



Tuesday October 14, 2008

Anna Timbrell  
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Major Infrastructure Assessments  
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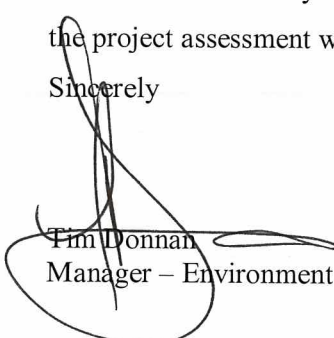
Dear Anna,

***Re: Narrabri Gas Utilisation Project, Narrabri LGA (07\_0023)***

In response to the request for further information (received via email 26 September 2008) on various issues outstanding in Planning NSW's assessment of the proposed Narrabri Gas Utilisation Project, please find enclosed the following detailed submission.

Please contact me if you require further information. I look forward to discussing the progression of the project assessment with you very soon,

Sincerely

  
Tim Donnan  
Manager – Environment

1. *Provide a reasonable estimated time frame for the proving stage of the gas wells...[continues]*

The purpose of the proving stage is to gather production data that will allow independent certifiers to both confirm the commerciality of gas production and quantify the level of gas reserves available for production. It is possible that this process could itself be staged, with incremental increases in gas reserves achieved as gas production rates continue to increase. In addition, to establish reserves sufficient to allow commercial production it will be necessary to undertake other activities, such as seismic acquisition and corehole drilling.

The 'proving stage' for testing of pilot production wells is not directly related to the issue of a Petroleum Production Licence ('PPL') or the commencement of commercial gas production.

Contingent upon commerciality being confirmed and a sufficient level of gas market and, in turn, gas reserves being established, it is anticipated (but by no means guaranteed) that the opportunity will eventually emerge to apply for a PPL and to undertake production development activities. The commencement of commercial production will not necessarily imply that the proving stage of gas production has finished.

2. *Provide a reasonable estimation of the amount of gas to be produced during the proving stage...[continues]*

Section 2.4 of the EA provides a reasonable estimate of gas to be produced which is based upon the production modelling completed by an independent third party consultant. An improved estimate cannot be provided until the production testing phase has advanced and the production profiles have matured (i.e. gas production rates have peaked). At this stage in the projects life, the production profiles continue to exhibit the classic trends described in section 1.6.3 of the EA, however it remains impossible to estimate a timeframe in which this may occur.

After ten years, if production is commercial then it is expected gas production would continue, with gas either used at the Wilga Park Power Station or supplied to market. If production is not economic, it is probable that production would cease.

3. *Provide a reasonable estimation of the intended life of the Wilga Park Powerstation...[continues]*

It is expected the Wilga Park Power Station will have a life of at least, and potentially longer than, ten years. If a commercial gas production development proceeds, the Wilga Park Power

Station will continue to have a useful role to play in utilising gas from new wells that are being developed to supply the NSW gas market or gas than is from time to time surplus to market requirements. The ability to quickly switch the gas fired engines on or off (as for peak load power stations elsewhere) illustrates clearly the role Wilga Park will play into the future and in response to electricity or gas market demands.

4. *It is noted that the pipeline will supply gas from Bibblewindi and Bohena test wells. Should these gas fields become exhausted in the short term, are there any other fields that will make use of this pipeline?*

As noted in Section 2.4 of the EA, while there no other fields presently developed to supply gas to the proposed development, additional pilot production drilling/production has and will continue to be a key requirement of the exploration and development of the areas CSG resources.

To illustrate this ongoing exploration effort, the Proponent continues to implement a significant program of core hole drilling and seismic acquisition across PAL2 and Petroleum Exploration Licence 238 which contributes to the delineation of further CSG prospects and the fulfillment of key requirements of the reserves certification.

DECC rightly points out that as a result of these exploration efforts, a lateral production pilot is being installed approximately 4500m south/southeast of the Bibblewindi CSG Pilot on a prospect identified in December 2007 (Bibblewindi-11 corehole).

Gas from additional production pilots, such as the Bibblewindi laterals, will eventually be utilised at Wilga Park as could gas produced from any number of additional prospects that are identified. However, the ability to produce gas is contingent upon the completion of the drilling, the installation of subsurface production infrastructure and ultimately performance of the pilot. The installation and operation of a water/gas gathering system is initially designed to facilitate the transportation of production water from this pilot back to the water management facility at Bibblewindi-1. At this stage, it is too early in the process to consider the inclusion of this lateral pilot into the current Proposal.

