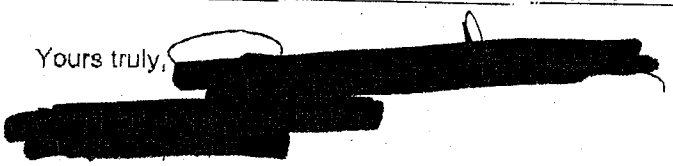
In Conclusion

There is no reason why this plant should could not be built to have no impact on the environment & surrounding neighbourhood and the people who live within that neighbourhood. We need to insist on 'Worlds best practice'.

Just because "gas" is considered a clean form of energy - the environmental controls on this facility should be built into the 'Approval' to protect the environment and the people of the region from the dirtier forms of operation, and ensure the plant always operates at the same clean/quiet levels!

All these issues need to be addressed as a matter of great & immediate concern!

Yours truly,



Submission No 5

Dept of Planning Copy

ATTENTION: Keiran Thomas
Major Development Assessment
Department of Planning
GPO Box 39
SYDNEY NSW 2001

MAJOR PROJECT PROPOSAL:
PROPOSED MUNMORAH GAS TURBINE FACILITY

Application Ref No:	(05_0195)
Location:	Part Lot 61 DP1065038 Doyalson Wyong NSW
Proponent:	Delta Electricity
Approval Authority:	Minister for Planning

Meeting with Department of Planning & Delta representatives.

In my past submissions I have raised several concerns over Noise levels, Heat transference, Air Pollution emissions, & Risk Management.

There was a report published last week that stated that "Peak Load Electricity" had hit an all time record price of $10,000 per Megawatt hour. Normal base load bulk prices are usually around $40 per MWh. Therefore, Delta can afford to install whatever safeguards are needed to minimise the impact of the plant on the surrounding residential area.

For a 600 MW plant 5 hours of operation would generate an income of $30 Million dollars. Five hundred hours of operation would produce an income potential of $3,000 Million

The DE submission relies on the fact that there is a low density of housing around the proposed facility. Government figures anticipate that by 2025 Wyong shire will have trebled in population & the density of housing will be approaching Metropolitan density. The majority of this increase will be located in the northern region of the Shire. Which means around this power plant.

The DE submission is asking for approval for up to 24 hr operation of the plant for up to 365 days of the year. Once this approval is granted, this level of operation will be permitted without any further approvals.

It will be cheaper for Delta to build the plant to Worlds Best Practice NOW, take whatever measures necessary to ensure that it is built with all

noise attenuation installed and all emission mitigation built-in than to try to fix the problem later.

We don't understand why short cuts are being taken in the environmental assessment process and in planning for mitigation measures.

The Dept of Planning EP & A Act states that it is permissible with Department of Planning consent

(d) To Provide that new industrial development and other development does not present unacceptable risks by limiting development which:

(i) exposes residences and the natural environment to unacceptable levels of pollution or hazard risk and does not incorporate adequate safeguards to mitigate *any* potential threats
(I have added the emphasis on any)

also,

(e) To promote environmentally sustainable development by limiting development that:

(i) contributes to the degradation of the Tuggerah Lakes or Lake Macquarie systems

Lake Munmorah has a much smaller volume than Lake Macquarie and little (often no) flushing effect. The effects of any additional heated effluent water entering the lake, superheated air in the environs and additional emissions of hazardous gases and particulate matter on both the lake ecosystem and surrounding residences is an issue which needs much more rigorous studies that the environmental assessment process conducted by DE in their submission.

If these shortcomings are obvious to one who has taken a reasonably thorough look at the submission without any qualifications in environmental engineering, I urge the Department of Planning to ensure that the appropriate people with the relevant qualifications are given the opportunity to conduct a detailed examination of the submission and are permitted to gain access to all of the relevant data (and require that further studies are undertaken where any data is not available).

<u>Selection of Suitable Sites.</u>

Under the selection criteria the distance to 'sensitive receptors' was the

apparently considered when deciding between Vales Point or Lake Munmorah Power Station Sites. The distance from Mannering Park is similar to the distance to Halekulani or Budgewoi. At Vales Point there is only one population area as compared to 4 surrounding Munmorah, however, they obviously thought that Halekulani /Budgewoi is somehow considered 'less sensitive' to noise for some reason.

We don't understand why other sites have not been considered to the south west of the ash dam would move the site many kms from any urban areas. What about the old mines rescue site?

Secondly, within Munmorah Power Station, in the selection process they seemed to gloss over this aspect of the criteria and decided that Halekulani/Budgewoi was also a less sensitive receptor. Site E is located approx 600 m from the edge of Halekulani /Budgewoi and approx 1.7 to the edges of Buff Pt & San Remo. Site A is located approx 1.4 kms from the edge of Halekulani /Budgewoi and approx 1km from the edge of San Remo.

Considering that this is a peak load plant, mostly operating under adverse weather conditions; where the prevailing winds will be either hot westerlies, or cold south or south westers; the areas to the east of the plant will always be the most adversely effected.

- How could the effects on their closest neighbour, Bevington Shores Manufactured Home Village with over 250 permanent residents not be analysed as part of their studies? We have an over 50's permanent population with a high proportion of special health issues that needed to be considered carefully.

By choosing the cheaper alternate site A Delta will reduce the effect on the urban areas and save money that can be used for additional sound mitigation and emission controls. This results in a WIN/WIN solution for everyone.

1. Noise

- "ambient" noise levels readings were taken when the existing plant was operating. The local population generally considered this to be objectionable and it only happened rarely.
- locate the plant away from urban areas in another Delta facility i.e. Mt Piper, or in another area of Deltas land at Munmorah/Mannering park.
- Use the cheaper site A alternative & move the plant away from

Halekulani /Budgewoi

- dig-in the plant and install sound absorbent screens around the plant
- install large noise barriers to provide additional screening effect such as that already provided by the existing plant
- installation of acoustic tiles on the plant
- planting of vegetation screens for longer term noise attenuation

2. Heat

- at the very least, a study to examine the effects on surrounding populated areas and local environment of the effects of the superheated air emissions. I have recalculated the volume of emissions through the 4 x 6m diameter stacks at 40 m/s to equal just over 4500 m^3/s.
- the DE submission seems to assume there will be no effect and have provided no modelling or data. How can this volume of super heated air have no effect on the surrounding areas? In discussions that I have had with experts in the field, they all concur that at the very least large quantities of hot air will shear off the plum of super heated air and be blow across surrounding neighbourhoods.
- can the air emissions be added to the taller existing stacks to reduce the velocity, temperature and noise of the vent stack emissions, as well as increasing the height of the emission source?
- DE needs to look at the 35m stack height & calculate the datum levels of the plant compared to the 22m level of Bevington Shores Village

3. Air Pollution

- some of the figures given by DE in their planning estimates show that emissions are expected to exceed guidelines in continuous operations. Why would a plant be approved which is planning to exceed guidelines?
- DE's own representative, Brett Cordoroy, advised me that start ups could take place on a daily basis over periods of peak loading and that 5 hours operation would be the maximum time of operation on natural gas before the plant would need to switch to distillate (another start up). The planned operation of the plant includes many start-ups, which emit much higher pollutant levels. The start up levels cannot be ignored as the start ups will be so frequent. There could conceivably be 50-100 start ups for the anticipated 500 hours of operation. Each start-up represents many times the increase of gas emission releases. eg CO emissions during normal operation under gas are 7920 grams per second for a 30 minute period. Gas

start-ups release 1,612,080 grams per second over a 30 minute period. (equivalent to 203.5 hours of normal CLEAN operation. Distillate start-up releases 3,079,980 grams per second over the same 30 minute period – which is equivalent to 388.9 hours or normal gas operation. How could this be allowed? How could the provisions of the Protection of the Environment Operations (Clean Air) Regulations of 2002 not apply to start-ups? The residents of the Central Coast demand that they do apply and that the plant is filtered or whatever is necessary to ensure that the normal operating levels using gas are NEVER exceeded. Otherwise it is a clean gas plant hiding a nasty dirty operation whenever DE feels like it.

- **The approval is for both "clean" gas fired operations and distillate operations, with no limitations on the hours of operation on distillate. In both cases many of the guideline emissions are expected to be exceeded!**
- **If this approval is granted, DE could potentially run this plant 24 hours a day for 365 days of the year on distillate! Where are the limitations?**

4. Vibration

- **this has not been addressed at all**

5. Risk Management

- **DE has addressed their own emergency response plan. However, they have not addressed how the local population may be effected. The SES and NSW Fire Brigade will be provided with information. Why not the people close enough to be most affected?**
- **In the event of a natural gas emergency vent procedure, how will this affect the local population? How will people be notified? Will they be notified? Bevington Shores has over 250 residents, many of them with breathing difficulties.**

The DE submission is a large document which contains many technical issues. As a person with my own full time business to run, I have spend as much time as I could going through the submission. I have found many, many issues which concern me. As the stakes are so high, I feel that the Department of Planning should require DE to provide a submission which proves that it will institute World's best practice design techniques and hazard mitigation measures from the outset. It will be too late and too difficult to require them to institute fixes later.

With only 3 weeks to analyse the data and no time to commission or prepare

our independent environmental studies we rely on the Dept of Planning to ensure that the public of NSW are protected & that any major development that approved in 2006 meets and exceeds all the expectations of pollution controls.

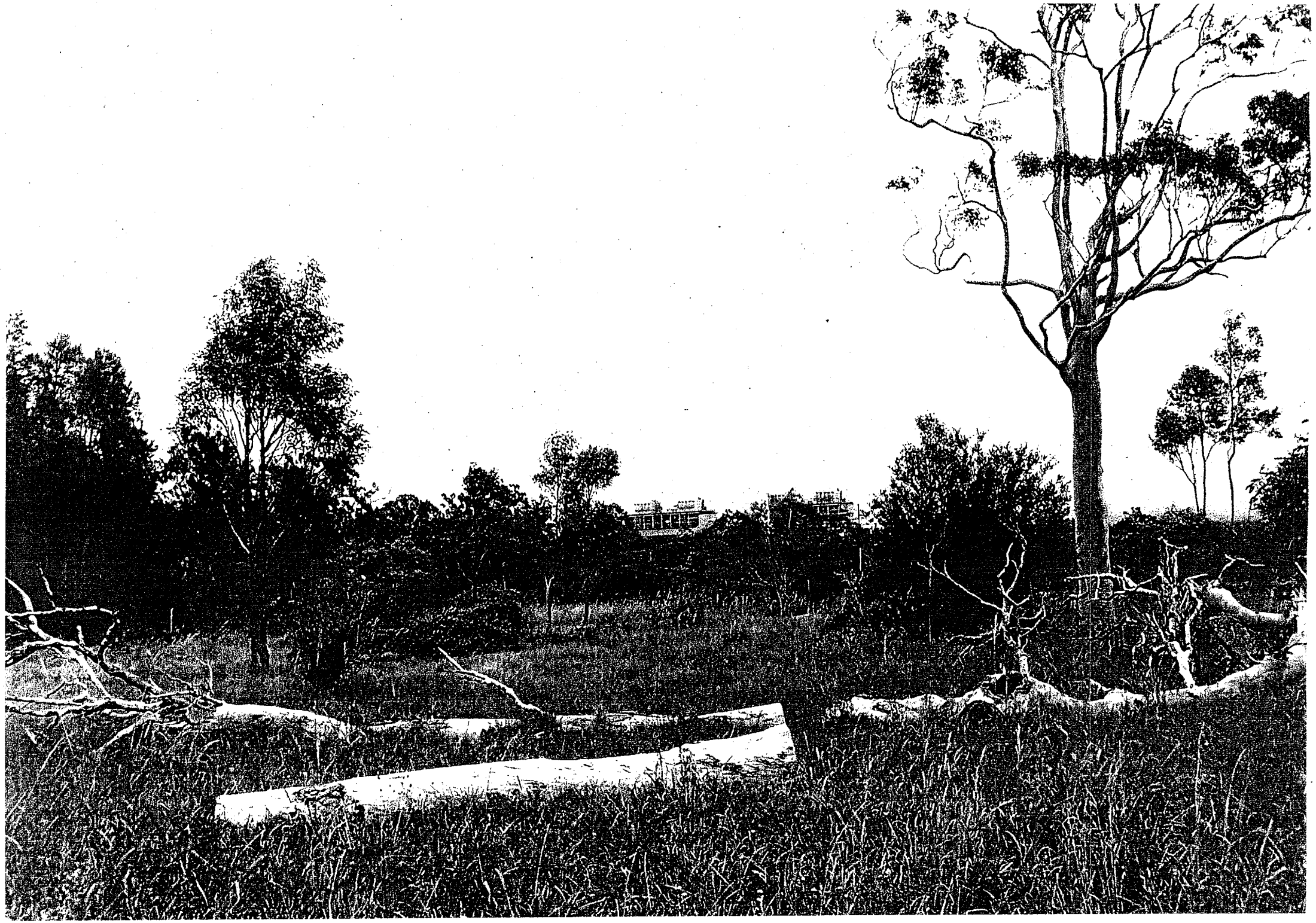
I realise that we have a crisis regarding peak power demand levels and whole heartedly agree that cleaner energy generation is the way to go. The proposed plant in this submission falls significantly short of the standards we should expect for something which will affect the environment and elderly residents for many years to come.

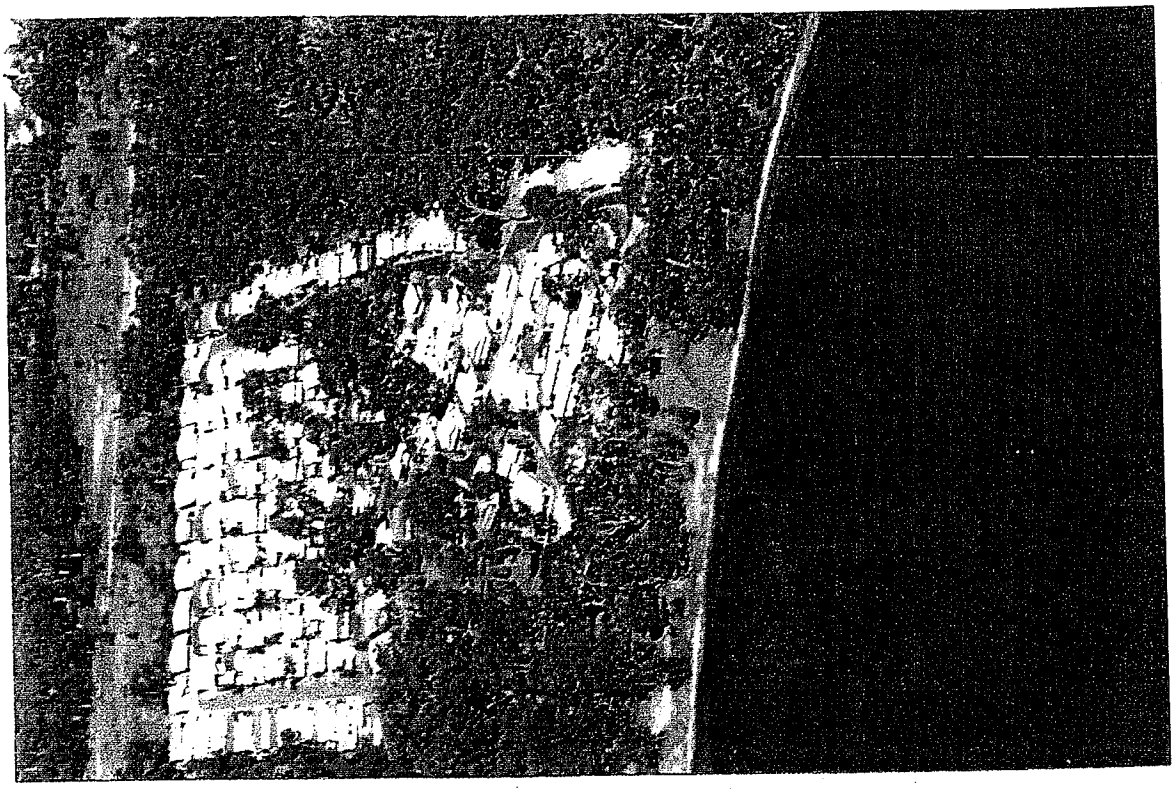
Yours truly,

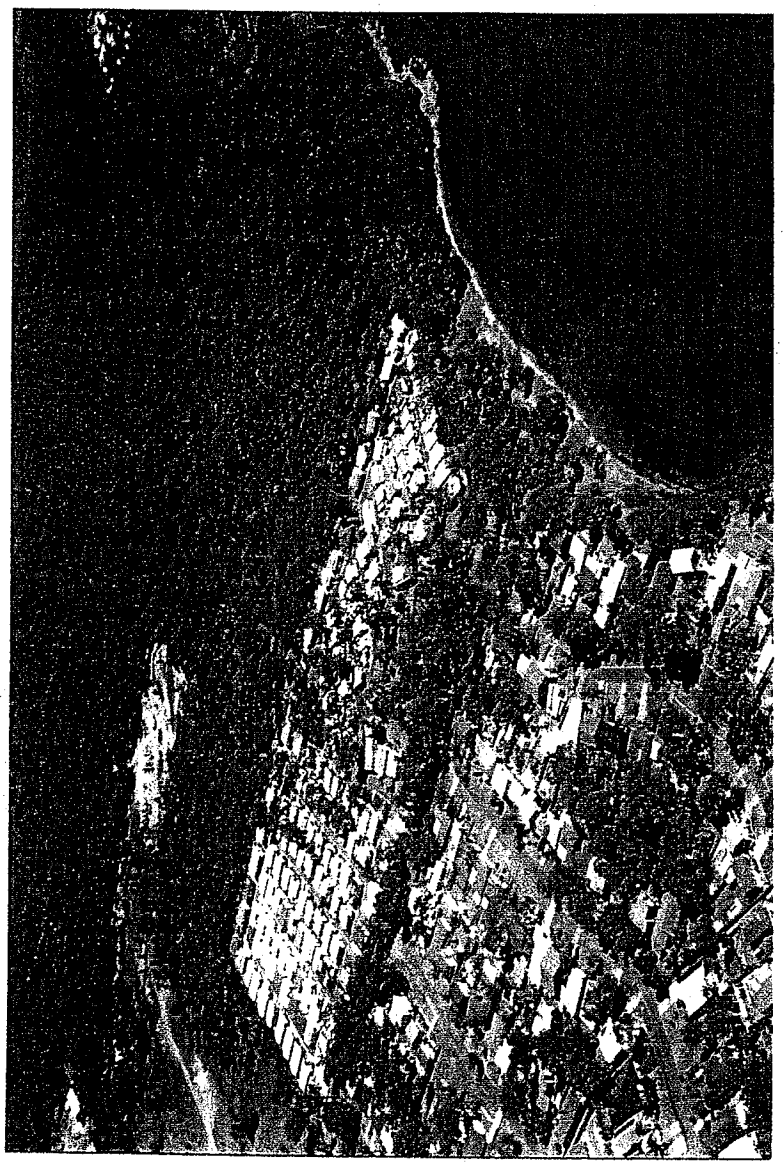
[redacted]

