

Elf Farm Supplies

# STAGED DEVELOPMENT OF MUSHROOM SUBSTRATE PLANT

## CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

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137R1

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## Document Control

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# 1. INTRODUCTION

## 1.1 *Purpose of the CEMP*

This Construction Environmental Management Plan (CEMP) has been prepared to provide a framework for implementing appropriate environmental management practices during staged construction works for development of Elf Farm Supplies' mushroom substrate plant at 108 Mulgrave Road, Mulgrave.

The aim of the document is to:

- incorporate environmental requirements and mitigation measures relevant to construction derived from the environmental assessment and project approval;
- ensure compliance with environmental legislation; and
- promote best practice environmental management during construction works.

The CEMP does not refer to operation of the substrate plant, which will be ongoing during all stages of construction. Environmental aspects of plant operation are included in a separate environmental management plan.

The location of the substrate plant is shown on *Figure 1*.

## 1.2 *Revision 1 - July 2016*

The project approval for expansion of the substrate plant was issued on 11 January 2012. The CEMP was first prepared in January 2012 and approved by the then Department of Planning and Infrastructure in March 2012. A modification to the project approval (MOD 1) was issued by the Department of Planning and Environment on 14 March 2016.

Revision 1 of the CEMP has been prepared in July 2016 to incorporate;

- modifications to the project approved in March 2016
- modified conditions of approval;
- progress of construction work since the project commenced.

In the period since construction work began under the project approval, Stage 1 works, including site filling, are substantially complete. A bale storage shed originally identified as part of Stage 1 has been deferred for consideration in Stage 2B.

## 1.3 *Content*

This revised edition of the CEMP has been prepared consistent with conditions 1 and 1A of Schedule 3 of the project approval (as modified by MOD 1);

Conditions 1 and 1A of Schedule 3 are as follows:

1. *The Proponent shall prepare and implement a Construction Environmental Management Plan for the Substrate Plant site to the satisfaction of the Secretary. This Plan must:*
  - (a) *be prepared in consultation with NOW and EPA;*

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FIGURE 1 Substrate Plant Location

- (b) *be submitted for approval prior to commencement of construction, and include:*
- *a noise and vibration management plan, including a noise monitoring program that can be used to demonstrate compliance with the construction noise criteria in Condition 18 below;*
  - *an air quality management plan;*
  - *a soil and water management plan, including details of the erosion and sediment control measures to be used on site;*
  - *a flora and fauna management plan;*
  - *a heritage management plan;*
  - *a traffic management plan; and*
  - *a waste management plan.*

1A *The Proponent shall update the CEMP required by Condition 1 of Schedule 3 to include the works associated with MOD 1. The updated plan shall be submitted to and approved by the Secretary prior to the commencement of any construction works associated with MOD 1.*

*The revised CEMP shall be implemented throughout the construction works.*

“NOW” refers to the New South Wales Office of Water. “EPA” (originally “OEH”) refers to the Environment Protection Authority. The various management plans referred to in the condition are included in the text of the CEMP under the relevant headings. Noise and vibration management measures are based upon a management plan prepared by Atkins Acoustics and included as *Appendix C*.

Other conditions included in Schedule 3 of the modified project approval that are relevant to construction environmental management are listed below and addressed in the CEMP.

7. *The Proponent shall implement all reasonable and feasible measures to minimise dust generated at the Substrate Plant site.*
8. *During the construction and operation of the project, the Proponent shall ensure that:*
- (a) *all trucks entering or leaving the Substrate Plant site with loads have their loads covered;*
  - (b) *the trucks associated with the Project do not track dirt onto the public road network;*
  - (c) *all areas are maintained in a condition to minimise the emission of wind-blown or traffic-generated dust to the satisfaction of the Secretary.*
15. *The Proponent shall ensure that only VENM and/or ENM or material approved by the EPA is used as fill.*
16. *The Proponent shall ensure that filling of the manoeuvring area shall be undertaken in accordance with plans submitted with DA 0571106.*
- 16A *The Proponent shall ensure that the earthworks associated with the biofilter pad do not act as a source of sedimentation. The Proponent shall stabilise the area of fill associated with the biofilter within one week of the approval of MOD 1.*
- 16B *Prior to the commencement of construction of the biofilter, the Proponent shall submit to the Secretary, details demonstrating that the earthworks in the area of the biofilter have been:*
- (a) *undertaken in accordance with AS 3798; and*
  - (b) *compacted to 98% Standard dry density ratio (AS1289 E4.1).*
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.
20. The Proponent shall comply with the operating hours in Table 3 at the Substrate Plant site, unless otherwise agreed to in writing by the Secretary.

**Table 3: Operating hours**

Activity	Day	Time
Construction	Monday – Friday	7:00am to 6:00pm
	Saturday	8:00am to 1:00pm
	Sunday and Public Holidays	Nil
Operation	All days	Any time

21. The Proponent shall construct the 7 m high noise wall adjacent to the southern side of the bale storage shed or implement 'other noise mitigation measures' with the same or greater effect, prior to commencement of stage 2B construction works.

*Should 'other noise mitigation measures' be implemented, the Proponent shall demonstrate, to the satisfaction of the Secretary, that the chosen measures will be as effective as modelled for the noise wall. Construction of Stage 2B cannot commence unless the Proponent has received the Secretary's approval for the 'other noise mitigation measures'.*

- 24A The Proponent shall prepare a Landscape Management Plan for the Substrate Plant site. The plan shall:
- be prepared in consultation with Council;
  - identify screen planting to minimise visual impacts of the site, particularly the new biofilter; and
  - be approved by the Secretary prior to the commencement of construction of the works associated with MOD 1.

In preparing the original Environmental Assessment for the project (Perram & Partners 2010), studies were undertaken to assess potential impacts and prescribe suitable management or mitigation measures. Mitigation measures were summarised in the Statement of Commitments included in that document and subsequently revised and incorporated into the project approval (now modified by MOD 1). Appendix A reproduces the section of the Statement of Commitments from the modified project approval that is relevant to construction work at the substrate plant. All relevant mitigation measures from the Statement of Commitments have been included in the CEMP.

The *Guideline for Preparing Environmental Management Plans* (DoPI 2004) was consulted in preparing this document.



## **1.4 Validity**

A draft copy of the CEMP was forwarded to the Office of Environment and Heritage and the NSW Office of Water in 2012 for comment consistent with part (a) of Condition 1. The response from those agencies has been included as *Appendix D* and has been considered in finalising this document.

Following receipt of approval from the Department of Planning and Environment, the modified CEMP is intended to remain in place for the duration of construction work and any defects liability period. When construction work is complete and any defects liability period has expired, the CEMP will cease to have effect.

The document will be reviewed from time to time to ensure its continued relevance. Any resulting amendment will take effect when approved of the Department.

## **1.5 Relevant Legislation**

Legislation that may be relevant to aspects of the construction project is listed in *Appendix B*.

## **1.6 Environment Protection Licence**

The substrate plant is licensed by the Environment Protection Authority. Licence No 6229 specifies that in relation to pollution of waters, the licensee must comply with section 120 of the *Protection of the Environment Operations Act, 1997*. The licence specifies a daytime  $L_{Aeq(15 \text{ minute})}$  noise limit at the most affected residence of 44 dB(A). This limit is understood to apply to operational noise rather than construction noise. The project approval sets more practical construction noise limits that are in excess of the licence limit.

## 2. THE PROJECT

### 2.1 Description

Construction work at the substrate plant to which this CEMP relates is described in the environmental assessment for project approval (Perram & Partners 2010) as modified by the environmental assessment for modification of the project approval (Perram & Partners 2015). Development of the site as now approved will take place in several stages generally with progressive increases in the weekly tonnage of substrate produced. Development to be undertaken in each stage is listed in *Table 1* and shown on *Figure 2*. Stage 1 works now complete are shown in *Figure 2* as part of the existing plant.

*Table 1* STAGES OF EXPANSION AT THE SUBSTRATE PLANT

Stage	Development Works
1	<ul style="list-style-type: none"> <li>• Construct an additional straw bale storage shed (<b>deferred to stage 2B</b>);</li> <li>• Fill a 1.6 hectare area on the western side of the pre-wet shed to 16 metres AHD and modify drainage to improve stormwater detention and water quality (<b>substantially complete</b>);</li> <li>• Extend the emergency backup generator room, construct a store room and provide sealed parking areas (<b>complete</b>)</li> </ul>
2A	<ul style="list-style-type: none"> <li>• Construct new emissions plant including               <ul style="list-style-type: none"> <li>- southern pre-wet plant room</li> <li>- services corridor</li> <li>- biofilter</li> <li>- raw materials enclosure</li> <li>- associated ductwork</li> <li>- associated switch room, transformer, generator and cooling plant</li> </ul> </li> <li>• Construct part of Phase 2/3 building No 2 with conveyor and ductwork</li> </ul>
2B	<ul style="list-style-type: none"> <li>• Construct the southern part of the pre-wet tunnel building with six tunnels;</li> <li>• Extend the materials storage shed to the pre-wet tunnel building;</li> <li>• Install the pre-wet conveyor system;</li> <li>• Extend Phase 2/3 building No 2;</li> <li>• Convert the existing pre-wet shed to an indoor bale wetting area;</li> <li>• Review timing for bale storage sheds and construct when needed;</li> <li>• Remove the old weighbridge.</li> </ul>
3	<ul style="list-style-type: none"> <li>• Construct the northern part of the pre-wet tunnel building with four tunnels;</li> <li>• Construct an additional two Phase 1 tunnels;</li> <li>• Expand Phase 2/3 building No 1 to 25 tunnels (add 3 tunnels);</li> <li>• Expand Phase 2/3 building No 2 to 25 tunnels;</li> </ul>

Concept design plans for the new buildings were included and described in the environmental assessments for the original application and the modification (Perram & Partners 2010, 2015). Detailed design drawings will accompany the application for a construction certificate.

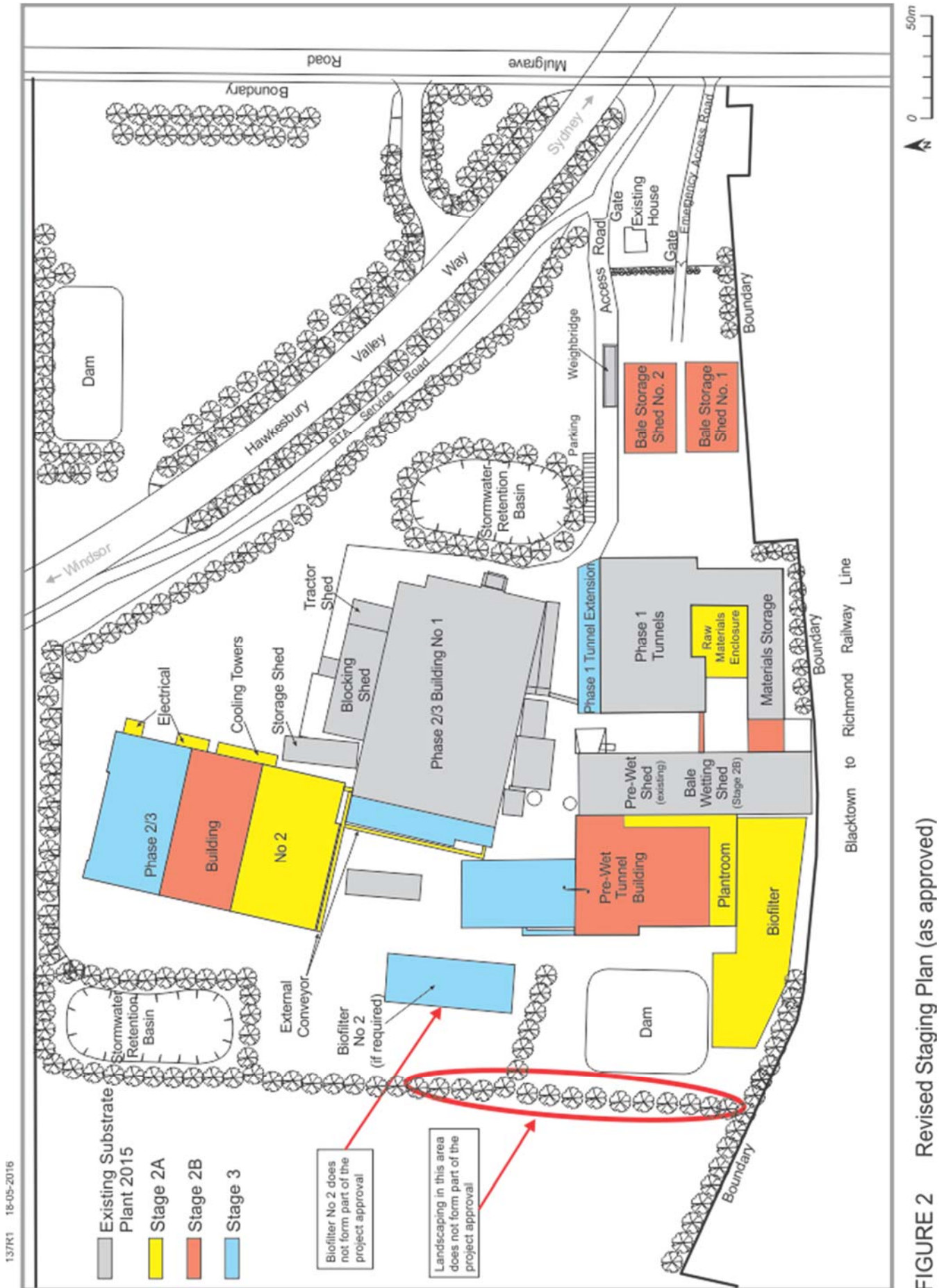


FIGURE 2 Revised Staging Plan (as approved)

## 2.2 Construction

The following description of construction work is summarised primarily from the Environmental Assessment.