5. *What decommissioning plans are proposed for the pipeline?*

There are currently no decommissioning plans for the pipeline given that the Narrabri CSG Project is at such an early stage of development. With the lifespan of a CSG well likely to exceed



20 years, it is envisaged that the infrastructure will be utilised for the purposes discussed for at least that length of time.

As stated in response 6.10 of the response document, The Final Statement of Commitments (action 11.7) has been amended to reflect the position that prior to any abandonment action, an abandonment plan is required to be compiled and provided to the Director-General of DPI for his approval.

6. *Please provide details of contingency gas supplies, if any, should the gas supply at the Bibblewindi and Bohena CSG Pilot wells dry up.*

It is highly unlikely that the gas supplies at the Bohena and Bibblewindi CSG pilots will ‘dry up’ (also discussed in points 2, 3 & 4) in the short to mid term. More likely is a steady increase in gas production in line with modeled production profiles to which additional CSG can be added as subsequent pilots are installed and commence production testing.

Furthermore, it is necessary to note that the Coonarah Gas Field is a “conventional” natural gas discovery (see section 1.6.2 and 1.6.3 of the EA for further discussion and comparison) with essentially a finite lifespan that differs significantly from a CSG reservoir. It is neither necessary nor appropriate for contingency arrangements to be established at the present time or addressed under the EA. On the contrary, the purpose of the proposed infrastructure is establish an environmentally friendly means for using gas presently being, and predicted to be, produced. Failure to commercialise coal seam gas production is a risk that lies with the Narrabri Coal Seam Gas joint venture.

7. *Provide details of additional water requirements resulting from expanding operations at the power station (if any), where that water supply comes from, impact on other users and whether it is a reliable source*

Expanded power station operations do not give rise to any material increase in water requirements. The gas fired engines and associated generation infrastructure do not utilise water during normal operation.

8. *Provide details on how biodiversity offsets are to be achieved. Potential biodiversity offset sites must be identified now, to demonstrate that a viable offset outcome could be achieved. This should reflect the likely scale of the offset required and the availability of land.*



Identifying how adequate biodiversity or vegetation offsets to account for the cumulative impacts of the proposal are to be achieved is a complex issue that is unlikely to be fully resolved nor realised in the short-term. However, the Proponent can provide the following discussion that may outline the basis for ongoing negotiations of the offset program and its scope for growth.

- The proponent calculates that the proposal will result in approximately 13.1 ha of native vegetation being extensively modified in the near to mid term.
- The intrinsic conservation values of the three vegetation communities impacted are fairly broad as they are widespread and regionally common communities that do not represent suitable habitat for threatened species known to occur within the region
- Utilising the Biobanking assessment tool as a means to provide a base case for initiating adequate offsets, the Proponent commits to observing a minimum 3 to 1 ratio in a 'like for like' offset situation. This ratio and the base data utilised to calculate the actual offset is entirely negotiable and open to refinement where required. Furthermore, the "maintain or improve" outcome will be developed in consultation with DECC using the Biobanking tools developed by DECC.
- As there are no locally derived credits currently available nor likely in the short term, the Proponent commits to undertaking the offsets program internally in consultation with DECC and the Namoi CMA.
- Areas identified as potentially suitable for vegetation offsets ('like for like') include areas on the forest/farmland interface where woodland remnants of poorer quality can be readily accessed, rehabilitated and protected (maintain/improve).