[redacted]


WARNING
EASTERN STAR
SECURITY
1300 55 1800







WSC

DARKINJUNG ABORIGINAL LAND COUNCIL
P.O. BOX 401 WYONG.

727733

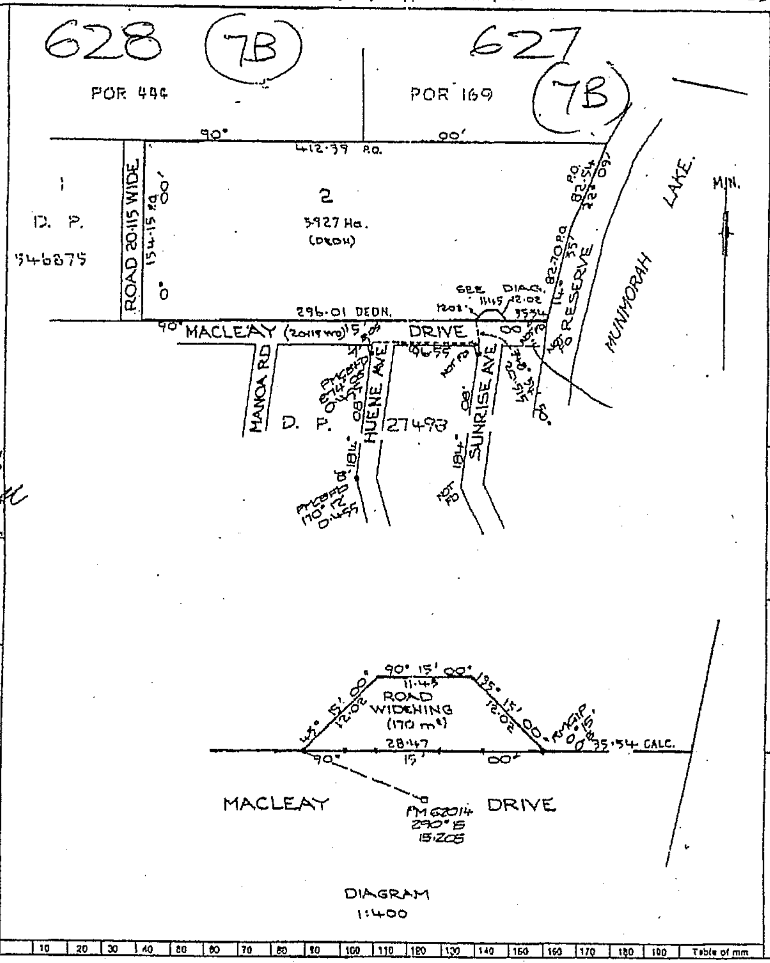
PLAN FORM 1

Plan Drawing only to appear in this space

*OFFICE USE ONLY

SIGNATURES, SEALS AND STATEMENTS of intention to dedicate public roads or to create public reserves, drainage reserves, easements, restrictions on the use of land or positive covenants.

IT IS INTENDED TO DEDICATE THE ROAD WIDENING TO THE PUBLIC AS PUBLIC ROAD.



Crown Lands Office Approval

PLAN APPROVED ....
Authorised Officer
Land District ....
Paper No. ....
Field Book .... pages

Council Clerk's Certificate

I hereby certify that
(a) the requirements of the Local Government Act, 1919 (other than the requirements for the registration of plans), and
~~(b) the requirements of section 34B of the Metropolitan Water, Sewerage and Drainage Act, 1924, as amended, Hunter District Water, Sewerage and Drainage Act, 1938, as amended~~
have been complied with by the applicant in relation to the proposed ROAD WIDENING
(Insert "new road", "subdivision" or "consolidated lot") set out herein
Subdivision No. 4602
Date 2 — 11 — 1988
(Signature) ....
Council Clerk
Council File No. ....

*The part of certificate to be deleted where the application is only for a consolidated lot or the opening of a new road or where the land to be subdivided is wholly outside the areas of operations of the Metropolitan Water Sewerage and Drainage Board and the Hunter District Water Board.
† Delete if inapplicable.

SURVEYOR'S REFERENCE: 10096.

WARNING: CREASING OR FOLDING WILL LEAD TO REJECTION

DP 785567

Registered: 17-2-1989
C.A. Nº 4602 OF 2-11-1988
Title System: TORRENS
Purpose: SUBDIVISION
Ref. Map: U4520-63
Last Plan D.P. 546875

PLAN OF ROAD WIDENING AFFECTING LOT 2 D.P. 546875 AND RESIDUE

Lengths are in metres   Reduction Ratio 1: 3000

Mun./Shire WYONG
Locality: BUDGEWOI
Parish: WALLARAH
County: NORTHUMBERLAND

Plans used in preparation of survey/compilation.
POR. 168
D. P. 546875
D. P. 27493

I, ROBERT JOHN RANSON
of 33 ALISON ROAD, WYONG
a surveyor registered under the Surveyors Act, 1929, as amended, hereby certify that the survey represented in this plan ~~is~~ ROAD WIDENING is accurate and has been made in accordance with the Survey Practice Regulations, 1933 and any special requirements of the Department of Lands, and was completed on
12. 5. 88
Signature ....
Surveyor registered under Surveyors Act, 1929, as amended.
Datum Line of Azimuth: "A"-"B"
Insert date of survey.
AMENDMENTS BY ME 9-1-1989

— RESERVE
CUSTOMER SERVICE
* 43505555

This negative is a photograph made as a permanent record of a document in the custody of the Registrar General this day. 17th February, 1989

Submission No 6

[redacted]

ATTENTION KEIRAN THOMAS
MAJOR DEVELOPMENT ASSESSMENT
DEPARTMENT OF PLANNING,
G.P.O. BOX 39,
SYDNEY
N.S.W. 2001.

7-2-06

Received
10 FEB 2006
Major Development Assessment
OSDAA

REF. MAJOR PROJECT PROPOSAL
PROPOSED MUNMORAH GAS TURBINE FACILITY

APPLICATION REFERENCE No. (05 0195)
LOCATION PART LOT 61 DP 1065038 DOYALSON WYONG NS
PROPONENT DELTA ELECTRICITY
APPROVAL AUTHORITY MINISTER FOR PLANNING

AS A RESIDENT OF THE [redacted] WHICH IS VERY ADJACENT TO THE PROPOSED SITE FOR THE MUNMORAH GAS TURBINE FACILITY I AM VERY CONCERNED ABOUT THE VARIOUS HIGH POLLUTION LEVELS TO WHICH THE HOMES IN THIS VILLAGE WILL BE SUBJECTED. FIRSTLY NOISE WHICH I UNDERSTAND CAN BE CONSIDERABLE; THEN HEAT WHICH I BELIEVE CAN BE GENERATED AT 500 DEG. CENTIGRADE CAUSING AN INCREASED RISK OF FIRE & EXPLOSION; AND ALSO AIR POLLUTION USING DISTILLATE FUEL ETC.. ALL THESE COULD AFFECT THE PROPERTY VALUES OF THE HOMES IN THE VILLAGE AND THE PLEASANT LIFE STYLE AT PRESENT ENJOYED BY THOSE WHO LIVE IN THEM.

I HAVE JUST BEEN SHOWN A MAP OF THE AREA SHOWING THE TWO PROPOSED SITES FOR THE TURBINES, EITHER SITE A OR SITE E AND IT SEEMS TO ME THAT IF THIS THING IS INEVITABLE, THAT PROPOSED SITE H, WHICH IS A BIT FURTHER AWAY AND IS ALSO SHIELDED TO SOME EXTENT BY HAVING THE POWER HOUSE IN BETWEEN THE TURBINES AND THE VILLAGE, COULD TO SOME EXTENT LESSEN THE POLLUTION. BUT I THINK THAT IN ANY CASE THERE SHOULD BE CONSIDERATION GIVEN TO COMPENSATION TO BE GIVEN TO THE PEOPLE LIVING IN THE VILLAGE.

YOURS FAITHFULLY

[redacted]

Keiran.P Thomas - Gas turbines at Munmorah Power Station

Submission No 7

From: [redacted]
To: <keiran.p.thomas@dipnr.nsw.gov.au>
Date: 9/02/2006 8:37 pm
Subject: Gas turbines at Munmorah Power Station

ATTENTION: Keiran Thomas
Department of Planning NSW Government
MAJOR PROJCT PROPOSAL - PROPOSED MUNMORAH GAS TURBINE FACILITY.
Application Ref No: (05_0195)
Location: Part Lot 61 DP1065038 Doyalson Wyong NSW
Proponent: Delta Electricity
Approval Authority: Minister for Planning

We object to the Development Proposal made by Delta Electricity to erect a 4 Gas Turbine Facility at Lake Munmorah Power Station on the following grounds:

1. The noise level is of greatest concern. Sharing the same boundary as the Power Station we will be adversly ffected. Looking at the Plant Location map sent to us by the Senior Project Officer for Delta Electricity, Brett Corderoy, the noise is to be funnelled into the centre of the plant. Looking at the map, anyone can see that sound will fan out to Halekulani, right to our back door.

2. It is also hard to accept that heat generation will be dispersed without detriment to the residents of Halekulani and Budgewoi, and with it air pollution.

3. The volatility of gas will always be a major concern.

4. And last but by no means least, the adverse effects on our property values.
Please reject this proposal put forward by Delta Electricity.

[redacted]
Thursday 9th February, 2006.

Submission No 8

6 February 2006

[redacted]

Mr Keiran Thomas
Major Development Assessment
Department of Planning
GPO Box 39
SYDNEY NSW 2001

Dear Mr Thomas

Re: Major Project Proposal – Munmorah Gas Turbine Facility
Application Ref. No. 05_0195

As a nearby resident of the proposed Munmorah gas turbine facility, I wish to state my objection to the proposal in the strongest terms for the following reasons:

1. The increased noise levels which will adversely effect my ability to sleep. My property backs on to the site of the proposed facility and as I am a shift worker, the increased noise will make it harder to sleep through the day which is already difficult at times.

2. I am particularly concerned about the adverse impact that the increased noise and pollution from the facility will have on bird and wildlife in the area. The neighbourhood has many kookaburras, parrots and rosellas, and the impact of a larger, noisier facility can only be detrimental to the surrounding environment.

3. I am also concerned about loss of vegetation that will occur to build the facility. There are a lot of mature Angophora trees as well as other native vegetation which are home to birds and native animals. This vegetation has served as a buffer between my property and the existing power station and I am concerned that much will be lost to build the new facility.

As you can appreciate, increased noise and heat generation, as well as a negative impact on the peace and quiet of my neighbourhood are major concerns and I hope that you will consider these points before you make a decision.

[redacted]

Submission No 9
9 - FEB 2006
Major Development Assessment
OSDAA

[redacted]

[redacted]

3rd February, 2006

The Manager
Department of Planning
Application Ref No: (05_ 0195)
Location: Part Lot 61 DP 1065038 Doyalson Wyong NSW
Proponent: Delta Electricity
Approval Authority: Minister for Planning

Dear Sir/Madam,

<u>Major Project Proposal</u>
<u>Proposed Munmorah Gas Turbine Facility</u>

We refer to the above application and have major concerns to the proposed modification to the Power Station and specifically object about the noise and heat pollution that will be emitted from the proposed four turbine power plant.

In addition we have concerns relating to Air Pollution from the new Power Plant.

We are the owners of [redacted]hich is a 150 site Residential, and Permanent Holiday Site Park, which is, located approximately 900 metres from the corner of Preferred Site E in the above Development Proposal.

[redacted] currently has 50 Permanent Residential Sites with approximately 100 Permanent Residents, the majority of whom are retired, many of whom are frail and have moved to our Park for the peace and tranquillity which the location offers.

In addition we have a large number of Permanent Holiday Sites who are used for Sydney – sider's for weekends and annual holidays. Any increase in noise or pollution levels will have a disastrous impact on their enjoyment and our Business and Livelihood.

Noise pollution

Section 10 in the Environmental Assessment paper in our opinion contains missing data, ambiguity and results which in our opinion are based on flimsy 'assumptions' of anticipated noise levels & collection data to come up with an average noise level which is much higher than the true level.

The study 'indicates exceediences of up to 4dBA are possible at a number of residential areas, located to the east and south east of the proposed gas turbine facility'.

This doesn't sound like much until you realise that this is twice the noise level (greater than 3dBA) higher than the non-existent average sound level of the area.

These predictions are also made for areas they did not in fact bother to collect any ambient data, as neither collections sites B or C are the closest suburban points to the facility, which will no doubt be the most adversely effected. Our park, which is approximately 900 metres from the preferred site, was not assessed where as other locations further away were referred too. In addition only preferred site E was referred to in the development report and no comparisons were given on other possible sites, A to D.

At no point can we find any details of the PITCH of the proposed noise emissions. There are some noises (like massive, high speed turbines, that are much more annoying, and indeed unbearable to the human ear, especially when running 24 hours a day 7 days a week), other noises are less offensive and easier to live with.

The underlying presumption of this whole proposal is based on the false premise of short-term operation (500 hours), with an approval for 24/365 operation.

Their answer to any breach is summed up by Paragraph 10.4.2

"Although the concurrence of night time operation and adverse weather is likely to be rare, historical meteorological data was used to assess the proportion of time the criteria may be exceeded. When allowing for only occasional use of the facility, the exceeded levels would occur less than two percent of the time. On the basis, negligible impacts would be expected". **NB**. Page 5 of the Summary, (at the beginning of their proposal), has the same paragraph but quotes "5 per cent of the time". WHO KNOWS WHAT THE TRUE ESTIMATE IS?

We request that our site be assessed for the likely impact of Site E. In addition we request that Site A be correctly assessed as we believe that this will have less impact not only for our residents but for substantial additional residents in Bevington Shores Manufactured Home Park and surrounding streets of Halekulani.

We advise that we intend to commission an independent consultants report which we request be treated as part of this submission to assess the noise and potential pollution impact that the development proposal will have on our residential park.

Vibrations

At no point in the discussions on noise emissions has the likelihood of vibrations been discussed. What efforts will be made to ensure that this is not an added impact of the new plant?

Heat Emissions

The report reads; "the hot exhaust gases generated via the combustion process are used to drive an electric generated to produce electricity. The hot exhaust gases are vented to the atmosphere at high villosity and temperature (about 40 metres per second and 500 degrees Celsius respectively) via a 6 metre diameter 35 metre exhaust stack fitted at the end of each gas turbine unit.