### 2.2.1 Erosion and Sediment Controls

All stages of construction involve some soil disturbance either from filling the land, installing foundations, burying services such as water, drainage or electricity and driving over unsealed surfaces.

To limit soil displacement during the works, erosion and sediment controls will be installed to arrest movement of soil from the disturbed areas onto other land.

### 2.2.2 Demolition

There is no significant demolition associated with the project. Minor demolition works include removing sections of the western wall of the existing pre-wet shed, removing part of the northern façade of the Phase 1 tunnel building and removing an existing weighbridge.

### 2.2.3 Earthworks

Only minor earthworks will be undertaken for the duration of this updated CEMP. Site filling has largely been completed. Remaining earthworks include surface finishing and excavations for building foundations, drainage and other services.

Where further fill material is required, it will continue to be sourced from construction projects in the Sydney region that have surplus excavated material at the time filling is underway at the substrate plant. Imported fill is excavated natural material (ENM – refer to condition 15) certified to be free of contamination. The EPA has issued an exemption from various legislative requirements relating to waste tracking and disposal permitting ENM<sup>1</sup> to be imported to a site for filling purposes. Demolition rubble or other forms of waste have not been accepted on the site. Topsoil scraped from the land to be filled has assisted in preparing the tree corridor and fill batters for landscaping. The surface of the filled area is being finished as hardstand, suitable for building construction.

### 2.2.4 Building Construction

Building construction work will continue in stages generally as programmed with necessary changes to plant operations to allow construction work to proceed. During the construction period environmental controls will be maintained using temporary

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<sup>1</sup> Definition of ENM:

**Excavated natural material** is naturally occurring rock and soil (including but not limited to materials such as sandstone, shale, clay and soil) that has:

- a) been excavated from the ground, and
- b) contains at least 98% (by weight) natural material, and
- c) does not meet the definition of Virgin Excavated Natural Material in the Act.

Excavated Natural Material does not include material that has been processed or contains acid sulphate soils (ASS) or potential acid sulphate soils (PASS).

measures where required and by timing critical works, such as removing walls from operational buildings to match periods of low activity.

### 2.2.5 Landscaping

A landscape management plan has been prepared and submitted for approval consistent with condition 24A. This document shows existing landscaping to be retained and further landscaping to be undertaken as part of the construction works.

At the completion of construction works, any undeveloped part of the filled land that is not required for hardstand or landscaping will be returned to pasture for grazing.

### 2.2.6 Hours of Construction

Construction work will take place between:

- 7:00 am to 6:00 pm Monday to Friday; and
- 8:00 am to 1:00 pm Saturday (refer to condition 20, schedule 3).

### 2.2.7 Construction Plant and Equipment

Earthworks at the substrate plant involves dump trucks, excavator and compactor operation. Building erection requires delivery trucks, concrete pumps, cranes and elevating work platforms. Portable generators may be used at some locations if more convenient than a construction power supply from the substrate plant electricity system.

### 2.2.8 Program

Stage 2A works which involve constructing and commissioning the upgraded odour management system will be completed as soon as possible, expected to be within 18 months. The project approval requires Stage 2A and 2B works associated with MOD 1, with the exception of the additional Phase 2/3 tunnels and the northern group of four pre-wet tunnels, to be completed within two years of the approval of MOD 1 (that is by 14 March 2018).

### 2.2.9 Noise Wall

Condition 21 requires that construction of the southern boundary wall near the bale storage shed, or other noise mitigation measures to the same or greater effect, occur prior to commencement of Stage 2B works. The construction and vibration noise management plan included in *Appendix C* addresses this matter confirming that the intended noise mitigation can be achieved using straw bales stacked as described in that document. Subject to approval from the Department it is intended to use straw bales as an interim barrier until a permanent barrier is constructed.

The straw bale wall will be constructed as described in *Appendix C* prior to commencement of Stage 2B construction work. The project manager will inspect the wall to ensure its integrity at least monthly. Individual straw bales will be replaced when required with the entire stack being replaced at intervals of not greater than six months. The requirement for bale storage sheds will be reviewed prior to completion

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of Stage 2B works. Following the review the temporary straw bale barrier will be replaced by a permanent noise barrier.

#### 2.2.10 Biofilter Pad

Conditions 16A and 16B, referring to the filled pad prepared for the biofilter, were added to the approval with MOD 1. Separate documentation is being forwarded to the Department of Planning and Environment verifying compliance with those conditions.

### 3. SITE DESCRIPTION AND SENSITIVITY

The rural property upon which the substrate plant is located comprises lots 13 and 14 DP 1138749. The substrate plant site has an area of about 12.4 hectares and includes Lot 14 and part of Lot 13. Most of the site has been filled to a level of 16 metres AHD.

The site is roughly triangular in shape with a small frontage to Mulgrave Road, as shown on Figure 1. On its southern side the substrate plant mostly adjoins the Blacktown-Richmond Railway. Near Mulgrave Road, the southern boundary steps in to pass around a separate narrow allotment for the former station master's cottage, now abandoned and derelict.

Most of the northern site boundary abuts the embankment of the elevated main road, Hawkesbury Valley Way. The remainder of the northern boundary adjoins another rural property on the flood plain of South Creek.

Lot 13 extends westward to South Creek, although the substrate plant boundary is set back about 150 to 200 metres from the creek at the edge of the filled land. The balance of Lot 13 is a grassed paddock with a gentle slope to South Creek. This land is used for cattle grazing.

In addition to the substrate plant buildings, the site contains a residence near the Mulgrave Road frontage occupied by a person employed at the site. Access to the substrate plant is obtained via a private roadway intersecting Mulgrave Road beside Hawkesbury Valley Way overbridge.

The nearest residences not associated with the substrate plant include:

- a rural residence on the adjoining grazing property to the north;
- a rural residence on the market garden immediately south of the rail line;
- Mulgrave village to the east and south east; and
- Chisholm Place (part of Windsor residential area) to the west.

The original Environmental Assessment (Perram & Partners 2010) included a flora and fauna study of the area to be affected by construction and operation activities. The assessment found that owing to extensive re-contouring, the site contains no remnant vegetation and almost no habitat attributes that would attract native fauna. An archaeological and cultural heritage assessment undertaken at the same time did not identify any Aboriginal sites or relics. The latter study concluded that previous rural land uses and subsequent re-contouring reduced the likelihood of finding intact archaeological cultural deposits on the site.

## **4. MANAGEMENT RESPONSIBILITY**

### **4.1 Organisation Structure**

The Managing Director of Elf Farm Supplies Pty Ltd has ultimate responsibility for development and operation of the Mulgrave substrate plant. The General Manager has managerial responsibility for all activities on the site.

When construction work is underway and depending on the extent of work at the time, a specialised project manager may be appointed to supervise and co-ordinate contractors and builders. In periods of low activity the managing director or general manager may fulfil this role.

### **4.2 Emergency Contact Details**

Relevant phone numbers at the substrate plant are as follows:

- during office hours - **02 4577 5000**
- 24-hour complaints number is - **1800 155 079**

### **4.3 Role Responsibility and Authority**

The formal environmental management roles of staff at various levels is summarised in *Table 2*.

### **4.4 Construction Staff Induction**

Before commencing work on the project all contractors' and subcontractors' personnel are to be inducted and made aware of their responsibilities under legislation and the specific procedures of this CEMP relevant to their work.

Should any contractor return to the site after an absence of more than three months, for example to work on a later stage of the development, the contractor's personnel are to be provided with a fresh induction before commencing work.



Table 2 ROLE, RESPONSIBILITY AND AUTHORITY

Task	Managing Director	Project Manager	Construction Site Co-ordinator	Contractor(s) Supervisor	Construction WHS Manager	Construction Environmental Manager
Construction Management	Overview construction progress and performance	Appoint construction team, set goals, monitor progress and performance	Program work; schedule day to day activities by contractors	Manage and control day to day activities by contractor's Employees and Sub-Contractors	Support other Managers/ Supervisors to maintain WHS System & plans for acceptance and implementation;	
Environmental Management	Independently overview environmental performance, confirm compliance with environmental objectives and approvals.	Prepare the CEMP and any amendments; ensure that environmental objectives are understood; monitor construction work to confirm compliance	Ensure that environmental objectives are understood; take corrective action as required to achieve environmental objectives in this CEMP. Respond to all incidents and complaints.	Undertake work consistent with environmental requirements as instructed.		Support other Managers/ Supervisors to maintain Environmental System & plans for acceptance and implementation; Collect, co-ordinate and store relevant records.

<p>Community Liaison</p>	<p>Assist with community relations as required. Participate in any community forums relevant to construction</p>					<p>Work with community to ensure that an adequate response is given when environmental issues are raised. Participate in any community forums relevant to construction</p>
<p>Induction and Training</p>		<p>Ensure that an adequate induction and training program is given to staff</p>	<p>Ensure induction and training for all staff. Retain records of all training given.</p>	<p>Ensure all staff attend induction and training.</p>	<p>Provide induction and training for all staff. Retain records of all training given.</p>	<p>Provide induction and training for all staff. Retain records of all training given.</p>
<p>Complaints Register</p>	<p>Maintain awareness of any complaints and action taken.</p>	<p>Review complaints register. Ensure procedures are followed. Review effectiveness of corrective action.</p>	<p>Record details of any complaints and arrange an investigation. Implement corrective actions as required.</p>			<p>Record details of any complaints and investigate. Provide a response to every complaint received. Decide and implement corrective action. Ensure records are available for audit.</p>

Environmental Monitoring		Ensure that the monitoring program is adequate and complies with Project regulatory conditions. Review and implement corrective actions.	Ensure monitoring is carried out in accordance with the program. Review results with the Project Manager and implement corrective actions.			Arrange for monitoring to be carried out in accordance with the program. Review results with the Project Manager.
Recording		Ensure records of all communications with approval and regulatory bodies. Ensure that monitoring results are forwarded when required.	Maintain construction diary		Collect, co-ordinate and store and maintain WHS records.	Maintain records of all communications with approval and regulatory bodies. Ensure that monitoring results are forwarded when required.
Emergency Action	Intervene on matters over which this position has control at any time where there is an unacceptable risk to safety, or significant environmental damage may occur. Review procedures as required.	Intervene on matters over which this position has control at any time where there is an unacceptable risk to safety, or significant environmental damage may occur. Review procedures as required.	Intervene on matters over which this position has control at any time where there is an unacceptable risk to safety, or significant environmental damage may occur. Arrange remedial measures to overcome the emergency.	Intervene on matters over which this position has control at any time where there is an unacceptable risk to safety, or significant environmental damage may occur. Arrange remedial measures to overcome the emergency.	Intervene on matters over which this position has control at any time where there is an unacceptable risk to safety, or significant environmental damage may occur. Arrange remedial measures to overcome the emergency.	Intervene on matters over which this position has control at any time where there is an unacceptable risk to safety, or significant environmental damage may occur. Arrange remedial measures to overcome the emergency.

## 5. ENVIRONMENTAL MANAGEMENT

Management of environmental performance is described in this CEMP by setting objectives, identifying performance requirements, specifying strategies and actions and providing mechanisms for monitoring, reporting and corrective actions.

Environmental issues and mitigation measures have been derived from the environmental assessments (Perram & Partners 2010 & 2015), the revised statement of commitments included in the modified project approval –MOD 1 (see *Appendix A*) and the Noise and Vibration Management Plan prepared by Atkins Acoustics (see *Appendix C*).

### 5.1 Noise and Vibration

#### 5.1.1 Introduction

An updated construction noise and vibration management plan prepared by Atkins Acoustics and Associates is attached as *Appendix C*. The tabulated plan below is derived from the detailed plan and the Environmental Assessment, having regard to conditions 18, 20 and 21 in schedule 3.