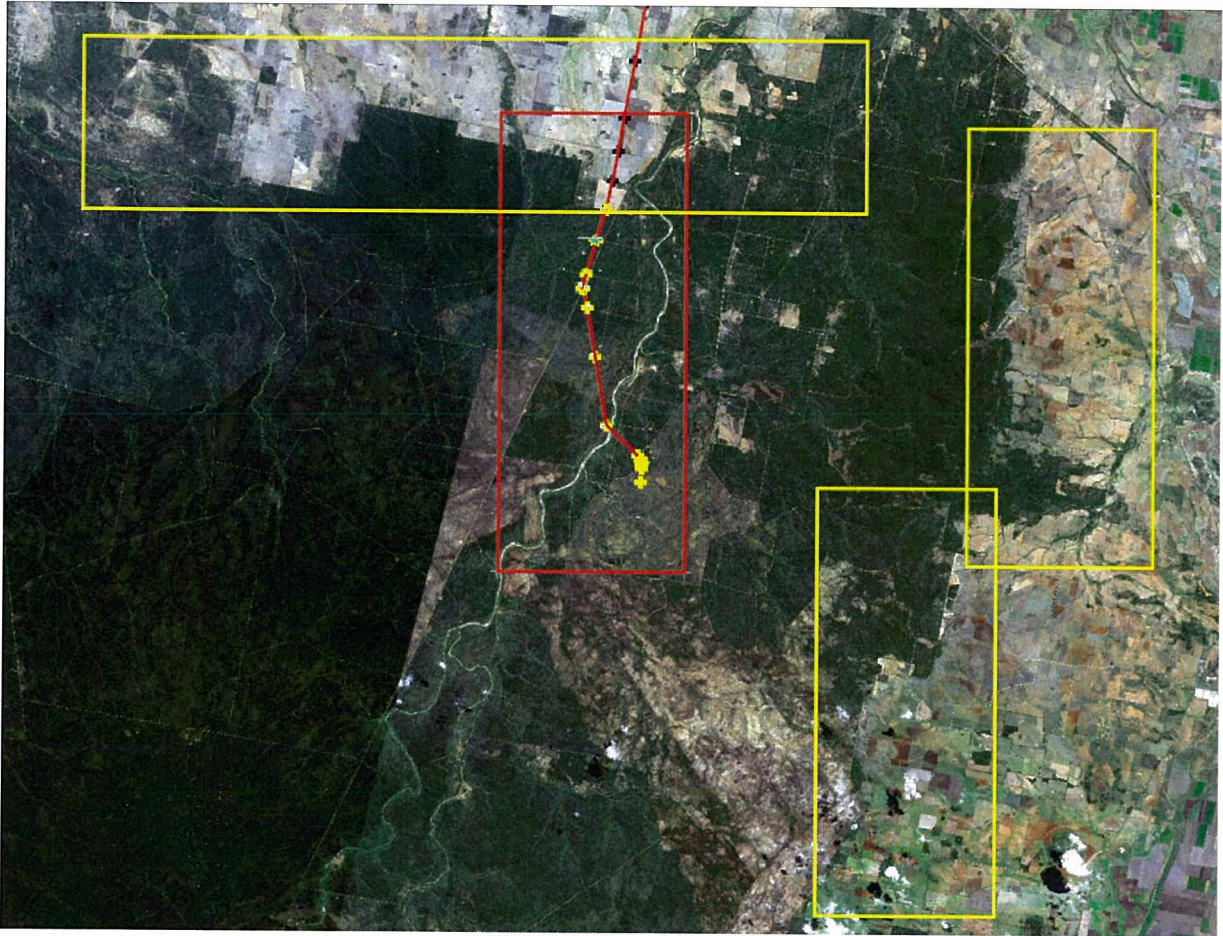


Figure 3. Areas identified as suitable for like for like vegetation offsets

- Areas identified as potentially suitable for biodiversity offsets include many areas to the west of the Project site where existing remnants of the Brigalow *endangered ecological communities* exist. This itself may require direct procurement of lands that possess the characteristics of the community or otherwise the formulation of agreements with landholders willing to create suitable credits that will serve to achieve the agreed outcomes.



