

## ELF FARM SUPPLIES MUSHROOM SUBSTRATE FACILITY

Annual Environmental Management Review



**SEPTEMBER 21, 2023** 



# Author Blake Edwards WHS/HR Manager Elf Farm Supplies Pty Ltd Revision Number Status David Tolson General Manager Elf Farm Supplies Pty Ltd Elf Farm Supplies Pty Ltd Revision Number Status Date 1.0 Final - submitted September 2023

Name of operation	ELF FARM SUPPLIES
Name of operator	ROBERT TOLSON
Development consent / project approval#	MP 08_0255
Name of holder of development consent/project approval	ROBERT TOLSON
Compliance Reporting phase	Operation
Annual Review start date, as per Schedule 5, condition 3	September 2022
Annual Review end date	August 2023

I, David Tolson, certify that this audit report is a true and accurate record of the compliance status of Elf Farm Supplies for the period September 2021 – August 2022 and that I am authorised to make this statement on behalf of Robert Tolson.

I declare that I have reviewed the contents of the attached Compliance Report and to the best of my knowledge:

- the Compliance Report has been prepared in accordance with all relevant conditions of consent;
- the Compliance Report has been prepared in accordance with the Compliance Reporting Post Approval Requirements;
- the findings of the Compliance Report are reported truthfully, accurately and completely;
- due diligence and professional judgement have been exercised in preparing the Compliance Report; and
- the Compliance Report is an accurate summary of the compliance status of the development.

## Notes:

- Under section 10.6 of the Environmental Planning and Assessment Act 1979 a person must not include false or misleading information (or provide information for inclusion in) a report of monitoring data or an audit report produced to the Minister in connection with an audit if the person knows that the information is false or misleading in a material respect. The proponent of an approved project must not fail to include information in (or provide information for inclusion in) a report of monitoring data or an audit report produced to the Minister in connection with an audit if the person knows that the information is materially relevant to the monitoring or audit. The maximum penalty is, in the case of a corporation, \$1 million and for an individual, \$250,000; and
- The Crimes Act 1900 contains other offences relating to false and misleading information: section 3078 (giving false or misleading information — maximum penalty 2 years' imprisonment or 200 penalty units, or both).

Name of authorised reporting officer	David Tolson
Title of authorised reporting officer	General Manager
Signature of authorised reporting officer	D.w. Jolson
Date	21/9/23



## 1. Executive Summary

As part of conditions of compliance to the Department of Planning, Industry and Environment's (DPIE) project approval 08\_255 MOD 3(2020), Elf Farm Supplies is required to produce an 'Annual Environmental Management Review' report of the environmental performance of its project and operations.

The purpose of this document is to comply with Condition 3 of Schedule 5 of project approval No 08\_255. MOD 3. Which states as follows:

"By 30 September 2020, and annually thereafter, unless otherwise agreed by the Secretary, the Proponent must review the environmental performance of the Project to the satisfaction of the Secretary. This review must

- (a) describe the operations that were carried out during the reporting period;
- (b) analyse the monitoring results and complaints records of the Project during the reporting period, which includes a comparison of these results against the:
- i. relevant statutory requirements, limits, or performance measures/ criteria;
- ii. monitoring results of previous years; and
- iii. relevant predictions in the EA;
- (c) identify any non-compliance during the reporting period, and describe what actions were (or are being) taken to ensure compliance;
- (d) identify any trends in the monitoring data over the life of the Project;
- (e) describe what measure(s) will be implemented during the next reporting period to improve the environmental performance of the Project."

This report covers the 12-month period between September 2022 and August 2023.

It is set out to assess compliance with items (a) to (e) of Condition 3; Schedule 5 as well as review the overall environmental performance of approval 08\_255 MOD 1(2016) project works and operations at the mushroom substrate plant at Mulgrave operated by Elf Farm Supplies for the stipulated period.



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## **Abbreviations**

AEMR – Annual Environmental Management Review.

EA – Environmental Assessment.

EPA – Environmental Protection Authority.

EPL – Environmental Protection Licence.

EFS – Elf Farm Supplies.

IEA – Independent Environmental Audit.

## 2. Introduction

## Background

Elf Farm Supplies Pty Ltd (EFS) was established at Mulgrave in 1981 and is a family-owned Australian Company. Today, EFS is one of the leading Phase 3 mushroom substrate (compost) producers in Australia. We are the largest agricultural enterprise in the Hawkesbury and the only substrate supplier located in the Sydney region. Our products are supplied throughout Australia/Pacific countries and are integral to the success of the Australian Mushroom Industry.

In March 2016 the approved modification (MOD1) primarily involved the following upgrades to the site:

- Replacement of the existing method of air exhaust treatment,
- Installation of a new air emissions treatment plant and ancillary works,
- Retrofitting the existing Phase 2 and 3 building,
- Converting the existing Pre-Wet Building for straw wetting and bale breaking operations.
- Building 10 new indoor Phase 1 bunkers

MOD1 was completed on 30<sup>th</sup> June 2018, therefore this Annual report will summarise all operations in the new process.

MOD3 was approved in March 2020 – 08\_0255 MOD3 - Extension of Straw Bale Storage Area and associated works, amended stormwater management system and western tree corridor.

These modifications have not commenced during this reporting period.

## **Review Scope**

This Annual Environmental Management Review (AEMR) report has been prepared pursuant to Condition 3 of Schedule 5 of Project Approval MP 08\_0255, as well as additional requirements for this and future reports as per letter dated 26<sup>th</sup> October 2018 from the Department of Planning, Industry and Environment in Appendix D.

Appendix A lists the requirements of this Condition 3.

Environmental Management across the site is the responsibility of the following key positions: Owner, General Manager, Plant Manager, Production Managers can be contacted on 02 4577 5000.

## 3. Operations Overview

EFS operations have been designed and built to produce a phase 3 mushroom substrate that is used for mushroom growing. The site has implemented world leading technology including an exhaust air management system to ensure all environmental goals are met.

The facility produces mushroom substrate by utilising a multi-stage composting process. An overview of the process is as follows:

## Raw Materials Preparation:

Raw materials preparation involves combining all ingredients including poultry manure, gypsum, and seasonal additions ready for internal transfer to bale wetting building. This mix is then colloquially known as the Brew.

The straw bales are transported from the bale storage area to the Bale Wetting Building in preparation for the bale wetting process. The bale wetting process involves gradually soaking water through the straw bales to start the composting process. Since the 25<sup>th</sup> February we have ceased wetting straw bales before the pre-wetting process due to structural concerns in the bale wetting building.

## Pre-Wetting:

The wet straw and the brew are blended via conveyors and mixing hoppers in the Bale Wetting Building and transported to a pre-wet bunker. Re-blending is undertaken during the pre-wet stage by removing the straw mix from each bunker and transferring via mixing hoppers and conveyors back into an empty bunker. During the re-blending operation water is continuously added to the straw mix.

## Phase 1:

The straw mix is processed in bunkers during which temperature and oxygen conditions are controlled.

## Phase 2:

The substate is transferred to tunnels to be pasteurised. Pasteurisation removes weed moulds or pests in preparation for spawning, post the 8 hour pasteurisation process we control the compost between high 40's & low 50 degree Celsius temperature range to convert the Ammonia NH3 to Ammonium NH4 by the natural microflora within the mushroom substrate in readiness for spawning.

## Phase 3:

The pasteurised compost is removed from the tunnel, mushroom spawn is added and transferred into a clean tunnel. The spawn is encouraged to grow throughout the compost by regulating both temperature and oxygen requirements.

## **Exhaust Air Treatment System**

Ammonia scrubbers and a large biofilter extract, treat and exhaust the buildings and process air from all potentially odourous plant operations. Exhaust air from the Phase 2 plant is also exhausted through the treatment system for a nominal 36-hour period after Phase 1 transfer.

## 4. Previous report actions

Table a Report actions

I	bie a	Report actions			
Source	Condition of consent	Action Proposed	Proposed Completion Date	Status	Action completed
AEMR 2022	Schedule 3  Condition 2  AIR  QUALITY  Offensive  Odours	Change out the 2 <sup>nd</sup> half of the biofilter.	During reporting period 2022- 2023	Commenced Planning and resources July 2023	Complete early Oct 2023
AEMR 2022	Schedule 3 Condition 9 Green House Gas	Energy efficiency measures – HID lighting in main working halls have been replaced with LED lighting.	During reporting period 2022- 2023	Complete	Yes
AEMR 2022	Schedule 3 Condition 9 Green House Gas	A 1.6 MW Solar panel system has been purchased in this reporting period. It will be installed in the next reporting period.	During reporting period 2022- 2023	Commenced November 2022. Completed August 2023	Yes

## 5. Compliance status summary

Table b Compliance status summary

Tabl	e b Compliance sta	tu summary
Condition of consent	Requirement (Summary)	Comment
Schedule 3 Condition 2	cause or permit the emission of offensive	Two odour complaints were received by the EPA in this reporting period, both in September 2022. Investigations were conducted by EPA and EFS during an onsite visit, Friday 14 October 2022, and it was concluded the likely source was the Western Dam which was breached during recent flood events and the odours are likely to be a result of this flood water.  EFS engaged a third party to nominate mitigation measures to deal with the anaerobic conditions. EFS installed a surface aeration and applied the Biostim powder, beneficial bacteria to improve biological activity, as recommended.  Action: ongoing surface aeration and applying the Biostim powder while continuing to pump out dam when conditions are favourable, no further complaints were recorded.

Table c Production Summary

Material	Approved limit	Previous	This Reporting	Next reporting
		reporting period	period	period
Phase 1 mushroom substrate	2400 T Per week  – Schedule 2 Condition 7(2) – Approved 31st October 2019	1930 T per week	1940 T per week	Up to 2400T per week

## 5.1.Penalty Notices

## Penalty Notice issued by NSW Environmental Protection Authority

There were no penalty notices issued to EFS by the EPA this review period.

## Penalty Notice issued by NSW Department of Planning, Industry and Environment

There were no penalty notices issued to EFS by the DPE this review period.

A warning letter was issued regarding noise mitigation measures not in place during previous reporting period. Bale noise mitigation wall was used for process straw due to the site being isolated due to flood events.

## 5.2. Environmental Protection Licence

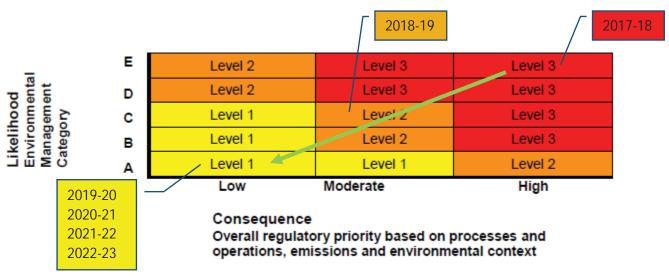
There are no non-compliances related to the environmental protection licence No: 6229

## Licence Variation

No variation made during this reporting period.

Risk Rating continues to be at the lowest level, Level 1 – 2022-23.

The risk ranking has fallen from Level 3 2017-18 prior to MOD1 completion to Level 1 in 2019-20 MOD1 operations and continues to stay at this level 4 years beyond completion.



## Annual Returns and Annual Waste Summary

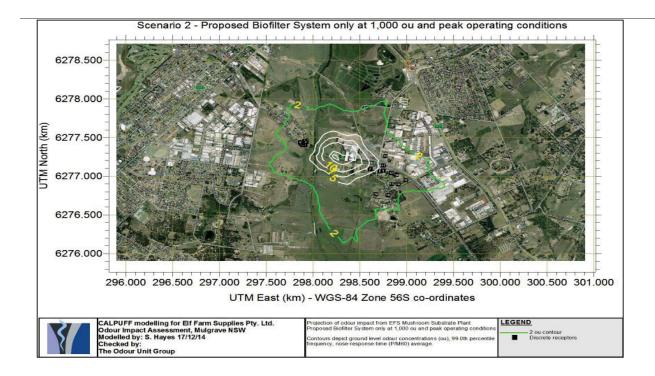
The Annual Return and annual waste summary for 2023 have been lodged in accordance with the NSW EPA requirements. There were no non-compliance incidents that resulted in a Penalty Notice or referrals for this review period.

## 5.3. Noise Management and Monitoring

Performance during the reporting period	No Noise Complaints during reporting period  No Construction was undertaken during this reporting period.
	No Noise complaints recorded for this reporting period.
Trend / key	This would be due to no operational change and noise wall on the eastern and southern side was compliant as well.
management Actions	As per 6.1 of the Noise Management Plan, no noise monitoring audits were conducted because of zero complaints during this reporting period.
	Table H, I & J, section 6, shows complaint trends – None for the past 5 years
Proposed management actions.	Complaints will continue to be addressed as per our Complaints Procedure http://www.elffarmsupplies.com.au/complaints-procedure/

## 5.4. Odour Management and Monitoring

Performance during the reporting period	Odour Emissions & biofilter control System audit was conducted.
	This is the 5th full reporting year running the Biofilter emissions system.
	There were zero odour complaints during this reporting period, in relation to Biofilter emissions system.
	Annual Biofilter testing was conducted July 2023. Biofilter efficiency continues to be greater than 95%.
Trend / key management	Biofilter MOER (wet) is 55% lower than Odour Impact Assessment estimates.
Actions	Western Dam odour was successfully controlled using aeration and biological agent, this will continue to be part of our odour mitigation strategy moving forward.
	Biofilter audit confirms the odour units, avg 171 are well within the odour impact assessment (OIA) 2015 of mean 500 and max 1000 ou. Image below showing the OIA proposed disturbance footprint of 1000 ou.
	Table H, I & J, section 6, shows complaint trends



## 5.5.Energy Efficiency Monitoring

Performance during the reporting period	Total grid supplied electricity consumption for the financial year is 9351 MWh.  Averaged weekly electricity is consumed at a rate of 179.0 MWh.  Grid Supplied Electricity consumption per phase 1 tonnage equates to 86 Kwh.  Total electricity consumption per Phase 1 tonnage equates to 92 Kwh.  Solar generation during reporting period is 342 MWh.
Trend / key management Actions	<ul> <li>Compared to the electricity consumption per tonnage last year there was a reduction in grid supplied electricity.</li> <li>Sources of overall increase in consumption include the following: <ul> <li>Slight Increased tonnage required longer operating hours.</li> <li>2<sup>nd</sup> half of biofilter required high energy consumption due to the compaction of media.</li> <li>Ceasing of prewetting bales has extended Phase 1 bunker time due to the straw not commencing process in a pre-wetted state.</li> </ul> </li> <li>A 1.6 MW Solar panel system was grid connected in 3 stages over the install period, March, May, and June 2023.</li> <li>Gas usage is steady.</li> <li>Table D, E &amp; F and G, shows graphical trends explained above.</li> </ul>
Proposed management actions.	The media in the second half of the biofilter will be completed by Oct 2023, this will have an immediate reduction in energy consumption.  Energy saving opportunities will continue to be identified in the following areas: Water pumping and cooling systems, process plant machinery, exhaust air treatment systems, tunnel and bunker fan operations and site facilities.  Monitor Solar usage/production and operations to utilise the solar in the most efficient way.

Table d Electricity Use Trend Analysis

	Electrical Energy Grid Consumption Annual Summary														
	Financial '	Year 2022-23	Financial \	Year 2021-22	Financial Year 2020-21		Financial Year 2019-20		Financial '	Year 2018-19	Financial '	Year 2017-18	Financial Year 2016-17		
Month	Usage (MWh)	Production (Tonnes)	Usage (MWh)	Production (Tonnes)	Usage (MWh)	Production (Tonnes)	Usage (MWh)	Production (Tonnes)	Usage (MWh)	Production (Tonnes)	Usage (MWh)	Production (Tonnes)	Usage (MWh)	Production (Tonnes)	
July	689.3	8568	604.1	7436	625.5	6737	515	6162	524.1	7033	424.5	6905	410.3	5962	
August	777.6	10561	645.4	9649	597.5	8886	455.4	5916	566	5666	429.1	5524	393.6	7391	
September	771.7	8379	729.6	7952	668.6	7,137	438.9	7457	547.6	5819	428.6	5534	392	5834	
October	835.1	10377	785.1	7816	674.6	7,029	478.1 5780		607.9	8256	460.9	6959	416.3	6731	
November	747.9	7681	731.5	9022	691.3	8,016	532.3	5254	637.1	6565	434.2	5084	415.7	4858	
December	788.8	8073	755.4	6897	736.1	7,187	592.7	7745	699.5	6610	472.7	5515	474.9	5528	
January	835.8	9991	818.9	9327	755.9	7,040	739.5	6386	765.3	7833	530	6891	525.9	6947	
February	787.6	7,843	758.6	7,736	678.3	6,990	637.6	6462	643.9	6502	474.3	5559	480.2	5581	
March	794.5	7766	826.7	7220	630.8	9,075	644.7	8156	701.7	6521 537.8		5525	512.4	5583	
April	735.9	7136	759.5	7710	729.8	7,252	601.3	6777	581	7977	488.7	6970	442.7	5590	
May	594.0	8661	703.3	9511	705.0	8606	587.2	6720	569.5	6212	533.3	5607	452.5	6971	
June	446.2	7273	637.5	8043	620.1	7183	570.3	8362	536.4	7706	572.5	5489	426.1	5528	
Total	8804.3	102309	8755	98319	8113	91138	6793	81998	7380	82700	5787	71562	5343	72504	
Energy consumption rate (kWh/tonne)		89		89		82.8		89.2		8	30.8	73.7			

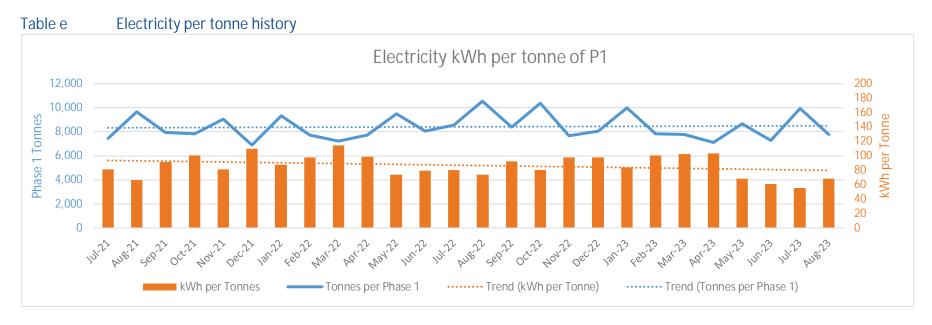


Table f Electricity per tonne this reporting period

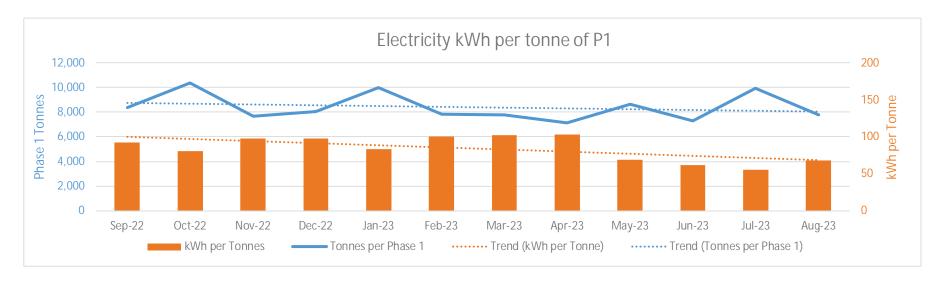


Table g **Gas Consumption Trend Analysis** 

	Gas Consumption Annual Summary: 2016 – 2023																			
		Review	Period			Review	Period		Review Period				Review Period				Review Period			
		(Sept 2018	- Aug 2019)			(Sept 2019	- Aug 2020)		(Sep	t 2020 -	Aug 20	021)	(Se	ept 2021	- Aug	2022)	(Sept 2022 - Aug 2023)			
	Billing Period	Usage (GJ)	Bill days	Production (Tonnes)	Billing Period	Usage (GJ)	Bill days	Production (Tonnes)	Billing Period	Usage (GJ)	Bill days	Production (Tonnes)	Billing Period	Usage (GJ)	Bill days	Production (Tonnes)	Billing Period	Usage (GJ)	Bill days	Production (Tonnes)
	Aug – Nov	805.6	90	20640	Sept - Nov	882.5	89	18491	Sept – Nov	1013	92	22182	Sept – Nov	808	89	24790	Sept – Nov	182 <sup>1</sup>	87	26437
	Nov - Feb	781.9	91	20945	Dec – Feb	893.9	93	20593	Dec – Feb	1034	96	21217	Dec – Feb	939	90	23960	Dec – Feb	770	91	25907
	Feb – May	884.8	91	20710	Mar – May	884.4	94	21653	Mar – May	736.7	90	21653	Mar – May			24441	Mar – May	1043	89	23563
	May – Aug	957.2	91	19784	Jun – Aug	883.8	93	23985	Jun – Aug	886.3	92	23985	Jun – Aug			27172	Jun – Aug			24992
Total Gas consumption (GJ)		342	9.5			354	4.6		3670.7 1747 <u>1</u>							1813 <sup>2</sup>				
Total production Tonnes	82079					84722			92600				48750				49470			
Total Gas consumption rate (kJ/tonne)	41.78 kJ/tonne					41.84 kJ/tonne			39.64 kJ/tonne				35.84 kj/tonne				36.65 kj/tonne			

<sup>&</sup>lt;sup>1</sup> Gas meter stopped working, possibly due to flood water, waiting for it to be replaced. <sup>2</sup> Gas meter stopped working, waiting for it to be replaced.