#### 5.1.2 Noise and Vibration Management Plan

Potential Issues	<ul style="list-style-type: none"> <li>Noise and vibration annoyance to residents and farm workers</li> <li>Vibration damage to buildings and structures</li> </ul>
Sources	<ul style="list-style-type: none"> <li>Delivering, placing and compacting fill at the western side of the site</li> <li>Concreting works associated with building construction</li> <li>Miscellaneous excavations and earthworks</li> </ul>
Objective	<ul style="list-style-type: none"> <li>Manage construction noise to within prescribed limits for residential neighbours (condition 18)</li> <li>Manage vibration to within acceptable levels for residential neighbours</li> </ul>
Actions / Controls	<ul style="list-style-type: none"> <li>Adopt best management practice and best available technology economically achievable as encouraged by EPA</li> <li>Select plant and equipment based on acoustic performance where practicable</li> <li>Reduce operating speeds where practical and switch off idle plant</li> <li>Arrange for trucks to travel in a forward direction throughout the site and minimise reversing or manoeuvring where possible</li> <li>Confine construction work to hours approved in condition 20</li> <li>Review the use of mobile plant reversing sirens and alter work practices where practical, or replace with broad band or level varying alarms</li> <li>Install and maintain an approved noise attenuation barrier at the location of the future southern boundary wall adjacent to the bale storage shed prior to commencement of Stage 2B works (condition 21)</li> <li>when concrete pours are taking place, locate concrete trucks and pumps in a manner that will maximise screening to residential properties to the south and west;</li> <li>where practicable schedule the noisiest activities to occur during parts of the day when ambient noise levels are higher;</li> </ul>

	<ul style="list-style-type: none"> <li>• Include site noise and vibration minimisation as part of induction for all staff and contractors.</li> <li>• undertake construction activities in accordance with AS 2436:1981, <i>Guide to Noise Control on Construction, Maintenance and Demolition Sites</i>, with all equipment demonstrating compliance with the noise levels recommended in the standard and reproduced below.</li> </ul> <table border="1"> <thead> <tr> <th>Plant Description</th> <th>Sound Power Level L<sub>w</sub> (dB(A))</th> <th>Sound Pressure Level @ 7m (dB(A))</th> </tr> </thead> <tbody> <tr> <td>Compactors</td> <td>110</td> <td>85</td> </tr> <tr> <td>Cranes</td> <td>104</td> <td>79</td> </tr> <tr> <td>Dump Truck</td> <td>106</td> <td>81</td> </tr> <tr> <td>Truck/Water Cart</td> <td>102</td> <td>77</td> </tr> <tr> <td>Concrete trucks/ pumps</td> <td>112</td> <td>87</td> </tr> <tr> <td>Scissor Lift</td> <td>95</td> <td>70</td> </tr> </tbody> </table>	Plant Description	Sound Power Level L <sub>w</sub> (dB(A))	Sound Pressure Level @ 7m (dB(A))	Compactors	110	85	Cranes	104	79	Dump Truck	106	81	Truck/Water Cart	102	77	Concrete trucks/ pumps	112	87	Scissor Lift	95	70
Plant Description	Sound Power Level L <sub>w</sub> (dB(A))	Sound Pressure Level @ 7m (dB(A))																				
Compactors	110	85																				
Cranes	104	79																				
Dump Truck	106	81																				
Truck/Water Cart	102	77																				
Concrete trucks/ pumps	112	87																				
Scissor Lift	95	70																				
Maintenance	<ul style="list-style-type: none"> <li>• Inspect construction vehicles and equipment according to a program and maintain and repair where necessary</li> </ul>																					
Performance Indicators	<ul style="list-style-type: none"> <li>• Absence of verified complaints from members of the public</li> <li>• Observance that work is restricted to approved hours</li> </ul>																					
Monitoring	<ul style="list-style-type: none"> <li>• Visual and aural inspections when vehicles and items of plant arrive on site</li> <li>• Site attended noise monitoring in accordance with the monitoring program (section 7.2) and in response to any complaint</li> </ul>																					
Corrective Action /Reporting	<ul style="list-style-type: none"> <li>• If a complaint is received the noise source is to be checked for compliance immediately and the complainant advised of measures taken to reduce noise or quickly complete work at that location.</li> <li>• Record any incidents or issues with noise or vibration in an environmental journal</li> </ul>																					

## 5.2 Air Quality

### 5.2.1 Introduction

Potential air emissions during construction comprise dust and gases from vehicle exhausts. Dust can arise whenever vehicles drive on dry unsealed surfaces. Filling works create the greatest potential for dust. Emissions from vehicle exhausts would be of negligible consequence. Appropriate measures to minimise impacts are outlined below, having regard to conditions 7 and 8.

### 5.2.2 Air Quality Management Plan

Potential Issues	<ul style="list-style-type: none"> <li>• Dust annoyance to residents and businesses from construction activities.</li> <li>• Release of air pollutants from vehicles and motorised equipment</li> <li>• Release of greenhouse gases from construction vehicles and equipment</li> </ul>
Sources	<ul style="list-style-type: none"> <li>• Transporting, depositing, compacting and levelling fill material</li> <li>• Vehicle movement across unsealed surfaces</li> <li>• Operating construction plant and equipment</li> <li>• Effect of wind on disturbed land surface</li> <li>• Excavation for drains and building footings</li> <li>• Exhaust gases from vehicles and equipment</li> </ul>

Objective	<ul style="list-style-type: none"> <li>• Minimise nuisance to the community from dust and gases</li> <li>• Implement all reasonable and feasible mitigation measures (condition 7)</li> </ul>
Actions / Controls	<ul style="list-style-type: none"> <li>• Limit vehicle speed on unsealed surfaces</li> <li>• Maintain the off-road haul route in a damp state when in use</li> <li>• Avoid spillage of transported material and ensure prompt clean-up if spillage occurs</li> <li>• Ensure all trucks entering or leaving have their loads covered (condition 8)</li> <li>• Ensure that trucks do not track dirt onto public roads (cond. 8)</li> <li>• Maintain internal areas and roads to minimise wind-blown dust (condition 8)</li> <li>• Stabilise finished surfaces as soon as practicable</li> <li>• Include dust awareness in the induction for all construction personnel</li> </ul>
Maintenance	<ul style="list-style-type: none"> <li>• Inspect and repair revegetated or landscaped areas to ensure that a ground cover is quickly established and maintained</li> <li>• Water exposed areas to ensure dust levels are minimised prior to finishing with hardstand or landscaping.</li> <li>• Ensure that vehicles and equipment are appropriately maintained</li> </ul>
Performance Indicators	<ul style="list-style-type: none"> <li>• Absence of verified complaints</li> <li>• Observation that no visible dust leaves the site</li> </ul>
Monitoring	<ul style="list-style-type: none"> <li>• Visually look out for dust throughout the construction period, particularly during dry or windy conditions</li> <li>• Immediately report any potential or actual issues with nuisance dust</li> <li>• Record and act upon any complaints received</li> </ul>
Corrective Action /Reporting	<ul style="list-style-type: none"> <li>• Should monitoring indicate inadequate performance or a complaint be received, then the source of the problem will be identified, and existing procedures or equipment modified to rectify the problem.</li> <li>• Record any incidents or issues with dust in an environmental journal</li> </ul>

### 5.3 **Soil and Water Management**

#### 5.3.1 Introduction

The original Environmental Assessment (Perram & Partners 2010) included a stormwater management plan prepared by Barker Ryan Stewart. The plan developed modifications to the stormwater management system of the substrate plant to handle additional stormwater generated by the expansion and improve water quality of the runoff. The modifications recommended in the study have been incorporated into the works as will any further modifications when the stormwater plan is revised consistent with MOD 1. Included in the stormwater management plan is an erosion and sediment control plan (ESCP) showing catch drains, sediment fencing and wheel shaker pads to be installed during the construction phase at the plant to minimise soil erosion and sedimentation. The requirements of the ESCP are considered to adequately reflect the altered works as described in MOD 1, with a relocation of the western sediment fence to enclose the new shape of the pre-wet tunnels and biofilter. A copy of the ESCP is included as *Appendix D*.

The erosion and sediment control plan will be implemented throughout the construction process at the substrate plant. The tabulated plan below incorporates the written notes from the erosion and sediment control plan.

### 5.3.2 Soil and Water Management Plan

Potential Issues	<ul style="list-style-type: none"> <li>• Soil loss from disturbed ground owing to wind or water erosion</li> <li>• Deposition of eroded material elsewhere on the land or the public road system</li> <li>• Siltation of drainage lines</li> <li>• Unnatural turbidity in South Creek</li> </ul>
Sources	<ul style="list-style-type: none"> <li>• Exposed uncompacted fill during filling operations</li> <li>• Vehicle movement across unsealed surfaces in wet conditions</li> <li>• Transfer of material to public roads on the wheels of vehicles</li> <li>• Runoff from earthworks associated with excavations</li> <li>• Heavy rainfall on finished landforms prior to landscaping</li> </ul>
Objective	<ul style="list-style-type: none"> <li>• To minimise erosion and consequent sediment deposition</li> <li>• To provide long term erosion and sediment control measures where required</li> <li>• To ensure that permanent or temporary works are appropriate and maintained during and after construction</li> </ul>
Actions / Controls	<ul style="list-style-type: none"> <li>• Provide detailed design and placement of erosion and sediment control devices</li> <li>• Install sediment controls prior to clearing vegetation, importing any fill to the land or commencing other construction work</li> <li>• Establish clean water diversion drains above any significant earthworks located on sloping ground</li> <li>• Install geofabric fencing is to be installed downslope of all locations where significant soil disturbance is planned to occur on sloping land and retain in place until the surface is stabilised.</li> <li>• Provide temporary rehabilitation where work is delayed or in abeyance and disturbed areas will be exposed for two months or more</li> <li>• Stabilise finished surfaces within 20 days of completion of earthworks. If the surface is to be landscaped apply topsoil and mulch before planting</li> <li>• If topsoil is to be stockpiled and unused for four or more weeks stabilise the stockpile with seeding or equivalent methods</li> <li>• Provide a means of removing material from the wheels and bodies of trucks departing from the site</li> <li>• Provide permanent drainage works where an altered ground profile, such as the filled land, is to remain.</li> <li>• Confine off road traffic to a single haul route within the site</li> </ul>
Maintenance	<ul style="list-style-type: none"> <li>• Maintain sediment control and water quality structures in a fully operational state at all times</li> </ul>
Performance Indicators	<ul style="list-style-type: none"> <li>• No visible evidence of sediment or turbid water escaping the work sites.</li> <li>• No bare patches of ground following restoration works.</li> </ul>
Monitoring	<ul style="list-style-type: none"> <li>• While construction is in progress, the project manager shall inspect all sediment control devices and rehabilitation areas weekly and after each major rainfall event.</li> </ul>

	<ul style="list-style-type: none"> <li>• After completion of each stage of construction, sediment control structures are to be inspected every three months. Temporary structures are to be removed when they are no longer required.</li> <li>• Construction personnel are to immediately report to the project manager any damaged or ineffective erosion or sediment control device or potential water contamination.</li> <li>• Record and act upon any complaints received</li> </ul>
Corrective Action /Reporting	<ul style="list-style-type: none"> <li>• Undertake necessary repairs immediately upon becoming aware that sediment controls have become ineffective</li> <li>• If a complaint is received or potential/actual escape of sediment from the work site is identified, investigate and undertake corrective action immediately. This includes preventing further escape, cleaning up the affected environment as much as practically possible and taking preventive measures.</li> <li>• Record any incidents or issues with the sediment and water quality controls in an environmental journal</li> </ul>

## 5.4 *Flora and Fauna*

### 5.4.1 Introduction

The 2010 Environmental Assessment included a flora and fauna assessment prepared by Kevin Mills and Associates. The assessment noted that there is no naturally occurring native vegetation on the substrate plant site and virtually nothing to attract native fauna. The tabulated plan below incorporates the recommendation relevant to the Mulgrave site to minimise removal of (planted) trees wherever possible.

### 5.4.2 Flora and Fauna Management Plan

Potential Issues	<ul style="list-style-type: none"> <li>• Disturbance to existing landscape plantings</li> <li>• Disturbance to any fauna that may be present in the kikuyu ground cover where fill is to be placed</li> </ul>
Sources	<ul style="list-style-type: none"> <li>• Removing topsoil and kikuyu prior to filling the land</li> <li>• Removing any exiting landscape plantings on the area of land where the surface is to be raised</li> </ul>
Objective	<ul style="list-style-type: none"> <li>• Confine disturbance to the area designated for filling.</li> <li>• Minimise removal of existing landscape trees wherever possible</li> </ul>
Actions / Controls	<ul style="list-style-type: none"> <li>• Prior to commencing topsoil stripping, carefully identify the boundaries of the area to be disturbed so that trucks and machinery do not move into adjoining areas.</li> <li>• Where the boundaries of the land to be filled are not well defined by existing fencing or obvious markers, install temporary markers or tape</li> <li>• Suppress weeds on the construction site and protect existing landscape planting that is to be retained.</li> </ul>
Maintenance	<ul style="list-style-type: none"> <li>• Ensure that any fencing or flagging erected to define the filling area is maintained until it becomes redundant</li> </ul>
Performance Indicators	<ul style="list-style-type: none"> <li>• There is to be no disturbance to vegetation beyond the area to be filled, other than normal maintenance and weed removal</li> <li>• There is to be no evidence of significant weed outbreak in the landscaped areas affected by construction work</li> </ul>



Monitoring	<ul style="list-style-type: none"> <li>Inspect the filling area boundary weekly to ensure it remains adequately marked, has not been exceeded with deposited fill and has not been overrun with weeds</li> </ul>
Corrective Action /Reporting	<ul style="list-style-type: none"> <li>Record any significant events or issues with regard to flora and fauna in an environmental journal</li> </ul>

## 5.5 Heritage

### 5.5.1 Introduction

The 2010 Environmental Assessment included a cultural heritage assessment prepared by Biosis research. No cultural heritage artefacts were found in the area to be disturbed by construction work at the substrate plant and there are no records relating to the site on any relevant register. The assessment concluded that the proposed works will not have impacts on archaeological sites or cultural heritage places. The tabulated plan below incorporates the recommendations of the cultural heritage assessment.