Questions which we request answers to, be as follows: -

What effect will this heat omission have on the air temperature of our residential village when the hot westerly winds will blow the heat omitted to us within 1 to 2 minutes of discharging?

Has a Bush Fire assessment been done as to whether the proposal will increase the likelihood of the close surrounding bush being impacted by the development proposal and a comparison of the impact of different sites A to E?

It would appear to us that Site E would be of the highest risk in terms of potential danger to surrounding bush as compared to other alternate sites.

Wetlands

Significant Wetland areas surround the current power station which have a fragile environmental status. Of the identified sites Site E has the highest potential to compromise this protected area. Has a full environmental impact been undertaken of the possible negative consequences of the proposed development and a comparison between all of the identified potential sites, A to E?

Air Pollution

While we concede that potentially gas fired power plant releases less pollutants than the conventional coal fired facility, we have concerns about emissions produced from the use of the alternate distillate fuel, should the plant be required to operate beyond the 5 hours per day maximum running time under gas.

DE s proposal actually states that it is expected that they will use distillate for 75 hours out the 500 hours of proposed operation. This equates to around 15% of the operating time. What limits will be imposed on the use of distillate?

Start-up Emissions

The proposal provides information on the stack pollution considerations that have been estimated for the proposed gas turbine under normal operating conditions. The emissions reported during the start up time are in the terms of natural gas start up significantly higher, for example CO emissions grams per second for normal operation are 4.4 where as under start up are 895.6. This disparity is even worse in terms of a distillate start up where normal operations are 35.6 grams per second and 1711.1 grams per second under start up conditions.

Distillate has a much higher emission than natural gas over the same start up in distillate has a rate of 1711.1 grams per second would release 3079980 grams during start up compared the normal gas fired operation which would take 388.9 hours operation to release the same level of pollution. We could go through other emission levels but we are sure the point has been made.

Questions, to which we request answers to, are as follows: -

Why do normal clean air controls not apply to start up when a distillate start up would omit the same levels of pollution as 388.9 hours of normal operation? Remember the proposal is for only 500 hours per year, total operation.

How many start up will there be every year?

What guarantees are there that distillate will only be used on very rare occasions when there is an interruption to the distribution of natural gas supply?

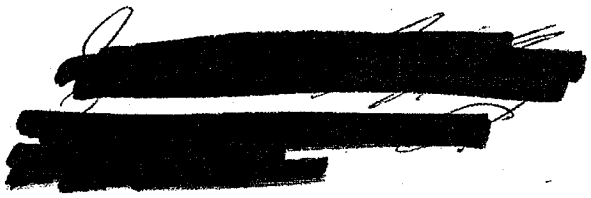
If the natural gas supply could not be resumed within a certain period of time would the use of distillate cease and the plant be closed?

Based on the preferred site [redacted] directly in the path of the warm westerly and North Westerly winds on hot summer days, which are likely to be the times when the plant is to operate. The only way to minimise this negative impact is to consider and adopt the other potential sites highlighted but not investigated in the development report.

In conclusion

We believe that we are either the closest or one of the closest local residence who will be impacted by this proposal and consider that the preferred site as per the development report will produce a negative impact on the well being of our residents, park customers and our business. We contend that alternate sites identified in the report but not investigated should be re assessed, as they are not only preferable to us but also a significant number of other residents in the surrounding area.

Yours faithfully



Submission No 10

RESPONSE TO DELTA ELECTRICITY PROPOSAL FOR MUNMORAH GAS TURBINE FACILITY - (REFERENCE 05-0195)

The following objections are made to Delta Electricity's proposal to install a 600MW Gas Turbine Facility at the Munmorah Power Station Site.

Delta Electricty has shown disregard for community health in the Munmorah area with its continued operation of Vales Point Power Station with unsatisfactory precipitators, long after they were due for replacement. Delta Electricity's operation of Vales flue gas cleaning system has contravened the requirements of DEC Environment Protection Licence (operate in a proper and efficient manner) and has resulted in visible dust deposition in surrounding areas. In addition Delta has a range of redundant plant that should be dismantled and removed. These aspects have occurred despite Delta Electricity having better financial performance than the other NSW State Owned Generation Companies and the capacity to make improvements. While fabric filters are now planned for Vales Point, they come too late.

The Gas Turbine proposal occurs in a context where Delta Electricity is considering upgrading its coal fired plant at Vales Point and Munmorah to burn even more coal and consequently increase emissions further. The Gas Turbine emissions will be in addition to the two coal plants, all sources are in close proximity to each other and to residential areas.

The Air quality assessment seems to model gas turbine emissions but does not simulate coal fired power stations at the same time. The modeling needs to be re-run with multiple sources under maximum emissions for each source and under various wind directions to fully assess the worst case impacts on surrounding residential areas.

Delta Electricity must clearly articulate the impact of all these developments, select which ones are most important to it and declare that it will not proceed with all of the options and will cap the generation and associated impacts at the locality.

Specific reasons for objecting to the proposal are:

- The proposed site is unsuitable due to the considerable growth in residential properties in the areas surrounding the Munmorah Power Station. New developments are occurring now that will have clear views of the development and potentially be impacted by noise and air quality.
- An alternative gas turbine site exists at Eraring and has a site bench, adjacent Fuel Tanks and a rail delivery facility for diesel fuel (100MW of Gas Turbines were previously installed and operating at that site). It should be used in place of Munmorah as it has a greater buffer zone and better ancillary facilities
- The air quality assessment needs to address cumulative impacts of gas turbines operating at the same time as the coal fired power station
- Ambient air quality data was inadequate for the assessment with only the two sites, Wyee and Munmorah around the station. Additional stations closer to the station should have been available. In their absence detailed modeling of all power station sources should have been used with analysis of interaction of the plumes.

[redacted]

[redacted]

- Similarly the Noise Assessment should consider all plant operating at worst case situation at the same time
- Use of Open Cycle Gas turbines is a poor use of a high grade fuel that will have greater community value (particularly for transport) in years to come due to Australia's and the World's declining oil stocks.
- Any move toward Combined Cycle operation for these units is of serious concern due to the extended operation, increased impacts and high fuel consumption. Although a more efficient use of fuel Delta must declare that this is not proposed at this location now or in the future. The thermal impact of additional cooling waters on Lake Munmorah would be unsustainable.
- The plant is TOO BIG. While some peaking plant may be necessary for NSW, the site should be limited to 300 MW of Gas turbines at MOST. It is possible to distribute gas turbine plant and there are network benefits in doing that.
- The large number of starts (166 per turbine per year is of concern) (664 starts)
- 75 hours firing on diesel is also of concern at this location in respect of emissions and also in terms of fuel delivery and storage.

Despite the unacceptable nature of the proposal, if the Munmorah Gas Turbine facility proposal were to proceed, then as a minimum, conditions must be applied to reduce impacts and apply community safeguards:

- Maximum generation capacity at this site (coal and gas) must be capped at no more than the 50% increase over the capacity of the current two unit Munmorah Power Station (650MW), up to about 1000 MW. (Note that 1320 MW at Vales is likely to become 1500MW in the future)
- This cap could involve 300MW of Gas Turbines and two coal units (up to 700MW) at Munmorah. Vales and Munmorah could then represent about 2,500 MW, the equivalent of an Eraring Power Station yet much closer to residences.
- The 2 redundant coal fired units at Munmorah should be dismantled and removed from the site together with the unused chimney stack. This site improvement would offset the additional visual impact of the Gas Turbine Power Station and gives confidence to neighbours that impacts will not progressively creep up.
- Additionally Delta Electricity should complete the removal of redundant plant at its Vales Point Power Station instead of leaving it as a rusty eye-sore.
- Coal handling areas at the coal fired power stations should be down-sized and the unused sections rehabilitated
- The Environment Protection Licence must ensure strict limits on noise and air quality consistent with the Parsons Brinckerhoff Environmental Assessment and require operations to be curtailed where the limits can not be met.

Submission No 11

#13

Attention: Keiran Thomas
Major Development Assessment
Department of Planning
GPO Box 39
Sydney NSW 2001

MAJOR PROJECT PROPOSAL:
PROPOSED MUNMORAH GAS TURBINE FACILITY

Application Ref No:	(05_0195)
Location:	Part Lot 61 DP1065038 Doyalson Wyong NSW
Proponent:	Delta Electricity
Approval Authority:	Minister for Planning

Dear Sir

In relation to the proposed development by Delta Electricity I wish to lodge an objection to the development proposal.

My general concerns are:

1. The air emissions at start up are extremely high and as this is peaking plant, two start-up per day would be quite likely thus affecting the air quality. This will cause unacceptable levels of air pollution on the adjacent residential areas.

2. The constant high noise levels will impact highly on the residents to the east. This will cause unacceptable levels of noise pollution of the adjacent residential areas.

The proposal need to eliminate all the adverse effects indicated above as these will impact on the areas tranquillity, health of residents and reduce property values.
I feel that the current proposal does not address these issues fully and that the development proposal needs to re-evaluate how it will address these problems fully.

Yours truly,

[redacted]

6th February 2006

Received
8 - FEB 2006
Major Development Assessment
OSDAA

#1 89

Submission No 12

Attention Keiran Thomas!
Major Development Assessment
Department of Planning
G.P.O. Box. 39
SYDNEY. N.S.W. 2001

MAJOR PROJECT PROPOSAL
PROPOSED MUNMORAH GAS TURBINE FACILILITY

I would like to draw your attention to the fact I am already subjected to noise from the existing power station;
Air polution - i.e. chemical smells;
Air polution – black sooty dust and film that lodges on my furniture floors and windows gutters buildings and cars.

If another power station was built in the same vicinity the quality of life at Budgewoi would be Further reduced. Already there is a very high incidence of cancer in the immediate surrounding area of the power station.

Risks of plant sabotage which will no doubt increase with another facility…the existing area is not properly patrolled and surely open to sabotage.

Increased risk of fire and explosion – the area surrounding the present power station is not in my mind sufficiently kept clear between the power station and adjoining properties. In the event of strong northerly/northeasterly or northwesterly winds, houses would most certainly be razed if a fire happened on the Munmorah property as there are very high gum trees running parallel to Woollana Avenue and Ulana Avenue Budgewoi. This also has thick undergrowth.

There will be **more** adverse effects on my property values with addition of another power station.

It would surely affect bird and native animal life in the high gums thus reducing the peace and enjoyment of life in this area.

Signed .....

Signed .....

Date .....

Submission No 13

Major Development Assessment
Department of Planning
GPO Box 39
Sydney 2001

[redacted]

Attention : Mr Keiran Thomas. Application Reference 05-0195

Dear Sir,

I am concerned over the plan to install Gas Fired Turbines to generate power at the Munmorah Power Station . Delta Electricity provided the following information when I telephoned them on Wednesday, 1st February, 2006.

1) Noise Levels in our area, Halekulani, would be up by 25db on a night ambient exceeding the E.P.A. Standard of 5db, an increase in power level of 100 times.

2) The initial use will be restricted to 500 hours/year, but then will operate at 24 hours/day for a cycle.

3) A reserve of Diesel fuel will be held at the Station which, should the Natural Gas supply fail, can be used with water injection with the fuel to "decrease" odour/polution.

Up to date the local Press coverage has dealt with cleaner air and jobs promotion as principle aspects of the project. Little, if anything has been published in the Media concerning noise levels.

The reference to db levels, Section 10 Page 11, in literature on display at the Council chambers would mean little to the general public.

An expression of any increases as a linear ratio may mean more to the general public.

This brings up the point; what recourse is there should the estimated noise levels are found to be too high ?

In summary, the predominant concern is noise levels and their effect on our quality of life and property valuations in our Area.

I await your urgent reply to these specific concerns.

Yours sincerely,

[redacted]

cc The General Manager, Wyong Shire Council
Mr Paul Crittendon MP
Mr Milton Orkopoulos MP

#3

Submission No 14

[redacted]

Tuesday, January 31, 2006

Keiran Thomas
Major Development Assessment
Department of Planning
GPO Box 39
Sydney NSW 2001

Re: Major Project Proposal Proposed Munmorah Gas Turbine Facility

Application Ref No	(05_0195)
Location	Part lot 61 DP1065038 Doyalson Wyong NSW
Proponent	Delta Electricity
Approval Authority	Minister for Planning

Dear Mr. Thomas,

I have severe reservations about the proposal to erect a gas turbine facility in the Lake Munmorah power station grounds. My concerns relate to the close proximity to residential property. The noise and heat generated from these turbines running for long periods of time in peak load times will have an adverse effect on resident's ability to enjoy outdoor activities and have a detrimental effect to property values in the Budgewoi area.

While I understand that there is a greater need for power generation as the population grows. I feel a more suitable site could be found that is further removed from residential areas.

Yours truly,

[redacted]

Regarding Deadlock Community on:-

#34

Submission No 15

E.A-.DELTA GAS TURBINE FACILITY.

Delta lists in the Central Coast Express Advocate eight factors in the Enviromental Asessment of the proposal but does make any comment on the one factor that has been before Council and rate-payers for many years. This is simply- what will be the effect on the Lakes. Consideration of this easily outweighs any other environmental considerations.

The present re-cycling of cooling water through the power station is detrimental to the lakes as there is minimal fresh water at that 'cul- de-sac' end of the lakes. Council and the State government have spent millions on endeavouring to improve the Lakes but the sea grass and (in season) the stink continues. Before the Power Station and its re-cycled water the Lakes were noted for its sandy bottom and pristine conditions.

Yet here we appear to have a situation where a private company – driven understandably by the 'bottom line'- will presumably be permitted to cause further degeneration due to increased hot water flow.

To provide fresh water in the upper Lakes a condition of any approval should be that cooling water be taken from the ocean and then passed on to the Lakes. If Council does not have the authority to arrange this then appropriate strong representations should be made to the approving authorities.

One could imagine this matter going before the 'Land and Environment Court'. If there is chance of a result favouring Delta I think that if Council were to mobilise residents who would feel very strongly against the proposal in its present form, then the response could be very enlightening to the State government and its representative.

An alternative is the much larger Lake Macquarie which does not to have the problems of our Lake system.

[redacted]

3/1/06

Submission No 16

[redacted]

Our Ref: CJR/93142/070206ltr

Received
10 FEB 2006
Major Development Assessment
OSDAA

9 February 2006

Major Development Assessment
GPO Box 39
SYDNEY NSW 2001

Attention: Keiran Thomas

Dear Keiran,

RE: SUBMISSION ON BEHALF OF [redacted]
MUNMORAH GAS TURBINE FACILITY
ENVIRONMENTAL IMPACT STATEMENT

[redacted], owns land significantly affected by the proposed pipeline route associated with the Munmorah Gas Turbine facility. [redacted] has undertaken development work on the Central Coast since 1993, in association with its parent company, [redacted]

Since 1993 [redacted] has been engaged by [redacted] to identify development options for land owned by [redacted] on the Central Coast, including development of the land in Precinct 4 of Wyong Shire Council where it is proposed the pipeline route for the gas turbines will be located.

The following comments are made in relation to statements made in the Environmental Impact Statement (EIS), December 2005, prepared on behalf of Delta Electricity by Parsons Brinckerhoff.

1. Route option assessment

The selection criteria used in the identification of the preferred pipeline route are listed in section 3.3.1 of the EIS. While the key factors considered in the route selection process (3.3) include reference to maximizing the distance between the pipeline and residential receptors, the criteria in 3.3.1 appear to be focused on the impact of the proposal on the Delta Electricity easement and maximizing the use of Delta Electricity land, and do not include any assessment of the impact of the pipeline location on adjoining landowners.

[redacted] has been working since 1993 on a mixed development concept for Spring Creek, located in Precinct 4. Spring Creek has a total site area of 423 hectares, with the potential for approximately 80 hectares of residential land within the mixed development. [redacted] is the major owner of the land adjoining the existing easement, with two lots totaling 91 hectares to the north of the easement and one lot of 35 hectares to the south. (Attachment 1)

[redacted] has already had discussion with TransGrid and obtained preliminary costs to relocate the power lines to facilitate urban development of Spring Creek. (Attachment 2) Consideration of the impact of the proposed route on owners of adjoining land should have been included in the route assessment criteria.

2. Selected option

The preferred pipeline route, Option A, was chosen *'as it would not cause the severance or sterilization of the subject land...'* This is not correct and must be a reference to Delta Electricity land. The [redacted] and bordering the existing electricity easement is significantly affected and severed by the addition of the pipeline to that easement. Development options are reduced by the additional constraints imposed by the pipeline's presence, and its possible buffer.

Future land uses (road widening activities) have been acknowledged as a reason why Option B is not preferred. In relation to Option A, the EIS states (section 3.3.2) that the consultation phase of the EIS identified the future adjoining land uses as industrial/commercial. This is at odds with Chapter 18 of the EIS (section 18.2) where it is acknowledged that land adjoining the northern side of the proposed pipeline route has potential development including *'urban redevelopment comprising industrial, commercial, retail and residential* development'.