## 5.6.Incident/emergency Reporting

Performance during the reporting period	No Incidents		
	Previous reporting year had two (2) emergency uses of western dam.  Zero emergency use of western dam during this reporting period.		
Trend / key	2019 2 2020 2		
Management Actions	2020 2 2 2021 4		
	2022 2		
	2023 0		
Proposed management actions.	The additional 100,000 litres tanks increased the first flush storage volumes during a stormwater event, continues to play a big part in the reduction of overflows of the main pit, even during high rain fall events. Changing from a two batch system on consecutive days to a three batch system spread evenly over the week has evened out our water use throughout the week.		

## 5.7. Community Information Complaints Handling

Performance during the reporting period	2 Complaints had been reported to EPA during the period.  Feedback line continues to be monitored
Trend / key management actions	Company culture focused on maintaining compliance and an efficient exhaust system has led to this outstanding result.  Investigation from EPA determined the odour complaints related to flood waters that breached the western dam. Actions were taken to control odour.  Table H, I & J, section 5, shows complaint trends
Proposed management actions.	Complaints will continue to be addressed as per our Complaints Procedure http://www.elffarmsupplies.com.au/complaints-procedure/

## 5.8.Dust

Performance during the reporting period	Ground area for bale storage at the eastern end of site was concreted and this continues to reduce dust events during windy conditions.  Access roads are either concrete, sealed or gravelled to minimise dust.  All trucks entering and leaving site are required to have loads covered, Signs are placed near the exit to the site.  Water truck was available for other dirt areas if required on dry windy days.
Trend / key management actions	No Complaints for dust for the life of the project.
Proposed management actions.	Continue to monitor and control potential dust generating activities.  During dry windy conditions, dirt areas are wetted down.

## 6. Complaints

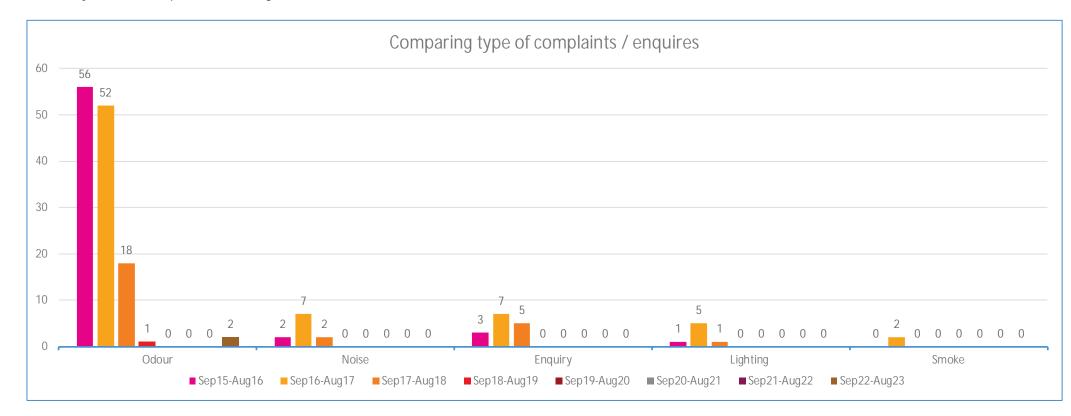
Table h Number of complaints and enquires by reporting period.

Reporting period	Number of enquiries and complaints
1 September 2015 to 31 August 2016	59
1 September 2016 to 31 August 2017	69
1 September 2017 to 31 August 2018	26
1 September 2018 to 31 August 2019	1
1 September 2019 to 31 August 2020	0
1 September 2020 to 31 August 2021	0
1 September 2021 to 31 August 2022	1
1 September 2022 to 31 August 2023	2

Table i Odour Complaint Data Analysis

Complaints Period	Number of Complaints	Number of Wind	Number of Wind	Number of No-Location	Mushroom Substrate Process		
		Direction - Confirmed	Direction - Uncertain	Complaints Given	Complaints when undertaking Transfer	Complaints when Blending Phase 1	Complaints when Blending PW
Sept-Dec '12	2	1	1	1	n/a	n/a	n/a
2013	109	43	46	22	22	13	39
2014	68	30	30	9	9	13	17
2015	125	74	32	8	14	44	22
Jan-Sept '16	35	20	15	-	9	22	8
Sept 16 - Oct 17	53	10	21	4	28	12	19
Sept 17 – Aug 18	18	0	16	2	0	11	1
Sept 18 – Aug 19	1	1	0	0	0	0	0
Sept 19 – Aug 20	0	0	0	0	0	0	0
Sept 20 – Aug 21	0	0	0	0	0	0	0
Sept 21 – Aug 22	1	0	1	0	0	0	0
Sept 21 – Aug 22	2	0	2	0	0	0	0
Totals	414	179	164	46	82	115	106

Table j Complaints trending



## 7. Action Items from Previous Annual Review

## 8. Forecast and Proposed Environmental Improvements

Proposed management actions are detailed in each section 5.3 to 5.8.

Review of Management plans during the reporting period 2023-24.

## **Next Annual Review**

The next annual review is due in a year, which is by the end of September 2024 as per the requirements in Condition 3 Schedule 5 of project approval No 08\_255.



## 9. Appendices

## **APPENDIX A**

# CONSOLIDATED PROJECT APPROVAL 08\_055 MOD3

## **Project Approval**

## Section 75J of the Environmental Planning and Assessment Act 1979

As delegate for the Minister for Planning and Infrastructure, I approve the project application referred to in Schedule 1, subject to the conditions in Schedules 2 to 5.

These conditions are required to:

- prevent, minimise, and/or offset adverse environmental impacts;
- set standards and performance measures for acceptable environmental performance;
- require regular monitoring and reporting; and
- provide for the ongoing environmental management of the Project.

Richard Pearson

Deputy Director-General

Sydney 2011

**SCHEDULE 1** 

Application No: 08\_0255

**Proponent:** Elf Farm Supplies Pty Ltd and Elf Mushrooms

Approval Authority: Minister for Planning and Infrastructure

Substrate Plant Site Land: Lot 14 DP 1138749 and part Lot 13 DP 1138749

108 Mulgrave Road, Mulgrave

Mushroom Farm Site Land: Lot 138 DP 752037, 521

The Northern Road, Londonderry

Project: Elf Substrate Plant and Elf Mushroom Farm Project

## **DEFINITIONS**

AHD Australian Height Datum
APZ Asset Protection Zone
ARI Average Recurrence Interval
BCA Building Code of Australia

CEMP Construction Environmental Management Plan

Construction The demolition of buildings or works, carrying out of works, including

bulk earthworks, and erection of buildings and other infrastructure

covered by this approval

Day The period from 7am to 6pm on Monday to Saturday, and 8am to

6pm on Sundays and Public Holidays

Department NSW Department of Planning, Industry and Environment or its

successors in title

DPIE Water Department of Planning, Industry and Environment Water Division

Director General of the Department (or delegate)

EA Environmental assessment titled Mushroom Industry Expansion in

Western Sydney – Environmental Assessment dated December 2010 and the associated response to submissions, dated 17 March

2011 and 15 June 2011

EESG Environment, Energy and Science Group of the Department of

Planning, Industry and Environment.

ENM Excavated Natural Material

EPA Environment Protection Authority of OEH
EP&A Act Environmental Planning & Assessment Act 1979
EP&A Regulation Environmental Planning & Assessment Regulation 2000

EPL Environment Protection Licence
Evening The period from 6pm to 10pm

Feasible Feasible relates to engineering considerations and what is practical

to build

Heavy Vehicle Any vehicle with a gross vehicle mass of 5 tonnes or more

Incident An incident causing or threatening material harm to the environment,

and/or an exceedance of the limits or performance criteria in this

approval

Land In general, the definition of land is consistent with the definition in the

EP&A Act.

LGA Local government area

Material harm to the environment Harm to the environment is material if it involves actual or potential

harm to the health or safety of human beings or to ecosystems that is

not trivial

Minister for Planning and Infrastructure

Mitigation Activities associated with reducing the impacts of the Project
MOD 1 The modification as described in the Environmental Assessment,

titled Mushroom Substrate Plant Modification to Approved Project Environmental Assessment dated February 2015, prepared by Perram and Partners, the letter Response to Submissions titled Mushroom Substrate Plant, Mulgrave Application to Modify Project Approval and Concept Plan Approval (08\_0255 MOD 1), dated 29 August 2015, prepared by Perram and Partners and the Assessment of Biofilter Filling dated 17 December 2015, including the letter by

WMA Water dated 21 January 2016, prepared by Perram and Partners

MOD 2 The modification as described in the Environmental Assessment titled MUSHROOM FARM Proposed Section 75W Modification to

Concept Plan (MP 08-0225) Elf Mushroom Farm dated August 2016, prepared by Urban City Consulting, as amended by the Response to Submissions titled ENVIRONMENTAL ASSESSMENT MUSHROOM FARM Proposed Section 75W Modification to (MP 08-0225) Elf Mushroom Farm prepared by Urban City Consulting and dated August 2018 including the letter from Northern Auto Wreckers dated 28 August 2018, as revised by the additional Response to

Submissions sent by email on 21 February 2019 from Greg Hall of Urban City Planning and email received from Greg Hall on 6 June

2019.

MOD 3 The modification as described in the Environmental Assessment,

titled Mushroom Substrate Plant Project Modification No 3
Environmental Assessment dated May 2018, prepared by Perram
and Partners, the letter Response to Submissions titled RE: Elf Farm

Supplies Mushroom Substrate Plant, Mulgrave Responses to

Submissions – MOD 3 dated 13 November 2018, prepared by Perram and Partners and the letter titled RE: Elf Farm Supplies Mushroom Substrate Plant, Mulgrave Responses to Submissions – MOD 3 dated 30 January 2019, prepared by Perram and Partners

Mushroom Farm site Lot 138 DP 752037 521 The Northern Road, Londonderry

Night The period from 10pm to 7am on Monday to Saturday, and 10pm to

8am on Sundays and Public Holidays

Noise Wall As described in the EA, and as modified by MOD 2

Noise Barrier Located at the Substrate Plant site and as described in MOD 3

NOW NSW Office of Water

Odour emissions plant Ammonia scrubbers and biofilter as described in MOD 1

DEH Office of Environment and Heritage

Operation (Mushroom farm site) Operation commences when the Substrate Plant increases

production above 1,000 tonnes of substrate per week

Operation (Substrate Plant site)

Operation commences upon receipt of substrate at the Mushroom

Farm site

OTMP Operational Traffic Management Plan

PCA Principal Certifying Authority

Phase 1 substrate

Substrate that has been through the composting process only
Phase 2 substrate

Phase 1 substrate that has been pasteurised at high temperature

Phase 3 substrate Phase 2 substrate that contains mushroom spawn POEO Act Protection of the Environment Operations Act 1997

Project The development described in the EA, comprising the construction

and operation of a mushroom farm at 521 The Northern Road, Londonderry; and the expansion of the existing mushroom substrate plant at 108 Mulgrave Road, Mulgrave; as modified by the conditions

of this approval

Proponent Elf Farm Supplies Pty Ltd and Elf Mushrooms or their successor in

title

Reasonable Reasonable relates to the application of judgment in arriving at a

decision, taking into account: mitigation benefits, costs of mitigation versus benefits provided community views, and the nature and extent

of potential improvements.

Rail Corridor The Richmond railway line and associated infrastructure, adjoining

the southern boundary of the Substrate Plant site.

Rehabilitation The treatment or management of land disturbed by the Project for the

purpose of establishing a safe, stable and non-polluting environment

RTA Roads and Traffic Authority

RMS NSW Roads and Maritime Services

Secretary of the Department of Planning, Industry and

Environment, or nominee

SRDAC Sydney Regional Development Advisory Committee

Stages 1 to 5 at the Mushroom Farm site The development stages shown on the plan in Appendix 4 Stages 1 to 2 3 at the Substrate Plant site The development stages shown on the plan in Appendix 2 Statement of Commitments The Proponent's Statement of Commitments 1

Substrate Mushroom growing medium

Substrate Plant site Lot 14 DP 1138749 and part Lot 13 DP 1138749, 108 Mulgrave

Road, Mulgrave

Vegetation Management Area

The area shown on the Plan in Appendix 5

VENM Virgin Excavated Natural Material

WMP Water Management Plan

## SCHEDULE 2 ADMINISTRATIVE CONDITIONS

## **OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT**

1. The Proponent must implement all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the construction, operation or decommissioning of the Project.

## **TERMS OF APPROVAL**

- 2. The Proponent must carry out the Project generally in accordance with the:
  - (a) EA
  - (b) statement of commitments (see Appendix 1);
  - (c) site layout plans and drawings in the EA; and
  - (d) MOD 1; and
  - (e) MOD 2; and
  - (f) MOD 3.
- 3. If there is any inconsistency between the above, the conditions of this approval must prevail to the extent of any inconsistency.
- 4. The Proponent must comply with any reasonable requirement/s of the Secretary arising from the Department's assessment of:
  - (a) any reports, plans, strategies, programs or correspondence that are submitted in accordance with this approval; and
  - (b) the implementation of any actions or measures contained in these reports, plans, strategies, programs or correspondence.
- 5. This approval must lapse if the Proponent does not physically commence the proposed development associated with this approval within 5 years of the date of this approval.

## **LIMITS ON APPROVAL**

## **Substrate Plant Site**

- 6. (1) The Proponent must ensure that the Project on the Substrate Plant site does not:
  - a) produce more than 3,200 tonnes per week of phase 1 substrate; subject to (2) below and
  - b) dispatch more than 1,920 tonnes of phase 3 substrate per week.
  - (2) The proponent must not produce on the Substrate Plant site more than 1,000 tonnes of phase 1 substrate per week except in accordance with a staged approval granted by the Secretary in accordance with condition 7 Schedule 2 below.
- 7. (1) The Proponent may apply to the Secretary for approval to increase production of substrate up to the rate of 1,600 tonnes of phase 1 substrate a week on the Substrate Plant site if
  - a) the Odour Management Plan required under condition 6 of Schedule 4 has been prepared to the satisfaction of the Secretary and is being implemented; and
  - b) an independent odour audit has been prepared and submitted in accordance with condition 5 of Schedule 3.
  - (2) The Proponent may apply to the Secretary for approval to increase production of substrate up to the rate of 2,400 tonnes of phase 1 substrate a week on the Substrate Plant site if
    - the site has been producing phase 1 substrate at a rate between 1,500 and 1,600 tonnes per week in accordance with an approval granted by the Secretary under this condition; and
    - b) an independent odour audit of the site operating in this range has been prepared and submitted in accordance with condition 5(c) of Schedule 3.

Production of up to 2,400 tonnes of phase 1 substrate a week may not occur until the Proponent has received the written approval of the Secretary.

- (3) The Proponent may apply to the Secretary for approval to increase production of substrate up to the rate of 3, 200 tonnes of phase 1 substrate a week on the Substrate Plant site if
  - a) the site has been producing phase 1 substrate at a rate between 2,300 and 2,400 tonnes per week in accordance with an approval granted by the Secretary under this condition; and
  - b) an independent odour audit of the site operating in this range has been prepared and submitted in accordance with condition 5(c) of Schedule 3.

Production of up to a maximum of 3,200 tonnes of phase 1 substrate a week may not occur until the Proponent has received the written approval of the Secretary.

- (4) In deciding whether to approve an increase in substrate production under this condition, the Secretary must:
  - a) assess the odour performance of the premises at its current rate of production; and
  - b) assess the likely odour impacts from the proposed increase; and
  - c) consider the requirement not to cause or permit the emission of offensive odours from the Substrate Plant site as defined in section 129 of the POEO Act; and
  - d) consider EPA advice regarding compliance with the POEO Act.
- 7A. Unless otherwise agreed in writing by the Secretary, the Proponent must ensure that the work associated with MOD 1, with the exception of the additional Phase 2/3 tunnels and the pre-wet tunnels to be constructed as part of Stage 3 (as identified on the plan in Appendix 2), has been constructed and is operating within two years from the date of the approval of MOD 1.
- **7B.** The Proponent must maintain the MOD 3 tree corridor identified in Appendix 2, Figure 1 of this approval for the duration of operation of the Substrate Plant site.

### **Mushroom Farm Site**

8. The Proponent must ensure that the Mushroom Farm site does not produce more than 220 tonnes mushrooms per week. Records of weekly mushroom production levels and details of the break-down of total volume distributed must be kept on site at all times and made immediately available to the Secretary on request.

## **EXISTING DEVELOPMENT CONSENTS AND RIGHTS**

9. The Proponent must surrender all existing development consents in accordance with Clause 97 of the EP&A Regulation for the land referred to in Schedule 1, within 12 months of commencement of stage 1 operations, or as otherwise agreed by the Secretary.

Note: This requirement does not extend to the surrender of construction and occupation certificates for existing and proposed building works under Part 4A of the EP&A Act. Surrender of a consent or approval should not be understood as implying that works legally constructed under a valid consent or approval can no longer be legally maintained or used.