### 5.5.2 Heritage Management Plan

Potential Issues	<ul style="list-style-type: none"> <li>Damage to undiscovered Aboriginal sites or human remains</li> </ul>
Sources	<ul style="list-style-type: none"> <li>Grass and topsoil stripping on the land to be filled</li> </ul>
Objective	<ul style="list-style-type: none"> <li>Confine disturbance to the area designated for filling.</li> <li>Establish a procedure for construction personnel should previously unidentified objects or human remains be encountered.</li> </ul>
Actions / Controls	<ul style="list-style-type: none"> <li>Prior to commencing topsoil stripping, carefully identify the boundaries of the area to be disturbed so that trucks and machinery do not move into adjoining areas.</li> <li>If archaeological material is discovered at any location, cease work at that location, seek advice from OEHL and an archaeologist and notify the Deerubbin LALC;</li> <li>If skeletal remains are discovered at any location, cease work at that location, report the find to the police. If the remains are of Aboriginal origin seek advice from OEHL and an archaeologist</li> <li>Ensure personnel are aware of the requirements to protect Aboriginal sites and the need to stop work if archaeological material is discovered;</li> </ul>
Maintenance	<ul style="list-style-type: none"> <li>Ensure that any fencing or flagging erected to define the filling area is maintained until it becomes redundant</li> </ul>
Performance Indicators	<ul style="list-style-type: none"> <li>No disturbance to any Aboriginal material that may be discovered</li> </ul>
Monitoring	<ul style="list-style-type: none"> <li>Inspect the filling area boundary weekly to ensure it remains adequately marked and has not been exceeded with deposited fill</li> </ul>
Corrective Action /Reporting	<ul style="list-style-type: none"> <li>Record in the environmental journal any significant events and issues with regard to Aboriginal sites</li> </ul>

## 5.6 Traffic

### 5.6.1 Introduction

The 2010 Environmental Assessment included a traffic assessment prepared by Halcrow MWT. Having regard to the likely traffic generation from the expanded substrate plant, no modifications were considered necessary at the site access or its intersection with Mulgrave Road. The tabular plan below includes the relevant requirements of conditions 8 and 26.

### 5.6.2 Traffic Management Plan

Potential Issues	<ul style="list-style-type: none"> <li>Safety for site personnel and the public</li> </ul>
Sources	<ul style="list-style-type: none"> <li>Construction traffic on the site and on public roads</li> </ul>
Objective	<ul style="list-style-type: none"> <li>Maintain safety and amenity for personnel and the public</li> </ul>
Actions / Controls	<ul style="list-style-type: none"> <li>Instruct drivers as to the acceptable routes for heavy vehicles to use when visiting the site</li> <li>Instruct drivers to observe road rules at all times when travelling on public roads</li> <li>Ensure construction vehicles are properly maintained</li> <li>Ensure that vehicles associated with construction work on the site do not park or queue on public roads (condition 26)</li> <li>All trucks entering or leaving the site must have covered loads and must not track material onto the road (condition 8)</li> </ul>
Maintenance	<ul style="list-style-type: none"> <li>Ensure the site entrance is maintained in a safe condition suitable for use by heavy vehicles and clearly identified for drivers</li> </ul>
Performance Indicators	<ul style="list-style-type: none"> <li>Absence of incidents arising from construction vehicles on the site or on public roads</li> </ul>
Monitoring	<ul style="list-style-type: none"> <li>Continually monitor the worksite for unsafe driving practices</li> </ul>
Corrective Action /Reporting	<ul style="list-style-type: none"> <li>If reports indicate error or omission in driver behaviour, then alter or update procedures or training to minimise risk of recurrence</li> <li>Record in the environmental journal any significant events and issues with regard to construction traffic</li> </ul>

## 5.7 Waste

### 5.7.1 Introduction

Demolition and construction activities will generate waste materials for disposal. The guiding principles for waste management on this project are to reduce waste wherever practicable, to recycle materials where that is possible and to dispose of the remainder in a lawful manner.

## 5.7.2 Waste Management Plan

Potential Issues	<ul style="list-style-type: none"> <li>• Inefficient use of resources resulting in excessive waste generation</li> <li>• Litter or contamination of the site and surroundings through poor waste disposal methods</li> </ul>
Sources	<ul style="list-style-type: none"> <li>• Demolition materials</li> <li>• Packaging</li> <li>• Other construction off cuts and wastes</li> <li>• Waste spoil or rock from excavation</li> </ul>
Objective	<ul style="list-style-type: none"> <li>• Minimise production of waste</li> <li>• Ensure appropriate waste disposal</li> <li>• Avoid environmental harm from waste disposal.</li> </ul>
Actions / Controls	<ul style="list-style-type: none"> <li>• Where possible, reuse or recycle construction wastes</li> <li>• Dispose of general wastes that are not recyclable in a lawful manner</li> <li>• Send waste metal components such as roofing to a recycler</li> <li>• Collect pasture grass with topsoil for reuse when preparing the fill site</li> <li>• Incorporate material excavated for footings, drains and the like into the filled platform</li> <li>• Contain any waste paper or plastic materials as soon as they are generated, to avoid dissipation by wind</li> <li>• Ensure that waste is transported by approved waste transporters to sites designated for their disposal</li> </ul>
Maintenance	<ul style="list-style-type: none"> <li>• Remove general waste at least weekly for disposal</li> </ul>
Performance Indicators	<ul style="list-style-type: none"> <li>• No complaints</li> <li>• Waste segregation, recycling and reuse is occurring appropriately.</li> </ul>
Monitoring	<ul style="list-style-type: none"> <li>• Observe and supervise waste management practices throughout construction.</li> </ul>
Corrective Action /Reporting	<ul style="list-style-type: none"> <li>• Investigate and act upon any complaints</li> <li>• Record any significant events or issues with regard to waste in an environmental journal</li> </ul>

## 6. COMPLAINTS PROCEDURE

For many years Elf Farm Supplies has implemented a complaints management procedure for the substrate plant at Mulgrave, detailed in this section of the CEMP. The complaints procedure has been utilised in connection with operations and construction work and contained the following elements:

- advertised telephone number for complaints;
- system for logging and investigating complaints;
- process for recording the outcome of investigations and action taken; and
- feedback to complainants following investigation, as required.

In May 2016 the complaints handling procedure was revised and updated. The new procedure, developed by Straight Talk, is included as *Appendix F*.

## **7. MONITORING, REPORTING AND REVIEW**

### **7.1 *Monitoring Program***

Monitoring is to be conducted as described in the individual plans set out in Section 5 of this CEMP. It is the responsibility of the project manager to ensure that monitoring is undertaken. The project approval specifically requires that noise be monitored during the construction phase.

The results of monitoring will be documented and retained at the plant office. In addition a copy of monitoring results will be made available on the web site for the plant in accordance with condition 8 of schedule 5 of the MOD 1 project approval. If monitoring identifies any non-conformances, a corrective action strategy is to be implemented and recorded with the monitoring records.

### **7.2 *Noise Monitoring***

#### **7.2.1 Location**

Noise measurements are to be taken at the receptors as determined by the acoustic specialist. In addition, near field measurements are to be conducted of construction plant and equipment in use at the time.

#### **7.2.2 Method**

Measurements will be taken with sound level meters attended by an operator when construction works are in progress.

#### **7.2.3 Frequency**

Noise will be monitored once during each stage of construction. The project manager will advise the noise consultant when each stage is commencing and the noise consultant in consultation, will determine a suitable time for monitoring when worst case conditions are expected to be occurring.

#### **7.2.4 Performance Targets**

Monitoring results from measurements at the receptors will be used confirm that noise emissions from the plant, attenuated by building structures, are not above the limits included in the project approval (see condition 18 in section 1.3 of this CEMP). Near field measurements will confirm compliance with the noise levels included in AS 2436-1981 reproduced in section 5.1.2 of this CEMP.

#### **7.2.5 Review of Results**

After each monitoring episode, the project manager and general manager will examine the noise report, compare it with previous results and look for any trends.

Should results indicate non-compliance or declining performance, the reasons will be explored and appropriate corrective action taken. Follow-up noise monitoring may

be undertaken during any stage of construction to confirm the validity of any suspect results or to test the effectiveness of corrective action.

### **7.3 Reporting**

#### **7.3.1 Record Keeping**

Any record or document required to be kept by this CEMP must be kept at the plant office during the construction period and be retained until completion of all construction work approved under the project approval. The document should be available for examination by an authorised person from a relevant government agency.

A copy of the CEMP must be kept in the plant office and at any other location (for example a temporary construction office) so that it is readily accessible to persons carrying out the construction activities. A copy of the CEMP should be given to the head contractors undertaking construction work on the site.

#### **7.3.2 Documentation**

In addition to the complaints register and monitoring results, the following documentation is to be retained to record compliance with the CEMP.

##### **(i) Environmental Journal**

An environmental journal is to be kept where any observations or issues are to be recorded. Such information will include:

- location of construction work at any particular day;
- any inspections or monitoring undertaken in accordance with this CEMP;
- any corrective action that has been undertaken
- any other relevant observations

##### **(ii) Record of Environmental Incidents**

Document any environmental incidents that occur in the environmental journal. The following information is to be recorded where applicable:

- the location of the incident;
- the name and telephone number of the person reporting the incident;
- the time of incident;
- the suspected cause of the incident;
- the environmental harm and/or environmental nuisance caused, threatened or suspected to be caused by the incident; and
- action taken to prevent any further occurrence and mitigate any environmental harm and/or nuisance caused by the incident.

### (iii) Corrective Action Statements

When recording a non-conformance from environmental monitoring, a separate statement shall be written for each system problem identified. The corrective action statement shall comprise four elements:

- objective evidence – the precise observation of the non-conformance;
- reference – to the specific section of the construction documentation;
- explanation – why the non-conformance occurred or why the documentation is deficient; and
- action required – to alleviate the non-conformance or amend the documentation.

### 7.3.3 Notifications of Emergencies and Incidents

As soon as practicable after becoming aware of any emergency or incident which results in harm to the environment, personnel or property, the Department of Planning and Environment and any other relevant agency must be notified and provided with details encompassing the same information as that included in the environmental journal, described in section 7.3.2 above. An environmental incident will also activate the *Site Pollution Incident Response Management Plan* which also includes notification requirements.

Within seven days of the initial notification a detailed report of the incident must be given to the Department of Planning and Environment and any other relevant agency.

## 7.4 Review

This CEMP may be reviewed at any time to suit the needs of the project. In compliance with condition 4 of Schedule 5 of the project approval, the document shall be reviewed and if necessary revised, within three months of any of the following:

- submission of any incident report referred to in section 7.3.3 above;
- completion of an annual review of the environmental performance of the approved project as a whole (referred to in condition 3 of Schedule 5 of the project approval);  
or
- completion of a two-yearly environmental audit of the project as a whole (referred to in condition 3A of Schedule 5 of the project approval).

A record shall be kept that the review has taken place. If a review determines that the CEMP requires amendment, the approval of the Department of Environment and Planning is to be obtained before the amended CEMP is brought into effect.

## Appendix A

# STATEMENT OF COMMITMENTS

This appendix is an extract from Appendix 1 of the project approval (as modified by MOD 1) and includes the section of the proponent's statement of commitments referring to construction work at the substrate plant.





