

## Appendix B

# NOISE ASSESSMENT

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**Attention: Terry Perram**

**Atkins Acoustics and Associates Pty Ltd.**  
Consulting Acoustical & Vibration Engineers

22 December 2014

**PRELIMINARY ACOUSTIC REVIEW**  
**MODIFIED OPERATIONS**  
**MUSHROOM SUBSTRATE PLANT**  
**MULGRAVE**

**1.0 Background**

*Atkins Acoustics* was engaged by Perram & Partners on behalf of Elf Farm Supplies Pty Ltd to prepare an operation and construction noise assessment for the expansion of the existing mushroom substrate plant at Mulgrave. The results and findings of that assessment were presented in 'Operation and Construction. Noise Impact Assessment. Mushroom Substrate Plant. Mulgrave' Report No. 40.6411.R1:CFCD4 Rev03 dated June 2010.

The development was approved by the Department of Planning and Infrastructure (11 January 2012) under Application No. 08\_0255 and Conditions of Consent imposed. In terms of specific operational noise limits, Condition 19 states:

**Operational Noise Criteria**

19. The Proponent shall ensure that the operational noise generated by the Substrate Plant site does not exceed the criteria in Table 2.

Table 2: Operational Noise impact assessment criteria dB(A)

<b>Receiver / Location</b>	<b>Day/Evening <i>L<sub>Aeq</sub></i> (15 minute)</b>	<b>Night <i>L<sub>Aeq</sub></i> (15 minute)</b>
R1 – 46 Mulgrave Road, Mulgrave	42	42
R2 – Mulgrave Industrial Area		
R3 – 2 Railway Road, Mulgrave		
R4 – 126 Mulgrave Road, Mulgrave	44	39
R5 – Chisholm Place, South Windsor		

**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 Proposal

Following ongoing development and review of best available technologies including odour control, Elf Farm Supplies propose to modify the approved development in order to increase efficiencies in site operations and provide improved odour control facilities. A summary of the approved and amended site layouts are presented in *Appendix 1*.

The changes are principally constrained to the western portion of the site and occupy the area that was to accommodate the approved pre-wet shed expansion. In line with current best available technology for the production of mushroom substrate, it is proposed to modify the method of production from an open mixing shed to enclosed processing within tunnels. This process would allow for the existing Traymaster Blender, previously identified and ranked as a significant noise source to overall site noise emissions to be de-commissioned.

The existing bio-scrubber system and approved second bio-scrubber would be replaced with a new emissions plant including ammonia scrubbers and bio-filter. Additional ancillary components of the development include enclosure of the existing bale wetting area, a bale breaking line, an enclosed conveyer systems and ducted ventilation systems.

We have been advised that the annual tonnage output and consequent truck movements to/from the site will continue to be limited as specified in the project approval. Accordingly the proposed modifications are principally associated with replacing the existing pre-wet process with a tunnel processing facility and improved odour management utilising a bio-filter system.

## 3.0 Preliminary Acoustic Review

The principle plant and equipment associated with the proposed amendments are fans and pumps that would be installed in purpose built plantrooms to the south (tunnels 1-6) and north (tunnels 7-10), hydraulic pumps and other ancillary plant in the plantroom adjacent the eastern side of tunnel 6, roof mounted fans and evaporative cooling towers. Mobile plant is consistent with the existing approved operations, with potential for an additional front end loader (FEL). Typical operation of mobile plant during the night would be within buildings.

Final design and details of all plant and equipment has not been prepared at this time, however a preliminary selection of envisaged plant and equipment from similar facilities and associated noise emissions has been considered and noise output assessed to the reference residential receivers identified in Condition 19.

A review of the preliminary noise modelling for calm and adverse meteorological scenarios identified in '*Operation and Construction. Noise Impact Assessment. Mushroom Substrate Plant. Mulgrave*' Report No. 40.6411.R1:CFCD4 Rev03 dated June 2010 has identified that noise emissions from the modified plant can be controlled with appropriate selections and effective noise controls to

achieve the noise limits imposed by Condition 19 of Application No. 08\_0255 at the referenced receiver locations.

#### **4.0 Recommendation**

During the detailed design phase of the project a detailed acoustic design review will be required to confirm compliance with the noise limits contained in Condition 19. It is appropriate that this detailed acoustic design review form part of any pending Consent Condition or Deferred Consent.

Operational noise from plant and equipment would be considered under typical worse case operating scenario under calm and adverse conditions referenced to the EPA, Industrial Noise Policy and reported in '*Operation and Construction. Noise Impact Assessment. Mushroom Substrate Plant. Mulgrave*' Report No. 40.6411.R1:CFCD4 Rev03 dated June 2010.