## TRANSITIONAL ARRANGEMENTS

10. All existing environmental management plans that apply to the Substrate Plant site under DA No. 0623/02, DA No. 0571/06, DA No. 0921/06, DA No. 0701/07 and DA No. 0120/09 must continue to be fully applied until replaced under this approval.

## STRUCTURAL ADEQUACY

11. The Proponent must ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures are constructed in accordance with the relevant requirements of the BCA.

Notes:

- Under Part 4A of the EP&A Act, the Proponent is required to obtain construction and occupation certificates for the proposed building works.
- Part 8 of the EP&A Regulation sets out the requirements for the certification of the Project.
- 11A. The Proponent must ensure that any structures which require a relevant alternative solution developed to meet the performance requirements of the BCA must be designed in consultation with Fire and Rescue NSW.

## **DEMOLITION**

12. The Proponent must ensure that all demolition work is carried out in accordance with Australian Standard AS 2601:2001: The Demolition of Structures, or its latest version.

## **OPERATION OF PLANT AND EQUIPMENT**

- 13. The Proponent must ensure that all plant and equipment used for the Project is:
  - (a) maintained in a proper and efficient condition; and
  - (b) operated in a proper and efficient manner.

## **UTILITIES**

14. Prior to the construction of any utility works, the Proponent must obtain the necessary approvals from relevant service providers.

## SUBMISSION OF PLANS OR PROGRAMS

- 15. With the written approval of the Secretary, the Proponent may:
  - (a) submit any reports, plans, strategies or programs required by this approval on a progressive basis; and
  - (b) combine any reports, plans, strategies or programs required for the Substrate Plant site with any similar reports, plans, strategies or programs for the Mushroom Farm site.
  - (c) separate any reports, plans, strategies or programs required for the Substrate Plant site from any similar reports, plans, strategies or programs for the Mushroom Farm site.

## **EVIDENCE OF CONSULTATION**

- 16. Where conditions of this approval require consultation with an identified party, the Proponent must:
  - consult with the relevant party prior to submitting the subject document to the Secretary for approval; and
  - (b) provide details of the consultation undertaken including:
    - (i) the outcome of that consultation, matters resolved and unresolved; and
    - (ii) details of any disagreement remaining between the party consulted and the Proponent, and how the Proponent has addressed the matters not resolved.

## SCHEDULE 3 SPECIFIC ENVIRONMENTAL CONDITIONS – SUBSTRATE PLANT SITE

## CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

- 1. The Proponent must 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 DPIE Water and the 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 heritage management plan;
    - a traffic management plan; and
    - a waste management plan.
- 1A. The Proponent must update the CEMP required by Condition 1 of Schedule 3 to include the works associated with MOD 1. The updated plan must be submitted to and approved by the Secretary prior to the commencement of any construction works associated with MOD 1.

The revised CEMP must be implemented throughout the construction works.

## **Updated CEMP - MOD 3 Works**

- 1B. Prior to the commencement of the MOD 3 construction works, the Proponent must prepare an updated Construction Environmental Management Plan (CEMP) for the Substrate Plant site to the satisfaction of the Secretary. The updated CEMP must:
  - (a) be prepared in accordance with the requirements of Schedule 3, Condition 1 and Schedule 5, Condition 2 of this approval;
  - (b) be prepared in consultation with Sydney Trains;
  - (c) detail the measures that are to be implemented to minimise impacts associated with the MOD 3 construction works; and
  - (d) include:
    - plans which confirm the stormwater management system will not result in pooling or stormwater impacts to the Rail Corridor; and
    - (ii) certification from a suitably qualified and experienced geotechnical or structural engineer which confirms the construction of the noise barrier and filling of the open bale storage area will not impact upon the adjacent Rail Corridor.
- 1C. The Proponent must:
  - (a) not commence the MOD 3 construction works until the updated CEMP is approved by the Secretary;
     and
  - (b) implement the most recent version of the updated CEMP approved by the Secretary for the duration of the MOD 3 construction works.

## **AIR QUALITY**

## **Offensive Odours**

- 2. The Proponent must not cause or permit the emission of offensive odours from the Substrate Plant site, as defined under Section 129 of the POEO Act.
- 3. The Proponent shall design, operate and maintain the bio-scrubber stacks at the Substrate Plant site in a manner that would achieve emissions compliance with the EPL for the Substrate Plant site. The Proponent must advise the Department of any variations to the EPL as approved by the EPA.

## **Odour Emissions Plant Design and Construction**

- 3. Prior to the commencement of construction of the works associated with MOD 1, the Proponent must commission and pay the full cost of an independent odour specialist to review the detailed design of the odour emissions plant and assess its capacity to meet the performance criteria within the Environmental Assessment for MOD 1. The review must:
  - (a) be provided to the Secretary and the EPA within two weeks of finalisation of the review; and

(b) be endorsed by the Secretary in consultation with the EPA prior to the commencement of construction of the works associated with MOD 1.

Should the review not certify that the odour emissions plant has the capacity to meet the performance criteria within the Environmental Assessment for MOD 1, then the Proponent must undertake additional design to meet the criteria, to the satisfaction of the Secretary within the timeframe specified by the Secretary. The additional design is to be endorsed by the independent odour specialist.

- 3A. The Proponent must construct the odour emissions plant in accordance with the final design endorsed by the independent odour specialist required by Condition 3.
- 3B. Prior to the commencement of operation of the odour emissions plant, the Proponent must commission and pay the full cost of an independent odour specialist to certify that the 'as constructed' odour emissions plant has been undertaken in accordance with the final detailed design with reference to the Environmental Assessment for MOD 1 and the outcomes of Condition 3 of Schedule 3.

A copy of the certification is to be provided to the Secretary and the EPA within one week of its finalisation.

3C. The Proponent must implement all reasonable and feasible measures to ensure that all new structures are constructed to prevent corrosion from the atmosphere contained within those structures.

## **Odour Management Plan**

- 4. The Proponent must prepare and implement an Odour Management Plan for the Substrate Plant site to the satisfaction of the Secretary. This plan must:
  - (a) be prepared in consultation with the EPA by a suitably independent, qualified and experienced expert whose appointment has been endorsed by the Secretary;
  - (b) be submitted to the Secretary for approval within 3 months of the date of this approval;
  - (c) describe in detail the measures that would be implemented on site to minimise the odour impacts of the Project, such as storing the stable bedding in the pre-wet shed extension building in Stages 2 and 3, and to ensure that these measures remain effective over time;
  - (d) identify triggers for remedial and contingency action; and
  - (e) include a program for monitoring the odour impacts of the Project.
- 4A. The Proponent must update the Odour Management Plan for the Substrate Plant site, in consultation with the EPA, to the satisfaction of the Secretary. This plan is to update the plan approved under Condition 4 of Schedule 3 and must:
  - (a) be prepared a suitably independent, qualified and experienced expert whose appointment has been endorsed by the Secretary:
  - (b) be submitted to the Secretary for approval within one month of the date of endorsement by the Secretary of the odour emissions plant design as required under Condition 3(a) of the approval;
  - (c) identify of all major sources of odour;
  - (d) include management measures to ensure no offensive odours from the Substrate Plant site;
  - (e) include procedures for the monitoring of odour emissions, in accordance with the requirements of the Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales and any requirements of the EPA. The odour monitoring program must include, but not be limited to:
    - i. results of the complaints handling system; and
    - i. system and performance review for continuous improvement;
  - (f) include odour management performance parameters that are consistent with the manufacturers' performance guarantees provided for the biofilter and scrubbers;
  - (g) include measures to prevent and/or mitigate fugitive emissions;
  - (h) include triggers for remedial and contingency action; and
  - (i) include contingency measures in the event of failure of any component of the odour emissions plant and biofilter system or identification of fugitive emissions from the facility. Contingency measures must include enclosing the West Water Recycle pit and treating the post 36 hour emissions from the Phase 2/3 building via the ammonium scrubbers and biofilter.
- 4B. The approved updated Plan (as revised and approved by the Secretary from time to time), must be implemented for the life of the Project as soon as written endorsement by the Secretary is received.

## **Odour Management Audit**

- 5. Prior to commencement of operation of each development stage at the Substrate Plant site, the Proponent shall commission and pay the full cost of an Independent Odour Audit on the site. This audit must:
  - be prepared in consultation with EPA by a suitably qualified, experienced and independent expert whose appointment has been endorsed by the Director-General;
  - (b) assess the effectiveness of the odour controls on site in protecting receivers against offensive odours:

- (c) review the Proponent's production data (that are relevant to the odour audit) and complaint
- (d) review the effectiveness Odour Management Plan for the Project and advise whether any changes to the Plan is considered necessary;
- (e) determine whether the Project is complying with condition 2 above; and, if necessary,
- (f) recommend whether additional measures are required to minimise the odour emissions of the Project, such as enclosing the bale wetting area and water recycling pits and enclosing the chicken manure storage area.

## **Odour Emissions and Biofilter Control System Audit**

- 5. The Proponent must undertake an Odour Emissions and Biofilter Control System Audit to quantify the odour abatement efficiency of the odour emissions plant and assess the effectiveness of all other odour controls on the Substrate Plant site:
  - (a) within six weeks of the commissioning of the biofilter;
  - (b) within six weeks of the decommissioning of the bioscrubber;
  - (c) prior to the commencement of each increase in production, in accordance with Conditions 7(2) and 7(3) of Schedule 2;
  - (d) and as directed by the Secretary;
  - (e) each audit required under (a) to (d) inclusive, must:
    - i. be undertaken and prepared by a suitably qualified, experienced and independent expert whose appointment has been endorsed by the Secretary;
    - ii. be prepared in consultation with the EPA;
    - iii. report on the results of the source emissions sampling and analysis undertaken in accordance with the Odour Management Plan (required by Condition 4A of Schedule 3) or as otherwise agreed to in writing by the EPA:
    - iv. review the Proponent's production data (that are relevant to the audit) and complaints record;
    - v. review any complaints received during the relevant period;
    - vi. determine whether the Project is complying with condition 2 of Schedule 3; and, if necessary;
    - vii. recommend whether any additional management works and/or management practices are required to ensure no offensive odours from the Substrate Plant site.
- 6. Within 2 weeks of this audit being completed, or in a timeframe as otherwise agreed by the Secretary, the Proponent must submit a copy of the audit report to EPA and the Secretary together with an action plan demonstrating how the findings of the audit are to be implemented.
- 6A. Two months after the completion of the audits required under Conditions 5 (a) and 5(b) of Schedule 3, the Proponent must submit to the satisfaction of the Secretary, a report verifying that any actions identified in the audit have been implemented.

## Dust

- 7. The Proponent must 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 must 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.

## **GREENHOUSE GAS**

## **Energy Efficiency Plan**

- 9. The Proponent must prepare and implement an Energy Efficiency Plan on the Substrate Plant site to the satisfaction of the Secretary. This plan must:
  - (a) be submitted to the Secretary for approval prior to the commencement of operations on the site;
  - (b) describe the measures that would be implemented to minimise energy use on the site;
  - (c) explore the possibility of using renewable energy use to generate power; and
  - include a program to monitor the effectiveness of these measures, and a protocol to periodically review the plan.

## SITE OPERATION

## **Fire Management**

- 10. The Proponent must:
  - (a) implement suitable measures to minimise the risk of fire on the Substrate Plant site;
  - (b) ensure straw bales stored in the open bale storage area are:
    - (i) readily accessible by firefighting crews; and
    - (ii) separated from buildings and other assets (excluding the noise barrier and northern perimeter wall) to prevent a fire from spreading;
  - (c) extinguish any fires on the Substrate Plant site promptly; and
  - (d) maintain adequate fire-fighting capacity on the Substrate Plant site.

## **Hazards**

- 11. The Proponent shall ensure that all dangerous goods and hazardous substances are stored and handled on the Substrate Plant site in accordance with the Dangerous Goods Code and AS 1940-2004: The storage and handling of flammable and combustible liquids.
- 11. The Proponent must ensure that all dangerous goods and hazardous substances are stored and handled on the Substrate Plant site in accordance with the Dangerous Goods Code and AS 1940-2004: The storage and handling of flammable and combustible liquids and AS 3780-2008 The Storage and Handling of Corrosive Substances.

### Waste

12. The Proponent must not cause, permit or allow any waste generated outside the Substrate Plant site to be received at the site for storage, treatment, processing, reprocessing or disposal of at the Substrate Plant site, except with the approval of the Secretary and as expressly permitted by a licence under the *Protection of the Environment Operations Act 1997.* 

## **Bunding**

13. The Proponent must store all chemicals, fuels and oils used on the Substrate Plant site in appropriately bunded areas, with impervious flooring and sufficient capacity to contain 110% of the largest container stored within the bund, unless double-skinned tanks are used. Any bunds must be designed and installed in accordance with the requirements of all relevant Australian Standards, and/or DECCW's Storage and handling liquids: Environmental Protection – Participant's Manual.

## **SOIL and WATER**

## **Discharge Limits**

- Except as may be expressly provided by an EPL for the Substrate Plant site, the Proponent must comply with Section 120 of the POEO Act.
- 15. The Proponent must ensure that only VENM and/or ENM or material approved by the EPA is used as fill.
- 16. The Proponent must ensure that filling of the manoeuvring area must be undertaken in accordance with plans submitted with DA 0571/06.
- 16A. The Proponent must ensure that the earthworks associated with the biofilter pad do not act as a source of sedimentation. The Proponent must 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 must 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).

## **Water Management Plan**

17. The Proponent must prepare and implement a Water Management Plan for the Substrate Plant site to the satisfaction of the Secretary. The plan must be submitted to the Secretary for approval prior to the commencement of operation of Stage 1 and be prepared in consultation with EPA and NOW.

- 17A. The Proponent must prepare an updated Water Management Plan for the Substrate Plant site required by Condition 17 of Schedule 3 to include the works associated with MOD 1. The plan must be submitted to the Secretary for approval prior to the commencement of operation of MOD 1.
  - Operation of works associated with MOD 1 must not commence until the Proponent has received written approval of the plan. The approved Plan must be implemented for the life of the Project.
- 17B. The Proponent must ensure that the western dam at the Substrate Plant site (identified on the plan in Appendix 2 of this approval) does not receive process water.
  - Notes: The dam may receive water from direct rainfall, area runoff and groundwater and during times of emergency.
- 17C. Notwithstanding Condition 17B of Schedule 3, in the event of an emergency such as a high rainfall event or plant breakdown, the Proponent may use the western dam. Notification of any emergency use of the dam must be provided to the Secretary in writing within 7 days of the emergency.

## **Updated Water Management Plan - MOD 3**

- 17D. Prior to the commencement of construction of the stormwater management system approved under MOD 3, the Proponent must prepare an updated Water Management Plan (WMP) for the Substrate Plant site to the satisfaction of the Secretary. The updated WMP must:
  - (a) be prepared in accordance with the requirements of Schedule 3, conditions 17 to 17C of this approval;
  - (b) be prepared in accordance with the updated Stormwater Catchment Plan for the Substrate Plant site (see Appendix 2A of this approval); and
  - (c) detail the measures that are to be implemented to manage stormwater impacts associated with the MOD 3 works.
- 17E. The Proponent must:
  - (a) not commence operation of the MOD 3 stormwater management system until the updated WMP is approved by the Secretary; and
  - (b) implement the most recent version of the updated WMP approved by the Secretary.

## Flood Compatible Materials - MOD 3

17F. The Proponent must ensure any structures approved under MOD 3 that are built below the 100-year ARI flood level, including the noise barrier and the northern perimeter wall, are constructed from flood compatible building components.

Note: The 100-year ARI flood level at the Substrate Plant site is RL 17.3 metres AHD.

## NOISE

## **Construction Noise Criteria**

18. The Proponent must 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 LAeq(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:

## **Operational Noise Criteria**

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

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.

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

Receiver/Location	Day /Evening	Night
Neceivei/Location	LAeq(15 minute)	LAeq(15 minute)
R1 – 46 Mulgrave Road, Mulgrave	43	43
R2 – Mulgrave Industrial area	42	42
R3 – 2 Railway Road, Mulgrave	42	37
R4 – 126 Mulgrave Road	44	41
R5 - Chisholm Place, South Windsor	44	42

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.

### Motos:

 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.

## **Hours of Work**

20. The Proponent must 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

## **Additional Noise Mitigation Measures**

- 21. The Proponent shall install the southern boundary noise wall adjacent to the bale storage shed on the Substrate Plant site prior to commencement of other stage 1 construction works.
- 21. The Proponent must 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 must 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'.

- 21. The Proponent must ensure the noise barrier is constructed:
  - (a) prior to the importation of fill for the expansion of the open bale storage area; or
  - (b) as otherwise agreed to in writing by the Secretary.
- 21A. The Proponent must continue to implement the 'other noise mitigation measures' approved by the Department in its letter dated 18 July 2016 until the noise barrier referred to in Schedule 3, Condition 21 of this approval is constructed.

## **Noise Management Plan**

- 22. The Proponent must prepare and implement a Noise Management Plan for the Substrate Plant site in consultation with EPA to the satisfaction of the Secretary. The Plan must be submitted to the Secretary for approval prior to commencement of operations, and include a noise monitoring protocol for evaluating compliance with the noise impact assessment criteria in this approval.
- 22A. The Proponent must update the Noise Management Plan for the Substrate Plant site, to the satisfaction of the Secretary. This plan is to update the plan approved under Condition 22 of Schedule 3 and must include:
  - (a) the works associated with MOD 1; and
  - (b) a revised monitoring protocol for evaluating compliance with the noise impact assessment criteria in this approval once all construction works associated with MOD 1 are complete.

22B. Operation of works associated with MOD 1 must not commence until the Proponent has received the Secretary's written approval of the plan. The approved Plan (as revised and approved by the Secretary from time to time), must be implemented for the life of the Project as soon as written endorsement by the Secretary is received.

## **BIODIVERSITY**

## Riparian Management Area

23. The Proponent must establish a fenced, 35 metre wide riparian corridor along the length of South Creek within 12 months of commencement of operation of Stage 1. The Proponent must consult with the Hawkesbury-Nepean Catchment Management Authority on methods and species selection to ensure that best practise techniques are used at the site, to the satisfaction of the Secretary.

### **VISUAL AMENITY**

## Lighting

- 24. The Proponent must ensure that all external lighting associated with the Substrate Plant site:
  - (a) does not create a nuisance to surrounding properties or roadways; and
  - (b) complies with AS 4282(INT) 1995 Control of Obtrusive Effects of Outdoor Lighting.
- 24A. The Proponent must prepare a Landscape Management Plan for the Substrate Plant site. The plan must:
  - (a) be prepared in consultation with Council:
  - (b) identify screen planting to minimise visual impacts of the site, particularly the new biofilter; and
  - (c) be approved by the Secretary prior to the commencement of construction of the works associated with MOD 1.
- 24B. The landscaping around the site of the new biofilter required under MOD 1 must be installed within three months following the completion of the construction of the biofilter. All other landscaping must be installed prior to the commencement of operation of the works associated with MOD 1.

## Signage

25. The Proponent must not install any advertising signs on the Substrate Plant site without the written approval of the Secretary.