## 1. Substrate Plant - Construction

Outcome		Commitment	Timing
Environmental management	3.1	Prepare and subsequently implement an environmental management plan for construction, or modify the existing EMP, consistent with this EA and conditions of approval.	Prior to issue of construction certificate
	3.2	Instruct all construction personnel of the requirements for environmental management on the site.	Prior to and during construction
Minimise soil erosion and sediment deposition	3.3	Implement erosion and sediment controls consistent with the erosion and sediment control plan and keep in place with adequate maintenance until work is complete or they are no longer required.	Prior to commencement of earthworks and thereafter as long as necessary
	3.4	Progressively rehabilitate areas disturbed during construction with landscaping or hardstand as designed	During construction
Control nuisance dust	3.5	Implement the following dust mitigation measures: <ul style="list-style-type: none"> <li>• limit vehicle speeds on unsealed surfaces;</li> <li>• maintain unsealed haul routes for fill trucks in a damp state; and</li> <li>• rehabilitate finished surfaces as soon as possible either with landscaping or hardstand, according to intended use.</li> </ul>	During construction
Minimise construction noise	3.6	Implement construction noise mitigation measures as follows: <ul style="list-style-type: none"> <li>• avoid operating the bulldozer and compactor simultaneously during filling operations;</li> <li>• when concrete pours are taking place, locate concrete trucks and pumps in a manner that will maximise screening to residential properties to the south and west;</li> <li>• construct the southern boundary wall adjacent to the eastern bale wetting area as early as practicable in the construction program;</li> <li>• adopt construction practices recommended by DECCW for best management and best available technology economically achievable;</li> <li>• select construction plant and equipment having regard to controlling noise emissions, including reversing alarm noise;</li> <li>• where practicable schedule the noisiest activities to occur during parts of the day when ambient noise levels are higher;</li> <li>• undertake audits at receiver locations to monitor noise from site construction;</li> <li>• establish a noise complaints procedure with contact phone number and logging and response protocols;</li> </ul>	During construction

Outcome		Commitment	Timing
		<ul style="list-style-type: none"> <li>undertake construction activities in accordance with AS 2436:1981, <i>Guide to Noise Control on Construction, Maintenance and Demolition Sites</i>, with all equipment demonstrating compliance with the noise levels recommended in the standard.</li> </ul>	
Manage construction traffic	3.7	Maintain the intersection of the site access road and Mulgrave Road in a safe condition suitable for heavy construction traffic including vehicles delivering fill.	During construction
Minimise visual impact	3.8	<p>Implement measures to reduce visual impact of the development as follows:</p> <ul style="list-style-type: none"> <li>commence screen planting around the periphery of the extended platform area as early as possible during the project;</li> <li>during construction, minimise the area of physical disturbance to the land at any one time and revegetate any disturbed areas visible from beyond the site that are not required as hardstand;</li> <li>mulch fill batters as soon as possible after completion and maintain them to achieve total vegetation cover;</li> <li>continue to maintain previous landscaping and screen planting on the site to maximise screening of the plant;</li> <li>incorporate building materials of the same colour and texture as used in the existing plant, which minimise glare and visual obtrusiveness.</li> </ul>	During construction
Protect cultural heritage	3.9	<p>Implement the following protocols as required:</p> <ul style="list-style-type: none"> <li>should any Aboriginal object be identified during construction, work should cease and notification given to DECCW, a qualified archaeologist and Aboriginal representatives of the Deerubbin LALC. The archaeologist is to develop an appropriate mitigation or management strategy in consultation with OEH and DLALC and the EMP is to be amended accordingly;</li> <li>should skeletal remains be discovered, cease work at the location and report the find to the police. If the remains prove to be of Aboriginal origin advise DECCW, a qualified archaeologist and Aboriginal representatives of the Deerubbin LALC.</li> </ul>	During construction
Protect flora and fauna	3.10	Suppress weeds on the construction site and protect existing landscape planting that is to be retained.	During construction

Appendix B

# RELEVANT LEGISLATION

State legislation that may be relevant to environmental aspects of the proposed construction work is included in the following table.



## RELEVANT LEGISLATION

Legislation, relevant to environmental management	Purpose, relevant to the project	Requirements applicable to construction
<i>Contaminated Land Management Act, 1997</i>	Establish a process for investigating and where appropriate remediating land that the EPA considers to be contaminated significantly enough to require regulation.	Filling to take place during construction will use material certified to be free of contamination. Construction will not result in the site becoming contaminated land.
<i>Environmental Planning and Assessment Act, 1979</i>	Promote orderly and economic use and development of land; provide for management, development and conservation of resources, protection of the environment and other related matters	Project approval was granted on 11 January 2012. The Act requires that conditions of approval be observed and a construction certificate be obtained from a certifier before commencing building construction.
<i>Heritage Act, 1997</i>	To promote understanding and conservation of the State's heritage; to identify and register items of the State's heritage and provide for their protection	There are no objects or places on the substrate plant site that are listed on any relevant heritage register. No relics were found during a survey of the affected part of the site.
<i>National Parks and Wildlife Act, 1974</i>	Conservation of places, objects and features of significance to Aboriginal people. Conservation of nature.	A person must not harm or desecrate an object that the person knows is an Aboriginal object unless the work is consistent with a permit obtained for the purpose. A person must not harm protected fauna except as essential for carrying out the project.

<b>Legislation, relevant to environmental management</b>	<b>Purpose, relevant to the project</b>	<b>Requirements applicable to construction</b>
<i>Noxious Weeds Act, 1993</i>	To reduce the negative impact of weeds on the economy, community and environment of New South Wales	If a notifiable weed is on the land, the local control authority must be notified. Any noxious weeds must be prevented from spreading or becoming established.
<i>Protection of the Environment Operations Act, 1997</i>	To protect, restore and enhance the quality of the environment in New South Wales	The substrate plant operates under an environment protection licence. The licence regulates all activities on the site, including construction.
<i>Threatened Species Conservation Act, 1995</i>	To prevent the extinction and promote the recovery of threatened species, populations and ecological communities	A survey of the site found there is no remnant native vegetation and no habitat useful to native fauna on the site. The project does not constitute a threat to threatened species, populations or ecological communities
<i>Waste Avoidance and Resource Recovery Act, 2001</i>	To minimise the consumption of natural resources and the final disposal of waste by encouraging the avoidance of waste and the reuse and recycling of waste	There are no specific requirements relevant to construction work on the site.

Appendix C

# CONSTRUCTION NOISE AND VIBRATION MANAGEMENT PLAN







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N.S.W. 1675  
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**Atkins Acoustics and Associates Pty Ltd.**

Consulting Acoustical & Vibration Engineers

**CONSTRUCTION NOISE & VIBRATION  
MANAGEMENT PLAN  
SUBSTRATE PLANT  
MULGRAVE**

46.6411.CNVMP\_MUL:GD/DT/CF/2016  
Rev 07

**Prepared for:** ELF FARM SUPPLIES  
C/- Perram & Partners  
12 Clanwilliam Street  
**EASTWOOD NSW 2122**

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April 2016

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## 1.0 INTRODUCTION

*Atkins Acoustics* was engaged by *Perram & Partners* on behalf of Elf Farm Supplies to prepare a Construction Noise and Vibration Management Plan (*CNVMP*) for the construction works associated with the expansion of the existing mushroom substrate plant at Mulgrave.

The first published version of this *CNVMP* (version 4) dated January 2012 was included in the site's construction environmental management plan of the same date. In March 2016 Elf Farm Supplies received approval for a modification to the project (MOD 1). The *CNVMP* has now been updated to respond to the requirements of the project as modified by MOD 1.

This report addresses procedures for the management of noise and vibration issues associated with the construction. It is proposed to expand the facility in several stages over approximately ten (10) years. The main components of the expansion are presented below:

Stage	Description
1	Works associated with stage 1 are substantially complete with the exception of an additional straw bale storage shed which has been deferred.
2A	New emissions plant including plant room, biofilter, services corridor, ductwork and electrical and cooling equipment
2B	Pre-wet tunnel building, extend roofing over mixing area, move bale wetting to vacated pre-wet shed, bale storage sheds, part of new Phase 2/3 building and overhead supply conveyor, remove old weighbridge
3	Extra pre-wet tunnels, Phase 1 tunnels and extension to both Phase 2/3 buildings

## 2.0 REQUIREMENTS

### 2.1 Ministers Conditions of Approval

Conditions of Approval were issued by Department of Planning and Infrastructure (11 January 2012) for the development under Application No. 08\_0255 and modified on 14 March 2016. Conditions 1 and 1A of Schedule 3 refer to the CEMP which includes preparation of a Noise and Vibration Management Plan for the Substrate Plant.

Specifically:

#### ***Construction Environmental Management Plan***

**1.** *The Proponent shall prepare and implement a Construction Environmental Management Plan for the Substrate Plant site to the satisfaction of the Secretary. This Plan must:*

*(a) be prepared in consultation with NOW and EPA;*

*(b) be submitted for approval prior to commencement of construction, and include:*

- a noise and vibration management plan, including a noise monitoring program that can be used to demonstrate compliance with the construction noise criteria in Condition 18 below;*
- an air quality management plan;*
- a soil and water management plan, including details of the erosion and sediment control measures to be used on site;*
- a flora and fauna management plan;*
- a traffic management plan; and*
- a waste management plan.*

**1A** *The Proponent shall update the CEMP required by Condition 1 of Schedule 3 to include the works associated with MOD 1. The updated plan shall be submitted to and approved by the Secretary prior to the commencement of any construction works associated with MOD 1.*

*The revised CEMP shall be implemented throughout the construction works.*

#### ***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)

<b>Receiver / Location</b>	<b>Day <math>L_{Aeq}</math> (15 minute)</b>
<i>R1 – 46 Mulgrave Road, Mulgrave</i>	52
<i>R2 – Mulgrave Industrial Area</i>	65
<i>R3 – 2 Railway Road, Mulgrave</i>	52
<i>R4 – 126 Mulgrave Road, Mulgrave</i>	52
<i>R5 – Chisholm Place, South Windsor</i>	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.

### **Additional Noise Mitigation Measures**

21. The Proponent shall construct the 7 m high noise wall adjacent to the southern side of the bale storage shed or implement 'other noise mitigation measures' with the same or greater effect, prior to commencement of stage 2B construction works.

Should 'other noise mitigation measures' be implemented, the Proponent shall demonstrate, to the satisfaction of the Secretary, that the chosen measures will be as effective as modelled for the noise wall. Construction of Stage 2B cannot commence unless the Proponent has received the Secretary's approval for the 'other noise mitigation measures'.

## **2.2 Relevant Guidelines**

The Substrate Plant, Mulgrave CNVMP was prepared with consideration of:

- o *OEH, Interim Construction Noise Guideline (2009)*
- o *OEH, Assessing Vibration: a technical guideline (2006)*
- o *Australian Standard AS 2670.2-1990*
- o *German Standard DIN4150 Part 3 (1986)*
- o *British Standard BS7385 -1993 - Part 2*

### 3.0 PROPOSAL

The expansion of the substrate site will be accommodated within the south-east, south-west and north-west portions of the site (*Figure 1*). The north-west area has previously been subject to approved filling operations under a previous development approval forming a platform level in the order of RL16m. Major earthworks are already completed thus main civil and construction works to be completed include preparation of hardstand areas, concrete works, building erection, installation and commissioning of plant and equipment.

The main noise generating activities will be associated with the concrete works and filling activities. For concrete works the following plant has been considered:

- concrete truck/pump
- cranes

Surface preparation activities are required for the new buildings and structures and involve the use of a compactor and excavator.

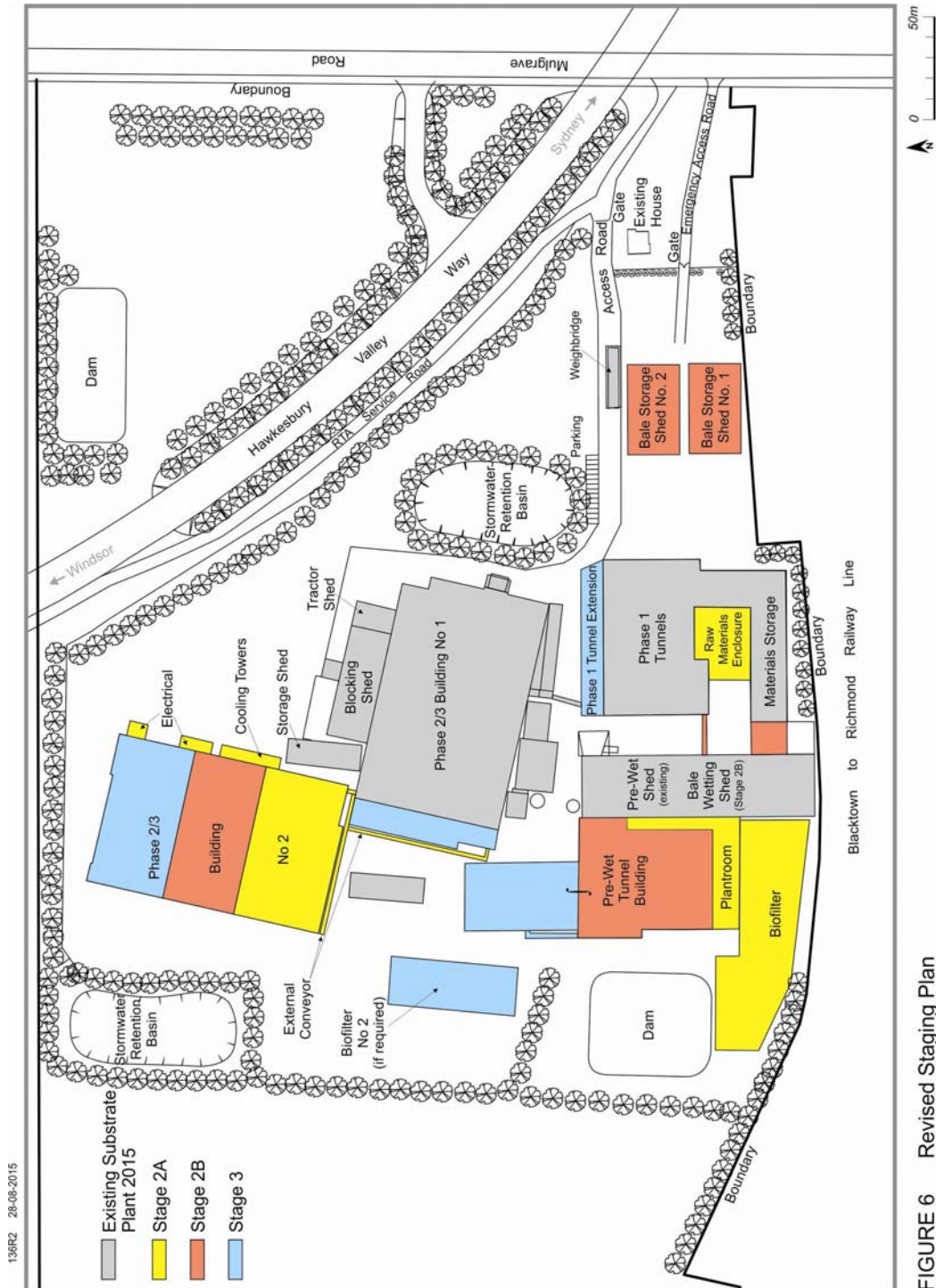
The building erection will be conducted with cranes, scissor lifts and associated minor plant and equipment. It is expected that noise emissions for these activities would be significantly less than the earth and concrete works. However for noise assessment purposes the following schedule of plant and equipment has been considered:

- cranes
- scissor lifts

The main civil earthworks and building construction will be undertaken between:

- 7.00am to 6.00pm - Monday to Friday
- 8.00am to 1.00pm - Saturday.