The EIS states that *'Option A was also considered an acceptable adjoining land use and would not prevent the development of these lands for such a purpose.'* While the urban development intentions of [redacted] to include residential and mixed use development were sent to Parsons Brinckerhoff, the EIS does not acknowledge or consider the potential for land at Spring Creek to be used for residential, educational or mix use purposes.

The Spring Creek site is identified in local and regional planning documents as future residential land. In *Shaping the Central Coast* (Department of Urban Affairs and Planning, 2000) Spring Creek is shown as existing residential land (Figure 6 Shaping the Central Coast). The proposed development of Spring Creek is consistent with the vision established by *Shaping the Central Coast* and will contribute positively to a number of the strategies of this regional plan.

Spring Creek will also assist Wyong Shire Council in meeting its requirements under its residential development strategy (Wyong Shire Council, 2002) as the development incorporates sustainable outcomes with the conservation of the environmental zones and the integration of employment and residential lands.

[redacted] in conjunction with the NSW Premier's Department, is currently preparing an application to have the Spring Creek site rezoned industrial, commercial, educational and residential purposes. Consultation with adjoining landowners during the preparation of the EIS would have identified residential development as a future land use in the vicinity of the Option A pipeline route.

3. Electricity transmission easement

The EIS states (section 4.3.3) that the electricity easement under the control of TransGrid is 60 metres wide and centred on the centre phase conductor of the transmission line.

However, the correspondence from TransGrid included in Appendix C of the EIS indicates that the TransGrid easement is 45 metres wide, centred on the centre phase conductor of the transmission line.
TransGrid also comment that the pipeline is to be installed at the edge of the easement and that no excavation works are to take place within 15 metres of any TransGrid structure. Assuming the easement is 60m in width, a pylon base of 8 metres and a pipeline of 1 metre, the pipeline will be located 20 metres from the centre of the easement and only 10 metres from the southern edge of the easement.

These factors have an impact on the future development on [redacted] and in relation to buffer distances to residential and other development.

4. Consultation

As the major owner of land adjacent to the pipeline proposed in Option A, consultation during preparation of the EIS should have included extensive consultation with [redacted]. [redacted] received a letter requesting access for the initial field survey and arrangements were made to facilitate access to [redacted] land for that purpose. Parsons Brinckerhoff were then provided with a copy of the concept master plan for the Spring Creek development clearly identifying the intention for residential development in proximity to the Option A route. Carlos Olles, Parsons Brinckerhoff, confirmed (pers. comm.. 31 January 2006) that a copy of the concept master plan was received.

[redacted] staff recall a field visit being made in relation to Aboriginal Heritage assessment of the easement, but no discussion was held in relation to the impact of the pipeline on [redacted] land or future land uses. Newsletter 1 contained no information to alert owners of land in proximity to the proposed gas pipeline of the ramifications of the pipeline presence.

[redacted] refutes the statement in the EIS that *'discussions with affected land owners also sought to identify future proposed land use plans, to ascertain any possible future land use conflicts'*. No such discussions were held with [redacted].

It is considered that the level of community consultation undertaken during the preparation of the EIS was inadequate.

5. Landowner issues

It is assumed that the landowner referred to in paragraph one of section 15.1.4 is [redacted]. If so, the following comments are made:

- It is implied that the land to the north of the proposed pipeline route is currently owned by others. [redacted] is the major land owner of land to both the north and south of the pipeline. (Attachment 1)
- State government departments are keen to implement the proposed development of Spring Creek due to the identification of the development as a substantial generator of local employment. (Attachment 3)
- A rezoning application is currently being prepared in relation to the land in Precinct 4. Projects of this size have a lead in time of approximately two decades.
- Preliminary discussions with TransGrid regarding the relocation of the electricity easement were held and will be continued as the development concept is finalized. Given that the EIS makes it clear that the relocation of the electricity easement has been raised previously, the existing easement should not be relied upon to provide a path for the pipeline. Relocation of the easement remains an integral part of the land owners' future development plans.
- Until the land is rezoned, no development application can be lodged.
- Wyong Shire Council is aware of [redacted]s intentions for the Spring Creek development.

6. Buffer restrictions

Risk assessment carried out as part of the EIS indicated that a 30 metre buffer zone from the pipeline centre may be required to restrict future sensitive land use (residential) developments along the proposed pipeline route. It is stated in the EIS (section 15.1.4) that this buffer zone would *'be contained within the area covered by the existing electricity easement to the north and along public road reserves to the south for most of its length'.*

For most of its length in Precinct 4, the southern buffer zone will be located on privately owned land, mainly that of [redacted]. As detailed in item 3 above, the requirements of TransGrid result in the pipeline being located only 10 metres from the southern side of the easement. This results in 20 metres of the pipeline buffer being located on land not under the ownership or control of Delta Electricity or TransGrid.

The presence of this buffer on [redacted]nd will have a significant negative impact on the future development options for landowners to the south of the electricity easement. Suggestions of the establishment of a pipeline easement with associated compensation for affected landowners is not considered to have the potential to compensate [redacted] for the loss of residential development potential due to the pipeline presence.

7. Conclusion

The preferred pipeline location (Option A) has a negative impact on adjoining landowners and places significant restrictions on the future development o[redacted]and.

The criteria used in the assessment of pipeline locations were flawed in that they did not include an assessment of the impact on adjoining land owners.

Insufficient pipeline route options were considered to be able to conclude that Option A is the best option.

The buffer zone recommended for the pipeline cannot be accommodated within the existing electricity easement.

8. Next Step

To facilitate a solution for the pipeline route, it is proposed that a meeting be arranged, perhaps through NSW Premier's Department.

If you have any queries in relation to this, please do not hesitate to contact me.

Yours faithfully

Encl. Attachment 1 Land tenure at Spring Creek
Attachment 2 TransGrid feasibility report (hard copy via post)
Attachment 3 Spring Creek Masterplan

Attachment 2.

FEASIBILITY STUDY

Proposed Deviation of a Section
Munmorah to Sydney North – Tee Tuggerah
330 kV Transmission Line

Bushells Ridge Residential Area

WOODBURY PARK ESTATES PTY. LTD.

TransGrid

(i) EXECUTIVE SUMMARY

On 9th November, 1998, TransGrid was engaged by Woodbury Park Estates Pty. Ltd. to examine the feasibility of deviating the existing Munmorah to Sydney North – tee Tuggerah 330 kV steel tower single circuit Transmission Line as it crosses the Bushells Ridge Residential Area 2 km west of Munmorah Power Station. The aim was to develop an alignment for the transmission line on the site , which would be more compatible with the proposed future use of the site.

The Munmorah to Sydney North – tee Tuggerah 330 kV transmission line was constructed in the early 1960's and is a critical element in the electricity supply system to the Sydney metropolitan area and NSW Central Coast. It transmits a major part of electricity generated at Munmorah and Vales Point Power Stations to the Sydney and Central Coast load areas.

TransGrid considers the deviation of the transmission line is technically feasible, although significant system operation constraints will need to be considered and incorporated into the design and construction work. These constraints add to the overall cost of the work.

The feasibility study is based on a new alignment of the transmission line essentially along the Motorway corridor (southern boundary of Bushells Ridge residential area).

Construction using conventional steel tower (similar to those of the existing line) is estimated to cost approximately $1.320 million ($1998). Construction using steel pole structures would have a higher estimated cost of $1.547 million, but may be more visually acceptable than steel towers near the proposed residential development.

These costs do not include any allowance for detailed environmental impact assessment in accordance with the requirements of Part 5 of the NSW Environmental Planning and Assessment Act.

All the requested alignment is located on the Woodbury Park Estates' land, except the western part, which the ownership is not clear.

It is estimated that the project would take approximately 2 years overall to complete. Environmental Impact assessment and approval is estimated to take approximately 12 months, with the final design and construction taking a further 12 months. Some limited opportunities to reduce overall time exist but have some increased risks and costs if implemented.

2. OPTIONS CONSIDERED

2.1 Route Options

Following receipt of the client's request for this feasibility study, it was agreed that deviation of the transmission line to southern boundary of his development area was to be considered.

Examination of the aerial photographic information provided by MM Consultants was carried out. No detailed investigations of environmental constraints or sub-surface conditions were conducted.

TransGrid has identified three possible conceptual alignments and these are shown on Figure 1.

The options are all similar in that they deviate southwards from the existing alignment next to RTA boundary, continue essentially parallel to the Doyalson Link Road, following the southern boundary of Woodbury Park Estates property before rejoining the existing transmission line alignment east of Main Northern Railway.

The three possible alignments are shown on figure 1 and are described below:

Option 1: deviates at a new angle tower just next to RTA boundary, continues essentially parallel to the Link Road to the extension of Roper Road, then angles west to the south- west boundary before angling again to rejoin the existing transmission line at a new angle tower.

Option 2: deviates at a new angle tower just next to RTA boundary, continues essentially parallel to the Link Road to the extend of Roper Road similar to option 1 then angles west to a point 150 m west of the boundary before angling again to rejoin the existing transmission line at the existing tower.

Option 3: deviates at a new angle tower just next to RTA boundary, continues essentially parallel Sydney-Newcastle Freeway to the extend of Roper Road similar to option 1 then angles west to the south- west boundary before angling again to rejoin the existing transmission line at the existing tower.

It is considered that Option 2 is the best of the three options developed. It is not the cheapest of the options but it does give the client a larger area to develop, also it does avoid the three building (houses or shads) shown on figure 2.

The final alignment selected would need to be examined in detail in an Environmental Impact Statement.

Agreement would be required from all affected property owners for any new alignment. Also, a new 60 metre easement would be required. TransGrid consider that the impact on the adjoining properties is manageable and opportunities to minimise this impact could be examined with these owners.

2.2 Structure Options

Two structure options have been examined for the deviation proposal. The first is the standard 330 kV steel tower design as used on the Munmorah – Sydney North – tee Tuggerah 330 kV transmission line and the second, a steel pole structure.

It is believed that the steel pole structure may be more visually acceptable adjacent to residential areas. The steel pole structures are, however, slightly more expensive than conventional towers and also have shorter spanning capability.

3. PROGRAM AND COSTING

3.1 Program

Below is a detailed program outlining the steps to be undertaken to complete the project:

Item	Description	2000												2001											
		J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D
1	Environmental Assessment																								
2	Finalise Alignment on Site																								
3	Design & Specification																								
4	Call Tenders & Contract																								
5	Steel Work Fabrication																								
6	On Site Erection																								
7	Dismantling																								

The detailed program above shows that the expected duration to complete the project is approximately 18 months, with environmental assessment and approval taking approximately 9 months, and the design and construction work approximately 9 months, with the actual construction work taking approximately 2.5 months.

Munmorah to Sydney North – tee Tuggerah transmission line is a critical element in the electricity supply system to the Sydney metropolitan and Central Coast areas. Construction of the deviation will require this line to be taken out of service for limited periods during the construction. The timing of the "outages" will need consultation with the system operators and electricity users. The work will need to be coordinated with the State System Controller and Network Service Providers and this may dictate the timing of the work.

3.2 Costing

A detailed cost evaluation was carried out on both the steel tower and the steel pole options.

The base for the estimate was the contract rates from the last 330 kV transmission line deviation in Newcastle area. This project was completed in 1996. The rates have generally been increased by 20% to allow for cost increases and the small scale of this project compared to larger jobs.

Option A - Standard Steel Tower Option
Below is a general breakdown of the cost components:

Project Management	$100,000
Design & Specification	$50,000
Construction Supervision	$25,000
Property &Survey	$70,000
Outages	$60,000
Material	$206,000
Contract	$689,000
Contingency	$120,000
Total	**$1,320,000**

This option allows for the construction of approximately 1.7 km of new 330 kV single circuit transmission line using TransGrid's existing 330 kV design. The design allows for a total of three (3) new tension towers and three (2) new suspension towers.

4. ENVIRONMENTAL REQUIREMENTS

This section of the study is based on the assumption that TransGrid is the proponent as well as the determining authority for the deviation of the transmission line.

An Environmental Impact Statement (EIS) will be required to be prepared for the Project. The EIS document would be prepared in accordance with the requirements of an Environmental Impact Statement (EIS) under the NSW Environmental Planning and Assessment Act 1979 (EP&A Act) and the Environmental Planning and Assessment Regulation 1994 (Regulation).

The transmission line works are assumed be full under the requirements of Part 5 of the Environmental Planning and Assessment Act 1979 and cannot be included in the Development application for the site which is under Part 4 of the EP&A Act

An Environmental Consultant should be engaged to obtain the Director's Requirements and to undertake all necessary environmental assessment studies and to incorporate all issues raised by affected landowners, local community group, government departments and statutory authorities into an Environmental Impact Statement (EIS). The consultant should be aware of TransGrid Standards and procedures.

When complete the Environmental Impact Statement (EIS) document will go on public display for comments.

All submissions received to the Environmental Impact Statement (EIS) must be examined and considered in a Submissions Report, which will be prepared on behalf of TransGrid. The report would be submitted to the Minister as part of seeking Ministerial approval to proceed with the project.

The Minister in making a decision will require the Director of the Department of Urban Affairs and Planning (DUAP) to prepare a Directors Report.

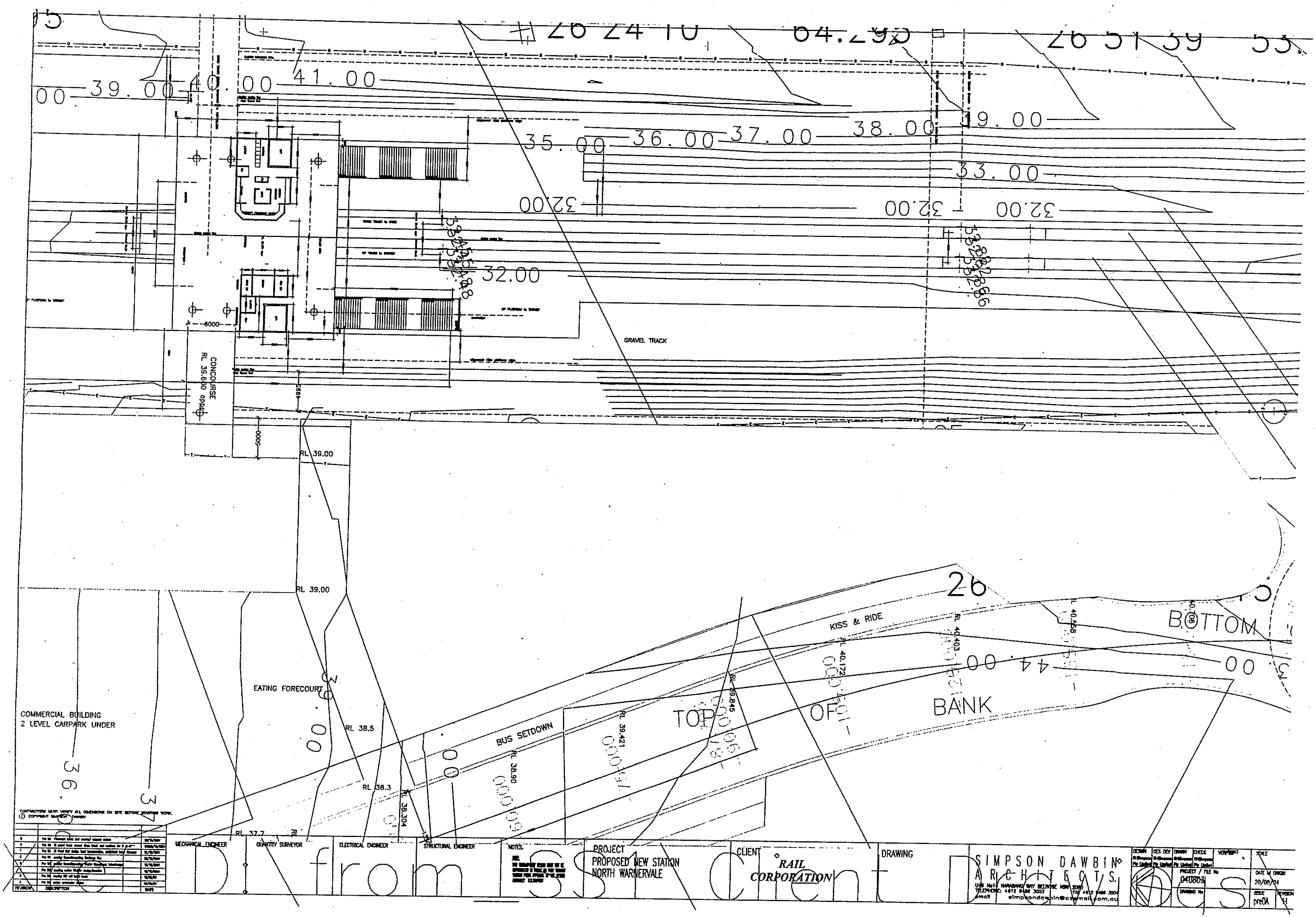
The Minister's decision will be made public.