## **TRANSPORT**

- 26. The Proponent must ensure that:
  - (a) car parking is constructed in accordance with the relevant requirements of the latest version of AS 2890.1: and
  - (b) vehicles associated with the Substrate Plant site do not park or queue on the public road network at any time.

## PROTECTION OF PUBLIC INFRASTRUCTURE

- Before the commencement of the MOD 3 construction works, the Proponent must:
  - (a) consult with the relevant owner and provider of services that are likely to be affected by the MOD 3
     construction works to make suitable arrangements for access to, diversion, protection and support
     of the affected infrastructure;
  - (b) prepare a dilapidation report identifying the condition of all public infrastructure in the vicinity of the site (including roads, gutters and footpaths); and
  - (c) submit a copy of the dilapidation report to the Secretary and Council.
- 28. Unless the Proponent and the applicable authority agree otherwise, the Proponent must:
  - (a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by carrying out the MOD 3 construction works; and
  - (b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the MOD 3 construction works.

## WORKS AS EXECUTED PLANS - MOD 3

29. Before the issue of the final Occupation Certificate for the works associated with MOD 3, works-asexecuted drawings signed by a registered surveyor demonstrating that the stormwater drainage and finished ground levels have been constructed as approved, must be submitted to the PCA and Sydney Trains.

## **RAIL CORRIDOR AND ASSOCIATED EASEMENTS**

- 30. The Proponent must ensure:
  - (a) no construction or maintenance works associated with MOD 3 occur within the Rail Corridor or its associated easements;
  - (b) stormwater drainage associated with MOD 3 is not discharged into the Rail Corridor; and
  - (c) fill is not spread or stockpiled within the Rail Corridor or its associated easements,

except with the prior approval of Sydney Trains.

31. The Proponent must ensure that straw bales stacked immediately adjoining the southern section of the noise barrier (adjacent to the Rail Corridor) do not exceed the height of the noise barrier.

## SCHEDULE 4 SPECIFIC ENVIRONMENTAL CONDITIONS – MUSHROOM FARM SITE

## CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

- 1. The Proponent must prepare and implement a Construction Environmental Management Plan for the Mushroom Plant site to the satisfaction of the Secretary. This Plan must:
  - (a) be prepared in consultation with NOW DPIE Water 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 15 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, including the programs/procedures to be implemented in the event that previously unidentified relics are discovered (Condition 21)
    - a waste management plan; and
    - a construction traffic management plan which addresses haulage routes, traffic safety and the number of truck movements required to import the identified fill for the site.

### **AIR QUALITY**

### **Offensive Odours**

2. The Proponent must not cause or permit the emission of offensive odours from the Mushroom Farm site, as defined under Section 129 of the POEO Act.

### **Dust**

- The Proponent must implement all reasonable and feasible measures to minimise dust generated at the Mushroom Farm site.
- 4. During the construction and operation of the project, the Proponent must ensure that:
  - (a) all trucks entering or leaving the Mushroom Farm 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.

## **GREENHOUSE GAS**

## **Energy Efficiency Plan**

- 5. The Proponent must prepare and implement an Energy Efficiency Plan on the Mushroom Farm site to the satisfaction of the Secretary. This plan must:
  - (a) be submitted to the Secretary for approval prior to the commencement of operations on the site;
  - (b) describe the measures that would be implemented to minimise energy use on the site;
  - (c) explore the possibility of using renewable energy use to generate power; and
  - (d) include a program to monitor the effectiveness of these measures, and a protocol to periodically review the plan.

## SITE OPERATION

## Hazard and Risk

- 6. The Proponent must:
  - (a) provide and manage a 24 25 metre wide APZ between the buildings on the Mushroom Farm site and any bushfire hazard;
  - (b) implement suitable measures to minimise the risk of fire on the Mushroom Farm site;
  - (c) extinguish any fires on the Mushroom Farm site promptly;
  - (d) maintain adequate fire-fighting capacity on the Mushroom Farm site; and
  - (e) construct the proposed office building in compliance with section 7 (BAL 29) Australian Standard AS 3959-2009 Construction of buildings in bush fire-prone areas and section A3.7 Addendum Appendix 3 of Planning for Bushfire Protection 2006.

7. The Proponent must ensure that all dangerous goods and hazardous substances are stored and handled on the Mushroom Farm site in accordance with the Dangerous Goods Code and AS 1940-2004: The storage and handling of flammable and combustible liquids.

### Waste

8. The Proponent must not cause, permit or allow any waste generated outside the Mushroom Farm site to be received at the site for storage, treatment, processing, reprocessing or disposal of at the site, except with the approval of the Secretary and as expressly permitted by a licence under the *Protection of the Environment Operations Act 1997*.

### **SOIL AND WATER**

### Pollution of waters

Except as may be expressly provided in an EPL for the Mushroom Farm site, the Proponent must comply with Section 120 of the POEO Act.

### **Bunding**

10. The Proponent must store all chemicals, fuels and oils used on the Mushroom Farm site in appropriately bunded areas, with impervious flooring and sufficient capacity to contain 110% of the largest container stored within the bund, unless double-skinned tanks are used. Any bunds must be designed and installed in accordance with the requirements of all relevant Australian Standards, and/or DECCW's Storage and handling liquids: Environmental Protection – Participant's Manual.

### **Minimising Impacts of Chemicals**

- 11. The Proponent must ensure that the use of chemicals (including pesticides and herbicides) on the Mushroom Farm site carried out in accordance with:
  - (a) Agricultural and Veterinary Chemicals Act 1994; and
  - (b) Agricultural and Veterinary Chemicals (NSW) Regulation 2000

### Imported Soil

12. The Proponent must ensure that only VENM and/or ENM or material approved by the EPA is used as fill.

### **Water Management Plans**

- 13(i) The Proponent must prepare and implement an operational Water Management Plan for the Project on the Mushroom Farm site in consultation with EPA, Penrith City Council and NOW DPIE Water to the satisfaction of the Secretary. The plan must:
  - (a) be submitted to the Secretary for approval prior to the commencement of operations;
  - (b) include:
    - a detailed Stormwater Operation and Management Plan that includes the measures outlined in the Stormwater Management report prepared by Barker Ryan and Stewart reference 20070166 Revision G dated 11 April 2016 as supplemented by addendum Stormwater Management report prepared by Harris Environmental Consulting dated 15 March 2018; and a Recycled Water Management Plan.
    - an effluent irrigation plan.
- 13(ii) Prior to the commencement of construction, the Proponent shall seek approval from Penrith Council under Section 68 of the Local Government Act to install and operate the Onsite Sewage Management System. The application shall include an Effluent Management Plan detailing monitoring and maintenance arrangements.

### NOISE

### **Construction Noise Mitigation**

14. The Proponent must install the northern environmental bund prior to commencement of any other construction works at the Mushroom Farm site.

Installation of the northern environmental bund must be completed within a period of not more than 3 months.

### **Construction Noise Criteria**

15. The Proponent must ensure that the construction noise generated at the Mushroom Farm site does not exceed the criteria in Table 4.

Table 4: Construction noise criteria dB(A)

Receiver/Location	<b>Day</b> LAeq(15 minute)
Receiver 1 – 503 The Northern Road, Londonderry	49
Receiver 2 – 509 The Northern Road, Londonderry	54
Receiver 3 – 1 Thomas Road, Londonderry	54
Receiver 4– 6-16 Timothy Road, Londonderry	45

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.
- The construction noise criteria do not apply to any works associated with the installation of the northern environmental bund (Condition 14 above).

### **Operational Noise Criteria**

16. The Proponent must ensure that the operational noise generated by the Mushroom Farm site does not exceed the criteria in Table 5.

Table 5: Project Noise Trigger Levels dB(A)

	Shoulder period*	Day LAeq(15 minute)  Evening LAeq(15 minute)			Sleep disturbance L <sub>A1(1 minute)</sub>	
Receiver/Location	(5-7am) LAeq(15 minute)		Night LAeq(15 minute)	Night	Shoulder period (5am – 7am)	
R1 – 503 The Northern Road	44	44	44	38	52	54
R2 – 509 The Northern Road	47	48	45	38	52	57
R3 – 1 Thomas Road	47	48	45	38	52	57
R4 – 6-16 Timothy Road	40	40	40	38	52	52

### 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 for Industry.

### **Hours of Work**

17. The Proponent must comply with the operating hours on the Mushroom Farm site in Table 6, unless otherwise agreed with the Secretary.

Table 6: Operating Hours

Activity	Day	Hours	
Construction	Monday – Friday	7 am - 6 pm	
	Saturday	8 am – 1 pm	
	Sunday & Public Holidays	Nil	
Operation	All days	Any time	

### **Noise Management Plan**

18. The Proponent must prepare and implement a Noise Management Plan for the Mushroom Farm site in consultation with EPA and property owner of 1 Thomas Road, Penrith (identified as location "R3") to the satisfaction of the Secretary. The Plan must be submitted to and approved by the Secretary for approval prior to commencement of operations construction, and include a noise monitoring protocol for evaluating compliance with the noise impact assessment criteria in Conditions 15 and 16 of this approval.

<sup>\* &</sup>quot;Shoulder period" noise trigger level should not exceed Day or Evening noise trigger levels.

The Noise Management Plan must also include all mitigation measures for both the construction and operations identified in the acoustic reviews titled 'Acoustic Review Modified Operations Mushroom Farm Londonderry' dated 5 April 2016 prepared by Atkins Acoustics and Associates Pty Ltd and 'Acoustic Review (Amended Development Application) Modified Operations, Mushroom Farm, 521 The Northern Road, Londonderry' dated 5 February 2019 prepared by Acoustic Consulting Engineers Pty Ltd. Mitigation measures must be implemented at the commencement of construction or as identified in the reports.

The Noise Management Plan must also include measures that restrict operations along the southern side of the building during night-time hours to mitigate intermittent noise impacts associated with truck movements and air brake release.

### **BIODIVERSITY**

### **Vegetation Management Area**

 The Proponent must establish a Vegetation Management Area at the Mushroom Farm site (as shown in Appendix 5).

### **Vegetation Management Plan**

- 20(i) The Proponent must prepare and implement a Plan for the Vegetation Management Area to the satisfaction of the Secretary. This plan must be prepared in consultation with OEH EESG by a suitably qualified and experienced expert/s whose appointment has been approved by the Secretary. The plan must:
  - be submitted to and approved by the Secretary for approval prior to the commencement of construction on the Mushroom Farm site;
  - identify all vegetation that is present within the vegetation management area (as shown in Appendix 5);
  - (c) include the recommendations of the 'Addendum Flora and Fauna Assessment 521 The Northern Road Londonderry' dated 7 July 2015 and prepared by Fraser Ecological Consulting;
  - include details of the mechanism that will be used to ensure that the vegetation within the area is protected in perpetuity;
  - (e) describe the management measures that will be implemented to maintain and enhance the vegetation within the area over time, including fencing of *Dillwynia tenuifolia* and *Persoonia* nutans. This should also include management measures aimed at ensuring that the implementation and management of the APZ protects the *Dillwynia tenuifolia* and *Persoonia* nutans:
  - (f) provide details of all trees scheduled for removal noting that trees to be felled with a Diameter at Breast Height (DBH) of 30cm or greater, once felled, are to be sawn into 2-6m lengths and relocated into the proposed conservation area identified in Appendix 5; and
  - (g) include a detailed weed condition map as a baseline from which site rehabilitation/management can be measured.

Note: all vegetation rehabilitation work is to be supervised by an appropriately qualified and experienced person with minimum qualifications of TAFE Certificate III in Bush Regeneration or Conservation and Land Management - Natural Area Restoration and 4 years bush regeneration experience;

### **Fauna Inspection**

20(ii) Prior to the commencement of works, including the removal of any trees associated with the approved development, an inspection for resident threatened fauna (including an inspection of hollows) must be undertaken by a qualified wildlife handler/expert and any fauna found relocated.

### **HERITAGE**

- 21. The Proponent must prepare and implement a Heritage Management Plan for the Project to the satisfaction of the Secretary. This Plan must:
  - (a) be prepared in consultation with OEH by a suitably qualified and experienced expert;
  - (b) be submitted to the Secretary for approval prior to commencement of construction;
  - (c) include programs/procedures for:
    - managing the discovery of previously unidentified heritage relics including halting of works in the vicinity, notification of OEH and the Department;
    - managing the discovery of human remains including the halting of works in the vicinity, notification of the NSW Police, the Department, the OEH and Aboriginal stakeholders and not recommencing any works in the area unless authorised to do so by the Department and/or the NSW Police (whichever is relevant); and
    - heritage inductions for construction personnel (including procedures for keeping records of inductions).

### **VISUAL AMENITY**

- 22. Prior to commencement of construction works, the Proponent must prepare and implement a Landscape Management Plan for the Project to the satisfaction of the Secretary. This Plan must:
  - (a) be prepared in consultation with Penrith City Council
  - (b) be submitted to and approved by the Secretary prior to commencement of construction works;
  - (e) where practicable, provide for the early planting of advanced plants along the northern, and southern boundaries to minimise the visual impacts of the Project; and
  - (d) use predominantly endemic species,
  - (e) where practicable, provide for the early planting of advanced plants along the northern, and southern boundaries to minimise the visual impacts of the Project; and
  - (f) provide for the maintenance of landscaping on site; and
  - (g) provide for the early planting of advanced plants along the northern, southern and eastern boundaries to screen and soften the expanse of the main structure.
- 22A. Prior to the commencement of construction works of the main building, the Proponent shall prepare a schedule of materials and finishes. To reduce glare and minimise visual intrusiveness, the visible light reflectivity from the materials and finishes must not exceed 20% reflectivity. The schedule of materials and finishes and evidence that these are consistent with the 20% reflectivity must be submitted to and endorsed by the Secretary prior to the issue of the relevant Construction Certificate.
- 23. Prior to the commencement of construction on the Mushroom Farm site the Proponent must offer and implement (if the offer is accepted) landscaping treatments to the residences in Table 7 below. These measures must be reasonable and feasible, and directed toward minimising the visibility of the operations from the residences on the land

Table 7 – residences at which landscape treatment will be offered

	Residences
Residence 1	493 The Northern Road, Londonderry
Residence 2	509 The Northern Road, Londonderry
Residence 3	1 Thomas Road, Londonderry

If within 3 months of receiving the offer, the Proponent and the owner can not agree on the landscaping treatment, or there is a dispute about the implementation of these measures, then either party may refer the matter to the Secretary for resolution.

24. Prior to installing any boundary fencing on Mushroom Farm site, the Proponent must submit detailed plans of this fencing to the Secretary for approval. These plans must be prepared in consultation with Penrith City Council. Following approval, the Proponent must ensure that the fencing is installed in accordance with the approved plans.

### Lighting

- 25. The Proponent must ensure that all external lighting associated with the Project on the Mushroom Farm site:
  - (a) does not create a nuisance to surrounding properties or roadways; and
  - (b) complies with AS 4282(INT) 1995 Control of Obtrusive Effects of Outdoor Lighting.

### Signage

26. The Proponent must not install any advertising signs on the Mushroom Farm site without the written approval of the Secretary.

### **ACCESS ROAD WORKS**

27. Prior to the commencement the operation of stage 1, the Proponent must design and construct the Mushroom Farm site access as a "Type CHR' Rural Intersection, in accordance with the RMS's *Road Design Guide* and relevant Austroads guidelines, to the satisfaction of the RMS.

In finalising the design of the site access, the Proponent must:

- (a) ensure that the swept path of the largest vehicle entering/exiting the site and manoeuvrability through the site is in accordance with the relevant Australian Standard and to Penrith City Council's satisfaction; and
- (b) sign a Works Authorisation Deed with the RMS.

### **TRANSPORT**

### Car Parking

- 28. The Proponent must engage a suitably qualified and experienced expert to prepare a car parking study to re-evaluate parking requirements for stages 2 to 5 of the Project on the Mushroom Farm site. The study must:
  - (a) be submitted to the satisfaction of the Secretary prior to commencement of construction works for stage 2; and
  - (b) provide recommendations as to whether the car parking is sufficient.
- 29. The Proponent must ensure that:
  - (a) the layout of the proposed parking areas (including driveways, grades, turn paths, sight distances requirements in relation to landscaping and/or fencing, aisle widths, aisle lengths, and parking bay dimensions) must comply with AS 2890.1–2004, AS2890.6-2009 for cars and AS2890.2 for heavy vehicles;
  - (b) vehicles associated with the Project do not park or queue on the public road network at any time;
  - (c) all vehicles enter and leave the site in a forward direction; and

### **Operational Traffic Management Plan**

30. Prior to the commencement of operation, the Proponent must prepare an Operational Traffic Management Plan (OTMP) for the development to the satisfaction of the Secretary.

The Plan must be prepared by a suitably qualified and experienced person(s) as approved by the Secretary and must:

- (a) be prepared in consultation with Council and RMS;
- (b) detail the measures to be implemented to ensure road safety and network efficiency;
- (c) detail heavy vehicle routes, access and parking arrangements;
- (d) detail measures aimed at minimising conflict between heavy vehicle and light vehicles accessing the site;
- (e) include a Driver Code of Conduct;
- (f) include onsite traffic control measures; and
- (g) include measures to minimise traffic noise in particular from reversing, loading and unloading and noise from exhaust brakes.

### **Bushfire Protection**

- 31. At the commencement of building works and for the perpetuity of the development, a minimum 25 metre distance shall be maintained as an inner protection (IPA) as outlined in Section 4.1.3 and Appendix 5 of 'Planning for Bush Fire Protection 2006', and the NSW Rural Fire Services document 'Standards for asset protection zones'.
- 32. All new construction shall comply with Sections 3 and 8 (BAL 40) of *Australian Standard AS3959-2009* 'Construction of buildings in bush fire prone areas' and section A3.7 Addendum Appendix 3 of 'Planning for Bush Fire Protection'.
- 33. The provision of water, electricity and gas is to comply with section 4.1.3 of 'Planning for Bush Fire Protection 2006'.
- 34. Property access roads must comply with section 4.2.7 of 'Planning for Bushfire Protection 2006'.
- 35. Emergency and evacuation arrangements must comply with section 4.2.7 of 'Planning for Bush Fire Protection 2006'.

### **Integrated Bushfire and Vegetation Management**

- 36. Prior to the commencement of construction works on the Mushroom Farm Site, the Proponent must demonstrate to the satisfaction of the Secretary that:
  - (a) a minimum 25 metre wide APZ; and
  - (b) appropriate landscaping to screen and soften the appearance of the structure

can both be provided.

### SCHEDULE 5 ENVIRONMENTAL MANAGEMENT and REPORTING

### **ENVIRONMENTAL MANAGEMENT**

#### **Environmental Management Strategy**

- 1. The Proponent must prepare and implement an Environmental Management Strategy for the Project to the satisfaction of the Secretary. The Strategy must:
  - a) be submitted to the Secretary for approval prior to the commencement of operation;
  - b) provide the strategic framework for environmental management of the Project;
  - c) identify the statutory approvals that apply to the Project;
  - d) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the Project;
  - e) describe the procedures that would be implemented to:
    - keep the local community and relevant agencies informed about the operation and environmental performance of the Project;
    - receive, handle, respond to, and record complaints;
    - resolve any disputes that may arise during the course of the Project;
    - respond to any non-compliance; and
    - respond to emergencies;
  - f) include:
    - copies of the various strategies, plans and programs that are required under the conditions
      of this approval once they have been approved; and
    - a clear plan depicting all the monitoring currently being carried out within the Project area.

