10 April 2013

WM Project Number: 06159-WM
Our Ref: AGL100413 RH_ComplianceResults

Tom Lawler
AGL Upstream Investments Pty Ltd
Lot 35, Medhurst Road
MENANGLE NSW 2568D2

Dear Tom

Re: Operational noise monitoring of well sites SF17 and SF20

Introduction

Wilkinson Murray was commissioned to conduct operational noise monitoring of well sites Spring Farm 17 (SF17) and Spring Farm 20 (SF20). Measurements were conducted at the potentially most affected residential receivers to assess compliance and at the well sites to establish source sound power levels. This letter report summarises the results of the measurements conducted on Wednesday, 3 April 2013 (well sites) and Thursday, 4 April 2013 (residential receivers).

Both well sites were free flowing during the measurements. At SF17, all three wells (SF1, SF2 and SF3) were producing. At SF20, only two of the four wells were producing (SF5 and SF7 were producing while SF8 and SF9 were shut down).

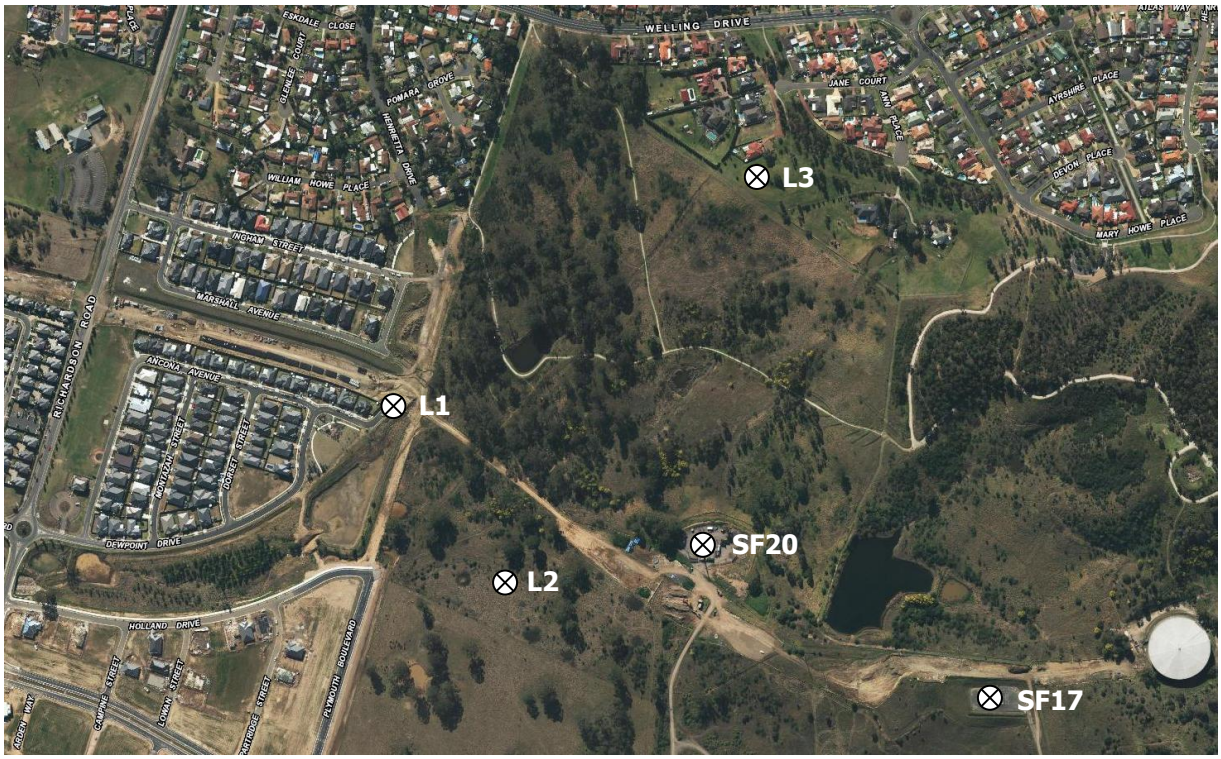
Measurement Locations

Measurements conducted at the potentially most affected residential receivers surrounding the well sites are described as follows:

- L1 67 Dewpoint Drive (existing house located directly west of the well sites)
- L2 Corner of Holland Drive and Reynolds Street (representing the easternmost point of Landcom's Spring Farm Eastern Village residential development area currently in construction)
- L3 15 Jane Court (existing house located to the north of the well sites)

Figure 1 shows the measurement locations and both well sites.

Figure 1 Measurement Locations & Well Sites



Operational Noise Criteria

The Minister's Conditions of Approval for the Project state Project-specific operational noise criteria as shown in Table 1.

Table 1 Project-Specific Operational Noise Criteria

Well Site	$L_{Aeq,15min}$ (dBA)		
	Day (7.00am – 6.00pm)	Evening (6.00pm – 10.00pm)	Night (10.00pm – 7.00am)
SF17 & SF20	43	41	36

Results of Attended Noise Measurements

Table 2 summarises the results of the measurements conducted at the receivers. Meteorological conditions were considered suitable for noise measurements (i.e. no rain and wind speeds below 5m/s).

Table 2 Measurement Results at Residential Receivers

Period	Measurement Start Time	Location	Comments	Estimated $L_{Aeq,15min}$ due to Well Sites (dBA)	$L_{Aeq,15min}$ Noise Criteria (dBA)		
					Day	Eve	Night
Day	4.30pm	L1	Measurement dominated by distant traffic and insect/frog noise (37-43dBA). Well sites inaudible at all times.	<31dBA	43		
	4.52pm	L2	Measurement dominated by distant traffic and insect/frog noise (30-36dBA). Well sites inaudible at all times.	<22dBA	43		
	5.20pm	L3	Measurement dominated by distant traffic and insect/frog noise (34-35dBA). Well sites inaudible at all times.	<26dBA	43		
Evening	6.54pm	L1	Measurement dominated by distant traffic and insect/frog noise (40-46dBA). Well sites inaudible at all times.	<33dBA		41	
	7.16pm	L2	Measurement dominated by distant traffic and insect/frog noise (32-36dBA). Well sites inaudible at all times.	<24dBA		41	
	7.40pm	L3	Measurement dominated by distant traffic and insect/frog noise (36-45dBA). Well sites inaudible at all times.	<28dBA		41	
Night	10.00pm	L1	Measurement dominated by distant traffic and insect/frog noise (48-51dBA). Well sites inaudible at all times.	<40dBA			36
	10.19pm	L2	Measurement dominated by distant traffic and insect/frog noise (33-37dBA). Well sites inaudible at all times.	<25dBA			36
	10.45pm	L3	Measurement dominated by distant traffic and insect/frog noise (35-38dBA). Well sites inaudible at all times.	<27dBA			36

Measurements at the well sites established a total sound power level of 66dBA for SF20 and 67dBA for SF17. As such, levels are expected to be below 20dBA at the potentially most affected residential receivers.

Conclusion

On the basis of the attended measurements conducted at the potentially most affected residential receivers and at the well sites, noise levels generated by well sites SF17 and SF20 are found to comply with the relevant operational noise criteria during the day, evening and night time periods.

I trust this information is sufficient. Please contact us if you have any further queries.

Yours faithfully
WILKINSON MURRAY

Roman Haverkamp
Project Engineer