**Figure 1: Site Layout - Substrate Plant Expansion**





Works associated with the building fit out and plant commissioning could be undertaken twenty-four (24) hours, seven (7) days a week where noise is inaudible at residential premises, subject to approval of the Director-General in writing.

It is proposed to develop the substrate plant in three (3) main stages, however for assessment and development purposes these stages have been further broken down into nine (9) key components. The envisaged total duration of the construction works and commissioning is in the order of sixty (60) months, albeit works will be conducted on a campaign basis with significant breaks between stages and accordingly the total site works is anticipated to take up to ten (10) years to complete.

## 4.0 CONSTRUCTION NOISE

### 4.1 Noise Receivers

The nearest potentially affected residential dwellings are located to the north (46 Mulgrave Road – feedlot and associated residence), south-east (commercial market garden - 124 Mulgrave Road and isolated residential dwellings - 2 Railway Road) and west (Chisholm Place, South Windsor) of the development. The closest residential dwellings are located approximately 460m north, 170-280m south-east and 390m to the west. *Table 1* and *Figure 2* identifies the receiver locations selected for noise assessment.

**Table 1: Assessment Locations**

Reference	Description	Location
R1*	46 Mulgrave Road, Mulgrave	North
R2	Mulgrave Industrial Area	East
R3	2 Railway Road, Mulgrave	South-east
R4*	126 Mulgrave Road, Mulgrave	
R5*	Chisholm Place, South Windsor	West

\* Noise monitoring locations

**Figure 2: Reference Assessment Locations**



## 4.2 Existing Noise Environment

For the purpose of assessing noise impacts from the proposal and establish project specific noise assessment goals, the ambient noise environment was monitored from Friday 20 March 2009 to Friday 27 March 2009.

The results of the noise monitoring at reference locations (*Table 1*) and shown on *Figure* confirmed daytime background  $L_{A90}$  noise levels of:

<i>M1</i>	46 Mulgrave Road, Mulgrave	39-43dB(A) (RBL 42dB(A))
<i>M2</i>	126 Mulgrave Road, Mulgrave	41-46dB(A) (RBL 42dB(A))
<i>M3</i>	3 Chisholm Place, South Windsor	39-43dB(A) (RBL 41dB(A))

Considering the measured noise levels, procedures of the *Interim Construction Noise Guideline (ICNG)* and location of referenced receivers, assessment goals were established for day construction activities and summarised in *Table 2* and consistent with the construction noise criteria specified in *Condition 18 (Application No. 08\_0255)*.

**Table 2: Construction Noise Goals – Day**  
*dB(A) ref:  $20 \times 10^{-6}$  Pa*

Reference Assessment Location	Rating Background $L_{A90}$ Noise Level (RBL)	Noise Assessment Goal ( $L_{Aeq,15min}$ )
R1	42	52
R2	Industrial	65
R3	42	52
R4	42	52
R5	41	51

*Note: Construction noise goals for standard hours of 7.00am to 6.00pm Monday to Friday and 8.00am to 1.00pm Saturday*

### 4.3 Construction Noise Sources

The main plant and equipment of acoustical significance envisaged during site preparation and construction includes compactor, trucks, concrete trucks and cranes. A summary of typical plant and equipment envisaged for construction works is listed in *Table 3*.

**Table 3: Construction Plant & Equipment**

Item	Description	Purpose
1	Compactor	Compacting site works
2	Excavator	Earthworks
3	Cranes	Concrete hardstand & building erection
4	Trucks	Filling, on-site transport of material
5	Water Cart	Filling of site
6	Concrete trucks/pumps	Concrete hardstand
7	Generator/s	Building erection

For noise modelling and assessment purposes *Table 4* presents a summary of equipment sound power levels established from field measurements, reported data for similar construction activities, manufacturers specifications and reference to AS2436-1981.

**Table 4: Plant/Equipment Sound Power Levels**  
*L<sub>A10</sub> re: 10<sup>-12</sup> Watts*

Plant Description	Sound Power Level								
	dB(A)	63	125	250	500	1k	2k	4k	8k
Compactor	110	107	110	105	107	105	104	96	94
Excavator	105	108	108	105	102	100	96	89	80
Cranes	104	88	96	96	100	99	98	95	86
Dump Truck	106	104	105	102	104	103	103	98	93
Truck/Water Cart	102	97	98	95	97	96	96	91	86
Concrete trucks/pumps	112	107	108	105	107	106	106	101	96
Scissor Lift	95	92	91	88	90	89	89	84	79

#### 4.4 Assessment

The results of noise modelling (Ref: 40.6411.R1:CFCD4 Rev03 and 41.6411.L4:CFCD5) demonstrated that with the incorporation of noise and management controls, the predicted noise levels satisfy the construction noise criteria specified in *Condition 18*.

Following preparation of the noise modelling in 41.6411.L4:CFCD5, a contractor was engaged for the filling operations (Compaction and Soil Testing Services Pty Ltd). Discussions with the contractor (Neil Groat - CSTS) confirmed a dozer would not be required, and filling would utilise a compactor, dump trucks and occasional use of a 20-30t excavator, accordingly noise emissions during Scenario 1 (Pre Wet Landfill) would reduce by up to 3dB without the requirement to limit simultaneous operation of plant.

We note that *Condition 21 of Application No. 08\_0255* requires the construction of the 7 metre high southern boundary noise wall adjacent the bale storage shed prior to commencement of other Stage 1 works. The primary acoustic requirement of Condition 21 is to control construction noise. Referenced to the 2010 Noise Impact Assessment (40.6411.R1.CFCD4 Rev 03) Para 6.2.2, the noise reduction predicted for the wall is 5-8dBA. For the purpose of noise control during construction an effective acoustic detail for the wall can be obtained using stacked straw bales in lieu of concrete. For the wall to be acoustically effective the stacked bales should be at least two (2) deep, constructed with lapped vertical butt joints and located as shown on the Site Plan submitted with the original application DWG 200608 Issue J. To maintain the acoustic effectiveness of the wall, site management controls will be required to replace any degraded/weathered bales.

## 5.0 CONSTRUCTION VIBRATION

### 5.1 Vibration Levels from Construction Equipment

During the envisaged range of filling and compaction, it will be necessary to use plant and equipment that generates ground vibration. The main source of ground vibration identified will be associated with vibratory rollers. To evaluate the likely effects of the construction activities, the following vibration levels (*Table 5*) have been considered.

**Table 5: Typical Plant Vibration Levels**  
*mm/s*

Plant Description	Vibration Levels mm/sec		
	@ 5m	@ 20m	@ 40m
Vibratory Roller	-	4	2.5

Ground vibration from vibratory roller could range up to 4mm/sec at a distance of twenty (20) metres, and 2-3mm/sec at forty (40) metres. The predicted ground vibration levels at these distances satisfy the recommended assessment goals, and acceptable from human disturbance and structural damage points of view.

## 6.0 ROLES and RESPONSIBILITIES

This section of the *CNVMP* provides an outline of the roles and responsibilities of the personnel involved in the construction works to ensure that noise and vibration impacts are managed to comply with the relevant assessment goals and does not adversely impact the identified sensitive receivers. The personnel, roles and responsibilities are summarised below:

### *Project Manager*

- reviewing and authorising the *CNVMP*;
- designate environmental responsibilities to the project *Construction Manager*;
- ensure sufficient resources are allocated such that the *CNVMP* commitments are adopted; and,
- continual review and monitoring of environmental performance to ensure suitability and effectiveness of *CNVMP* and objectives.

### *Construction Manager*

- reviewing, maintaining, updating and implementing the *CNVMP*;
- educate staff and contractors to ensure all relevant personnel are aware of their obligations under the *CNVMP*;
- review identified noise and vibration issues or complaints and action;
- co-ordination of any activities and duties required under this *CNVMP*;
- initial contact person in relation to any construction noise and vibration issues;
- provide advice on noise and vibration controls to manage any noise or vibration exceedances / complaints;
- designate an appropriately qualified person to provide specialist advice for managing noise and vibration as required; and,
- periodic review to ensure the *CNVMP* is being implemented.

### *Construction Personnel*

- aware of their responsibilities under the *CNVMP*;
- aware of the specific noise and vibration sources in their work area and requirements under this *CNVMP* to minimise construction noise and vibration impacts; and,
- inform the *Construction Manager* without delay where change in construction methods occur that may result in high levels of noise and/or vibration.



## 7.0 CONSTRUCTION NOISE and VIBRATION MANAGEMENT

Notwithstanding the predicted compliance with the project construction noise and vibration goals, to minimise impacts during construction, the following measures are recommended:

- when concrete pours are taking place, where practical locate concrete trucks / pumps within a specified area that provided localised acoustic screening to residential properties to the south and west;
  - adoption of Best Management Practice (BMP) and Best Available Technology Economically Achievable (BATEA) practices as encouraged by the *OEH*;
  - site inductions and personnel / contractor training in correct use of plant and equipment to minimise noise and vibration impacts;
  - selection of plant and equipment on acoustic performance where practical;
  - reduce operating speeds of equipment where practical and switch off idle plant when not in active use;
  - where practical noisy activities would be scheduled during periods of the day when general ambient noise levels are higher;
  - truck access arrangements to allow for forward travel throughout the site and minimise reversing or manoeuvring where possible;
  - inspection / maintenance / repair program for mobile mechanical plant;
  - construction conducted within the standard hours\*:
    - 7.00am to 6.00pm Monday to Friday
    - 8.00am to 1.00pm Saturday;
- \* unless under special circumstances (*ICNG Section 2.3*)
- review use of mobile plant reversing sirens / alarms and alter work practices where practical, or replace with broad band or level varying alarms / sirens;

- construction activities would be undertaken in accordance with AS 2436-1981 *Guide to Noise Control on Construction, Maintenance and Demolition Sites*. That is all equipment used on site would be required to demonstrate compliance with the noise levels recommended in AS 2436-1981 and presented in *Table 8* and reproduced below (Letter dated 11 October 2011 Ref: 41.6411.L4:CFCD5). Noise audits of site plant to be conducted as part of the noise monitoring program for each stage of construction as outlined in *Section 7.1*; and,

Plant Description	Sound Power Level L <sub>w</sub> (dB(A))	Sound Pressure Level @7m (dB(A))
Compactors	110	85
Cranes	104	79
Dump Truck	106	81
Truck/Water Cart	102	77
Concrete trucks/pumps	112	87
Scissor Lift	95	70

- a contact telephone number provided to the immediate neighbours so that information can be received or complaint made in relation to noise. A log of complaints maintained and actioned by the Project Manager.

## 7.1 Noise and Vibration Monitoring

Considering the distance separation from the construction works and sensitive receivers, and the predicted compliance with the noise and vibration goals, exceedances of *Condition 18* noise criteria are not anticipated.

However *Condition 1 – Schedule 3* requires noise monitoring to demonstrate compliance during construction activities. Accordingly this *CNVMP* recommends that noise monitoring be conducted for the each stage (Stage 1-3) of the construction works and consider the typical worst case activities during filling operations and/or concrete pours. In addition to receiver noise audits, nearfield measurements to be conducted of construction plant and equipment to ensure compliance with the noise levels presented in AS 2436-1981 and *Table 8* (Ref: 41.6411.L4:CFCD5).