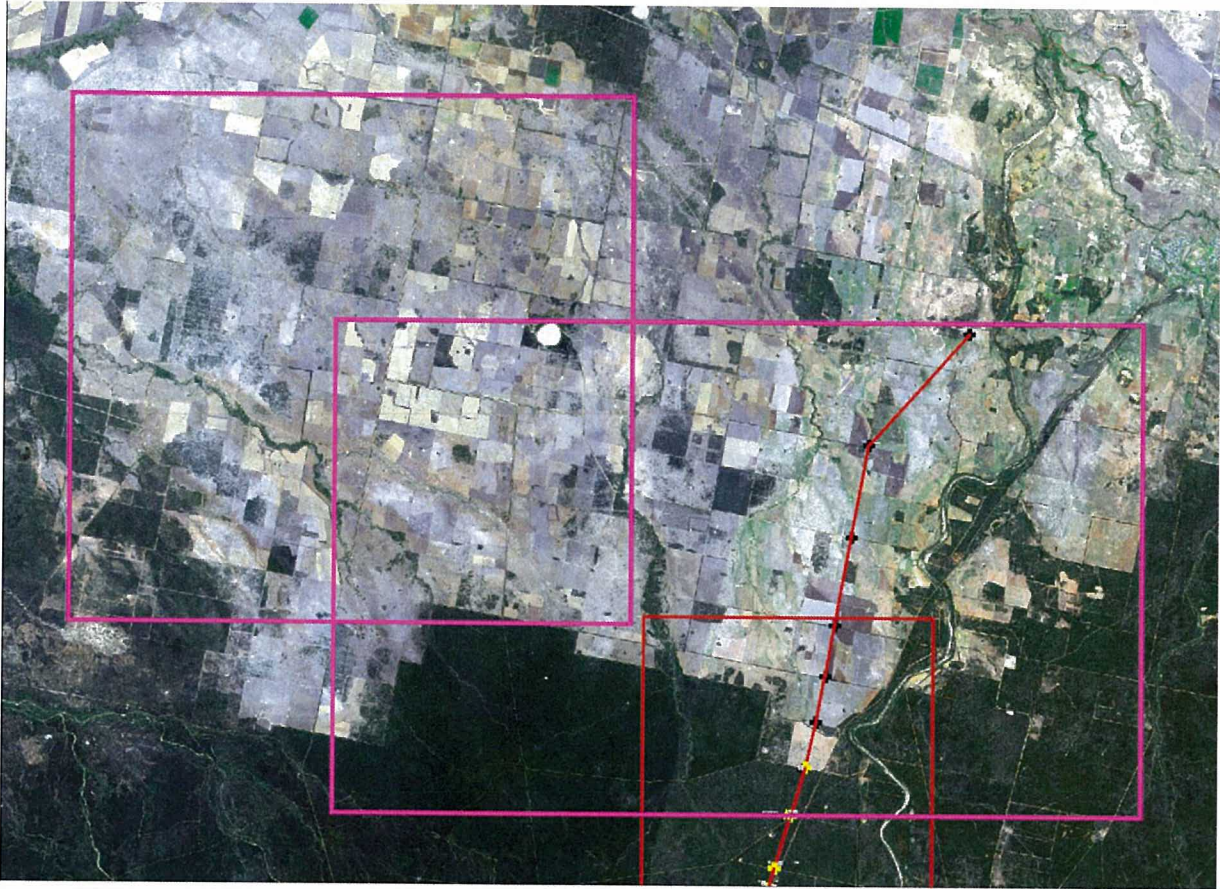


Figure 4. Areas identified as suitable for like for like biodiversity offsets

9. *Confirm whether the new pipe location is within the assessed corridor*

The amended location of the pipeline between point A & B as outlined in the preferred project plan is within the assessed corridor in respect to flora and fauna studies completed to date. Please refer to appendix 2 of the preferred project report in which the Greg Elks and Keith Kendall indicate that the proposed alteration of the pipelines southern terminus has been assessed in terms of flora and fauna respectively, and as such the proposed alteration of the pipeline between points A and B is considered highly unlikely result in specific impacts significantly different to those already described.

This section between points A & B have now been assessed for its actual and potential impacts on sites of Aboriginal heritage significance. The revised pipeline location shown in the preferred project report has been verified against all current Aboriginal heritage site databases including the DECC AHIMS and NLALC/PFAMC heritage registers and has under gone archaeological surveying for unknown sites of significance.

In addressing the issues raised by DECC in regard to Aboriginal heritage, the Proponent has:

- Expanded the Aboriginal community consultation framework through expressions of interest for the project (issue 15). One respondent group expressed interest in participating in the expanded archaeological survey and discussions relating to Cultural heritage management (see Appendix 3 & 4 of the Proponents response document). Survey reports from the initial archaeological survey have been forwarded to the Gomeroi Traditional Owners Group in preparation for these proposed actions.
- Undertaken that the Aboriginal heritage surveying will be expanded to a corridor 50m wide and 100m wide in woodland and riparian zones respectively.

Correspondence from the NLALC is attached that confirms the results of the further archeological surveying carried out on the proposed route.