Following the Minister's approval the Board of TransGrid would make its determination to proceed.

6. RISKS AND UNCERTAINTIES

Below is a listing of possible risks and uncertainties that could impact on the deviation project if it were to proceed:

- Community opposition to the relocation of the transmission line.
- Opposition by the western side landowners.
- Opposition by Government Authorities and Bodies.
- Discovery of major environmental constraint on the site (flora, fauna, heritage, aboriginal etc).
- Obtaining Environmental Approval from the Minister.



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RL 38.5
RL 38.3
RL 38.304
RL 37.7
BUS SETDOWN
RL 38.90
RL 39.421
RL 39.845
KISS & RIDE
RL 40.172
RL 40.403
RL 40.558
40.708
TOP OF BANK
BOTTOM
MECHANICAL ENGINEER
QUANTITY SURVEYOR
ELECTRICAL ENGINEER
STRUCTURAL ENGINEER
NOTES:
PROJECT
PROPOSED NEW STATION
NORTH WARNERVALE
CLIENT
RAIL CORPORATION
DRAWING
SIMPSON DAWBIN
ARCHITECTS
040803
20/08/04
preDA
H

Beth Robinson

From: cosborne@landcom.nsw.gov.au
Posted At: Thursday, 9 February 2006 11:46 AM
Conversation: 040803spreDA$Oct27 Stationplan200 (1)_1.pdf 1.0 (#1)
Posted To: Architecture Inbox

Subject: 040803spreDA$Oct27 Stationplan200 (1)_1.pdf 1.0 (#1)

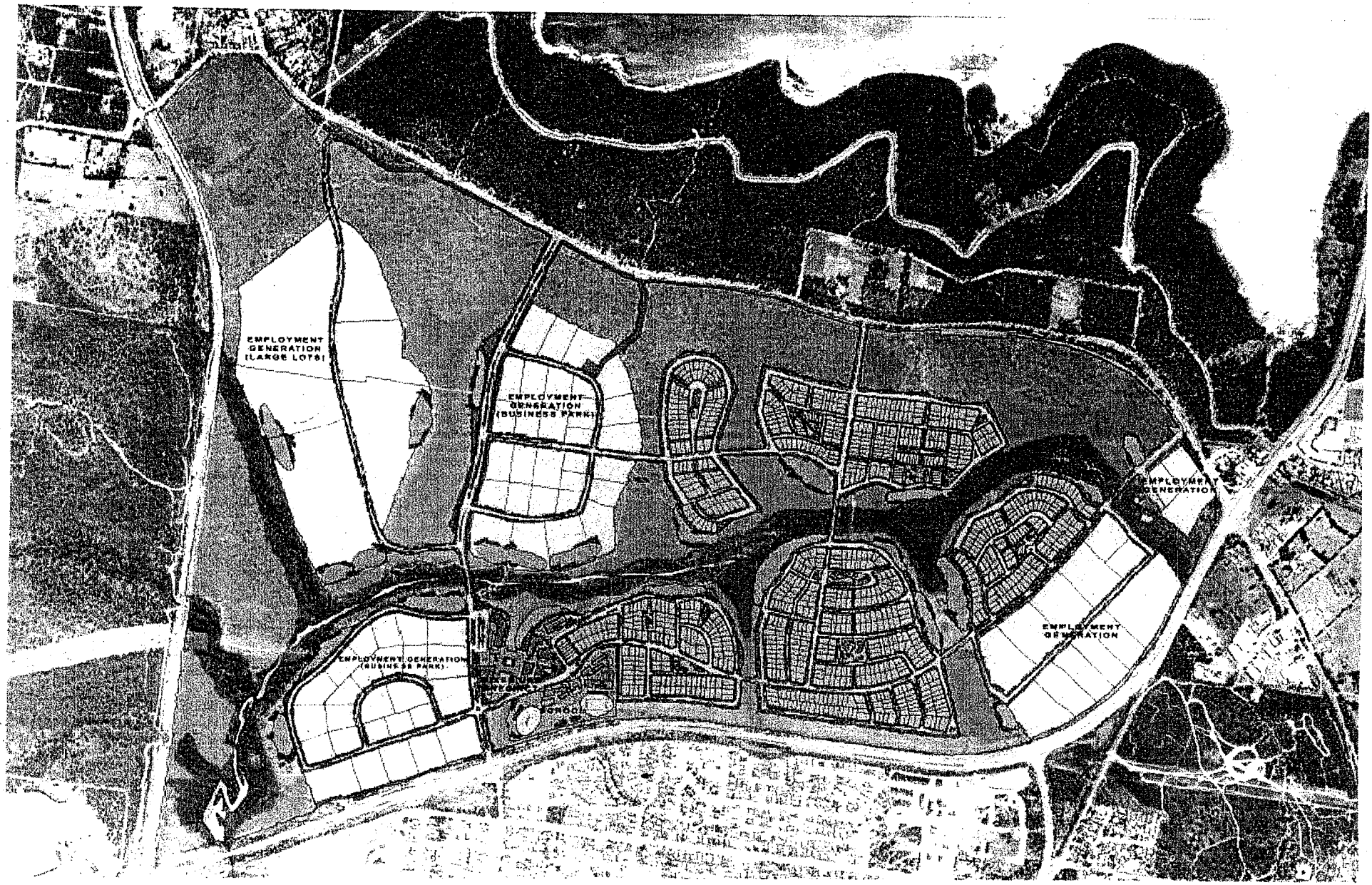
040803spreDA$Oct
27 Stationplan...

Kristy

see you tomorrow at 11

Carmen Osborne
Senior Development Manager
Landcom
cosborne@landcom.nsw.gov.au
T 9841 8671
F 9841 8777
M 0414 718 726(See attached file: 040803spreDA$Oct27 Stationplan200 (1)_1.pdf.PDF)

Attachment 3



Attachment 3

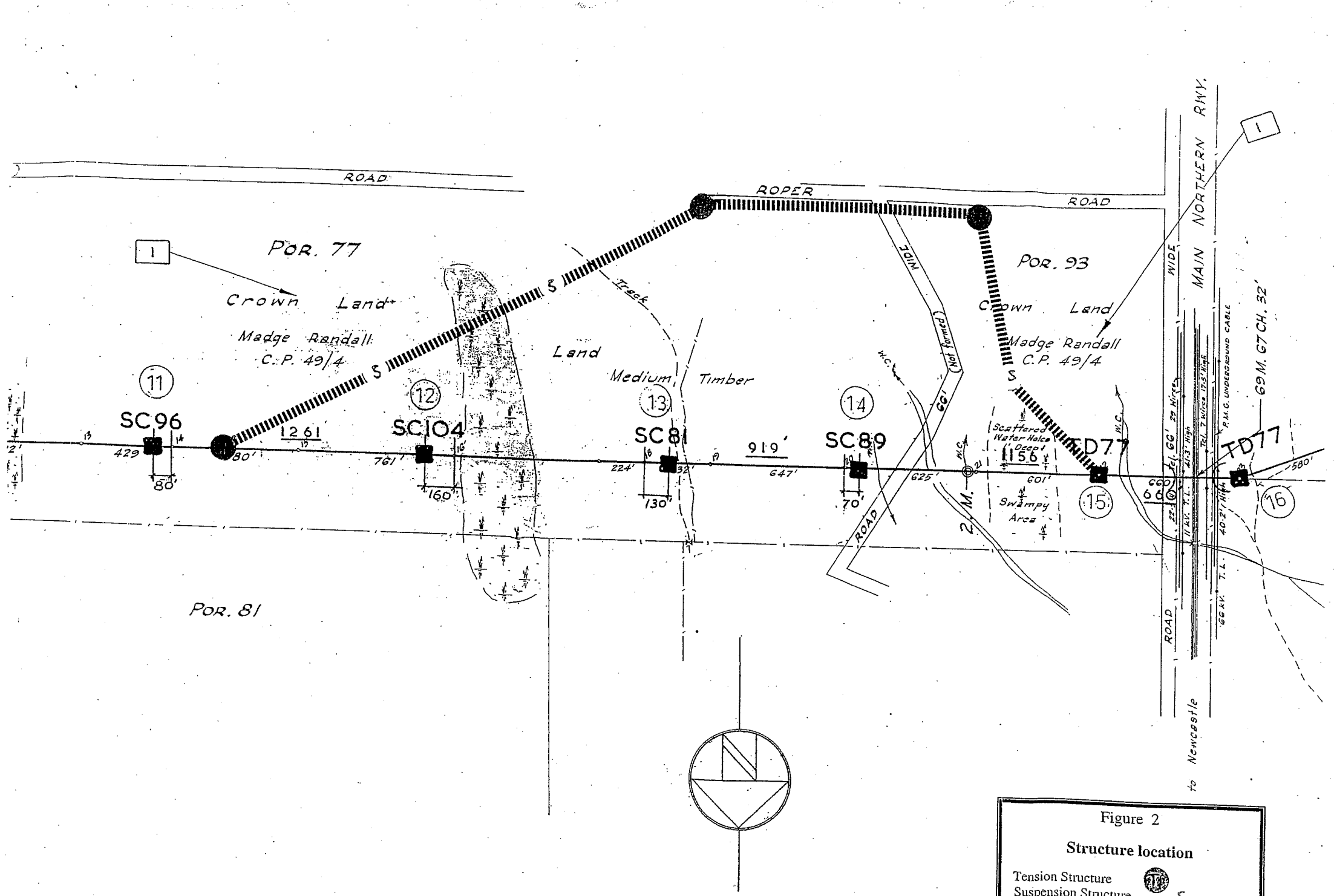


Figure 2

Structure location

Tension Structure
Suspension Structure
Towers 11,12,13 and 14 to be dismantled

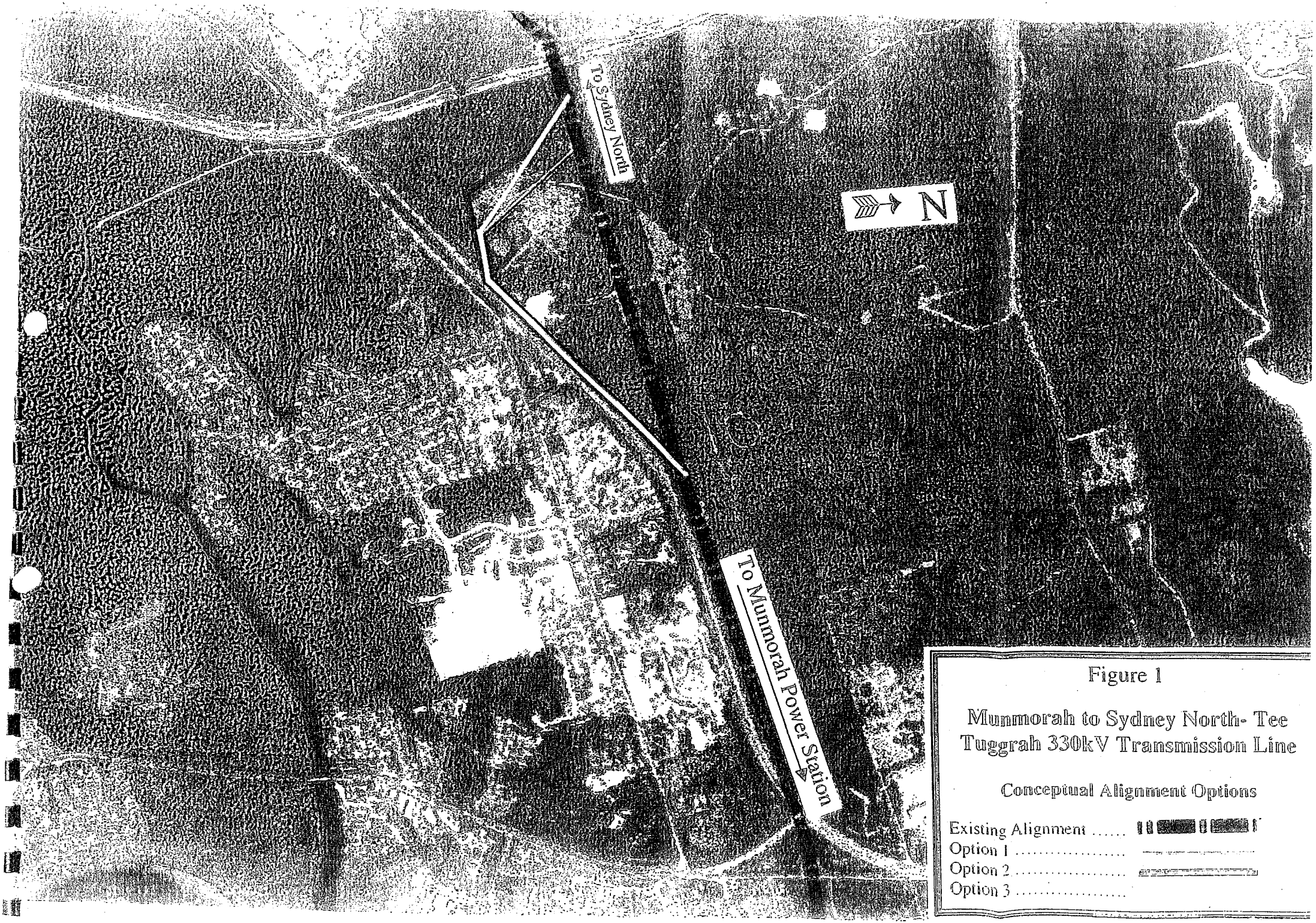


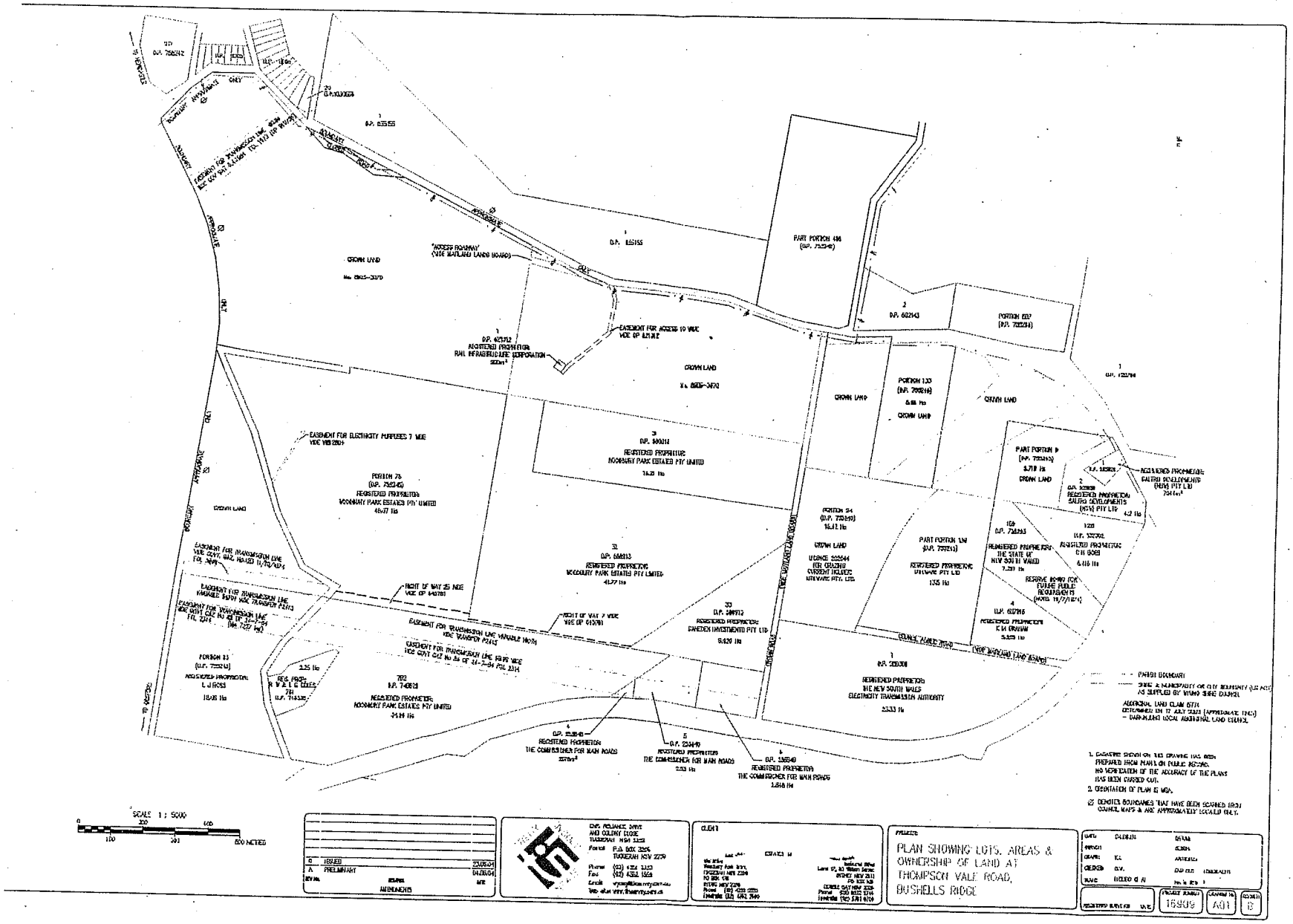
Figure 1

Munmorah to Sydney North- Tee Tuggrah 330kV Transmission Line

Conceptual Alignment Options

Existing Alignment .....
Option 1 .....
Option 2 .....
Option 3 .....