### **Management Plan Requirements**

- 2. The Proponent must ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include:
  - a) detailed baseline data;
  - b) a description of:
    - the relevant statutory requirements (including any relevant approval, licence or lease conditions);
    - any relevant limits or performance measures/criteria; and
    - the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the Project or any management measures;
  - c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria:
  - d) a program to monitor and report on the:
    - impacts and environmental performance of the Project;
    - effectiveness of any management measures (see c above);
  - e) a contingency plan to manage any unpredicted impacts and their consequences;
  - f) a program to investigate and implement ways to improve the environmental performance of the Project over time;
  - g) a protocol for managing and reporting any:
    - incidents;
    - complaints;
    - non-compliances with statutory requirements; and
    - exceedances of the relevant limits and/or performance measures / criteria; and
    - a protocol for periodic review of the plan.

### Review

h)

- One year after the commencement of operations, and every three years thereafter, the Proponent shall
  review the environmental performance of the Project to the satisfaction of the Secretary. This review
  must:
  - a) describe the operations that were carried out in the past year;
  - b) analyse the monitoring results and complaints records of the Project over the past year, which includes a comparison of these results against the
    - relevant statutory requirements, limits or performance measures/criteria;
    - monitoring results of previous years; and
    - relevant predictions in the EA;
  - e) identify any non-compliance over the last year, and describe what actions were (or are being) taken to ensure compliance;
  - d) identify any trends in the monitoring data over the life of the Project; and

- e) describe what measure will be implemented over the next year to improve the environmental performance of the Project.
- 3. By 30 September 2020 Within six months of commencement of operations, and annually thereafter, unless otherwise agreed by the Secretary, the Proponent must review the environmental performance of the Project to the satisfaction of the Secretary. This review must:
  - (a) describe the operations that were carried out during the reporting period;
  - (b) analyse the monitoring results and complaints records of the Project during the reporting period, which includes a comparison of these results against the:
    - i. relevant statutory requirements, limits or performance measures/ criteria;
    - ii. monitoring results of previous years; and
    - iii. relevant predictions in the EA;
  - (c) identify any non-compliance during the reporting period, and describe what actions were (or are being) taken to ensure compliance;
  - (d) identify any trends in the monitoring data over the life of the Project; and
  - (e) describe what measure(s) will be implemented during the next reporting period to improve the environmental performance of the Project.

### **Independent Environmental Audit**

- 3A. By 31 March 2021 Within six months of the approval of MOD 2, and every two years thereafter, unless otherwise agreed by the Secretary, the Proponent must commission and pay the full cost of an Independent Environmental Audit of the Project. This audit must:
  - (a) be conducted by suitably qualified, experienced and independent team of experts (including an odour expert), whose appointment has been endorsed by the Secretary;
  - (b) include consultation with the relevant agencies;
  - (c) include a full odour audit of the Project, taking into consideration the relevant technical guidelines and any odour complaints made since the previous audit;
  - (d) assess the environmental performance of the project and assess whether it is complying with the relevant requirements in this approval and any other licenses and approvals that apply to the project, (including any assessment, plan or program required under these approvals);
  - (e) review the adequacy of strategies, plans or programs required under these approvals; and, if appropriate;
  - (f) recommend measures or actions to improve the environmental performance of the project, and/or any assessment, plan or program required under these approvals.

Within six weeks of the completing of this audit, or as otherwise agreed by the Secretary, the Proponent must submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report.

### **Revision of Plans & Programs**

- 4. Within 3 months of the submission of an:
  - a) the submission of an incident report under condition 5 of schedule 5; and
  - b) the submission of an annual three yearly review under condition 3 of schedule 5; and
  - c) the submission of an independent environmental audit under condition 3A of Schedule 5; and
  - d) the approval of any modification of the conditions of this approval,

the strategies, plans and programs required under this approval must be reviewed.

the Proponent must review, and if necessary revise the plans and programs required under this approval to the satisfaction of the Secretary.

Note: This is to ensure the plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the Project.

4A. If necessary to improve the environmental performance of the project or cater for a modification, the strategies, plans and programs required under this approval must be revised, to the satisfaction of the Secretary. Where revisions are required, the revised document must be submitted to the Secretary for approval within six weeks of the review required by Condition 4 of Schedule 5.

**Note:** This is to ensure strategies, plans and programs are updated on a regular basis and to incorporate any recommended measures to improve the environmental performance of the development.

### **REPORTING**

#### Incident

5. The Proponent must notify the Secretary and any other relevant agencies of any incident associated with the Project as soon as practicable after the Proponent becomes aware of the incident. Within 7 days of the date of the incident, the Proponent must provide the Secretary and any relevant agencies with a detailed report on the incident.

### **Access to Information**

- 6. The Proponent must prepare a Community Consultation Strategy for the Substrate Plant site to address existing and future operations at the Substrate Plant site, including construction of works associated with MOD 1. This Plan must:
  - (a) be submitted to the satisfaction of the Secretary within one month from the approval of MOD 1;
  - include procedures for updating the community on the general operation of the site as well as the progress of any construction works; including
    - i. a newsletter for the local community which details the:
      - construction activities and the expected duration of works;
      - a general summary of the environmental management to be implemented; and
      - telephone number for taking complaints or enquiries in relation to the activities;
    - ii. the website required by Condition 7 of Schedule 5; and
    - iii. public meetings;
  - (c) describe the distribution area for the newsletter (at a minimum all residents within 2 km from the site boundary), prepared in consultation with Council; and
  - (d) include procedures for handling and monitoring all complaints received; and detail what management and/or contingency actions will be taken if complaints are received.
- 7. The approved Strategy (as revised and approved by the Secretary from time to time), must be implemented for the life of the Project as soon as written endorsement by the Secretary is received.
- 8. Within three months from the date of the approval of MOD 3 4, the Proponent must make the following information (unless commercially sensitive) freely available on a publicly accessible website, as it is progressively required under the approval:
  - (a) all current statutory approvals, including this approval and any modifications to it;
  - (b) plans and programs required under this approval;
  - (c) technical analysis/reports of monitoring results, which have been reported in accordance with the various plans and programs approved under the conditions of this approval;
  - (d) a complaints register, which is to be updated on a monthly basis;
  - (e) a copy of any review as required under Condition 3 of Schedule 5 (over the last five years);
  - (f) updates on the progress of the construction works associated with MOD 1, MOD 2 and MOD 3; and
  - (g) any other material as required by the Secretary.

# APPENDIX 1 PROPONENT'S REVISED STATEMENT OF COMMITMENTS 7 August 2018



# API Æ PLANT SIN **APPENDIX 2 SUBSTRATE PLANT SITE LAYOUT and STAGES** MGA OD-ORDINATES E29000 N 6277830 MGA CO-ORDINATES E298748 N 6277524 35 metre Riparian comidor 10% FLOOD PLAIN **MOD 3 Tree Corridor** PHASE 2/3 BUILDING 35 metre Riparian corridor INZ ZONE PHASE 1 TUNNELS PRE-VET PROPOSED WALLS BLACKTOWN TO RICHMOND RAILWAY LINE SITE PLAN

Figure 1: Substrate plant site layout following MOD 3

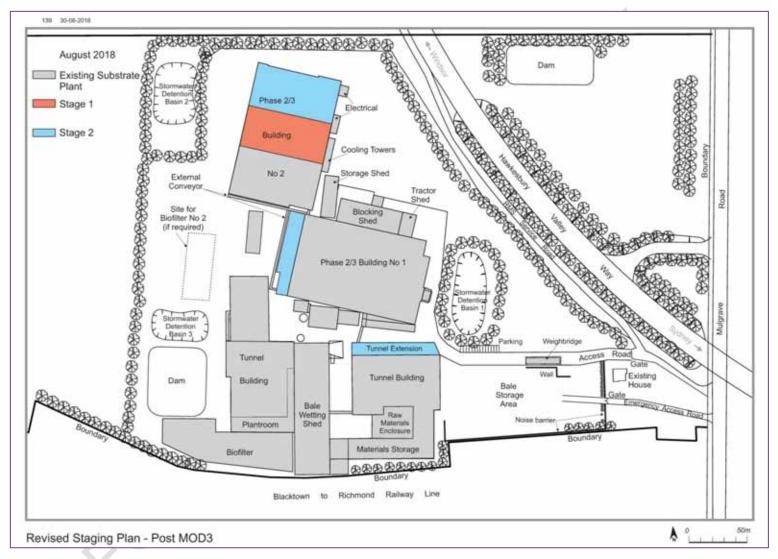


Figure 2: Substrate plant site staging following MOD 3

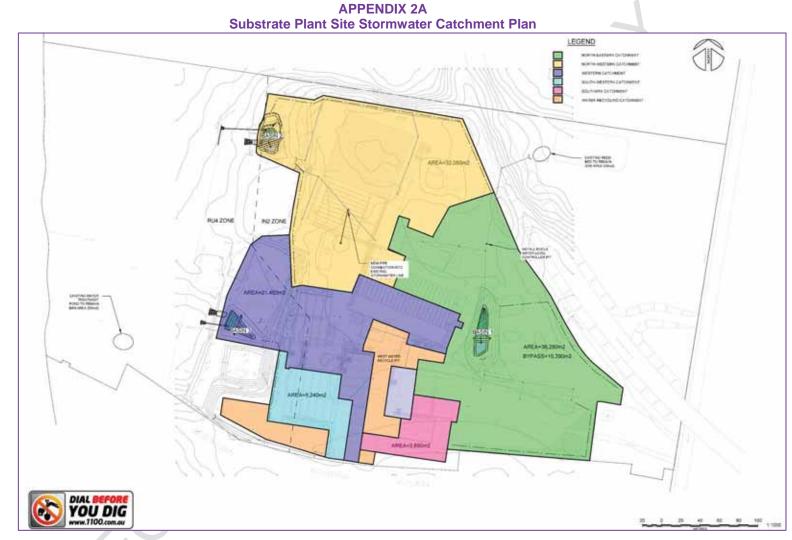


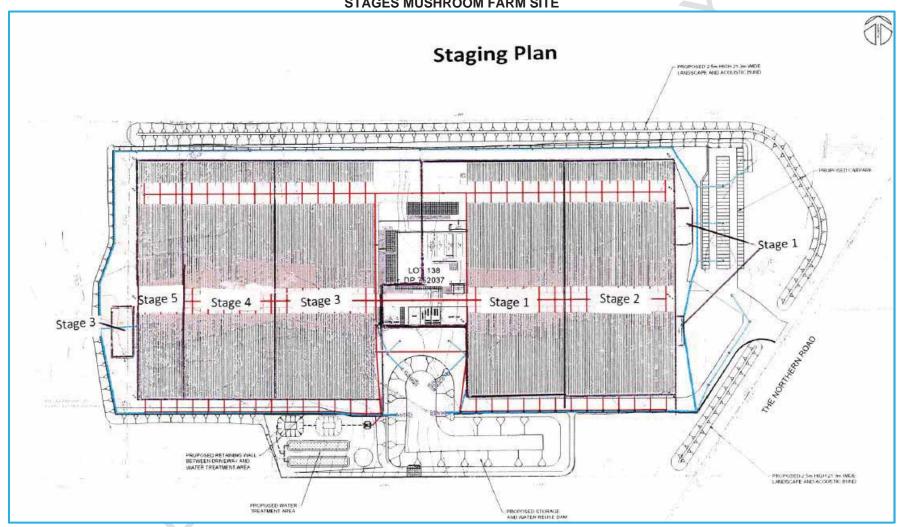
Figure 3: Substrate plant site stormwater catchment plan following MOD 3

# A1 PIAL BEFORE YOU DIG PLAN PROPOSED MUSHROOM FARM 521-555 THE NORTHERN ROAD LONDONDERRY SY180007E1-02

APPENDIX 3
MUSHROOM FARM SITE LAYOUT AS MODIFIED

Indicative Mushroom Farm Site Layout

# APPENDIX 4 STAGES MUSHROOM FARM SITE



Vegetation Management Plan to cover this area Castlereagh Woodland Castlereagh Swamp Woodland

**APPENDIX 5 VEGETATION MANAGEMENT AREA** 



# **APPENDIX B**

# **COMPLIANCE TABLE**



### Table k Compliances Table - Approval 08\_0255

Condition of consent number	Compliance Requirement (summary – detail appendix A)	Evidence and comments	Compliance status
Schedule 2 Condition 1-5	OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT TERMS OF APPROVAL	Reasonable and feasible measure have been undertaken by complying to the conditions below and EPA licence.	Compliant
Schedule 2 Condition 6	The Proponent must ensure that the Project on the Substrate Plant site does not: a) produce more than 3,200 tonnes per week of phase 1 substrate; b) dispatch more than 1,920 tonnes of phase 3 substrate per week.	Table c Production Summary - page 4	Compliant
Schedule 2 Condition 7(2)	Production of up to 2,400 tonnes of phase 1 substrate a week may not occur until the Proponent has received the written approval of the Secretary.	Letter Dated 20 <sup>th</sup> December 2019 Addressed in 2019-20 Annual review	Compliant
Schedule 2 Condition 7(3)	Production of up to 3,200 tonnes of phase 1 substrate a week may not occur until the Proponent has received the written approval of the Secretary.		Not Triggered
Schedule 2 Condition 8	Mushroom Farm Site	Mushroom farm site not constructed	Not Triggered
Schedule 2 Condition 9- 12	EXISTING DEVELOPMENT CONSENTS AND RIGHTS TRANSITIONAL ARRANGEMENTS STRUCTURAL ADEQUACY DEMOLITION	No Construction or Demolition was undertaken during reporting period	Not Triggered
Schedule 2 Condition 13	OPERATION OF PLANT AND EQUIPMENT  The Proponent must ensure that all plant and equipment used for the Project is:  a) Maintained in a proper and efficient condition and  b) Operated in a proper and efficient manner.	Onsite maintenance crew with an extensive range of specialist contractors. Employees undertake on the job training and verification	Compliant



Schedule 2	UTILITIES	Secondary 1 Kva transformer installed at	Compliant
Condition 14	Prior to the construction of any utility works, the Proponent must obtain the necessary approvals from relevant service providers	new Phase 2/3 plant room. Electrical service provider installed.	
Schedule 2	SUBMISSION OF PLANS AND PROGRAMS	Odour Management plan	Compliant
	With the written approval of the Secretary, the Proponent may:	was updated and submitted Approved copy	
Condition 15	a) Submit any reports, plans, strategies, or programs required by this approval on a progressive basis; and	found on website	
	b) Combine any reports, plans, strategies, or programs required for the Substrate Plant site with any similar reports, plans, strategies, or programs for the Mushroom Farm site.		
	c) Separate any reports, plans, strategies, or programs required for the Substrate Plant site with any similar reports, plans, strategies, or programs for the Mushroom Farm site.		
Schedule 2	EVIDENCE OF CONSULTATION	No consultation was required	Not Triggered
Condition 16	Where conditions of this approval require consultation with an identified party, the Proponent must:		
	(a) Consult with the relevant party prior to submitting the subject document to the Secretary for the approval; and		
	(b) Provide details of the consultation undertaken, matters resolved and unresolved and		
	(c) Details of any disagreement remaining between the party consulted and the Proponent and how the Proponent has addressed the matters not resolved.		
Schedule 3	Construction Environmental Management plan Mod 3 Works	Mod 3 works did not commence during the reporting period	Not triggered
Condition 1	Prior to the commencement of the MOD 3 construction works, the Proponent must prepare an updated Construction Environmental Management Plan (CEMP) for the Substrate Plant site to the satisfaction of the Secretary.		
Schedule 3	Air Quality	Biofilter operational and maintained and	Non - Compliant
	The Proponent must not cause or permit the emission of offensive odours from the	annually assessed.	
Condition 2	Substrate Plant site, as defined under Section 129 of the POEO Act.	Complaints received were in relation to flood waters entering western dam	
Schedule 3	Odour Emissions plant Design and Construction	MOD 1 completed previous years.	Not triggered
Condition 3			



Schedule 3	Odour Management Plan	Plan implemented for the life of the project – biofilter and associated operations	Compliant
Condition 4		implemented.	
Schedule 3	Biofilter control audit	Previously audited	Not Triggered
Condition 5-6			
Schedule 3	Dust	A warning sign is positioned on the exit to the site for all trucks to have loads covered.	Compliant
Condition 7-8		the site for all trucks to have loads covered.	
Schedule 3	Energy efficiency	Monitoring of energy and solar in operation.	Compliant
Condition 9	The proponent must prepare and implement an Energy Efficiency Plan on the Substrate Plant site to the satisfaction of the Secretary. This plan must:		
	(a)Be submitted to the Secretary for approval prior to the commencement of operations on the site:		
	(b)Describe the measures that would be implemented to minimise energy use on the site;		
	(c)Explore the possibility of using renewable energy use to generate power and		
	(d)Include a program to monitor the effectiveness of these measures and a protocol to periodically review the plan		
Schedule 3	Fire Management – straw bales storage	Straw bale site plan	Compliant
Condition 10		Fire equipment and Evacuation drills EPA PIRMP – Pollution incident response	
Condition 10		management plan, found on website.	
		www.elffarmsupplies.com.au	
Schedule 3	Hazards	No new hazardous substances.	Compliant
		No change to current bulk storage and	
Condition 11		handling of chemicals.	
Schedule 3	Waste	Only Waste permitted by licence was	Compliant
0 1111 - 15		received Appendix G	
Condition 12			
Schedule 3	Bunding	No change to previous storage of diesel and	Compliant
Condition 13		chemicals. Spill pallets used in workshop storage.	