*10. Additional noise impact assessment information – 12 x 1MW scenario*

- *The percentage of land that is noise affected as a result of the approved development on site; and*
- *The percentage change in noise affected land that would result from the current proposed project.*

The percentage of land that is noise affected as a result of the current approved development is shown in table 5.19 (amended) below. The operation of up to 12 x 1MW units at Wilga Park and the noise impacts associated with this scenario have been modelled as affecting three adjoining blocks, two of which are vacant. 24% of the Hardcastle block (vacant), 11% of the Archer block (vacant) and 0.2% of the Cochrane block will be affected by greater than background noise levels under temperature inversion conditions. Percentage figures for this climatic phenomenon are given here as they represent the worst case scenario.

The percentage change in noise affected land that would result from the current proposed project are found in the two right hand columns of table 5.19 (amended) below. For the blocks closest to the Wilga Park facility, the percentage change from the 12 x 1MW scenario (currently approved) to the maximum generating capacity of 40MW is:

- 3.8% increase for Cochrane
- 19% increase for Hardcastle
- 4% increase for Hatch



- 14% increase for Archer
- 3% increase for Williams

**Table 5.19 (Amended – 14/10/08)**  
**Areas of Adjoining Land Where 35dB(A) is Exceeded**

Ref.	Owner	Area of Land Where 35dB(A) is Exceeded – ha (% of lot)				
		40MW Generators				12 x 1MW
		Calm	SE	NW	Inversion	Inversion
B	R. & D. Cochrane	7 (5%)	13 (9%)	0	6 (4%)	0.3 (0.2%)
E	P. Hardcastle	65 (43%)	58 (38%)	43 (28%)	66 (43%)	37 (24.0%)
F	R. & D. Hatch	2 (2%)	0	2 (2%)	4 (4%)	0 (0%)
N	R. Archer	49 (24%)	21 (10%)	58 (28%)	51 (25%)	24 (11%)
O	J. Williams	8 (4%)	4 (2%)	3 (2%)	6 (3%)	0 (0%)

Amended noise contour maps for the current, current approved and proposed scenarios have been formulated and are enclosed.

# Narrabri

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Local Aboriginal Land Council

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Anna Timbrell - Planning NSW  
C/- Tim Donnan  
Eastern Star Gas Limited  
GPO Box 4526  
Sydney NSW 2001

13<sup>th</sup> October 2008

Dear Anna

Re: Proposed Gas Line Pilliga East State Forest

Eastern Star Gas Ltd requested assistance from Narrabri Local Aboriginal Land Council in the conducting of further Aboriginal heritage surveying on the proposed gas pipeline in the Pilliga East State Forest. Further to the completion of surveying in October 2007, approximately 4km of the pipeline route had been altered and negotiations with DECC had resulted in an agreement to expand the survey effort to achieve a greater effective coverage of the disturbance corridor.

Additional fieldwork was undertaken on Saturday 11<sup>th</sup> October 2008, by two representatives of the Narrabri Local Aboriginal Land Council these being Matthew Trindall and Shane Toomey and two representatives from the Gomerai Traditional Owner Group Michael Trindall and Nathan French. Eastern Star Gas was represented by Tim Donnan (Manager - Environment).

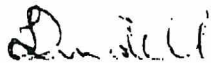
Survey methodology comprised a linear transect of approximately 50m in width along the entire length of 15km disturbance corridor. The survey was completed on foot over approximately 9 hours in fine, cool conditions. Particular attention was given to the terrace features within 150m of Bohena Creek where the predictive model devised for the previous survey suggested a greater likelihood of significant sites.

Ground conditions and visibility varied considerably from high to very low, although this is not considered significant in the ability to locate sites. Generally speaking, ground visibility in areas considered more likely to harbor sites of significance was high to very high.

Narrabri Local Aboriginal Land Council have been advised by Matthew and Shane that the additional survey effort was unable to identify any further sites or places of heritage significance.

If you require any further information please contact me on the above number.