In addition to the scheduled noise monitoring for each stage, where noise complaints are received, the source of the noise and / or vibration complaint will be identified and ameliorative measures considered if required. Noise and / or vibration monitoring would be considered in response to receipt of repeated complaints. Following audits, control measures will be reviewed should additional ameliorative measures be required.

Complaints will be recorded, and include location of complainant, time/s of occurrence of alleged noise impacts, perceived source of noise, prevailing weather conditions and similar details that could be utilised to assist in the investigations of the noise complaint. All resident complaints will be responded to in a timely manner and action taken recorded.

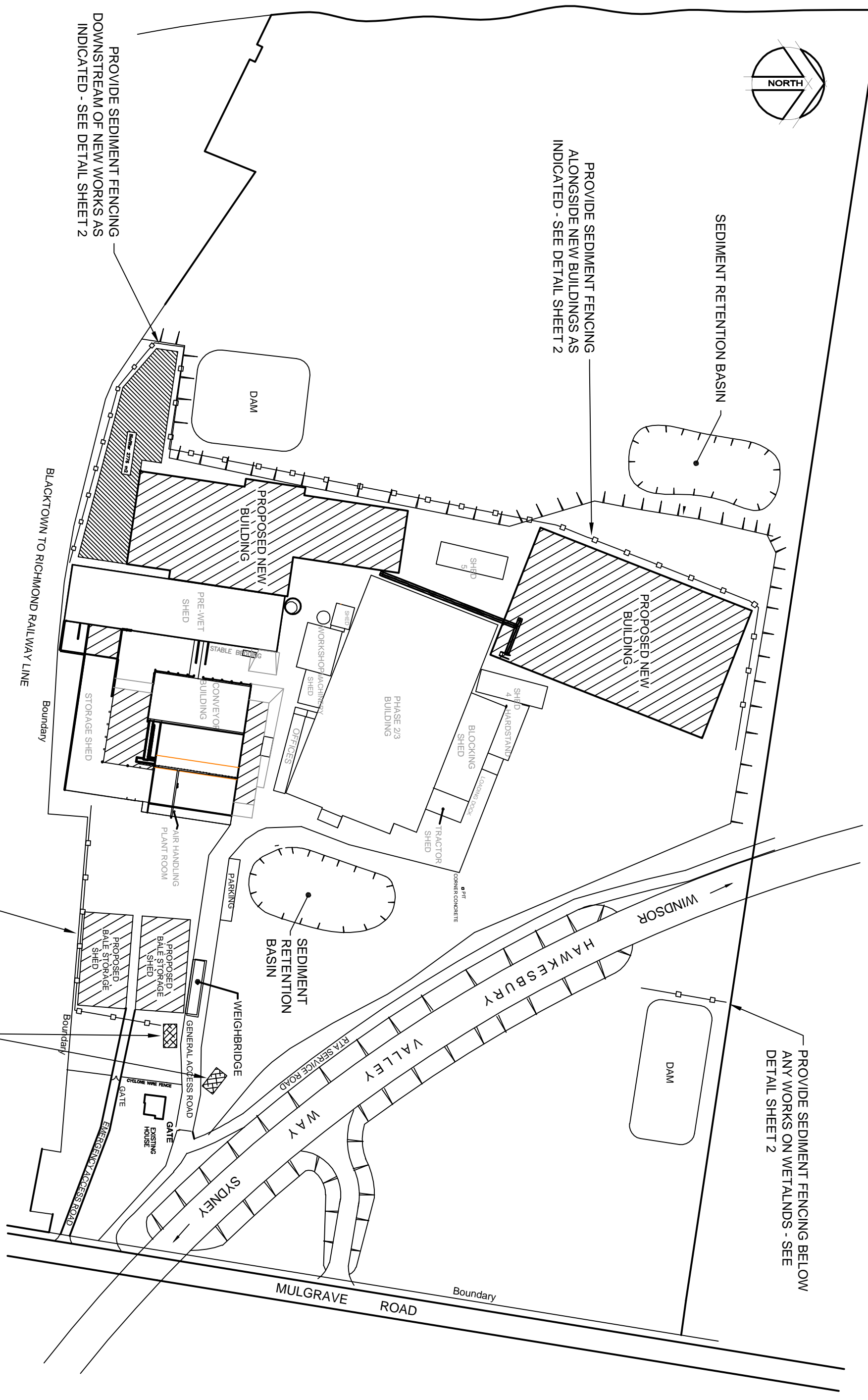
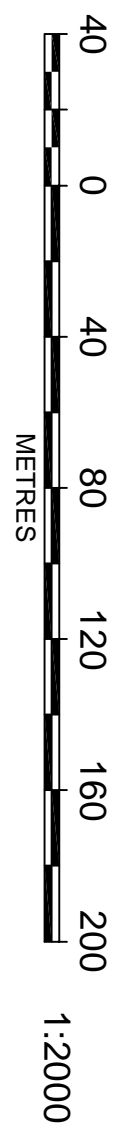
## **7.2 Records**

The results of all noise and / or vibration complaints and monitoring will be held onsite and maintained by the *Project Manager*.

Appendix D

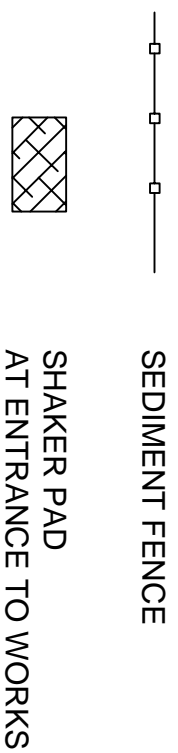
# EROSION AND SEDIMENT CONTROL PLAN





No.	DATE	AMENDMENT	DESIGNED: GJ	SCALE: Plan 1:2000	CLIENT: ELF FARM SUPPLIES PTY LTD	PLAN No. 07166E21
A	18/1/10	FIRST ISSUE	DRAWN: JB	Horiz. 1:2000	MULGRAVE ROAD, MULGRAVE	File Ref. 07166E21
B	20/6/16	ARCHITECTURAL UPDATED	CHECKED: GJ	Vert. X-Section	MUSHROOM FARM	E
TOTAL PROJECT SOLUTIONS			RETURN: A.H.D.		EROSION & SEDIMENT CONTROL PLAN	RE SHEET 1 OF 2 SHEETS
			SYDNEY 10/100 ROSS CENTRAL COAST HUNTER P. 02 4966 8388 ARLN 26 134 017 842 barker@barker-ryan.com.au ryan@barker-ryan.com.au			

**LEGEND**



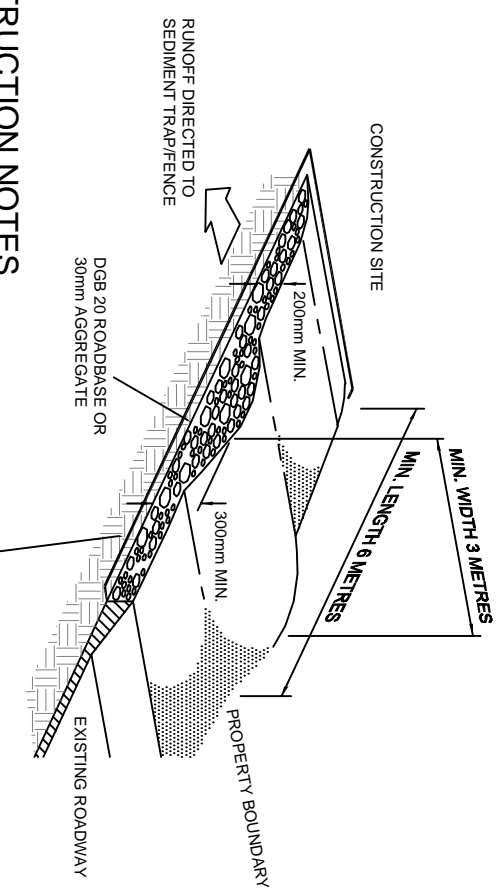
**EROSION AND SEDIMENTATION CONTROL NOTES**

- PRIOR TO THE COMMENCEMENT OF SITE DISTURBANCE, THE CONTRACTOR SHALL ESTABLISH ALL NECESSARY EROSION AND SEDIMENTATION CONTROL MEASURES IN ACCORDANCE WITH THIS PLAN, COUNCIL'S "CIVIL WORKS SPECIFICATION, PART 2 - CONSTRUCTION", AND THE NSW DEPARTMENT OF HOUSING'S PUBLICATION "MANAGING URBAN STORMWATER - SOILS AND CONSTRUCTION".
- THE LOCATION OF EROSION AND SEDIMENTATION CONTROL DEVICES SHOWN ON THIS PLAN ARE INDICATIVE ONLY AND SHOULD BE ADJUSTED TO SUIT SITE CONDITIONS.
- WHERE WORKS ARE DELAYED OR IN ABEYANCE AND DISTURBED AREAS ARE LIKELY TO BE EXPOSED FOR A PERIOD OF TWO MONTHS OR MORE, TEMPORARY REHABILITATION WORKS SHALL BE UNDERTAKEN TO PROTECT THE SITE.
- ALL DISTURBED AREAS SHALL BE TOPSOILED, SEEDED AND MULCHED WITHIN 20 DAYS OF THE COMPLETION OF THE WORKS.
- ALL AREAS WITH SLOPES STEEPER THAN 12% (1 in 8) SHALL BE STRAW MULCHED IN CONJUNCTION WITH SEEDING, OR TURRED.
- SILT BARRIERS LOCATED AROUND KERB INLET AND ROAD PITS SHALL BE REINSTATED FOLLOWING ROAD PAVING WORKS IF IT IS LIKELY THAT UNDISTURBED AREAS WILL STILL DRAIN TO THE PIT.
- SANDBAGS SHALL BE PLACED ACROSS THE END OF ROAD CONSTRUCTION AT THE COMPLETION OF EACH DAYS WORK TO PREVENT EROSION OF THE CONSTRUCTED MATERIAL.
- THE CONTRACTOR SHALL CONDUCT WEEKLY INSPECTIONS OF THE SITE TO ENSURE THAT ALL DEVICES AND REHABILITATION AREAS HAVE BEEN ADEQUATELY MAINTAINED. THE CONTRACTOR SHALL ALSO KEEP A LOG BOOK DETAILING SUCH INSPECTIONS, AND RECORDING RAINFALL EVENTS AND OTHER RELEVANT EVENTS.
- TOPSOIL SHALL BE STOCKPILED IN THE LOCATIONS SHOWN ON THIS PLAN OR AS DIRECTED BY COUNCIL'S ENGINEER, WHERE IT IS LIKELY THAT STOCKPILES WILL REMAIN IN PLACE FOR A PERIOD EXCEEDING 4 WEEKS. THEN THE STOCKPILE SHALL BE STABILISED BY SEEDING OR EQUIVALENT METHODS.
- ALL REVEGETATION WORKS ARE TO BE MAINTAINED, INCLUDING WATERING AND MOWING WHERE NECESSARY UNTIL THE COMPLETION OF THE MAINTENANCE PERIOD.
- THE MOVEMENT OF VEHICULAR TRAFFIC ON THE SITE SHALL BE CONFINED TO DESIGNATED AREAS DURING CONSTRUCTION WORKS. VEHICULAR ACCESS SHALL BE DENIED TO AREAS TO BE LEFT UNDISTURBED.
- SITE ACCESS SHALL BE LIMITED TO THE LOCATIONS SHOWN ON THIS PLAN. SHAKE-DOWN AREAS SHALL BE CONSTRUCTED AS SHOWN.
- DURING CONSTRUCTION WORKS, DUST CONTROL MEASURES SHALL BE IMPLEMENTED TO MINIMISE THE AMOUNT OF DUST GENERATED FROM THE SITE. THESE MEASURES TO BE IMPLEMENTED TO COUNCIL'S SATISFACTION.
- MAINTENANCE AND CLEANING OF CONSTRUCTION PLANT SHALL BE CARRIED OUT IN AN AREA WHERE RUNOFF CAN BE CONTAINED AND APPROPRIATELY TREATED AND DISPOSED OF.
- ALL EROSION AND SEDIMENTATION CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL ALL DISTURBED AREAS HAVE ADEQUATELY REGENERATED. THIS STAGE SHALL BE DETERMINED BY THE CERTIFIER.