Schedule 3	Soil and Water	No discharges or incidents during reporting	Compliant
Condition 14	Except as may be expressly provided by an EPL for the Substrate Plant site, the Proponent must comply with Section 120 of the POEO Act.	period	
Schedule 3 Condition 15	The Proponent must ensure that only VENM and/or ENM or material approved by the EPA is used as fill.		Not triggered
Schedule 3 Condition 16	<ul><li>16. The Proponent must ensure that the filing of the maneuvering area must be undertaken in accordance with plans submitted with DA 0571/06.</li><li>16A. The Proponent must ensure that the earthworks associated with the biofilter</li></ul>		Not triggered
	pad do not act as a source of sedimentation. The Proponent must 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 must 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		
Calcadada 2	(b) compacted to 98% Standard dry density ratio (AS1289 E4.1).		O a service and
Schedule 3	Water Management The Proposent must ensure that the western dam at the Substrate		Compliant
Condition 17	The Proponent must ensure that the western dam at the Substrate Plant site does not receive process water.		
Condition 17	Trant site does not receive process water.		
	Notes: The dam may receive water from direct rainfall, area runoff		
	and groundwater and during times of emergency.		
Schedule 3	Notwithstanding Condition 17B of Schedule 3, in the event of an	No Events	Not triggered
	emergency such as a high rainfall event or plant breakdown, the		
Condition	Proponent may use the western dam. Notification of any emergency		
17(C)	use of the dam must be provided to the Secretary in writing within 7		
	days of the emergency.		
Schedule 3	Water Management Plan	Mod 3 – no commencement of	Not triggered
Condition	Flood compatible Material	construction of stormwater system.	
Condition 17D – 17F			
1/0 – 1/6			
Schedule 3	Noise	Mod 3 – no commencement of	Not triggered
		construction	
Condition 18			



Schedule 3	The Proponent shall ensure that the operational noise generated by the Substrate Plant site does not exceed the criteria				No Change to operations since last noise survey.	Compliant
Condition 19	the substrate Fight site does not exceed the criteria				No Complaints made about noise to trigger additional surveys.  Table J	
Schedule 3	Hours of operation		No construction was undertaken during this	Compliant		
	Activity	Day	Time		reporting year.	
Condition 20	Construction	Monday – Friday Saturday Sunday and	7.00am – 6.00pm 8.00am – 1.00pm		As per condition - Operating hours: all days and anytime	
	Operation	Public Holidays All days	Nil Anytime			
Schedule 3	Additional Noise Mitigation measures				Bale noise wall in place during this reporting period	Compliant
Condition 21A						
Schedule 3 Condition 22	Noise Management plan				Previously been approved.  Reviewed by Department during approval of EMS Appendix C – letter dated 9 September 2022	Not triggered
Schedule 3	Biodiversity – Riparian Management Area				Area fenced off as per condition	Compliant
Condition 23						
Schedule 3	Lighting				No New external lighting installed. No Nuisance complaints	Compliant
Condition 24						
Schedule 3 Condition 24a24b	24a Landscape Management plan 24b Landscaping around biofilter				No Changes made to plan or current landscaping around biofilter.	Not triggered
Schedule 3	Signage				No advertising signage	Compliant
Condition 25						



Schedule 3 Condition 26	Transport	No changes to car parking No offsite parking	Compliant
Schedule 3 Condition 27 -31	Protection of public infrastructure Works as executed plans – MOD3. Rail corridor and Associated easements	MOD 3 – no construction commenced.	Not triggered
Schedule 4 Condition 1- 36	Specific Environmental Conditions for Mushroom Farm Site	Construction has not commenced.  Conditions apply to Elf Mushrooms Pty Ltd. A separate AMER report will be submitted from that entity when triggered.	Not triggered
Schedule 5 Condition 1	Environmental Management Strategy	Updated EMS was submitted to the Department for approval June 2022. Appendix C – letter dated 9 September 2022	Compliant
Schedule 5 Condition 2	Management plans	For this reporting period the following plans were required to be updated:  Odour Management Plan	Compliant
Schedule 5 Condition 3	By 30 September 2020 Within six months of commencement of operations, and annually thereafter, unless otherwise agreed by the Secretary, the Proponent must review the environmental performance of the Project to the satisfaction of the Secretary. This review must:  (a) describe the operations that were carried out during the reporting period;	DPE letter to EFS, 26 October 2012 specifying requirements for future AEMRs.  Non-compliance against several aspects – Items 5, 6 and 7 not complied with.	Non - Compliant
	<ul> <li>(b) analyse the monitoring results and complaints records of the Project during the reporting period, which includes a comparison of these results against the: <ol> <li>relevant statutory requirements, limits, or performance measures/ criteria;</li> <li>monitoring results of previous years; and</li> <li>relevant predictions in the EA;</li> <li>dentify any non-compliance during the reporting period, and describe what actions were (or are being) taken to ensure compliance;</li> <li>didentify any trends in the monitoring data over the life of the Project; and</li> <li>describe what measure(s) will be implemented during the next reporting period to improve the environmental performance of the Project.</li> </ol> </li> </ul>	Action: Included in this and future AEMR	
Schedule 5 Condition 3A	Two yearly Independent Environmental audit  By 31 March 2021 Within six months of the approval of MOD 2, and every two years thereafter, unless otherwise agreed by the Secretary, the Proponent must	Letter dated 28 March 2023 from Planning to Elf Farm Supplies endorsing Ms. Lonergan and Mr. Mawaraha as independent environmental auditors	Compliant



	commission and pay the full cost of an Independent Environmental Audit of the Project. This audit must:		
	(a) be conducted by suitably qualified, experienced, and independent team of experts (including an odour expert), whose appointment has been endorsed by the Secretary;		
	(b) include consultation with the relevant agencies;		
	(c) include a full odour audit of the Project, taking into consideration the relevant technical guidelines and any odour complaints made since the previous audit;		
	(d) assess the environmental performance of the project and assess whether it is complying with the relevant requirements in this approval and any other licenses and approvals that apply to the project, (including any assessment, plan or program required under these approvals);		
	(e) review the adequacy of strategies, plans or programs required under these approvals; and, if appropriate;		
	(f) recommend measures or actions to improve the environmental performance of the project, and/or any assessment, plan or program required under these approvals.		
	Within six weeks of the completing of this audit, or as otherwise agreed by the Secretary, the Proponent must submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report.		
Schedule 5 Condition 4	Revision of plans	Review of plans undertaken and completed November 2022	Compliant
and 4a	Within 3 months of the submission of an:	OMP updated May 2023and submitted for	
	a) the submission of an incident report under condition 5 of schedule 5; and	approval.	
	b) the submission of an annual three yearly review under condition 3 of schedule 5; and		
	c) the submission of an independent environmental audit under condition 3A of Schedule 5; and		
	d) the approval of any modification of the conditions of this approval,		
	the strategies, plans and programs required under this approval must be reviewed.		
	If necessary to improve the environmental performance of the project or cater for a modification, the strategies, plans, and programs required under this approval must be revised, to the satisfaction of the Secretary. Where revisions are required, the revised document must be submitted to the Secretary for approval within six weeks of the review required by Condition 4 of Schedule 5.		
Schedule 5	Reporting incidents		Not triggered
Condition 5	The Proponent must notify the Secretary and any other relevant agencies of any incident associated with the Project as soon as practicable after the Proponent becomes aware of the incident. Within 7 days of the date of the incident, the Proponent must provide the Secretary and any relevant agencies with a detailed report on the incident.		



Schedule 5	Information	Community consultation strategy already in	Compliant
Condition 6-8	Within three months from the date of the approval of MOD 3, the Proponent must make the following information (unless commercially sensitive) freely available on a publicly accessible website, as it is progressively required under the approval:	place. Website already in place and progressively updated www.elffarmsupplies.com.au	

Status	Description
Compliant	The proponent has collected sufficient verifiable evidence to demonstrate that all elements of the requirement have been complied with.
Non-compliant	The proponent has identified a non-compliance with one or more elements of the requirement.
Not triggered	A requirement has an activation or timing trigger that has not been met at the phase of the development when the compliance assessment is undertaken, therefore an assessment of compliance is not relevant.



# **APPENDIX C**

# ENVIRONMENTAL PROTECTION LICENCE NO: 6229



Licence - 6229

Licence Details		
Number:	6229	
Anniversary Date:	20-May	

### **Licensee**

ELF FARM SUPPLIES PTY LTD

**PO BOX 615** 

**WINDSOR NSW 2756** 

### **Premises**

ELF FARM SUPPLIES PTY LTD

108 MULGRAVE ROAD

**MULGRAVE NSW 2756** 

### **Scheduled Activity**

Composting

Waste storage

Fee Based Activity	<u>Scale</u>
Composting	> 5000-50000 T annual capacity to receive organics
Waste storage - other types of waste	Any other types of waste stored

### Region

Metropolitan South Branch

4 Parramatta Square, 12 Darcy Street

PARRAMATTA NSW 2150

Phone: (02) 9995 5000

Fax: (02) 9995 6900

Locked Bag 5022

PARRAMATTA NSW 2124



Licence - 6229

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### Information about this licence

### **Dictionary**

A definition of terms used in the licence can be found in the dictionary at the end of this licence.

### Responsibilities of licensee

Separate to the requirements of this licence, general obligations of licensees are set out in the Protection of the Environment Operations Act 1997 ("the Act") and the Regulations made under the Act. These include obligations to:

- ensure persons associated with you comply with this licence, as set out in section 64 of the Act;
- control the pollution of waters and the pollution of air (see for example sections 120 132 of the Act);
- report incidents causing or threatening material environmental harm to the environment, as set out in Part 5.7 of the Act.

### Variation of licence conditions

The licence holder can apply to vary the conditions of this licence. An application form for this purpose is available from the EPA.

The EPA may also vary the conditions of the licence at any time by written notice without an application being made.

Where a licence has been granted in relation to development which was assessed under the Environmental Planning and Assessment Act 1979 in accordance with the procedures applying to integrated development, the EPA may not impose conditions which are inconsistent with the development consent conditions until the licence is first reviewed under Part 3.6 of the Act.

### **Duration of licence**

This licence will remain in force until the licence is surrendered by the licence holder or until it is suspended or revoked by the EPA or the Minister. A licence may only be surrendered with the written approval of the EPA.

### Licence review

The Act requires that the EPA review your licence at least every 5 years after the issue of the licence, as set out in Part 3.6 and Schedule 5 of the Act. You will receive advance notice of the licence review.

### Fees and annual return to be sent to the EPA

For each licence fee period you must pay:

- an administrative fee: and
- a load-based fee (if applicable).



Licence - 6229

The EPA publication "A Guide to Licensing" contains information about how to calculate your licence fees. The licence requires that an Annual Return, comprising a Statement of Compliance and a summary of any monitoring required by the licence (including the recording of complaints), be submitted to the EPA. The Annual Return must be submitted within 60 days after the end of each reporting period. See condition R1 regarding the Annual Return reporting requirements.

Usually the licence fee period is the same as the reporting period.

### **Transfer of licence**

The licence holder can apply to transfer the licence to another person. An application form for this purpose is available from the EPA.

### Public register and access to monitoring data

Part 9.5 of the Act requires the EPA to keep a public register of details and decisions of the EPA in relation to, for example:

- licence applications;
- licence conditions and variations;
- statements of compliance;
- load based licensing information; and
- load reduction agreements.

Under s320 of the Act application can be made to the EPA for access to monitoring data which has been submitted to the EPA by licensees.

### This licence is issued to:

**ELF FARM SUPPLIES PTY LTD** 

**PO BOX 615** 

**WINDSOR NSW 2756** 

subject to the conditions which follow.



Licence - 6229

### 1 Administrative Conditions

### A1 What the licence authorises and regulates

A1.1 This licence authorises the carrying out of the scheduled activities listed below at the premises specified in A2. The activities are listed according to their scheduled activity classification, fee-based activity classification and the scale of the operation.

Unless otherwise further restricted by a condition of this licence, the scale at which the activity is carried out must not exceed the maximum scale specified in this condition.

Scheduled Activity	Fee Based Activity	Scale
Composting	Composting	> 5000 - 50000 T annual capacity to receive organics
Waste storage	Waste storage - other types of waste	Any other types of waste stored

### A2 Premises or plant to which this licence applies

A2.1 The licence applies to the following premises:

Premises Details
ELF FARM SUPPLIES PTY LTD
108 MULGRAVE ROAD
MULGRAVE
NSW 2756
LOT 13 DP 1138749, LOT 14 DP 1138749

### A3 Information supplied to the EPA

A3.1 Works and activities must be carried out in accordance with the proposal contained in the licence application, except as expressly provided by a condition of this licence.

In this condition the reference to "the licence application" includes a reference to:

- a) the applications for any licences (including former pollution control approvals) which this licence replaces under the Protection of the Environment Operations (Savings and Transitional) Regulation 1998; and
- b) the licence information form provided by the licensee to the EPA to assist the EPA in connection with the issuing of this licence.



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### 2 Discharges to Air and Water and Applications to Land

### P1 Location of monitoring/discharge points and areas

P1.1 The following utilisation areas referred to in the table below are identified in this licence for the purposes of the monitoring and/or the setting of limits for any application of solids or liquids to the utilisation area.

### 3 Limit Conditions

### L1 Pollution of waters

L1.1 Except as may be expressly provided in any other condition of this licence, the licensee must comply with section 120 of the Protection of the Environment Operations Act 1997.

### L2 Waste

L2.1 The licensee must not cause, permit or allow any waste to be received at the premises, except the wastes expressly referred to in the column titled "Waste" and meeting the definition, if any, in the column titled "Description" in the table below.

Any waste received at the premises must only be used for the activities referred to in relation to that waste in the column titled "Activity" in the table below.

Any waste received at the premises is subject to those limits or conditions, if any, referred to in relation to that waste contained in the column titled "Other Limits" in the table below.

This condition does not limit any other conditions in this licence.

Code	Waste	Description	Activity	Other Limits
NA	Chicken manure			NA
NA	Feather meal			NA
NA	Cotton seed meal			NA
NA	Natural organic fibrous materials			NA
NA	Horse stable bedding			NA
NA	General or Specific exempted waste			NA
NA	Waste			NA

L2.2 The licensee must ensure that the amount of excess compost that is stored at the premises does not exceed 150 tonnes at any one time.

### L3 Noise limits

L3.1 Noise generated at the premises must not exceed the LAeq (15 minutes) noise limits presented in the table below:



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Location	Day	Evening	Night	
Most effected residence	44	44	39	

L3.2 Noise from the premises is to be measured at the most affected point on or within the residential boundary or at the most affected point within 30m of the dwelling (rural situations) where the dwelling is more than 30m from boundary to determine compliance with the LAeq(15 minute) noise limits in condition L4.1.

Where it can be demonstrated that direct measurement of noise from the premises is impractical, the EPA may accept alternative means of determining compliance. See Chapter 11 of the NSW Industrial Noise Policy.

The modification factors presented in Section 4 of the NSW Industrial Noise Policy shall also be applied to the measured noise level where applicable.

- L3.3 The noise emission limits identified in condition L4.1 apply under meteorological conditions of:
  - a) wind speeds up to 3 m/s at 10 metres above ground level; and/or
  - b) temperature inversion conditions of up to 3 oC/100m.

### L4 Potentially offensive odour

- L4.1 No condition of this licence identifies a potentially offensive odour for the purposes of section 129 of the Protection of the Environment Operations Act 1997.
- Note: Section 129 of the Protection of the Environment Operations Act 1997, provides that the licensee must not cause or permit the emission of any offensive odour from the premises but provides a defence if the emission is identified in the relevant environment protection licence as a potentially offensive odour and the odour was emitted in accordance with the conditions of a licence directed at minimising odour.

### 4 Operating Conditions

### O1 Activities must be carried out in a competent manner

- O1.1 Licensed activities must be carried out in a competent manner.
  - This includes:
  - a) the processing, handling, movement and storage of materials and substances used to carry out the activity; and
  - b) the treatment, storage, processing, reprocessing, transport and disposal of waste generated by the activity.

### O2 Maintenance of plant and equipment

- O2.1 All plant and equipment installed at the premises or used in connection with the licensed activity:
  - a) must be maintained in a proper and efficient condition; and
  - b) must be operated in a proper and efficient manner.



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### O3 Dust

O3.1 The premises must be maintained in a condition which minimises or prevents the emission of dust from the premises.

### O4 Other operating conditions

- O4.1 There must be no incineration or open burning of any material(s) on the premises, except as specifically authorised by the EPA.
- O4.2 The licensee must ensure that the area in which the pre-wet process is conducted is fully enclosed within a building which is under negative pressure and ventilated through the Biofilter.
- O4.3 Clean up any spillage in front of the raw material ingredients storage building; including poultry manure, gypsum, meals, corn cobs, cotton seed, straw or elsewhere on a daily basis.
- O4.4 Remove solid material from the leachate collection pit screen daily when water is flowing to the pit (wet weather or bale wetting).
- O4.5 De-Sludge the leachate collection pit (if sludge is present) at least fortnightly and keep a record.
- O4.6 Keep doors to process buildings closed immediately before and after the movement of plant or people through the door.
- O4.7 All process buildings and conveyor systems must be constructed and maintained so that these do not allow fugitive odour emissions.

Fugitive odour emissions points include holes, leaks, gaps, corrosion points and other similar failures in containment structures without inclusion of the mechanical extraction vents.

### 5 Monitoring and Recording Conditions

### M1 Monitoring records

- M1.1 The results of any monitoring required to be conducted by this licence or a load calculation protocol must be recorded and retained as set out in this condition.
- M1.2 All records required to be kept by this licence must be:
  - a) in a legible form, or in a form that can readily be reduced to a legible form;
  - b) kept for at least 4 years after the monitoring or event to which they relate took place; and
  - c) produced in a legible form to any authorised officer of the EPA who asks to see them.
- M1.3 The following records must be kept in respect of any samples required to be collected for the purposes of this licence:



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- a) the date(s) on which the sample was taken;
- b) the time(s) at which the sample was collected;
- c) the point at which the sample was taken; and
- d) the name of the person who collected the sample.

### M2 Recording of pollution complaints

- M2.1 The licensee must keep a legible record of all complaints made to the licensee or any employee or agent of the licensee in relation to pollution arising from any activity to which this licence applies.
- M2.2 The record must include details of the following:
  - a) the date and time of the complaint;
  - b) the method by which the complaint was made;
  - c) any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
  - d) the nature of the complaint;
  - e) the action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
  - f) if no action was taken by the licensee, the reasons why no action was taken.
- M2.3 The record of a complaint must be kept for at least 4 years after the complaint was made.
- M2.4 The record must be produced to any authorised officer of the EPA who asks to see them.

### M3 Telephone complaints line

- M3.1 The licensee must operate during its operating hours a telephone complaints line for the purpose of receiving any complaints from members of the public in relation to activities conducted at the premises or by the vehicle or mobile plant, unless otherwise specified in the licence.
- M3.2 The licensee must notify the public of the complaints line telephone number and the fact that it is a complaints line so that the impacted community knows how to make a complaint.
- M3.3 The preceding two conditions do not apply until 3 months after: the date of the issue of this licence.

### 6 Reporting Conditions

### R1 Annual return documents

- R1.1 The licensee must complete and supply to the EPA an Annual Return in the approved form comprising:
  - 1. a Statement of Compliance,
  - 2. a Monitoring and Complaints Summary,
  - 3. a Statement of Compliance Licence Conditions,
  - 4. a Statement of Compliance Load based Fee,
  - 5. a Statement of Compliance Requirement to Prepare Pollution Incident Response Management Plan,

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- 6. a Statement of Compliance Requirement to Publish Pollution Monitoring Data; and
- 7. a Statement of Compliance Environmental Management Systems and Practices.

At the end of each reporting period, the EPA will provide to the licensee notification that the Annual Return is due.

- R1.2 An Annual Return must be prepared in respect of each reporting period, except as provided below.
- R1.3 Where this licence is transferred from the licensee to a new licensee:
  - a) the transferring licensee must prepare an Annual Return for the period commencing on the first day of the reporting period and ending on the date the application for the transfer of the licence to the new licensee is granted; and
  - b) the new licensee must prepare an Annual Return for the period commencing on the date the application for the transfer of the licence is granted and ending on the last day of the reporting period.
- R1.4 Where this licence is surrendered by the licensee or revoked by the EPA or Minister, the licensee must prepare an Annual Return in respect of the period commencing on the first day of the reporting period and ending on:
  - a) in relation to the surrender of a licence the date when notice in writing of approval of the surrender is given; or
  - b) in relation to the revocation of the licence the date from which notice revoking the licence operates.
- R1.5 The Annual Return for the reporting period must be supplied to the EPA via eConnect *EPA* or by registered post not later than 60 days after the end of each reporting period or in the case of a transferring licence not later than 60 days after the date the transfer was granted (the 'due date').
- R1.6 The licensee must retain a copy of the Annual Return supplied to the EPA for a period of at least 4 years after the Annual Return was due to be supplied to the EPA.
- R1.7 Within the Annual Return, the Statements of Compliance must be certified and the Monitoring and Complaints Summary must be signed by:
  - a) the licence holder; or
  - b) by a person approved in writing by the EPA to sign on behalf of the licence holder.
- Note: The term "reporting period" is defined in the dictionary at the end of this licence. Do not complete the Annual Return until after the end of the reporting period.
- Note: An application to transfer a licence must be made in the approved form for this purpose.