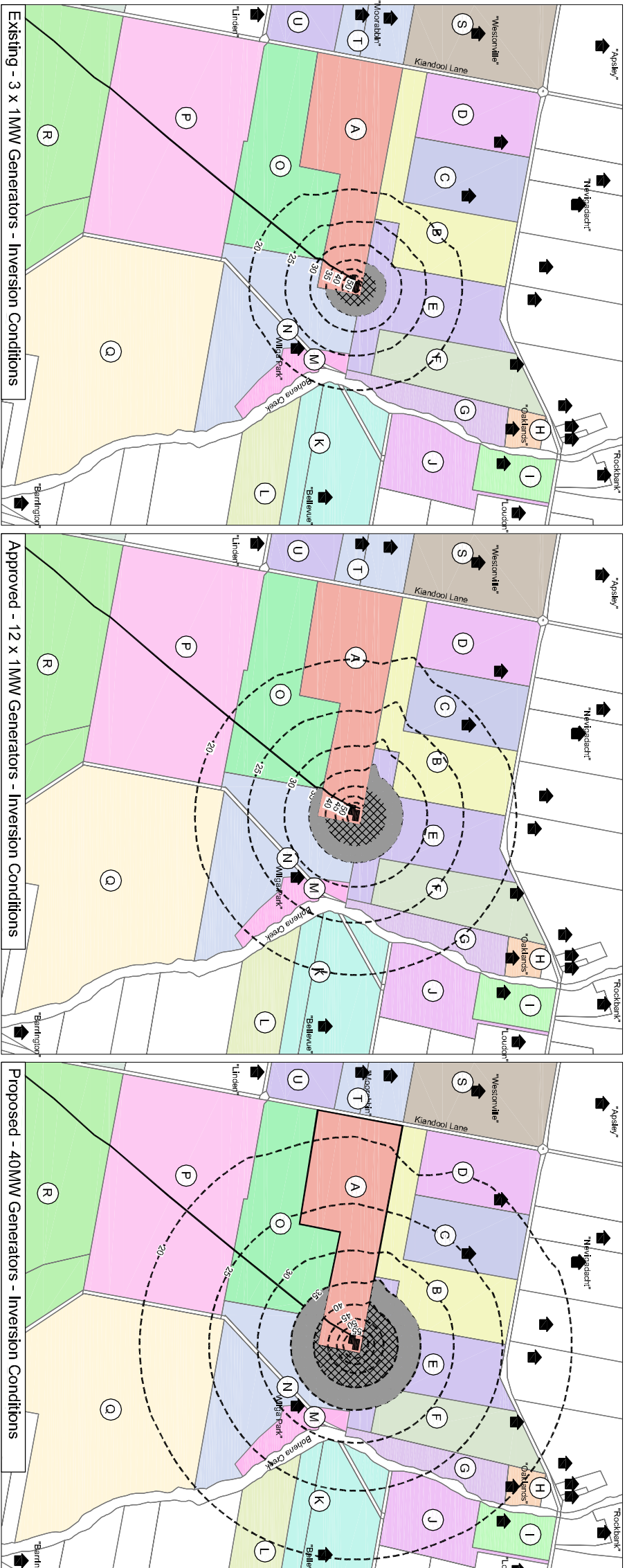
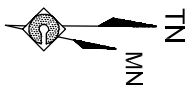
Yours truly,



Lynn Trindall  
Chief Executive Officer  
Narrabri Local Aboriginal Land Council

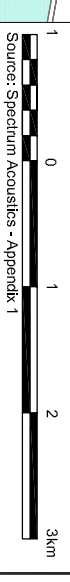


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Reference	Owner
A	Narrabri Power Limited
B	R. & D. Cochrane
C	T. V. Browning
D	M. & T. Wilson
E	P. Hardcastle
F	R. & D. Hatch
G	G. & L. Stanford
H	I. & P. Shields
I	E. & T. Gordon, M. Thrift & R. Baker
J	A. Steele
K	P. & Z. Swain
L	K. K. F. & C. Hill & D. & J. Canfell
M	K. & R. Archer
N	R. G. Archer
O	J. D. Williams
P	B. W. Cain
Q	L. Hodges
R	C. B. & A. M. Cain
S	J. Charles
T	F. Wales
U	R. Fern

SCALE 1:60 000



Source: Spectrum Acoustics - Appendix 1

- Proposed Gas Flow Line Corridor
- Cadastral Boundary
- Noise Contour (dB(A))
- Area of Exceedance of 35dB(A)
- Area of Exceedance of 40dB(A)

EXISTING, APPROVED AND  
PREDICTED NOISE LEVELS  
AROUND WILGA PARK  
POWER STATION