Attachment 1



[redacted]

Submission No 17

FACSIMILE MESSAGE

PK:23101241:KB

TO: Mr Keiran Thomas
Department of Planning

FAX NO: 9228 6455

[redacted]

SUBJECT: MUNMORAH GAS TURBINE FACILITY SUBMISSION TO ENVIRONMENTAL IMPACT ASSESSMENT

DATE: 10 February 2006

NO. OF PAGES INCLUDING THIS PAGE: 11

MESSAGE (if any):

Letters follow.

[redacted]

[redacted]

[redacted]

PK:23101241:KB

Our Ref

Your Ref

DIRECTORS

[redacted]

10 February 2006

VIA EMAIL: keiran.p.thomas@dipnr.nsw.gov.au

Major Development Assessments
Department of Planning
GPO Box 39
SYDNEY NSW 2001

Attention: Mr. Keiran Thomas

Dear Sir/Madam

MUNMORAH GAS TURBINE FACILITY - SUBMISSION TO ENVIRONMENTAL IMPACT ASSESSMENT

1. Instructions

We act for [redacted], which is the owner of the following properties at Spring Creek:

[redacted]

We are instructed as follows:

d. Delta Electricity ("the Proponent") seeks approval under Part 3A of the Environmental Planning and Assessment Act, 1979 ("Major Projects Application"), to construct and operate a gas turbine facility ("the Facility") within its grounds at Munmorah Power Station for the purpose of generating electricity.

e. The proposal also involves the construction of a gas supply pipeline ("the Pipeline") from the existing Sydney-Newcastle gas pipeline to the proposed gas turbine facility.

[redacted]

f. The Proponent, as part of the assessment process for Major Projects Applications, has prepared an Environmental Impact Assessment Report ("EIA") for the Facility and the Pipeline.

g. The Proponent proposes to construct the underground Pipeline, primarily within the existing electricity transmission easements that burden our client's property, [redacted]

h. Our client has, over several years and in consultation with Wyong Council and other relevant authorities, prepared a Masterplan for the redevelopment of its properties for the purpose of residential and employment generating land uses.

In view of the above, we have been instructed to review the Major Projects Application with respect to the Pipeline and make the following submissions to the Department of Planning. In doing so, we note that our client's environmental consultant [redacted], has also lodged a submission [redacted] on behalf of our client. In this regard, this submission is to be read in conjunction with the [redacted]

2. Consultation

As stated previously our client's redevelopment proposal of its property comprises of substantial residential and employment generating land uses. It is a significant proposal that has the preliminary support of Wyong Council and the relevant state planning authorities. However, a Development Application for such a proposal can not be lodged with Council at this stage as the property needs to be firstly rezoned to accommodate the proposal. In this regard, our client is continuing to prepare the necessary rezoning application. As you can appreciate, given the scale of our client's proposed redevelopment, the preparation of the rezoning application requires extensive resources and investigations that will take a considerable period of time to complete.

The Proponent at page 6-7 of the EIA states that:

> *"Orignal contact was made with land owners affected by the proposed pipeline route via a letter requesting access for field surveys. This was subsequently followed by a phone call to identify and discuss any issues of concerns regarding the proposal.....Discussions with affected land owners also sought to identify future proposed land use plans, to ascertain any possible future land use conflicts."*

In this regard, our client refutes this statement to the extent that no discussions were held with our client's authorised officers at any stage with respect to any issues of concerns regarding the proposal. Additionally, there were no discussions held with the Proponent in respect to our client's proposal to develop its properties in accordance with the Masterplan identified within the [redacted]

[redacted]

We are of the opinion that if those discussions were held, then the Proponent may have been more appreciable of our client's concerns relating to the proposed future redevelopment of its properties and subsequently proposed a route for the pipeline that would have responded in a more compatible manner to our client's redevelopment proposal. Instead, we have a proposed pipeline route that all but disregards our client's proposal and indeed seriously jeopardises its feasibility. In summary, our client stands to lose considerably as a result of the proposed pipeline route.

Accordingly, we insist that discussions take place between the Proponent and our client in order to address the issue of how our client's proposed redevelopment can satisfactorily co-exist with the proposed pipeline.

3. Terms of Existing Easement

Our client's property is burdened by an existing easement that is located adjacent to the northern property boundary of [redacted]. The easement was acquired by the Electricity Commission of NSW in 1964.

Notwithstanding that the existing terms of the easement do not refer to the use of same for the proposed pipeline, the EIA suggests that the pipeline will be located along the southern boundary of such an easement. The EIA states that a 30 metre buffer area is then required to be provided on either side of the centre line of the pipeline. As the existing easement is noted as being 60.96 metres wide, it would appear that the proposed buffer area to the south of the pipeline, given its proposed location within the easement, will encroach upon our client's land. This is unacceptable to our client as once again, the pipeline will further restrict the redevelopment of our client's property as identified in its Masterplan. Further, the Proponent has not indicated nor discussed with our client whether the use of the easement within our client's property will necessitate the acquisition of part of our client's land or require the creation of a further easement for the purpose of the pipeline, given its proposed location and the need for a buffer zone to same.

As previously stated, our client has previously been involved in discussions with Trans Grid to relocate the existing easement in a mutually convenient manner, given our client's redevelopment proposal. Trans Grid to as late as 2003 indicated that they may consider the relocation of the easement. This issue does not appear to have been considered to any great extent by the Proponent.

Accordingly, we insist that the Proponent enter into discussion with our client and Trans Grid to discuss the possible relocation and subsequent use of the existing easement to the satisfaction of all parties.

4. Future Development

Whilst the EIA makes a general statement with respect to our client's proposed redevelopment of its land, it does not, in our opinion give serious consideration as to the impact of the proposed pipeline on that proposal. Indeed, the EIA appears to dismiss our client's redevelopment proposal by stating at page 15-2 of the document that:

> *"Wyong Shire Council is also aware of this proposal, however, no formal development application has been made or submitted to Council for review and consideration at the time of writing the document."*

We are of the opinion that the Proponent's lack of consideration for our client's redevelopment proposal is totally unsatisfactory for the following reasons:

a. The zoning of our client's property has at all material times been zoned as 10 (a) (Investigation Precinct Zone). Accordingly, by the nature of the zoning, the Proponent should have placed more consideration as to the potential impact of the pipeline route on the possible redevelopment of such land for urban purposes; and

b. Notwithstanding that our client was not initially approached by the Proponent to discuss the impact of the pipeline on its property, our client did provide the Proponent with details of the proposed redevelopment of its property prior to the completion of the EIA. Consequently, the Proponent was in a position to make further detailed enquiries as to the redevelopment of our client's property and properly consider and evaluate same, prior to completing the EIA.

5. Discrepancies in EIA

At pages 16-6 of the EIA, the Proponent states in Table 16.1 that "Sensitive Land Uses" and "Residential" uses should be separated from the pipeline by 900 and 60 metres respectively. However, in the first paragraph on page 16-7 of the same document the Proponent classifies residential land as a "sensitive land use". Accordingly, if this is indeed the case, the proposed buffer of 30 metres (which is also unacceptable for the reasons outlined above) on either side of the proposed pipeline may be incorrect, as a buffer of 450 metres may be required instead. If this interpretation of Table 16.1 is correct, then our client's property would in effect, become sterilised for the purpose of the proposed redevelopment.

Further to the contents of Table 16.1, we note that the distance from the pipeline where the risk criteria is reached for residential uses is indicated as 32 metres, yet the Proponent only proposes a 30 metre buffer. Consequently, the proposed buffer area may potentially encroach further into our client's property than proposed. This again is unacceptable to our client.

6. Conclusion

It is evident for the above that our client stands to lose considerably from the proposed pipeline route. This could be avoided if the Proponent is willing to consider our client's legitimate concerns through meaningful discussions, notwithstanding that such discussions should have taken place at the investigation stage of the pipeline proposal. Nevertheless, our client is willing to conduct a round table discussion with the Proponent and all relevant authorities to achieve a mutually convenient solution to the route of the proposed pipeline.

In the absence of such discussions and a satisfactory resolution to our client's concerns, it is requested that the Application not be supported by the Minister.

If you have any further questions, please do not hesitate to contact [redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

PK:23101241:KB

Our Ref

Your Ref

10 February 2006

VIA EMAIL: keiran.p.thomas@dipnr.nsw.gov.au

Major Development Assessments
Department of Planning
GPO Box 39
SYDNEY NSW 2001

Attention: Mr. Keiran Thomas

Dear Sir/Madam

MUNMORAH GAS TURBINE FACILITY - SUBMISSION TO ENVIRONMENTAL IMPACT ASSESSMENT

1. Instructions

We act for [redacted], which is the owner of the property known [redacted]

We are instructed as follows:

a. Delta Electricity ("the Proponent") seeks approval under Part 3A of the Environmental Planning and Assessment Act, 1979 ("Major Projects Application"), to construct and operate a gas turbine facility ("the Facility") within its grounds at Munmorah Power Station for the purpose of generating electricity.

b. The proposal also involves the construction of a gas supply pipeline ("the Pipeline") from the existing Sydney-Newcastle gas pipeline to the proposed gas turbine facility.

c. The Proponent, as part of the assessment process for Major Projects Applications, has prepared an Environmental Impact Assessment Report ("EIA") for the Facility and the Pipeline.

d. The Proponent proposes to construct the underground Pipeline, primarily within the existing electricity transmission easement that is located adjacent to the southern property boundary of our client's property and is located within the property owned by

[redacted]

[redacted]

e. Our client, together with WPE, has over several years and in consultation with Wyong Council and other relevant authorities, prepared a Masterplan for the redevelopment of its properties in conjunction with those of WPE, for the purpose of residential and employment generating land uses.

In view of the above, we have been instructed to review the Major Projects Application with respect to the Pipeline and make the following submissions to the Department of Planning. In doing so, we note that our client's environmental consultant, [redacted] has also lodged a submission ([redacted] on behalf of our client. In this regard, this submission is to be read in conjunction with the [redacted] submission.

2. Consultation

As stated previously our client's redevelopment proposal of its property comprises of substantial residential and employment generating land uses. It is a significant proposal that has the preliminary support of Wyong Council and the relevant state planning authorities. However, a Development Application for such a proposal can not be lodged with Council at this stage as the property needs to be firstly rezoned to accommodate the proposal. In this regard, our client is continuing to prepare the necessary rezoning application. As you can appreciate, given the scale of our client's proposed redevelopment, the preparation of the rezoning application requires extensive resources and investigations that will take a considerable period of time to complete.

The Proponent at page 6-7 of the EIA states that:

> *"Orignal contact was made with land owners affected by the proposed pipeline route via a letter requesting access for field surveys. This was subsequently followed by a phone call to identify and discuss any issues of concerns regarding the proposal.....Discussions with affected land owners also sought to identify future proposed land use plans, to ascertain any possible future land use conflicts."*

In this regard, our client refutes this statement to the extent that no discussions were held with our client's authorised officers at any stage with respect to any issues of concerns regarding the proposal. Additionally, there were no discussions held with the Proponent in respect to our client's proposal to develop its properties in accordance with the Masterplan identified within the [redacted] submission.

We are of the opinion that if those discussions were held, then the Proponent may have been more appreciable of our client's concerns relating to the proposed future redevelopment of its property and subsequently proposed a route for the pipeline that would have responded in a more compatible manner to our client's redevelopment proposal. Instead, we have a proposed pipeline route that all but disregards our client's

proposal and indeed seriously jeopardises its feasibility. In summary, our client stands to lose considerably as a result of the proposed pipeline route.

Accordingly, we insist that discussions take place between the Proponent and our client in order to address the issue of how our client's proposed redevelopment can satisfactorily co-exist with the Proponent's proposed pipeline.

3. Terms of Existing Easement

Whilst our client's property is not burdened by the existing easement that is located adjacent to the northern property boundary of [redacted] concern is still raised as to the use of such an easement for the purpose of the pipeline, given its proximity to our client's property and the proposed redevelopment of same with the adjoining [redacted] roperties.

Notwithstanding that the existing terms of the easement do not refer to the use of same for the proposed pipeline, the EIA suggests that the pipeline will be located along the southern boundary of such an easement. The EIA states that a 30 metre buffer area is then required to be provided on either side of the centre line of the pipeline. As the existing easement is noted as being 60.96 metres wide, it would appear that the proposed buffer area to the south of the pipeline, given its proposed location within the easement, will encroach upon [redacted] roperty. This is unacceptable to our client as once again, the pipeline will further restrict the redevelopment of our client's and [redacted] properties, as identified in its Masterplan. Further, the Proponent has not indicated nor discussed with our client whether the use of the easement will necessitate the acquisition of part of our client's land for the purpose of the pipeline given its proposed location and the need for a buffer zone to same.

We note that [redacted] have previously been involved in discussions with Trans Grid to relocate the existing easement in a mutually convenient manner taking into account our client's and [redacted]s combined redevelopment proposal. Trans Grid to as late as 2003 indicated that they may consider the relocation of the easement. This issue does not appear to have been considered to any great extent by the Proponent.

Accordingly, we insist that the Proponent enter into discussion with our client [redacted] and Trans Grid to discuss the possible relocation and subsequent use of the existing easement to the satisfaction of all parties.

4. Future Development

Whilst the EIA makes general statement with respect to our client's and [redacted]'s proposed redevelopment of its land, it does not, in our opinion give serious consideration as to the impact of the proposed pipeline on that proposal. Indeed, the EIA appears to dismiss our client's redevelopment proposal by stating at page 15-2 of the document that:

"Wyong Shire Council is also aware of this proposal, however, no formal development application has been made or submitted to Council for review and consideration at the time of writing the document."

We are of the opinion that the Proponent's lack of consideration for our client's redevelopment proposal is totally unsatisfactory for the following reasons:

a. The zoning of our client's property has at all material times been zoned as 10 (a) (Investigation Precinct Zone). Accordingly, by the nature of the zoning, the Proponent should have placed more consideration as to the potential impact of the pipeline route on the possible redevelopment of such land for urban purposes; and

b. Notwithstanding that our client was not initially approached by the Proponent to discuss the impact of the pipeline on its property, our client did provide the Proponent with details of the proposed redevelopment of its property prior to the completion of the EIA. Consequently, the Proponent was therefore in a position to make further detailed enquiries as to the redevelopment of our client's property and properly consider and evaluate same, prior to completing the EIA.

5. Discrepancies in EIA

At pages 16-6 of the EIA, the Proponent states in Table 16.1 that "Sensitive Land Uses" and "Residential" uses should be separated from the pipeline by 900 and 60 metres respectively. However, in the first paragraph on page 16-7 of the same document the Proponent classifies residential land as a "sensitive land use". Accordingly, if this is indeed the case, the proposed buffer of 30 metres (which is also unacceptable for the reasons outlined above) on either side of the proposed pipeline may be incorrect, as a buffer of 450 metres may be required instead. If this interpretation of Table 16.1 is correct, then our client's property would in effect, become sterilised for the purpose of the proposed redevelopment.

Further to the contents of Table 16.1, we note that the distance from the pipeline where the risk criteria is reached for residential uses is indicated as 32 metres, yet the Proponent only proposes a 30 metre buffer. Consequently, the proposed buffer area may potentially encroach further into [redacted] property than proposed. This again is unacceptable to our client as it further restricts the proposed redevelopment of the subject properties.

6. Conclusion

It is evident for the above that our client stands to lose considerably from the proposed pipeline route. This could be avoided if the Proponent is willing to consider our client's legitimate concerns through meaningful discussions, notwithstanding that such discussions should have taken place at the investigation stage of the pipeline proposal. Nevertheless, our client is willing to conduct a round table discussion with the Proponent and all relevant authorities to achieve a mutually convenient solution to the route of the proposed pipeline.

In the absence of such discussions and a satisfactory resolution to our client's concerns, it is requested that the Application not be supported by the Minister.