Please do not hesitate to contact our office if further information or clarification is required.

Yours sincerely,

**ATKINS ACOUSTICS & ASSOCIATES PTY LTD.**



Carl Fokkema

## APPENDIX 1: SITE LAYOUTS

*Approved Site Layout - Substrate Plant Expansion*

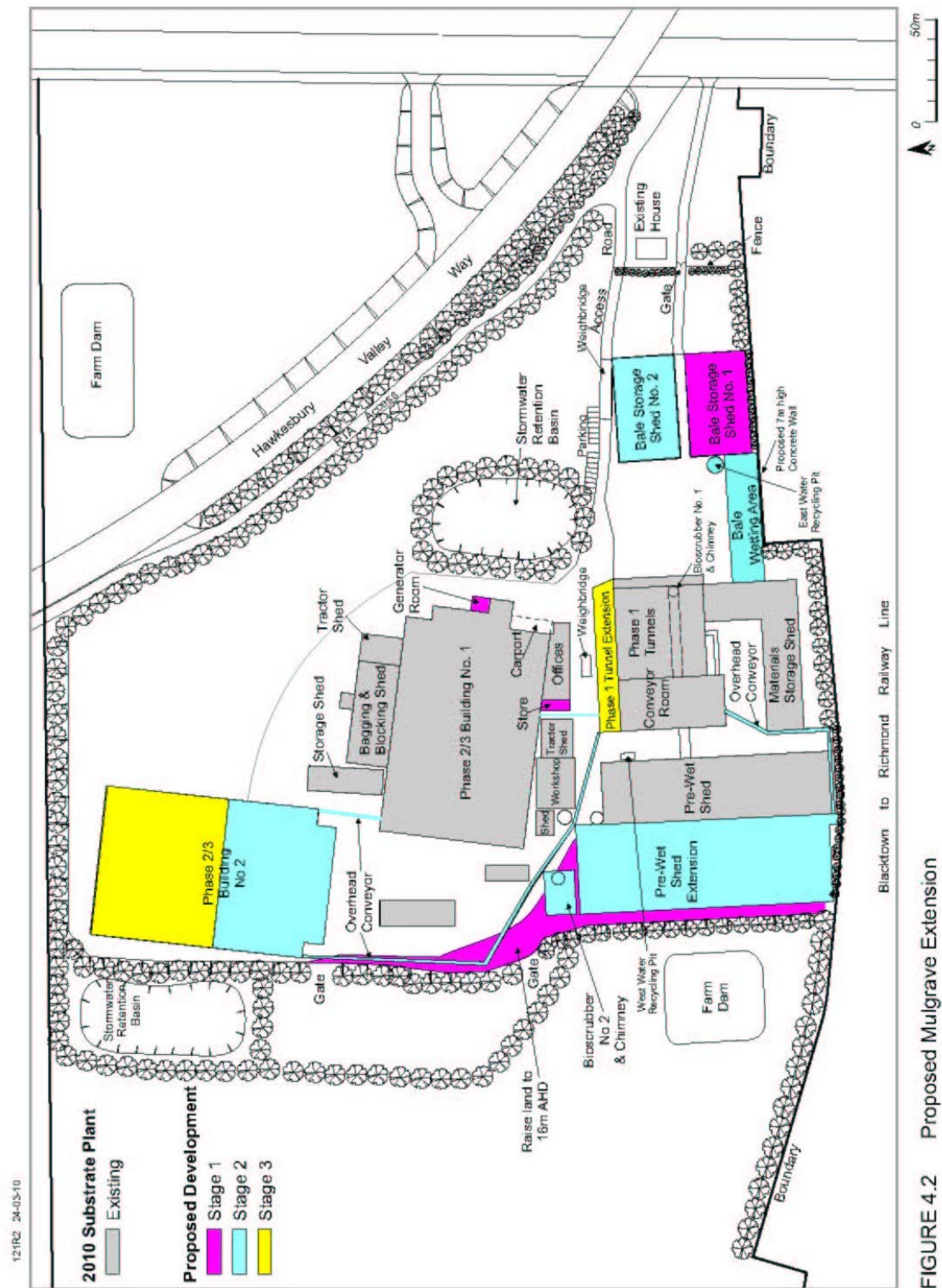


FIGURE 4.2 Proposed Mulgrave Extension

***Proposed Amended Site Layout - Substrate Plant Expansion***

