

Friday 2 September 2016

Elf Farm Supplies Pty Ltd
C/- Compaction and Soil Testing Services P/L
1/78 Owen Street
GLENDENNING NSW 2761

Our Reference 160787-03-01L-CF

For the attention of Mr Tete Awotedu

**Construction Noise Monitoring
Mulgrave Substrate Plant
108 Mulgrave Road, Mulgrave**

1.0 INTRODUCTION

Acoustic Consulting Engineers Pty Ltd was engaged by Elf Farm Supplies Pty Ltd to conduct a site attended construction noise audit for the preliminary construction works associated with the upgrade works for the existing Mulgrave Substrate Plant.

The purpose of the attended audit was to assess noise emissions from construction activities with reference to the 'Construction Noise & Vibration Management Plant. Substrate Plant. Mulgrave' Report No. 46.6411.CNVMP_MUL:GD/DT/CF/2016 Rev07 prepared by Atkins Acoustics and compliance with Schedule 3 - Condition 18 of the Project Approval No. 08_0255 that states:

Construction Noise Criteria

18. The Proponent shall ensure that the construction noise generated at the Substrate Plant site does not exceed the criteria in Table 1.

Table 1: Construction Noise impact assessment criteria dB(A)

Receiver/Location	Day
	L _{Aeq} (15 minute)
R1 – 46 Mulgrave Road, Mulgrave	52
R2 – Mulgrave Industrial area	65
R3 – 2 Railway Road, Mulgrave	52
R4 – 126 Mulgrave Road, Mulgrave	52
R5 – Chisholm Place, South Windsor	51

Notes:

- Noise generated by the Project is to be measured in accordance with the relevant procedures and exemptions (including certain meteorological conditions) of the NSW Industrial Noise Policy.

2.0 SITE ATTENDED NOISE AUDIT

This report presents the results and findings of site attended noise audits conducted from approximately 11.00am to 2.00pm on Wednesday 31 August 2016. Weather conditions during the audits were typically clear and dry with light to gusty breeze from the north-west. At the time of the audit construction activities typically comprised of unloading and

placement of demountable buildings, minor excavation, hand tools and small concrete slab pour on southern boundary of site.

The site attended noise measurements were conducted at five (5) reference residential receivers identified outlined in Project Approval No. 08_0255 as follows:

- R1** 46 Mulgrave Road (north)
- R2** Mulgrave Industrial Area (east)
- R3** 2 Railway Road (south-east)
- R4** 126 Mulgrave Road (south-east)
- R5** Chisholm Place (west)

The reference receiver locations are identified in *Figure 1*.

Figure 1: Reference Receiver Locations



Measurement instrumentation consisted of a Type 1 SVAN959 sound and vibration analyser and a Type 1 GRAS 40-AE prepolarised condenser microphone. The instrumentation was checked before and after the measurements with a SVAN SV30A acoustic calibrator and no drift in calibration was detected.

Measurements at each reference receiver location were conducted over two (2) fifteen (15) minute periods, instantaneous noise levels observed during the audit where appropriate were used to assess source noise contributions from construction activities. A summary of the measurement results is presented in *Table 1*.

Table 1 Noise Audit Measurement Results

Location	Statistical Noise Levels (dB(A))				Estimated Construction Noise Contribution $L_{Aeq,15min}$	Construction Noise Limit $L_{Aeq,15min}$	Compliance
	L_{Aeq}	L_{A90}	L_{A10}	L_{A1}			
R1	55.0	47.5	57.6	66.3	<38	52	√
	55.1	50.3	57.9	61.8			
R2	61.9	56.2	64.6	71.0	<46	65	√
	67.1	55.6	67.1	75.0			
R3	59.9	52.6	61.7	69.0	<43	52	√
	58.6	54.2	60.2	65.6			
R4	54.0	50.4	55.8	62.1	<40	52	√
	53.2	50.1	55.3	58.9			
R5	54.0	48.0	54.7	64.2	<38	51	√
	53.0	48.3	55.1	62.6			

Ambient noise during the site attended noise measurements were influenced by local and distant traffic, domestic activities, birds, dogs, trains, noise from Mulgrave Industrial Area, activities at R1 (see below) and natural elements.

Site observations confirmed that civil earthworks are presently being conducted at 46 Mulgrave Road, Mulgrave (R1) involving the filling and compaction of the southern portion of the site to accommodate a truck parking area and construction of storage and work sheds. Activities at R1 effectively controlled measured noise levels at this location, and these activities were also audible at R2.

Preliminary construction works from Mulgrave Substrate Plant were inaudible at all reference receiver locations and would be at least 10dB below the background noise levels. The results of site attended measurements confirmed that $L_{Aeq,15min}$ noise levels from construction activities satisfied the project noise goals in accordance with Schedule 3 - Condition 18 of Project Approval No. 08_0255.

We trust the information in this letter is satisfactory. Please do not hesitate to contact our office should further information or clarification be required.

Yours sincerely,



Carl Fokkema
Senior Acoustic Engineer
Acoustic Consulting Engineers Pty Ltd