### R2 Notification of environmental harm

- R2.1 Notifications must be made by telephoning the Environment Line service on 131 555.
- R2.2 The licensee must provide written details of the notification to the EPA within 7 days of the date on which the incident occurred.
- Note: The licensee or its employees must notify all relevant authorities of incidents causing or threatening material harm to the environment immediately after the person becomes aware of the incident in accordance with the requirements of Part 5.7 of the Act.



Licence - 6229

## R3 Written report

- R3.1 Where an authorised officer of the EPA suspects on reasonable grounds that:
  - a) where this licence applies to premises, an event has occurred at the premises; or
  - b) where this licence applies to vehicles or mobile plant, an event has occurred in connection with the carrying out of the activities authorised by this licence,
  - and the event has caused, is causing or is likely to cause material harm to the environment (whether the harm occurs on or off premises to which the licence applies), the authorised officer may request a written report of the event.
- R3.2 The licensee must make all reasonable inquiries in relation to the event and supply the report to the EPA within such time as may be specified in the request.
- R3.3 The request may require a report which includes any or all of the following information:
  - a) the cause, time and duration of the event;
  - b) the type, volume and concentration of every pollutant discharged as a result of the event;
  - c) the name, address and business hours telephone number of employees or agents of the licensee, or a specified class of them, who witnessed the event;
  - d) the name, address and business hours telephone number of every other person (of whom the licensee is aware) who witnessed the event, unless the licensee has been unable to obtain that information after making reasonable effort;
  - e) action taken by the licensee in relation to the event, including any follow-up contact with any complainants;
  - f) details of any measure taken or proposed to be taken to prevent or mitigate against a recurrence of such an event; and
  - g) any other relevant matters.
- R3.4 The EPA may make a written request for further details in relation to any of the above matters if it is not satisfied with the report provided by the licensee. The licensee must provide such further details to the EPA within the time specified in the request.

#### R4 Other reporting conditions

R4.1 The licensee must retain records detailing irrigation of waste water from the dam at the premises for four years. These records shall be made available to EPA officers upon request.

#### **Annual Waste Summary Reporting**

- R4.2 The licensee must complete and submit to the EPA an Annual Waste Summary Report each financial year.
- R4.3 The Annual Waste Summary Report must be submitted to the EPA via the Waste and Resource Reporting Portal (WARRP) within 60 days of the end of the financial year.

## 7 General Conditions



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## G1 Copy of licence kept at the premises or plant

- G1.1 A copy of this licence must be kept at the premises to which the licence applies.
- G1.2 The licence must be produced to any authorised officer of the EPA who asks to see it.
- G1.3 The licence must be available for inspection by any employee or agent of the licensee working at the premises.

## 8 Special Conditions

#### E1 Odour Complaints/Feedback Management System

- E1.1 The licensee must maintain and operate an Odour Complaints/Feedback Management System. The licensee must adhere to the complaints/feedback management system which is to contain the procedures outlined below.
- E1.2 An advertised telephone number for complaints/feedback:
  - A 24-hour telephone number is to be set aside for complaints and/or feedback. The number must be made known to the public by
  - a) Inclusion in future telephone directory listings for Elf Farm Supplies
  - b) Direct advice to Hawkesbury City Council, the EPA and any persons who may contact the plant regarding odour by mail or using existing phone numbers
  - c) Inclusion on a sign at the property entrance
  - d) Issue to interested persons via business cards or other media as the case arises.
- E1.3 Complaints logging and investigation:

Details of any complaints received by the Licensee must be documented and kept at a location on the premises as follows:

- a) Every complaint is to be investigated at the time it is received and a record created of the response.
- b) If the complaint is received by staff at the time the odour is claimed to be present, the location where the odour is detected must be attended to confirm the report and note relevant details.
- c) If for any reason it is not possible to attend the location of the reported odour, and where contact details are available, the Licensee is to contact the complainant for more information regarding the complaint.
- d) Where investigation or further contact is not possible due to a delayed or anonymous complaint, no contact details for the complainant or difficulty in attending the reported location, a record must nonetheless be made of the complaint.
- e) A record is to be made of activities at the plant during the period leading up to the time of the reported incident.
- f) The wind strength and direction is to be obtained and recorded from the weather station for the period of one hour prior to the reported incident.
- g) The oxygen content (%) of compost in the pre-wet processing phase is to be obtained and recorded from one hour preceding the odour incident until the time the incident is reported to have ceased.



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- E1.4 An Odour Complaint Report is to be completed to summarise all actions taken to investigate the complaint including:
  - a) Time, date and location of the odour report;
  - b) Name and address of the complainant (if provided);
  - c) The name of the person conducting the investigation;
  - d) The activities in the plant in the one hour preceding the reported incident;
  - e) The average wind speed and direction during the one hour preceding the odour incident;
  - f) The oxygen content (%) of compost in the pre-wet processing phase from one hour preceding the odour incident until the time the incident is reported to have ceased;
  - g) Any other observations as to the possible source of the odour incident.
- E1.5 A summary of the information documented under Condition E1.4 (a)-(e) and (g) is to be given to the complainant, where possible, in a follow-up telephone call or letter.
- E1.6 a) The record of a complaint must be kept for at least 4 years after a complaint was made.
  - b) Records must be made available to an authorised officer of the EPA who asks to see them.



Licence - 6229

## Dictionary

#### **General Dictionary**

3DGM [in relation
to a concentration
limit1

Means the three day geometric mean, which is calculated by multiplying the results of the analysis of three samples collected on consecutive days and then taking the cubed root of that amount. Where one or more of the samples is zero or below the detection limit for the analysis, then 1 or the detection limit respectively should be used in place of those samples

Act Means the Protection of the Environment Operations Act 1997

activity Means a scheduled or non-scheduled activity within the meaning of the Protection of the Environment

Operations Act 1997

actual load Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009

AM Together with a number, means an ambient air monitoring method of that number prescribed by the

Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales.

AMG Australian Map Grid

anniversary date The anniversary date is the anniversary each year of the date of issue of the licence. In the case of a

licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the

commencement of the Act.

annual return Is defined in R1.1

Approved Methods Publication Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009

assessable pollutants

Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009

BOD Means biochemical oxygen demand

CEM Together with a number, means a continuous emission monitoring method of that number prescribed by

the Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales.

COD Means chemical oxygen demand

composite sample Unless otherwise specifically approved in writing by the EPA, a sample consisting of 24 individual samples

collected at hourly intervals and each having an equivalent volume.

cond. Means conductivity

**environment** Has the same meaning as in the Protection of the Environment Operations Act 1997

environment protection legislation

Has the same meaning as in the Protection of the Environment Administration Act 1991

**EPA** Means Environment Protection Authority of New South Wales.

fee-based activity classification

Means the numbered short descriptions in Schedule 1 of the Protection of the Environment Operations

assification (General) Regulation 2009.

general solid waste Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act

(non-putrescible) 199



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flow weighted composite sample	Means a sample whose composites are sized in proportion to the flow at each composites time of collection.
general solid waste (putrescible)	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environmen t Operations Act 1997
grab sample	Means a single sample taken at a point at a single time
hazardous waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
licensee	Means the licence holder described at the front of this licence
load calculation protocol	Has the same meaning as in the Protection of the Environment Operations (General) Regulation 2009
local authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
material harm	Has the same meaning as in section 147 Protection of the Environment Operations Act 1997
MBAS	Means methylene blue active substances
Minister	Means the Minister administering the Protection of the Environment Operations Act 1997
mobile plant	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
motor vehicle	Has the same meaning as in the Protection of the Environment Operations Act 1997
O&G	Means oil and grease
percentile [in relation to a concentration limit of a sample]	Means that percentage [eg.50%] of the number of samples taken that must meet the concentration limit specified in the licence for that pollutant over a specified period of time. In this licence, the specified period of time is the Reporting Period unless otherwise stated in this licence.
plant	Includes all plant within the meaning of the Protection of the Environment Operations Act 1997 as well as motor vehicles.
pollution of waters [or water pollution]	Has the same meaning as in the Protection of the Environment Operations Act 1997
premises	Means the premises described in condition A2.1
public authority	Has the same meaning as in the Protection of the Environment Operations Act 1997
regional office	Means the relevant EPA office referred to in the Contacting the EPA document accompanying this licence
reporting period	For the purposes of this licence, the reporting period means the period of 12 months after the issue of the licence, and each subsequent period of 12 months. In the case of a licence continued in force by the Protection of the Environment Operations Act 1997, the date of issue of the licence is the first anniversary of the date of issue or last renewal of the licence following the commencement of the Act.
restricted solid waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997
scheduled activity	Means an activity listed in Schedule 1 of the Protection of the Environment Operations Act 1997
special waste	Has the same meaning as in Part 3 of Schedule 1 of the Protection of the Environment Operations Act 1997

Together with a number, means a test method of that number prescribed by the Approved Methods for the

Sampling and Analysis of Air Pollutants in New South Wales.

 $\mathsf{TM}$ 



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TSP	Means total suspended particles
TSS	Means total suspended solids
Type 1 substance	Means the elements antimony, arsenic, cadmium, lead or mercury or any compound containing one or more of those elements
Type 2 substance	Means the elements beryllium, chromium, cobalt, manganese, nickel, selenium, tin or vanadium or any compound containing one or more of those elements
utilisation area	Means any area shown as a utilisation area on a map submitted with the application for this licence
waste	Has the same meaning as in the Protection of the Environment Operations Act 1997
waste type	Means liquid, restricted solid waste, general solid waste (putrescible), general solid waste (non - putrescible), special waste or hazardous waste

Ms Nadia Kanhoush

**Environment Protection Authority** 

(By Delegation)

Date of this edition: 01-August-2000



Licence - 6229

End	Notes
1	Licence varied by notice 1001783, issued on 19-Sep-2000, which came into effect on 14-Oct-2000.
2	Licence varied by notice 1010892, issued on 19-Oct-2001, which came into effect on 13-Nov-2001.
3	Licence varied by notice 1015799, issued on 20-Mar-2002, which came into effect on 14-Apr-2002.
4	Licence varied by notice 1018881, issued on 17-Jul-2002, which came into effect on 11-Aug-2002.
5	Licence varied by notice 1019967, issued on 29-Aug-2002, which came into effect on 23-Sep-2002.
6	Licence varied by notice 1021960, issued on 28-Nov-2002, which came into effect on 23-Dec-2002.
7	Licence varied by notice 1031591, issued on 13-Oct-2003, which came into effect on 13-Oct-2003.
8	Licence varied by notice 1032264, issued on 02-Dec-2003, which came into effect on 27-Dec-2003.
9	Licence varied by notice 1040144, issued on 08-Sep-2004, which came into effect on 03-Oct-2004.
10	Licence varied by notice 1064617, issued on 08-Sep-2006, which came into effect on 08-Sep-2006.
11	Licence varied by notice 1073027, issued on 28-May-2007, which came into effect on 28-May-2007.
12	Licence transferred through application 145582, approved on 06-Aug-2008, which came into effect on 01-Jul-2008.
13	Condition A1.3 Not applicable varied by notice issued on <issue date=""> which came into effect on <effective date=""></effective></issue>
14	Licence varied by notice 1096799, issued on 04-Feb-2009, which came into effect on 04-Feb-2009.
15	Licence varied by Correction to EPA Regional data record., issued on 23-Jun-2010, which came into effect on 23-Jun-2010.
16	Licence varied by correction to DECCW Region data record, issued on 07-Jul-2010, which came into effect on 07-Jul-2010.
17	Licence varied by notice 1507559 issued on 14-Sep-2012
18	Licence transferred through application 1515019 approved on 24-Jun-2013, which came into effect on 01-Jul-2013
40	License veried by notice 1515012 issued on 07 Aug 2012

19 Licence varied by notice 1515813 issued on 07-Aug-2013



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20	Licence varied by notice	1519001 issued on 15-May-2014
21	Licence varied by notice	1523940 issued on 24-Sep-2014
22	Licence transferred througeffect on 01-Oct-2014	gh application 1525415 approved on 07-Oct-2014 , which came into
23	Licence varied by notice	1535927 issued on 08-Mar-2016
24	Licence varied by notice	1543371 issued on 23-Sep-2016
25	Licence varied by notice	1570728 issued on 04-Oct-2018
26	Licence varied by notice	1604164 issued on 17-Dec-2020



# **APPENDIX D**

# DEPARTMENT OF PLANNING, INDUSTRY AND ENVIRONMENT – CORRESPONDENCE





Contact: Alfarid Hussain Phone: (02) 9274 6456

Email: compliance@planning.nsw.gov.au

Elf Farms Supplies Pty Ltd 108 Mulgrave Road MULGRAVE NSW 2756

26 October 2018

Attention: Mr Neil Cockerell - General Manager

Dear Mr Cockerell

## Elf Farm Supplies Mushroom Substrate Facility — PA 08\_0255 — 2018 Annual Report

I refer to the Annual Environmental Management Review (Report) prepared for the Elf Farm Supplies Mushroom Substrate Facility (Facility) for the reporting period September 2017-August 2018 and submitted to the Department on 28 September 2018 as required under Schedule 5, Condition 3 of project approval 08\_0255, as modified (Approval).

The Department has reviewed the report and considers that it generally satisfies the requirements of the approvals. Please note that this letter is not an endorsement of the compliance status of the project.

For future annual reviews, it is requested that Elf Farms Supplies Pty Ltd (Elf Farm) incorporate the following in all future annual reviews:

- A production and dispatch summary for the Substrate Plant consistent with Table 1 in Attachment 1:
- Brief summaries on the effectiveness of the management plans applicable to the substrate plant. Please include details of any improvement measures that Elf Farm proposes to undertake with respect to its management plans in the next reporting period;
- A title block at the beginning of the annual review that is consistent with Table 2 in Attachment 2;
- Contact details of key personnel who are responsible for the environmental management of the site in the Introduction section of the report;
- Maps and aerial photography in the main body of the annual review showing the operational disturbance footprint and offset areas;
- 6) Summaries table assessing the compliance status of all conditions of the approval as an attachment to the annual review and not in the main body of the report. The summaries table should be consistent with Attachment A- Compliance Table Example in Compliance Reporting Post Approval Requirements (CRPAR). The CRPAR is available on the Department's website at:
  - https://www.planning.nsw.gov.au/~/media/Files/DPE/Other/compliance-reporting-post-approval-requirements-2018-06.ashx;
- 7) A copy of this letter as an attachment to the main report.



Lastly, please consider the recently released CRPAR in all future annual reports.1

Should you wish to discuss the above, please contact Alfarid Hussain on 02 9274 6456 or via email on  $\underline{\text{compliance@planning.nsw.gov.au}}$ 

Yours sincerely,

CMA

Chris Mathieson

Team Leader— Compliance
As Nominee of the Secretary

<sup>&</sup>lt;sup>1</sup> An an existing project, Elf Farms may elect to voluntarily comply with the CRPAR but must comply with the existing conditions.



# **APPENDIX E**

# **IMAGES**





Figure 1 Bale noise wall and fire separation from building - March 2023



# **APPENDIX F**

# **MONITORING REPORTS**





# **ELF FARM SUPPLIES**

# **Annual Biofilter Testing**

# **Elf Farm Supplies Pty Ltd**

PO Box 615 Windsor NSW 2756

Prepared by:

## **SLR Consulting Australia**

Tenancy 202 Submarine School, Sub Base Platypus 120 High Street, North Sydney NSW 2060

SLR Project No.: 610.031285.00001

1 September 2023

Revision: TR01R01



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SLR Project No.: 610.031285.00001 SLR Ref No.: 610.031285.00001-TR01R01-

#### **Revision Record**

Revision	Date	Prepared By	Checked By	Authorised By
TR01R01	4 September 2023	Danny Echeverri	Graeme Starke	Allate
	Click to enter a date.			
	Click to enter a date.			
	Click to enter a date.			
	Click to enter a date.			

# **Basis of Report**

This report has been prepared by SLR Consulting Australia (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with Elf Farm Supplies Pty Ltd (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid. Results relate to only to the items tested, calibrated, or sampled.

This report is for the exclusive use of the Client and shall not be reproduced except in full. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.



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- Appendix B **Equipment and Calibration Details**
- **Appendix C Sampling Plane Records and Measurements**



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## 1.0 Introduction

SLR Consulting Australia (SLR) was commissioned by Elf Farm Supplies (EFS) to conduct annual odour emission testing on the Biofilter Control System serving the EFS substrate facility located at 108 Mulgrave Road, Mulgrave NSW.

The purpose of the annual odour emission testing was to measure the odour concentration, odour emission rate and odour removal efficiency of the EFS biofilter and compare these against measurements taken in 2018 (as part of a site wide odour audit completed by SLR) and those adopted by the Odour Impact Assessment prepared by The Odour Unit dated 28 August 2015 (the OIA).

This report outlines the methodology and results of the biofilter odour monitoring. This report is limited to factual presentation of the monitoring data with minimal interpretation of results. This test report only includes the results from the locations nominated in **Section 1.1**.

## 1.1 Biofilter Testing Methodology

SLR conducted representative Biofilter odour testing in general accordance with:

- AS/NZS 4323.4:2009 Stationary source emissions Area source sampling Flux chamber technique; and
- Australian Standards and New Zealand Standards (AS/NZS) 4323.3:2001 Stationary source emissions – Determination of odour concentration by dynamic olfactometry; and
- AS4321.1:2021 and NSW EPA method TM-2 (USEPA method M2 "Determination of Stack Gas Velocity and Volumetric Flow Rate (Type S Pitot Tube)".

#### 1.1.1 Biofilter Outlet Odour and Flow Testing

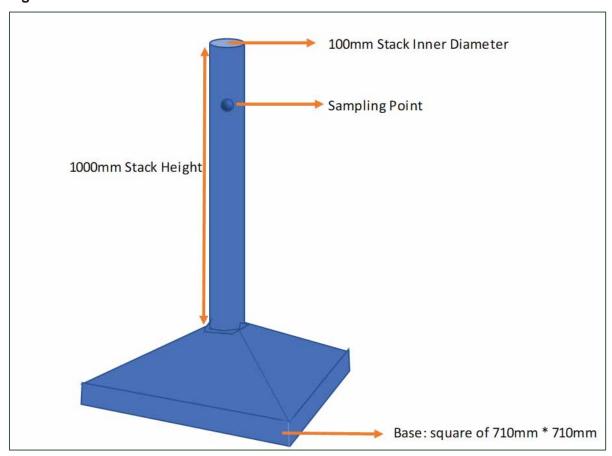
The AS/NZS 4323.4 Flux chamber technique is typically used for non-aerated surfaces such as landfill sites, ponds etc. An equilibrium hood is placed on the surface and nitrogen supply sweep air is used to stimulate the odorous surface within the equilibrium hood and therefore allowing a sample to be collected. However, a Biofilter system is aerated by a pressurised ventilation system. Therefore, SLR adopted the use of a Witches Hat hood (WHH) to conduct representative measurements that do not require nitrogen sweep air to collect a representative sample. Refer to **Figure 1** for an illustration of the Witches Hat hoods being used on the EFS Biofilter bed. Refer to **Figure 2** for a schematic of the Witches Hat hood used. Air flow measurements were undertaken using an anemometer to directly read average air flow rate and velocity from the outlet of the witches hat hoods, and to calculate the flow from each nominated location using the stack inner diameter.