If you have any further questions, please do not hesitate to contact

Capital Program Delivery/Environmental and Business
Telephone: (02) 9284 3340 Facsimile: (02) 9284 3355

TransGrid

Submission No 18

ABN 19 622 755 774

201 Elizabeth Street (cnr Park St)
PO Box A1000 Sydney South
New South Wales 1235 Australia
Facsimile (02) 9284 3456
Telephone (02) 9284 3000
Web http://www.transgrid.com.au
DX1122 Sydney

Major Development Assessment
Department of Planning
GPO Box 39
Sydney NSW 2001

Attention: Keiran Thomas

Dear Mr Thomas

Proposed Munmorah Gas Turbine Facility
Applicant: Delta Electricity

In response to the Environmental Assessment (EA) for the proposed Munmorah gas turbine facility, TransGrid makes the following submissions.

The proposed pipeline route parallels 330kV Transmission Line no.21, Munmorah - Tuggerah/Sydney North, over most of the pipeline length. The pipeline will cross T/L 21 and also T/L 23 Munmorah - Vales Point and T/L 26 Munmorah - Sydney West close to the power station.

In this submission, attention is drawn to technical interaction and compatibility issues, and associated safety issues, related to the proposal to construct and operate the proposed high pressure natural gas pipeline in close proximity to TransGrid transmission lines. These issues are the responsibility of the proponent and the proponent must demonstrate that they can be satisfactorily addressed. The issues are not addressed in the Environmental Assessment and its supporting Technical Paper 6 addressing hazards.

Advice is also included concerning some property issues affecting the pipeline.

A. Technical and Safety Issues

Attention is drawn to TransGrid comments provided in its letter dated 25 August 2005, which has been referenced in the EA. These comments remain applicable. Compliance with TransGrid's requirements stated in that letter will protect TransGrid's assets. Some additional issues that need to be considered are outlined below.

1. Ground currents due to Transmission Line Power Faults

Transmission line fault currents, now and in the future, can be 10,000 to 50,000 amps depending on the fault location. The higher values would occur close to the Munmorah Power Station switchyard where the fault level is currently 30kA. About 10% of the fault current might flow into the ground through the earth grid at a faulted transmission line structure some distance from the switchyard, and total ground currents of up to 85% of the fault current could flow in the ground (dispersed but extending over several or many km between a fault and its power source(s)) for typically 80 milliseconds, but up to 0.5s. Delta should design its pipeline not to be adversely affected by these a.c. ground currents.

2. Earth Potential Rise During Power Faults

Earth potential rise that is significant for safety of pipeline construction or maintenance workers can extend for up to (say) 100m, depending on the soil resistivity and the size of the transmission line earthing system. Delta should arrange to undertake detailed studies to identify

and analyse the earth potential rise issues and to determine whether they can be adequately alleviated to comply with the relevant safety standards.

3. Pipeline Corrosion Associated with Proximity to AC Transmission Lines

Running close to an a.c. power line can result in corrosion problems. Delta must accept responsibility for any costs or damage arising from corrosion including corrosion associated with the presence of the a.c. transmission line.

4. Safety Hazards Due to Longitudinal Induction

Longitudinal induction can create safety hazards for parallels between transmission lines and pipelines. There will be a continuous induced voltage due to load currents and a much higher induced voltage during a power fault on the transmission line. Longitudinal induced voltages in metallic pipelines can be alleviated by having insulting joints in the pipeline, but this will complicate the design and increase the expense of cathodic corrosion protection. For this reason, running in the easement of a power line or outside the easement but in close parallel, is not desirable. It is better to keep a substantial distance away and cross close to right angles. Delta should obtain expert technical advice on managing longitudinal induction.

5. Special Technical Challenges Associated with Pipelines Affected by Longitudinal Induction and Railway DC (if applicable)

Pipelines that are close to electrified train lines, esp. d.c. railway systems that may put return currents in the ground, face significant technical issues and these are greatly exacerbated if there is also a power line nearby.

6. Electrostatic Induction

Safety issues related to electrostatic induction when unearthed pipes are lifted away from the ground in close proximity to HV lines as may occur during construction and maintenance.

7. Pipeline Explosion

The possibility of gas ignition and explosion in the event of leakage and/or sparking due to longitudinal induction or pipeline failure in proximity to a 330 kV power line should be considered in a thorough hazard assessment.

What would be the extent of the explosion and the damage that it might cause to the surroundings including the power line? Can this risk be assessed and quantified?

The above issues should be addressed sufficiently to demonstrate that reliable solutions are available before approval is granted. Delta should accept all costs of the investigation and remedial actions. These issues should also be appropriately covered in the proponent's Statement of Commitments.

B. Property Issues

The proposed pipeline traverses properties west of Scenic Drive that belong to TransGrid, viz. Lots 1 – 3 of DP 259306 (see attached TransGrid transmission line plan). There is a proposal to sell Lots 1, 2 and 3 Deposited Plan 259306. The land comprises some 53ha and as any development of the sites would be severely limited by a number of environmental constraints, the proposed sale is on the basis that the great majority of the site would be protected permanently as a community reserve. The lots are traversed by the 330kV transmission line no. 21, Munmorah - Tuggerah/Sydney North about 150 metres from the southern boundary. The proponent could seek to acquire an easement for the pipeline prior to the sale or from the new owner after the sale.

TransGrid has easements for its transmission lines over properties not owned by TransGrid. This includes easement over Crown land in Lot 61 of DP 1065038 where the proposed pipeline crosses T/L 23 Munmorah - Vales Point and T/L 26 Munmorah - Sydney West. The EA does not clearly address the rights that need to be acquired by the pipeline proponent in acquiring an easement for the pipeline. Accordingly TransGrid is unable to ascertain whether those rights conflict with TransGrid's easement rights and whether they diminish the value of TransGrid easements.

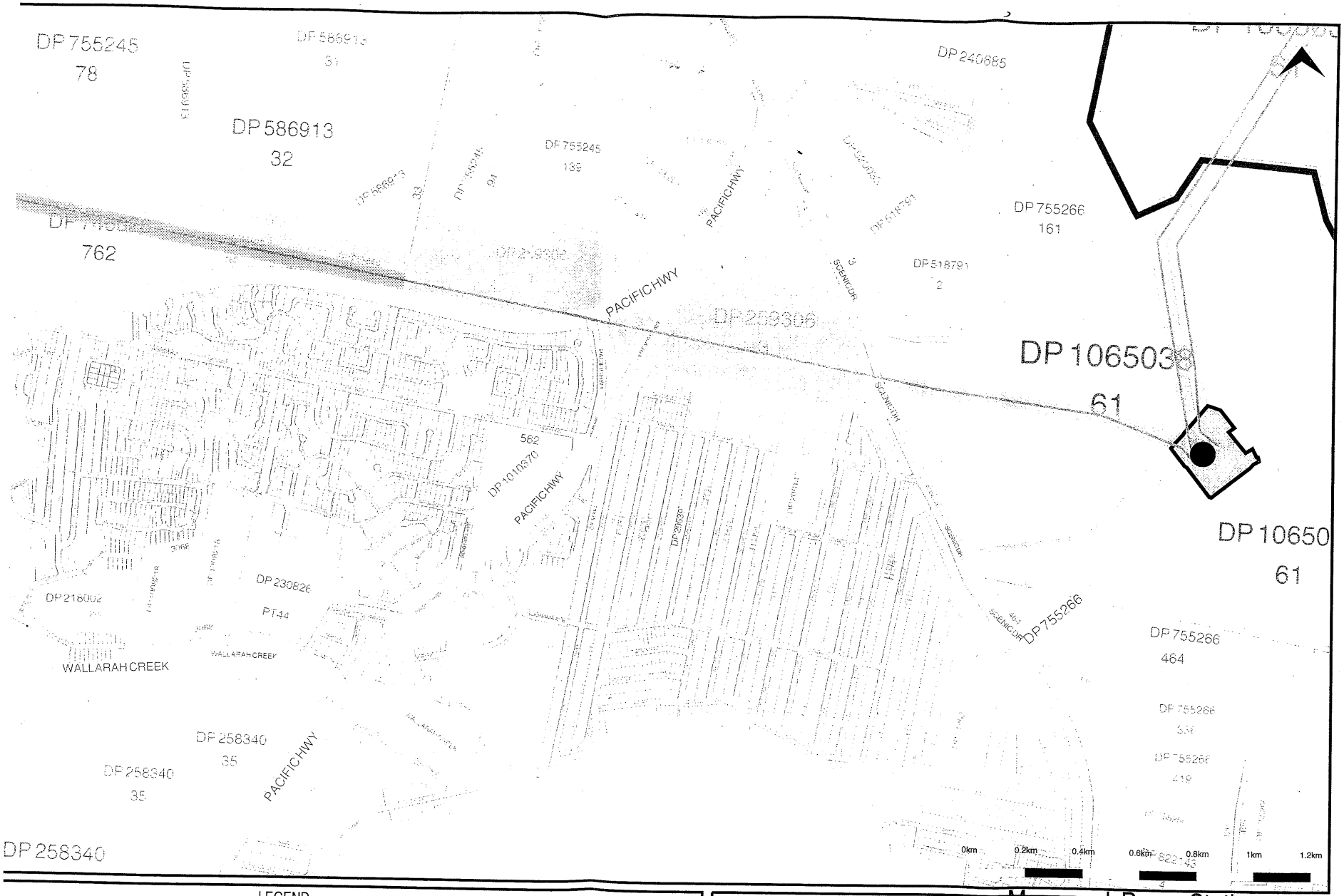
Yours sincerely

J Diesendorf 10/2/06

John Diesendorf
Manager/Environmental and Support Services

Attach

Doyalson Site with Munmorah PS...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LEGEND
TransGrid
Munmorah Power Station
OutLets

E 45

Submission No 19

Department of
Environment and Conservation (NSW)

Your reference : 9037381
Our reference : NEF 18496 File: 270754A6
Contact : Trevor Henderson, 4908 6824

Department of Planning
GPO Box 39
SYDNEY NSW 2001

13 FEB 2006

Attn: Keiran Thomas

Dear Sir

PROPOSED GAS TURBINE FACILITY – MUNMORAH POWER STATION, SCENIC DRIVE, DOYALSON (APPLICATION 05-0195) – WYONG LOCAL GOVERNMENT AREA

I refer to your letter of 9 January 2006 requesting the DEC's submission and recommended conditions of approval for the above development.

The DEC has reviewed the information provided and has determined that it is able to issue conditions of approval for the above development and these are in attachment A.

If The Department of Planning grants development consent for the proposal, these conditions should be incorporated into the consent. The applicant should be advised to make a separate application to the DEC, prior to any site preparation or construction work taking place, for an Environment Protection Licence. This licence will be amended to a full operating licence at an appropriate time towards the end of the construction work and before the plant commences normal operations.

The DEC has reviewed the Environmental Assessment (EA) and attached technical papers and the following general comments are provided for your information.

1. Air Quality Impact Assessment

The assessments appear to have been prepared in accordance with the *Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in NSW.* The DEC is satisfied that predicted emissions to atmosphere from the proposed gas fired power station up to a capacity of 600MW, will meet the statutory emission limits required under the *Protection of the Environment Operations (Clean Air) Amendment (Industrial and Commercial Activities and Plant) Regulation 2005* and satisfies the DEC's air impact assessment criteria when operated on gas or liquid fuel. Similarly, the photochemical pollution assessment concludes that emissions from the OCGT facility are predicted to result in no exceedances of air quality goals and standards for NO_2 and O_3 and will have negligible impacts on NO_2 and O_3 concentrations in the Sydney Basin.

The DEC recommends inclusion of an approval condition, which ensures that the OCGT facility is operated as a peak-load facility only. The EA states that it is anticipated that the facility will only be operated 500 hours per year, however the proponent is essentially

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seeking approval to operate 24 hours a day, 365 days per year. As such, it is important to ensure that the facility is not permitted to operate as an intermediate or base-load facility while continuing to employ open-cycle technologies.

An appropriate approval condition should be negotiated between the proponent and the Department of Planning, in consultation with the DEC. If it is proposed that the plant operates in exceedance of what can be considered to be meeting peak-load demand, the proponent should employ more thermally efficient processes such as combined-cycle operations.

2. Noise Impact Assessment

The DEC has reviewed the Noise Assessment for the proposed Gas Turbine Facility and provides the following comments.

Areas of agreement

- DEC supports the presented noise sensitive receiver locations.
- DEC considers that the ambient background noise assessment is reasonable.
- DEC concurs with the nominated Project Specific Noise levels.
- DEC considers that the operational predicted noise levels are reasonable and demonstrates that noise impacts will be minimal.

Areas of contention

The proponent has advised that the construction of the proposal will be over a 12-month period and has adopted the Construction Noise guidelines from Chapter 171 of the former EPA's Environmental Noise Control Manual (ENCM). While the proponent has used background + 5dB(A) criterion for construction of the Gas Turbine Facility on the Munmorah Power Station site, the proponent has used background + 20dB(A) for the natural gas pipeline construction because it is expected that construction activities will not affect individual receivers for more than four weeks. DEC considers that because the project will take 12 months to complete, background + 5dB(A) should have been used.

Not withstanding the above, DEC advises that noise limits are not usually specified for construction noise and that the proponent would be required to prepare a Construction Noise Management Protocol so that all related activities are managed to achieve an acceptable environmental outcome.

DEC considers that on review of the Noise Assessment noise impacts will be minimal. The proponent flagged that the noise assessment considered the impacts as though the gas turbine facility was running on a continuous basis. As the facility is expected to only operate 500 hours per year noise impacts may only occur up to 2% of the time in the worst season (provided there is an electricity peak demand).

The NIA is based on noise emission levels assumed for the facility. DEC's conclusions and recommended Licence limits depend on the proponent ensuring appropriate performance specifications are adopted for, and met by, the actual plant installed and operated.

3. Wastewater

The EPA notes that during the operation phase of the project that approximately 12,000 litres of wastewater will be generated per year and that this will be treated by an on site oil separator before passing to the existing wastewater treatment plant at Munmorah for

treatment and disposal to the ash dam. Small quantities of waste oil generated during maintenance procedures will be stored in drums and collected by a licensed liquid waste contractor for appropriate off site disposal. This approach is considered satisfactory.

4 Flora and Fauna

The proponent has provided satisfactory assessment of the impacts of the proposed development on native flora and fauna. Utilising already disturbed areas of the power line easement and the power station site and the mitigation measures described in Chapter 9 will minimise these impacts.

5 Aboriginal Cultural Heritage

Aboriginal cultural heritage issues have been addressed and the recommendations presented in Technical Paper No 2 are appropriate to be translated into consent conditions.

Applicability of General Terms of Approval

The general terms of approval provided relate to the development as proposed in the documents and information currently provided to the DEC, specifically for 500 hours per year operation. In the event that the development is modified either by the applicant prior to the granting of consent or as a result of the conditions proposed to be attached to the consent, it will be necessary to consult with the EPA about the changes before the consent is issued. This will enable the DEC to determine whether its general terms need to be modified in light of the changes.

If there are any matters that require either clarification or further discussion please contact Trevor Henderson on 4908 6824.

Yours sincerely

DAVID DARVALL
A/Manager, Hunter Region
North East Branch
Environment Protection and Regulation

ATTACHMENT A

DEPARTMENT OF ENVIRONMENT AND CONSERVATION – RECOMMENDED TERMS OF APPROVAL –OPEN CYCLE GAS TURBINE FACILITY – MUMNORAH POWER STATION
DA 05 0195

GENERAL

Works to be undertaken in accordance with information supplied to the DEC.

1. The development must be undertaken in accordance with the proposal contained in: the development application 05_0195 submitted to NSW Department of Planning.

and

2. The Environmental Assessment titled *'Munmorah Gas Turbine Facility Volumes 1 and 2'* dated 15 December 2005, prepared by Parsons Brinkerhoff Australia Pty Ltd; unless otherwise specified in these general terms of approval.

Obligation to prevent and minimise harm to the environment

3. All practicable measures must be taken to prevent and minimise harm to the environment as a result of the construction, operation and, where relevant, the decommissioning of the development.

Maintenance of plant and equipment

4. All plant and equipment installed at the premises or used in connection with the licensed activity:
   a) must be maintained in a proper and efficient condition: and
   b) must be operated in a proper and efficient manner.

AIR

Dust

5. The premises must be maintained in a condition that minimises or prevents the emission dust from the premises.

6. Activities occurring in or on the premises must be carried out in a manner that will minimise the generation, or emission from the premises, of wind-blown or traffic generated dust.

Odour

7. No offensive odour, as defined under Section 129 of the Protection of the Environment Operations Act 1997, may be emitted from the premises.

Note: Section 129 of the Protection of the Environment Operations Act 1997, provides that the licensee must not cause or permit the emission of any offensive odour from the premises but provides a defence if the emission is identified in the relevant environment protection licence as a potentially offensive odour and the odour was emitted in accordance with the conditions of a licence directed at minimising odour.

