

Tuesday 29 November 2016

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

Our Reference 160787-03-03L-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 <sub>Aeq</sub> (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 10.00am to 1.15pm on Monday 28 November 2016. Weather conditions during the audits were typically clear and dry with light to mild breeze from the north-north-east, north-east and east.

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.

At the time of the audit, construction activities comprised of bobcat, water truck, telehandler, front end loader and small drum roller. In addition there was occasional use of metal working hand tools including grinder.

Construction noise from the upgrade works associated with the Mulgrave Substrate Plant were not audible at measurement locations R1, R2 and R3.

Construction activities associated with the use of metal working hand tools and grinder were audible at measurement location R4. Whilst bobcat, front end loader and roller were occasionally audible at measurement location R5.

*Table 1* provides a summary of the site observations and *Table 2* the measurement results and estimated noise from construction activities. It should be noted that the measured 15-minute statistical levels presented in *Table 2* are for information only and not due to construction activities.

**Table 1 Site Observations**

Location	Observation
R1	Construction noise from Mulgrave Substrate Plant inaudible. Noise environment controlled by local and distant road traffic, occasional soil dumping at measurement location, chickens, birds, planes
R2	Construction noise from Mulgrave Substrate Plant inaudible. Noise environment controlled by local and distant road traffic, local industrial activities, cicadas, plane
R3	Construction noise from Mulgrave Substrate Plant generally inaudible. Occasional hammering on steel structure audible. Noise environment controlled by local and distant road traffic, local domestic activities, trains, birds
R4	Construction noise from Mulgrave Substrate Plant associated with metal working hand tools including grinder occasionally audible. Noise environment influences by distant road traffic, trains, birds, and maintenance activities on Pre Wet shed at Mulgrave Substrate Plant
R5	Construction noise from Mulgrave Substrate Plant associated with bobcat, front end loader and roller occasionally audible. Noise environment influences by local road traffic, trains, birds, chickens and distant thunder

**Table 2 Noise Audit Measurement Results**

Location	15-min Statistical Noise Levels (dB(A))			Estimated Construction Noise Contribution $L_{Aeq,15min}$	Construction Noise Limit $L_{Aeq,15min}$	Compliance
	$L_{Aeq}$	$L_{A10}$	$L_{A90}$			
R1	51.0	54.8	41.6	<32	52	√
	54.2	55.1	42.0			
R2	65.2	67.1	52.3	<40	65	√
	64.3	65.1	50.3			
R3	57.6	58.3	50.1	<38	52	√
	61.2	60.5	47.7			
R4	49.8	52.4	45.4	<44	52	√
	48.5	51.3	44.0			
R5	46.8	48.6	40.2	<40	51	√
	48.4	51.9	39.7			

The results of site attended measurements confirmed that  $L_{Aeq,15min}$  noise levels from construction activities associated with the upgrade of the Mulgrave Substrate Plant 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**