**CONSTRUCTION NOTES**

- STRIP TOPSOIL AND LEVEL SITE.
  - COMPACT SUBGRADE.
  - COVER AREA WITH NEEDLE-PUNCHED GEOTEXTILE.
  - CONSTRUCT 200mm THICK PAD OVER GEOTEXTILE USING ROADBASE OR 30mm AGGREGATE. MINIMUM LENGTH 15 METRES OR TO BUILDING ALIGNMENT. MINIMUM WIDTH 3 METRES.
  - CONSTRUCT HUMP IMMEDIATELY WITHIN BOUNDARY TO DIVERT WATER TO A SEDIMENT FENCE OR OTHER SEDIMENT TRAP.
- GEOTEXTILE FABRIC DESIGNED TO PREVENT INTERMIXING OF SUBGRADE AND BASE MATERIALS AND TO MAINTAIN GOOD PROPERTIES OF THE SUB-BASE LAYERS.
- GEOTEXTILE MAY BE A WOVEN OR NEEDLE PUNCHED PRODUCT WITH A MINIMUM CBR BURST STRENGTH (AS3706 4-90) OF 2500 N

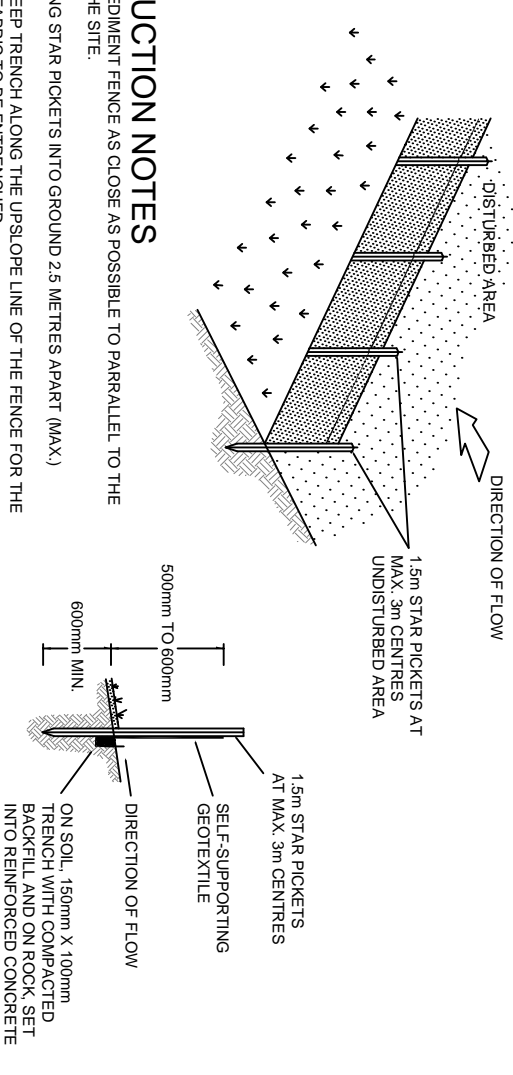
**SHAKER PAD**



**CONSTRUCTION NOTES**

- CONSTRUCT SEDIMENT FENCE AS CLOSE AS POSSIBLE TO PARALLEL TO THE CONTOURS OF THE SITE.
- DRIVE 1.5m LONG STAR PICKETS INTO GROUND 2.5 METRES APART (MAX.)
- DIG A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
- FIX SELF-SUPPORTING GEOTEXTILE TO UPSLOPE SIDE OF POSTS WITH WIRE TIES OR AS RECOMMENDED BY GEOTEXTILE MANUFACTURER.
- JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.
- BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.

**SECTION DETAIL**



<p>ARCHITECTURAL UPDATED</p> <p>20-05-16</p> <p>18/11/10</p> <p>NO. DATE</p>		<p>AMENDMENT</p>		<p>STUNNY 7/10 CENTRAL COAST</p> <p>BARKER RYAN STEWART</p> <p>TOTAL PROJECT SOLUTIONS 15/AVENUE PROJECT MANAGEMENT - ENGINEERING - CONSTRUCTION AVENUE 28   151 017 842 barker@totalproject.com.au totalproject.com.au</p>		<p>Designed: <b>GU</b></p> <p>Drawn: <b>JB</b></p> <p>Checked: <b>GU</b></p>		<p>Scales: Plan 1:2000 HORIZ. VERT. X-SECT.</p>		<p>Client: <b>ELF FARM SUPPLIES PTY LTD</b></p> <p>LGA: <b>HAWKESBURY</b> Council Ref:</p>		<p>Plan No. <b>07166E22</b></p> <p>File Ref. <b>07166E21 b</b></p>		<p>RE <b>A</b></p>	
<p>MULGRAVE ROAD, MULGRAVE MUSHROOM FARM SUBSTRATE PLANT EXTENSIONS NOTES, LEGEND AND DETAILS</p>				<p>SHEET 2 OF 2 SHEETS</p>											

## Appendix E

# RESPONSE FROM NOW AND OEH

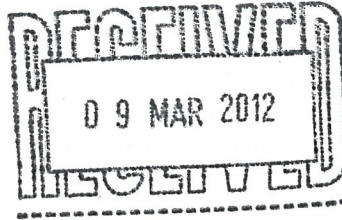






**Environment,  
Climate Change  
& Water**

Our reference: DOC12/5675



Mr Terry Perram  
Perram & Partners  
12 Clanwilliam St  
EASTWOOD NSW 2122

**STANDARD POST & EMAIL**

Dear Mr Perram

**RE: Mushroom Substrate Plant: Construction Environmental Management Plan**

I am writing in response to your request for comments from the Office of Environment and Heritage (OEH) on the proposed Construction Environmental Management Plan (CEMP) for development at Elf Farms, Mulgrave.

Please be advised that on 29 February 2012 the NSW Government established the Environment Protection Authority (EPA), an independent authority responsible for environmental licensing and regulation. OEH continues to develop policy in all environmental matters and regulates biodiversity, Aboriginal cultural heritage, waters and rivers, wildlife and native vegetation.

Neither the EPA nor OEH have a role in approving or endorsing EMPs, therefore will not be providing comments.

I note that the development will require the importation of fill to the property located at 108 Mulgrave Road, Mulgrave. I have therefore enclosed an educational brochure (*Avoiding the dangers of accepting fill on your land*) for your information and for the information of your client, Elf Farm Supplies.

The CEMP advises that the material to be used for the construction of the hardstand area will be Excavated Natural Material (ENM). ENM can be land applied, without seeking EPA approval, under "*The excavated natural material exemption 2008*" ("the General Exemption") if it meets the definition of excavated natural material under the General Exemption and all the conditions of the General Exemption are met. A copy of the General Exemption can be downloaded from the EPA's website at: [www.environment.nsw.gov.au/waste/generalRRE.htm](http://www.environment.nsw.gov.au/waste/generalRRE.htm).

Please ensure that appropriate documentation and records about the fill that is received are maintained to demonstrate compliance with the above exemption.

If you, or your client, require any further clarification please contact Andrew Reece on (02) 9995 5770.

Yours sincerely

**Penny Vella**  
**A/Unit Head Waste Operations**  
**Environment Protection Authority**

Enclosed: "[Avoiding the dangers of accepting fill on your land](#)"



Perram and Partners  
12 Clanwilliam Street  
EASTWOOD NSW 2122

**Attention: Terry Perram**

Contact Janne Grose  
Phone 02 4729 8262  
Fax 02 4729 8141  
Email [janne.grose@water.nsw.gov.au](mailto:janne.grose@water.nsw.gov.au)

Our ref ER21351  
Your ref

Dear Terry

**Staged Development of Mushroom Substrate Plant, Mulgrave Road, Mulgrave  
Construction Environmental Management Plan**

I refer to the letter of 23 January, 2012 requesting the NSW Office of Water's (Office of Water) comments regarding the draft Construction Environmental Management Plan for the approved construction work at Elf Farm supplies mushroom substrate plant.

The Office of Water comments are provided at **Attachment A** for consideration

Should you require further information please contact Janne Grose, Planning and Assessment Coordinator on (02) 4729 8262 at the Penrith office.

Yours sincerely

A handwritten signature in blue ink, appearing to read 'M. Mignanelli'.

**Mark Mignanelli**  
**Manager Major Projects, Mines and Assessment**  
9 March 2012



**Construction Environmental Management Plan  
Mushroom Substrate Plant, Mulgrave Road, Mulgrave**

The NSW Office of Water (Office of Water) provides the following comments on the draft Construction Environmental Management Plan (CEMP) for the proposed mushroom substrate plant at Mulgrave.

Condition 23 of Schedule 3 of the Concept Plan Approval (dated 11 January, 2012) requires the proponent to establish a fenced 35 metre wide riparian corridor along the length of South Creek within 12 months of commencement of operation of Stage 1 and to consult with the Hawkesbury Nepean Catchment Management Authority on methods and species selection.

The draft CEMP makes no reference to rehabilitating the riparian corridor along South Creek and only notes the grassed paddock which extends to South Creek is used for cattle grazing (see Section 3, page 9). While it is recognised the CEMP provides a framework for implementing appropriate environmental management practices during staged construction, it is not clear when and how the establishment of the riparian corridor is to be addressed?

Once operation of the substrate plant commences, details will need to be provided, for instance on the fencing of the riparian area, the establishment of local native riparian vegetation and maintenance and monitoring of the riparian area. It is suggested the CEMP makes reference to Condition 23 and the intent to establish a vegetated riparian corridor along South Creek at the site and that the CEMP indicates at what point and how the establishment of riparian area is to be addressed.

**End Attachment A  
9 March 2012**

## Appendix F

# COMPLAINTS HANDLING PROCEDURE



## **Elf Farm Supplies Complaints Procedure**

Version: May 2016

This procedure is the same as the complaints procedure included in the Elf Farm Supplies Community Consultation Strategy section 6.4 dated May 2016. On approval of this strategy by the NSW Department of Planning & Environment, the following complaints procedure will apply:

### **6.4.1. Introduction**

Complaints will be received via the complaints telephone line (1800 155 079) or via the Elf Farm Supplies website (once operational). On receipt, complaints will be forwarded immediately to the relevant officer for investigation, and will be responded to within five business days, should the complainant request a response. This response will be provided back to complainant through their nominated choice of:

- Follow up phone call with reference number
- Email with reference number
- Letter with reference number

### **6.4.2. Step one: receive and record the complaint**

All complaints received by the complaints telephone line (and via the complaints email portal) will be recorded and the following information will be sought from the complainant:

- Personal information of the complainant – ideally their name and contact details (complaints made without personal information will still be recorded and investigated)
- Nature of complaint
- Time of complaint
- Location of complaint (to the nearest cross street, if complainant prefers not to give their exact location)
- Description of odour (character and strength), if odour complaint
- How long the odour has been present, if odour complaint
- Wind direction and other pertinent meteorological information (e.g. raining, fog, hot, wind strength), if odour complaint.

Once the complaint has been recorded the complainant will be provided with a reference number and advised of the response timeframe. In circumstances where complaints can be resolved at the point of contact, a record will be taken and the complainant will be provided with the reference number of their complaint.

### **6.4.3. Step two: investigate, assess and determine action**

Once a complaint has been received and the details recorded, the complaint will be investigated and an assessment made:

Complaint information is forwarded to the appointed officer at the time of complaint for the matter to be investigated.

For odour complaints, attendance at reported site of complaint in order to confirm the nature of odour and its source:

- Confirmation of character and strength of odour
- Identification of direction of odour

- If not possible to attend (i.e. no location given, WHS requirements) the complaint is still investigated as per the following steps of this procedure

Cross-reference complaint against production schedule and activities at the Elf Farm Supplies at the time of complaint and one hour preceding the complaint.

For noise, odour and dust complaints, cross-reference complaint against meteorological conditions, including wind direction and strength at time of complaint and one hour preceding the complaint.

On the basis of the data gathered during the preceding stages, make an assessment of cause of the complaint.

Determine if corrective action is required and any contingency measures pending implementation.

Implement contingency measures and corrective action, where required.

#### **6.4.4. Step three: respond to the complaint**

Once the complaint has been assessed, a formal response will be provided to the complainant, if they requested one. The EPA will also be advised of the formal response.

This response will be provided within five business days of the complaint being made and will include:

- Time and date of the complaint
- If an odour complaint, the location of the complaint
- If an odour complaint, the wind strength and direction one hour prior to complaint lodgement
- Overview of activities at Elf Farm Supplies one hour prior to complaint lodgement
- Outcomes of the assessment of the complaint.

Should the complainant be dissatisfied with the outcome of the complaint, details of other complaint options will be provided and their dissatisfaction with the outcome will be recorded.

#### **6.4.5. Step four: report the complaint**

Complaint data will be compiled in a complaints register to record the quantity and nature of complaints. The complaints register will be published on the Elf Farm Supplies website, and updates will be posted on the site each month.

The register will detail:

- Number of complaints received
- Number of unique complainants where possible to identify
- Nature of complaints
- Outcomes of complaints
- If complaint was resolved in compliance with this procedure.

Reports and complaint records will be held for a period of four years after the complaint is made, as per EPA licence requirements.



#### **6.4.6. Promotion of complaints telephone line**

The complaints telephone line will be advertised through:

- Signage at the entry to Elf Farm Supplies Pty Ltd site (108 Mulgrave Road, Mulgrave NSW 2756)
- Telephone directory listing for Elf Farm Supplies
- Elf Farm Supplies website
- Newsletters, whilst provided
- Public information sessions, whilst conducted
- Periodic advertisements in the local print media, whilst provided.