Location of monitoring/discharge points and areas

8. The following points referred to in the table below will be identified in the environment protection licence for the purposes of monitoring and/or the setting of limits for the emission of pollutants to the air from the point.

Air

EPA Identification no.	Type of Monitoring Point	Type of Discharge Point	Description of Location
1	Air emissions monitoring	Discharge to air	Turbine Stack 1
2	Air emissions monitoring	Discharge to air	Turbine Stack 2
3	Air emissions monitoring	Discharge to air	Turbine Stack 3
4	Air emissions monitoring	Discharge to air	Turbine Stack 4

Limit conditions

9. For each monitoring/discharge point or utilisation area specified in the table\s below (by a point number), the concentration of a pollutant discharged at that point, or applied to that area, must not exceed the concentration limits specified for that pollutant in the table.

Air

POINTS 1,2,3,4

Pollutant	Units of measure	Fuel Type	100 percentile concentration limit	Reference conditions
Nitrogen dioxide (NO_2) or nitric oxide (NO), or both (as NO_2)	mg/m^3	Natural gas	50	Dry, 273K, 101.3ka, 15% O_2
		Distillate	65[1]	

Note 1: This limit applies if the power station is fired under emergency conditions using liquid fuel as specified below.

Requirement to monitor concentration of pollutants discharged

10. For each monitoring/discharge point or utilisation area specified below (by a point number), the licensee must monitor (by sampling and obtaining results by analysis) the concentration of each pollutant specified in Column 1. The licensee must use the sampling method, units of measure, and sample at the frequency, specified opposite in the other columns:

Air

POINT 1,2,3,4

Pollutant	Units of measure	Frequency	Sampling Method
Nitrogen dioxide (NO_2) or nitric oxide (NO), or both	mg/m^3	Continuous	CEM-2

Pollutant	Units of measure	Frequency	Sampling Method
Velocity	m/s	Post commissioning and annual	TM-2
Volumetric flow rate	m^3/s	Post commissioning and annual	TM-2
Moisture	%	Post commissioning and annual	TM-22
Dry gas density	kg/m^3	Post commissioning and annual	TM-23
Molecular weight of stack gases	g/gmol	Post commissioning and annual	TM-23
Carbon dioxide	%	Post commissioning and annual	TM-24
Oxygen	%	Post commissioning and annual	TM-25

Note: Post commissioning means within 90 days of commencing normal operations and during a period when the plant is operating under stable conditions at the design load. This requirement applies to stages 1, 2 and 3.

11. For EPA Identification Points 1, 2, 3 and 4 sampling must be undertaken at locations that have been determined strictly in accordance with the requirements of test method TM-1.

12. The results of the post commissioning monitoring required under this consent must be submitted to the Director-General and the EPA within 28 days of completing the monitoring.

Approved Fuels

13. Natural gas is the only fuel approved for routine firing of the power station turbines.

14. Distillate is approved for firing the power station turbines in emergencies when the natural gas supply has been disrupted. (or exhausted)

15. Operation of the turbines on distillate fuel must not exceed a total of 75 hours per year. ? 74.5 system shutdown

Unless approved by DG

Manufacturer's Performance Guarantee

16. Prior to installing fuel burning equipment the applicant must submit to the EPA manufactures performance guarantees. The documentation must demonstrate to the EPA's satisfaction that the equipment, when operating at design load will comply with the air emission concentration limits specified in this consent.

WATER

Pollution of Waters

17. Except as may be expressly provided in the licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997 prohibiting the pollution of waters.

WASTE

Receiving or Disposing of Waste

18. Except as expressly permitted in a licence, waste must not be: -

a) received at the premises for storage, treatment, processing, reprocessing or disposal; or
b) disposed of at the premises.

Hazardous and industrial waste

19. Hazardous or industrial waste must be stored and disposed of in a manner to minimise its impact on the environment including appropriate segregation for storage and separate disposal by a waste transporter licensed by the EPA.

NOISE

20. Noise generated at the premises must not exceed the noise limits presented in the table below. Note the noise limits relate to the noise contribution of the Gas Turbine Facility.

Noise Limits dB(A)

Location	Day	Evening	Night
	LAeq(15 minute)	LAeq(15 minute)	LAeq(15 minute)
Sunnylake Caravan Park	35	35	35
Macleay Avenue	41	41	41
Woolana Avenue, Halekulani	40	40	40
Ulana Avenue, Budgeowi	38	38	38
Barega Close, Buff Point	35	35	35
Baker Street, San Remo	35	35	35
Denman Street Colongra	35	35	35

21. For the purpose of this approval "day" is defined as the period from 7am to 6pm Monday to Saturday and 8am to 6pm Sundays and Public holidays'

    Evening is defined as the period 6pm to 10pm,

    Night is defined as the period from 10pm to 7am Monday to Saturday and 10pm to 8am Sundays and Public Holidays.

22. Noise from the premises is to be measured at the most affected point or within the residential boundary or at the most affect point within 30m of the dwelling (rural situations) where the dwelling is more than 30m from the boundary to determine compliance with the LAeq(15 minute) noise limits in this consent

23. Where it can be demonstrated that direct measurement of noise from the premises is impractical, the EPA may accept alternative means of determining compliance. See Chapter 11 of the NSW Industrial Noise Policy.

24. The modification factors presented in Section 4 of the NSW Industrial Noise Policy shall also be applied to the measured noise levels where applicable.

25. The noise emission limits identified in this consent apply under meteorological conditions of:
    a) Wind speed up to 3m/s at 10 metres above ground level; or
    b) Temperature inversion conditions of up to 5oC/100m and wind speed up to 3m/s at 10 metres above the ground.

Construction noise

26. The Applicant shall prepare a Construction Noise Management Protocol.

27. The Protocol shall include details about but no limited to:

    a) compliance standards;
    b) community consultation;
    c) complaints handling monitoring/system;
    d) site contact person to follow up complaints;
    e) mitigation measures;
    f) the design/orientation of the proposed mitigation methods demonstrating best practice;
    g) construction times;
    h) contingency measures where noise complaints are received.

RECORDING AND REPORTING REQUIREMENTS

Recording of Monitoring

28. The results of any monitoring required must be recorded and retained as set out in the licence.

Reporting Requirements

29. The EPA will require reporting on the environmental performance of the proposal as set out in the licence.

Telephone Complaints Line

30. The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises. The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a compliant.

ABORIGINAL CULTURAL HERITAGE

Aboriginal cultural heritage sites are ubiquitous in the area and the consent conditions should reflect the actual and likely disturbance of known and unknown sites by the proposal. Technical Paper 2 of the Environmental Assessment for the project provides five recommendations which should be reflected in any consent conditions. In particular, where aboriginal cultural sites are found work in the area must immediately cease until appropriate authorities, as identified in the Technical paper have been informed and have agreed on an appropriate course of action.

Wyong Shire Council ABN 47 054 613 735
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Phone: (02) 4350 5555 Fax: (02) 4351 2098
Submission No 20
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Web: www.wyongsc.nsw.gov.au

WYONG SHIRE COUNCIL
building a better tomorrow!

CENTRAL COAST

WKW/Wesley Wilson
F2005/01527
D00448757

Received 14 FEB 2006 Major Development Assessment

9 February 2006 #430

Major Development Assessment
Department of Planning
GPO Box 39
SYDNEY NSW 2001

Attention: Keiran Thomas

Dear Mr Thomas

PROPOSED GAS TURBINE FACILITY, MUNMORAH POWER STATION, SCENIC DRIVE, DOYALSON (APPLICATION 05_0195)

Thank you for your letter dated 9 January 2006 seeking Council's detailed submission regarding the above major project.

Council supports the provision of essential public infrastructure which will ensure residents of Wyong Shire will have continuous and reliable electricity supply at all times, including during peak demand periods.

Council does, however raise the following concerns which we request be given further consideration prior to any approval being granted:

Impact of the Gas Supply Pipeline on Future Land Uses

The preferred gas supply pipeline route (Option A) follows an existing 330V power line easement. This easement traverses a parcel of land which Council is in the process of acquiring from Transgrid and Precincts 4 and 15, which are identified for future employment generating and residential land uses.

Council requests clarification as to the potential impacts of the gas supply pipeline on future urban land uses outside of the existing electricity transmission easement (i.e. will there be further restrictions on development outside of the existing identified easement width?). Additionally, clarification is sought on what activities could occur within the easement (e.g. roads and infrastructure crossings).

The preferred route also has the potential to constrain the development of a future Wyong Coal Project within Precinct 15. Specifically, the pipeline may impact on the provision of large scale infrastructure such as coal washeries and rail loops.

Impact of the Gas Supply Pipeline on Flora and Fauna

The preferred gas supply pipeline route (Option A) traverses ecologically sensitive areas, including wetlands and habitat of threatened species and ecological communities. Most of the pipeline route and the location of the inlet facility have been identified as Interim Conservation Areas by Wyong Shire Council. These areas are under investigation for either the conservation of threatened species, retention of native vegetation and/or protection of wildlife corridors.

Although the amount of clearing required for the proposed pipeline is reduced by following an existing transmission easement and other disturbed areas, there are still a number of ecological issues that require consideration.

Threatened Species

The proposed pipeline route passes through areas identified in Wyong Shire Council's Conservation Management Plan for *Angophora inopina* as having high and medium conservation rankings for this species. Council is considering these areas for future conservation reserves. The flora and fauna assessment identified immature individuals in some of the areas proposed to be cleared and future management of vegetation along the pipeline route, particularly in relation to *Angophora inopina*, needs to be considered. The existing transmission easement is up to 60 metres wide in sections and consideration could be given to the extent to which cleared areas need to be maintained. A reduction in the width of cleared areas maintained and rehabilitation of some native vegetation, particularly in areas where *Angophora inopina* is present, would be preferable. This could also reduce barriers to fauna movement.

The surveys for the Wallum Froglet (*Crinia tinnula*) were undertaken at a time when the species would be unlikely to be detected, even if present (i.e. there had not been any rain for a number of days). In the Wyong Shire, Wallum Froglets are generally only heard calling after heavy rain, say 30mm to 50mm in 24 hours. This species has been recorded both upstream and downstream of the proposed creek crossings in the vicinity of Spring Creek and its tributaries. There is a current known population between Spring and Wallarah Creeks at Blue Haven. Council supports directional drilling under creeks so as to limit potential impacts on amphibians. A condition should be placed on any consent to ensure this occurs.

The study area represents known habitat for the Squirrel Glider (*Petaurus norfolcensis*). Habitat clearing and fragmentation is the greatest single threat to Squirrel Gliders in Wyong Shire. Possible impacts of the proposal on this species should be reduced if few hollow bearing trees are cleared and the width of the cleared areas along the transmission easement is not increased. Protocols for clearing Squirrel Glider habitat are detailed below under the heading *Mitigation Measures.*

Methodology

It was noted that the fauna surveys carried out on the eastern side of the Pacific Highway, Charmhaven were far less than those carried out on the western side. Only Anabat detection and a small amount of Elliott trapping was carried out in the eastern section of the study area.

Wetlands

The preferred gas supply pipeline route intersects wetland buffers and wetlands of local significance, as identified in Council's planning instruments. Council supports directional drilling under these wetland areas so as to limit potential impacts. A condition should be placed on any consent to ensure this occurs

Mitigation Measures

Council recommends the following measures form part of conditions of any consent issued for the pipeline:

- All amelioration measures outlined in Section 5.3 of the Flora and Fauna Assessment should be adopted and adhered to.
- Rehabilitation works along the pipeline route and any other disturbed areas should include plantings with seeds collected from the area prior to construction.

- A Flora and Fauna Management Plan should be prepared in consultation with Council as part of the Contractor Environmental Management Plan.
- The Flora and Fauna Management Plan should include a protocol for clearing in Squirrel Glider Habitat. The following protocol is used by Council for such clearing:

    1. All occupied Squirrel Glider habitat trees in the area to be cleared to be identified (by survey) and marked;
    2. Marked habitat trees and corridors of retained trees linking marked habitat trees with the nearest uncleared (secure) habitat areas to be left standing after initial vegetation clearing for a period of at least 3 weeks (to encourage gliders to disperse into adjacent uncleared habitat);
    3. After the three week waiting period standing habitat trees and corridors may be felled commencing with the most distant trees from secure habitat;
    4. Clearing should be undertaken in the Spring to Autumn period to facilitate survival of displaced animals;
    5. If habitat trees are in short supply (< 4 suitable trees per hectare) artificial nest sites (nest boxes) should be installed in adjacent (secure) habitat before clearing;
    6. If no secure habitat exists nearby to areas to be cleared, land owners should seek advice from the NSW National Parks and Wildlife Service before proceeding with clearing.

Noise

Council considers that noise generated by the proposed turbine facility has the potential to have the biggest impact on surrounding residential areas and requires that all noise levels comply with all relevant guidelines, even during adverse weather conditions. It should be noted that surrounding residents are more likely to have windows open during adverse weather conditions in summer and that this could worsen the impact of noise from the facility, particularly at night when background noise levels are low and occupants are trying to sleep.

Council notes that the predicted noise level exceedance in sound catchment B has been rationalised against the predicted operation hours of 500hr/year. The intention of the proposal is to imply a reduced impact by assuming that the nuisance will be negligible because it is not continuous. Council considers this assumption to be flawed.

Table 10.8 indicates that there is between 6% and 23% likelihood that this operation will cause nuisance at any particular time of operation. Additionally, it is likely that demand for peak energy will increase, creating greater need for the operation of these facilities. Hence the potential for nuisance is likely to increase over the life of the facility.

The mitigation measures outlined within Section 10.3 of the EIS should form part of the conditions of any consent and a copy of the final Noise Management Plan and Operational Environmental Management Plan for the operational phase of the facility should be forwarded to Council for consideration prior to commencement of use of the facility. Results of ongoing monitoring during peak usage should also be forwarded to Council for consideration and action, if required.

Emissions

The mitigation measures outlined within Section 11.3 of the EIS must form part of the conditions of any consent and a copy of the Air Quality component of the Operational Environmental Management Plan for the operational phase of the facility should be forwarded to Council for consideration prior to commencement of use of the facility. Results of ongoing monitoring during peak usage and 'black starts' should also be forwarded to Council for consideration and action, if required.

Distillate Fuel Transport

The EIS states that the 1,500 kilolitre tank of distillate fuel will be sufficient for 7 consecutive hours of operation. It is predicted that 75 hours/year of operation will utilise distillate fuel, equating to over 15,000 kilolitres/year of fuel. This fuel will be transported to the site in 1000 - 1500 road tanker movements along public roads. A condition should be placed on any consent requiring a public road dilapidation report prior to commencement of construction of the facility. The condition should also state that the cost of any damage caused to the public road system during construction or ongoing operation of the facility is to be borne by Delta Electricity.

Waste Water Discharge

Waste water from the facility will discharge via the existing route to Lake Munmorah. No detail is given in the EIS regarding the potential impact this additional discharge may have. Council requests that an assessment of these impacts be carried out and the results considered as part of assessment of the proposal prior to determination. Studies have shown that the existing power station impacts on the lakes system as outlined below:

> *"2.3 Munmorah Power Station: The Munmorah Power Station on the shore of Lake Budgewoi is the single most important point-source of anthropogenic pollutants to the Tuggerah Lakes system. The facility exerts a range of pressures, including raising water temperature, releasing chlorine and heavy metals, entraining biota, and altering the hydrodynamic environment of the lakes. Australia: State of the Environment; Nutrients in Marine and Estuarine Environments"* (Phillip R. Cosser, Environment Australia, 1997
>
> *Of the power station's various effects upon the lake environment, those caused by elevated water temperature are perhaps the most significant. The considerable heat load on the upper lakes causes a significant impact upon organisms and ecosystem processes and these are believed to have caused substantial ecological impacts within 1 kilometre of the outfall canal (Thresher et al. 1993). The power station may also have more broad-ranging effects on Lake Munmorah and Lake Budgewoi, although this could not be determined from the available data (Thresher et al. 1993)."*

Restrictions on Use

The EIS states in various places that the proposed gas turbine facility has the potential to be easily converted to a combined-cycle gas turbine facility to cater for intermediate or base-load demand. It also states in Section 2.5 that conversion would be the subject of additional environmental assessments and approvals from relevant planning authorities.

Council agrees that conversion of the facility to cater for anything other than peak demand periods may have increased environmental impacts and may result in unacceptable noise and air quality impacts on nearby residential areas. As such, it is requested that any consent be conditioned to ensure a separate application is submitted to and approved by the relevant authority for any conversion/increase in electricity output.

Please contact Wesley Wilson on 4350 5500 or email wilsonw@wyong.nsw.gov.au should you wish to discuss the above matters further or require additional information.

Yours sincerely

Martin Johnson
Manager
DEVELOPMENT ASSESSMENT