

Figure 1 Proposed Site Layout Details

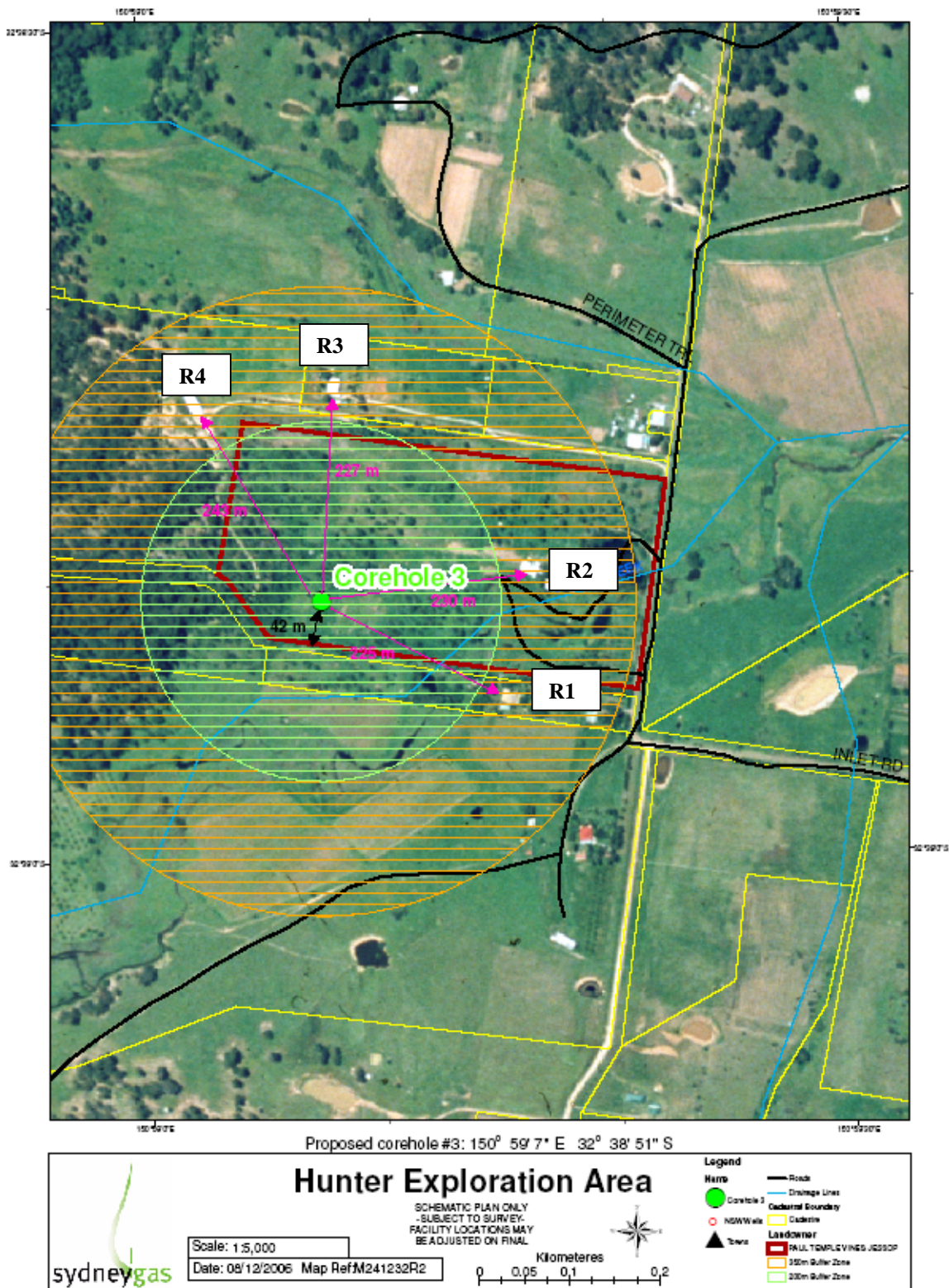


Figure 2 Residential Receivers



2 Noise Criteria

Since no background monitoring has been undertaken; GHD have considered the assumption of a daytime background noise level of 35dB(A) for this site, which is typical of a rural environment.

The period of operation is expected to be less than 40 days therefore a construction noise criteria has been proposed with the project specific noise goal set as 45 dB(A) (L_{A10}). Table 1 shows the construction noise criteria sourced from Section 171 of the DEC's Environmental Noise Control Manual.

Table 1 Construction Noise Criteria, L_{10} dB(A)

Construction Period	Level Restrictions	Noise Limit, L_{A10}
Less than 4 weeks	Background + 20 dB	55
Less than 26 weeks	Background + 10 dB	45
More than 26 weeks	Background + 5 dB	40

Normal construction hours are 7:00 am to 6:00 pm Monday to Friday, and 8:00 am to 1:00 pm Saturday and at no time on Sundays and public holidays. Construction activity outside those hours is not preferred but can usually occur provided the normal operational noise criteria are met and construction noise is not substantially audible or intrusive inside a dwelling.

3 Noise Modelling

Noise propagation modelling with consideration to ISO 9613-2 was undertaken to predict the noise exposure generated by the proposed site coring activities at the nearest residence. Predicted results are based on available information provided and should only be used as a guide.

The Rig emitted sound power level was based on information directly supplied by the client.

The site was modelled under neutral meteorological conditions, with no acoustic attenuation applied, for all modelled plant sources operating simultaneously at full power.

Estimated power levels for primary noise generating equipment are provided in Table 2.

Table 2 Sound Power Levels for primary operational noise sources - SWL dB(A)

Plant Item	Qty	SWL	Height (m)
Sump Pump	2	85	1
Bean Pump	2	85	1
LF230, Type LF90	1	107 (L_{Max})	3



4 Modelled Results

Modelled sound pressure levels at the residential receiver locations are summarised in Table 3

Operational modelling was not undertaken for night time scenarios as GHD understand that the proposed facility will not operate outside typical daytime hours.

The noise criteria are set for noise levels determined as $L_{10(15min)}$. During a full 15-minute period, the machinery items to be used on site will operate at maximum sound power levels for only brief stages. At other times, the machinery may produce lower sound levels while carrying out activities not requiring full power.

Based on information provided, modelling results suggest that compliance to the set criteria is expected at all the modelled receivers during the day operational time period.

Table 3 Modelled daytime receiver sound pressure levels [dB(A)]

Receiver	Distance (m)	Predicted Level dB(A)
R1	225	43
R2	230	43
R3	227	43
R4	243	42

5 Recommendations and Conclusion

Compliance testing is recommended to be undertaken during the initial operations. Compliance testing should be in the form of attended measurements, conducted at the most sensitive receiver boundary at a time of maximum impact.

Based on information provided, the findings of the assessment suggest that the project can meet construction noise goals.

Please call me if you require further information or clarification.

Yours sincerely

Evan Milton

Engineering Consultant - Air & Noise Service Group
49799909