Figure 1 Illustration of Witches Hat Hoods being used on EFS Biofilter Beds



Figure 2 Illustration of Witches Hat Hood Dimensions





In order to ensure consistency with the testing across the whole Biofilter bed and to minimise the variability that is typically associated with biofilters, SLR divided the EFS biofilter system into two (2) beds. SLR has identified these as the Eastern bed and the Western bed. SLR then further divided these two beds into evenly distributed rows (length and width).

The Eastern bed has a surface area of approximately 1,500 square meters (m<sup>2</sup>). SLR divided this bed into six (6) equal rows along its length and three (3) equal rows along its width (approximately 10 m by 9 m grid cells). This resulted in a total of 18 sample points evenly distributed across the Eastern biofilter bed.

The Western Bed has a surface area of approximately 1,278 m<sup>2</sup>. SLR divided this bed into five (5) equal rows along its length and three equal rows along its width (approximate 9 m by 9 m grid cells). This resulted in a total of 15 sample points evenly distributed across the Western biofilter bed.

EFS confirmed the total surface area of the Biofilter bed is 2,778 m<sup>2</sup>.

It is noted that at the time of the sampling, part of the eastern and western beds were inactive as the bedding material was being replaced. The active area of the beds was measured as follows:

- Eastern bed: approximately 22 m by 43 m
- Western bed: approximately 20 m by 43 m

The number of sample points for each bed was kept consistent with sampling conducted as part of a site wide odour audit completed by SLR in 2018. The smaller active surface area resulted in a tighter grid (approximately 7 m by 7 for the Eastern bed and 7.5 m by 7.5 for the Western bed).

Refer to **Figure 3** for an illustration of the Biofilter beds (as sampled) distributed into their grids.

Figure 3 Illustration of the Biofilter Distributed into 33 Grids

		(≈43m)						North (≈43m)				≈43m)	
		Biofil	ter We	stern E	n Bed Biofilter Eastern Bed								
West (≈20m)	Width Row A	11A	10A	9A	8A	7A	6A	5A	4A	3A	2A	1A	
	Width Row B	11B	10B	9B	8B	7B	6B	5B	4B	3B	2B	1B	East (≈22m)
	Width Row C	11C	10C	9C	8C	7C	6C	5C	4C	3C	2C	1C	
		(*	≈43m)			Sout	th (≈43m)						

Note: the image above does not represent actual layout.

Note 2: odour samples were collected from cells highlighted green



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Each grid cell was measured, as a minimum, for temperature and surface velocity at approximately the centre of each grid cell. The data was then assessed to determine if surface velocities measured for each north to south row were consistent or if there was evidence of breakthrough (high velocity) or blockage (low velocity). Should the scenario exist that a north to south row demonstrated inconsistency, SLR collected from that north to south row a single odour sample from the grid with the highest surface velocity measured and a single odour sample from the grid with the lowest surface velocity measured. SLR considered inconsistency to exist when there was a difference of greater than 20% from the average velocity measured. For all north to south rows with consistent surface velocities, SLR collected single samples from the middle grids (Row B).

A total of 20 samples were collected from the biofilter outlet. The locations where samples were collected are indicated in **Figure 4**.

Duplicate or triplicate samples, to quantify odour emission variability, at each nominated grid point were deemed not required as each odour sample is based on the same source gas distributed consistently across the biofilter based on the velocities measured. Hence repeatability of the odour samples has already been considered in the 20 samples measured across the biofilter.

The samples were analysed by a NATA accredited odour laboratory, The Odour Unit (TOU) within the specified 30 hours from sample collection. All samples were delivered to TOU as blind samples.

#### 1.1.2 Biofilter Inlet Odour Testing

The 'lung method' was used to collect representative samples from the Biofilter Inlet. SLR collected the gas samples from the Biofilter Inlet in accordance with AS/NZS 4323.3:2001 Stationary source emissions — Determination of odour concentration by dynamic olfactometry. The samples were analysed by a NATA accredited odour laboratory (TOU) within the 30 hours specification. One (1) sample was collected for the inlet into the Eastern bed and one (1) sample was collected for the inlet into the Western bed.

A sample access point compliant with the requirements of AS/NZS 4323.1:2021 Stationary source emissions - Method 1: Selection of sampling positions is available for the western biofilter (see **Figure 4**). However, due to the design of the eastern bed, such an access point could not be installed on the inlet to this biofilter and a large number of sample access points would need to be installed along the aluminium ducting to each section of the eastern bed to obtain total flow.

For the western biofilter, air flow measurements were undertaken and reported in accordance with AS4321.1:2021 and NSW EPA method TM-2 (USEPA method M2 "Determination of Stack Gas Velocity and Volumetric Flow Rate (Type S Pitot Tube)". The velocity profile was obtained across the ventilation duct from the western inlet utilising an S-Type pitot tube. Wet bulb and dry bulb temperature measurements were collected and used for the estimation of moisture content.

For the eastern biofilter, the odour sample for the eastern biofilter inlet was collected from a sample point installed approximately midway down the biofilter (see **Figure 5**). SLR assumed that the total air flow at the eastern biofilter inlet was equal to the total air flow at the eastern biofilter. This is deemed appropriate given the similarity between the western biofilter inlet and outlet flows measured (refer **Table 9**).

SLR is NATA accredited for the measurement of flow in accordance with AS4323.1:2021 and NSW EPA TM-2.



Figure 4 Illustration of Western Biofilter Inlet Sample Ports



Figure 5 Illustration of Eastern Biofilter Inlet Sample Port



# 2.0 Measurement of Uncertainty

**Table 1** Provides the estimated measurement accuracy associated with the monitoring methods.



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**Table 1** Measurement Uncertainty

Parameter	Test Method	Uncertainty		
Velocity	NSW EPA TM-2, AS 4323.1, USEPA Method 2	±5 %		
	Anemometer measurements: AS/NZS 4323.4:2009 Stationary source emissions - Area source sampling - Flux chamber technique	±1.0% of reading ±4 ft/min (±0.02 m/s)		
Temperature	NSW EPA TM-2, USEPA Method 2	±2°C		
Moisture	Dry/wet bulb temperature	±25%		
Odour	AS/NZS 4323.3:2001 Stationary source emissions – Determination of odour concentration by dynamic olfactometry	± 50 - 124% (based upon a single determination)		
	AS/NZS 4323.4:2009 Stationary source emissions - Area source sampling - Flux chamber technique			

## 3.0 Assessment Criteria

No assessment criteria were applicable to the measurements.

## 4.0 Deviations From the Method

There were no deviations to the specified test reference methodologies.

## 5.0 Reference Conditions

Method 2 measurements are reported as actual and normalised (dry and referenced to 0°C and 101.3 kpa).

# 6.0 Sample Plane Requirements (West Inlet)

**Ideal sampling positions:** In the absence of cyclonic flow activity ideal sampling plane conditions will be found to exit at 7-8 diameters downstream and 2-3 diameters upstream from a flow disturbance. However, in most cases, a suitable sampling plane will be in a position fitting the minimum criteria specified in Table 1 of AS/NZS 4323.1.

**Non-Ideal sampling position:** If the measurement near a bend is unavoidable, the sampling position shall be greater than one duct diameter upstream of the bend or greater than two duct diameters downstream of the bend. When the criteria in Table 1 of AS/NZS 4323.1 cannot be met, a greater number of sampling points shall be used in order to retain as much accuracy as is practicable.

## 7.0 Operating Conditions

The Elf Farm was considered to be operating under normal conditions.



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## 8.0 Biofilter Results

#### 8.1 Biofilter Outlet Results

The Biofilter Outlet was tested under normal operating conditions on Wednesday 5 July 2023 and Thursday 6 July 2023. These days were nominated for testing as Wednesday and Thursday are considered the worst case scenario in terms of odours being generated from the typical composting activities occurring on site. All samples were collected using the Witches Hat Hood method.

Refer to **Table 2** and **Table 3** for a tabulated summary detailing sampling times, temperature and air velocities measured within the Witches Hat Hoods.

As mentioned in **Section 1.1**, SLR reviewed all air velocities measured across the biofilter beds to check for consistency along each north to south row (rows 1 to 11) to determine if additional odour samples were required due to variability in the flow through these rows. Flow variations across a row greater than 20% from the average row velocities measured were observed at four north to south rows. Additional odour samples were collected from these identified rows in line with the methodology outlined in **Section 1.1** to ensure a representative data set is collected.

Refer to **Table 4** to **Table 7** for detailed results of the odour concentrations measured for the Eastern and Western biofilter beds. Refer to **Appendix A** for Certificates of Analysis.

In summary, the maximum odour concentration measured was 664 odour units (ou) and the average odour concentration measured was 171 ou.

**Table 8** provides detailed results of the Mass Odour Emission Rates (MOER) per biofilter grid cell measured. The measured MOER for the entire biofilter is 7,360 ou.m³/s. It is noted that MOERs presented in **Table 8** for each grid point have been calculated based on a 95 m² area for the Eastern bed samples and 86 m² for the Western bed samples rather than the actual areas, to allow for grids not sampled. As such, the sum of all MOERs is representative of the whole biofilter rather than the grid cells sampled.



Table 2 Summary of Biofilter Measured Results – Temperature and Air Velocities – 5 July 2023

#### North

	Biofilter Western Bed					Biofilter Eastern Bed								
Grid Identification			11A	10A	9A	8A	7A	6A	5A	4A	3A	2A	1A	
Time of Measurement		Row A	10:34	10:25	10:23	10:12	10:10	9:20	9:02	8:58	8:44	8:39	9:50	
Air Velocity (m/s)		× >	1.2	0.3	0.8	1.0	1.0	0.8	1.0	0.5	0.9	0.8	0.9	
Temp in WHH (°C, dry)			32.3	27.6	28.5	30.8	30.9	26.7	28.5	18.3	26.5	24.4	24.5	
Grid Identification			11B	10B	9B	8B	7B	6B	5B	4B	3B	2B	1B	
Time of Measurement	West	×	Row B	10:32	10:26	10:22	10:13	10:09	9:16	9:06	8:53	8:47	8:35	8:21
Air Velocity (m/s)		× □	1.6	1.0	0.9	1.0	1.4	1.0	0.9	1.1	0.8	0.8	1.1	
Temp in WHH (°C, dry)			33.5	31.6	30.8	30.4	32.8	26.3	24.4	32.2	25.3	25.3	26.3	
Grid Identification			11C	10C	9C	8C	7C	6C	5C	4C	3C	2C	1C	
Time of Measurement		Row C	10:30	10:28	10:19	10:16	10:08	9:12	9:08	8:52	8:49	8:31	8:27	
Air Velocity (m/s)		о О	2.2	2.1	3.0	1.5	1.9	1.3	1.6	1.3	1.1	1.6	1.2	
Temp in WHH (°C, dry)			33.9	33.6	32	30.7	33.2	27.6	28.0	31.8	26.0	27.9	27.8	
								South						
Avg. Air Velocity (m/s)			1.7	1.2	1.6	1.2	1.4	1.0	1.1	1.0	0.9	1.1	1.1	

Avg. Air Velocity across Biofilter (m/s) 1.2



Table 3 Summary of Biofilter Measured Results – Temperature and Air Velocities – 6 July 2023

North

			Biofilte	Biofilter Western Bed				Biofilter Eastern Bed					
Grid Identification			11A	10A	9A	8A	7A	6A	5A	4A	3A	2A	1A
Time of Measurement		Row	1:03	12:29	11:57	11:18	10:42	9:40	9:22	9:12	8:57	8:53	8:34
Air Velocity (m/s)		× >	1.2	0.5	0.9	1.1	0.7	1.2	1.1	0.6	1.0	0.9	1.0
Temp in WHH (°C, dry)			32.2	33.6	29.6	36.3	33.5	28.9	24.5	18.9	23.0	20.8	23.3
Grid Identification			11B	10B	9B	8B	7B	6B	5B	4B	3B	2B	1B
Time of Measurement	West	Row	1:01	12:27	12:00	11:25	10:38	9:43	9:31	9:09	9:00	8:49	8:39
Air Velocity (m/s)	est	× □	1.5	0.9	0.9	1.0	1.6	1.1	1.1	1.4	0.9	1.0	1.2
Temp in WHH (°C, dry)			33.2	33.9	30.8	34.5	35.3	27.5	23.1	29.6	21.4	22.5	22.0
Grid Identification			11C	10C	9C	8C	7C	6C	5C	4C	3C	2C	1C
Time of Measurement		Row	12:59	12:23	11:55	11:16	10:35	9:46	9:37	9:07	9:04	8:45	8:42
Air Velocity (m/s)		× 0	1.8	1.4	2.0	1.9	2.0	1.0	1.6	1.5	1.2	1.2	1.3
Temp in WHH (°C, dry)			34.5	33.5	33.5	34.0	33.1	25.3	27.8	29.8	23.0	23.5	24.2
	South												

1.4

1.4

1.1

1.3

1.2

1.1

1.0

1.2

Avg. Air Velocity across Biofilter (m/s) 1.21

1.5

0.9

1.3

Avg. Air Velocity (m/s)

Summary of Biofilter Outlet Results – Eastern Bed – 5 July 2023 Table 4

Parameter	Sample 1B	Sample 2A	Sample 2C	Sample 3B	Sample 4A	Sample 4C
SLR Sample No.	13535	13536	13537	13538	13539	13540
Sample Start Time	05-07-2023 10:11	05-07-2023 10:32	05-07-2023 10:56	05-07-2023 11:00	05-07-2023 11:25	05-07-2023 11:25
Sample Finish Time:	05-07-2023 10:21	05-07-2023 10:42	05-07-2023 11:06	05-07-2023 11:10	05-07-2023 11:35	05-07-2023 11:35
NATA Laboratory I.D No.	SC23369	SC23370	SC23371	SC23372	SC23373	SC23374
Analysis Date & Time Completed	06-07-2023 10:07	06-07-2023 10:37	06-07-2023 11:04	06-07-2023 11:30	06-07-2023 11:58	06-07-2023 13:13
Sample Analysis Period in Compliance (≤30-hrs)	23.8	23.9	24.0	24.3	24.4	25.6
(D <sub>s WHH</sub> ) Sample Point WHH Stack Internal Diameter (mm)	100	100	100	100	100	100
(A <sub>s WHH</sub> ) Sample Plane Cross Sectional Area (m²)	0.0079	0.0079	0.0079	0.0079	0.0079	0.0079
(T <sub>s whh</sub> ) Average Stack (Surface) Temperature (°C)	30.8	22.8	29.7	30.7	23.0	35.3
(Ps wнн) Average Stack / Surface Pressure (kPa)	101.2	101.1	101.1	101.1	101.0	101.0
(v <sub>s (WHH)</sub> ) Average Grid Stack Air Velocity (m/s)	1.30	0.76	1.42	1.20	0.41	1.81
(Q <sub>a whh</sub> ) Actual Grid Flow Rate (m³/s)	0.0102	0.0060	0.0112	0.0094	0.0032	0.0142
(D <sub>B WHH</sub> ) WHH Base Internal Diameter (mm)	801	801	801	801	801	801
(Ав wнн) WHH Base Cross Sectional Area (m²)	0.504	0.504	0.504	0.504	0.504	0.504
(Q <sub>flux</sub> ) Actual Grid Surface Flux Velocity (m/s)	0.020	0.012	0.022	0.019	0.006	0.028
Odour Concentration (wet) (ou)	235	118	140	84	59	215
EPL Odour Concentration Limit (ou)	500	500	500	500	500	500
Odour Character	dirt, soil, sewage	musty, dirty	dirt, soil, sewage	dirt, soil	dirt, soil	dirt, soil



Table 5 Summary of Biofilter Outlet Results – Eastern Bed – 5 July 2023 – Continued

Parameter	Sample 5B	Sample 5C	Sample 6A	Sample 6C
SLR Sample No.	13541	13542	13543	13544
Sample Start Time	05-07-2023 11:51	05-07-2023 12:15	05-07-2023 12:18	05-07-2023 12:38
Sample Finish Time:	05-07-2023 11:54	05-07-2023 12:25	05-07-2023 12:28	05-07-2023 12:48
NATA Laboratory I.D No.	SC23375	SC23376	SC23377	SC23378
Analysis Date & Time Completed	06-07-2023 13:42	06-07-2023 14:09	06-07-2023 14:36	06-07-2023 15:05
Sample Analysis Period in Compliance (≤30-hrs)	25.8	25.7	26.1	26.3
(D <sub>s WHH</sub> ) Sample Point WHH Stack Internal Diameter (mm)	100	100	100	100
(A <sub>s wнн</sub> ) Sample Plane Cross Sectional Area (m²)	0.0079	0.0079	0.0079	0.0079
(T <sub>s wнн</sub> ) Average Stack (Surface) Temperature (°C)	33.8	36.7	29.4	32.3
(Ps whh) Average Stack / Surface Pressure (kPa)	101.0	101.0	101.0	100.9
(v <sub>s (WHH)</sub> ) Average Grid Stack Air Velocity (m/s)	1.14	1.52	1.20	1.17
(Q <sub>а wнн</sub> ) Actual Grid Flow Rate (m³/s)	0.0090	0.0119	0.0094	0.0092
(D <sub>в wнн</sub> ) WHH Base Internal Diameter (mm)	801	801	801	801
(A <sub>в wнн</sub> ) WHH Base Cross Sectional Area (m²)	0.504	0.504	0.504	0.504
(Q <sub>flux</sub> ) Actual Grid Surface Flux Velocity (m/s)	0.018	0.024	0.019	0.018
Odour Concentration (wet) (ou)	64	64	83	76
EPL Odour Concentration Limit (ou)	500	500	500	500
Odour Character	dirt, soil	dirt, soil	dirt, soil	dirt, soil



Summary of Biofilter Outlet Results – Western Bed – 6 July 2023 Table 6

Parameter	Sample 7A	Sample 7C	Sample 8B	Sample 8C	Sample 9A	Sample 9C
SLR Sample No.	13555	13556	13557	13558	13548	13547
Sample Start Time	06-07-2023 10:54	06-07-2023 10:50	06-07-2023 11:38	06-07-2023 11:34	06-07-2023 12:09	06-07-2023 12:07
Sample Finish Time:	06-07-2023 11:04	06-07-2023 11:00	06-07-2023 11:48	06-07-2023 11:44	06-07-2023 12:19	06-07-2023 12:17
NATA Laboratory I.D No.	SC23380	SC23381	SC23382	SC23383	SC23384	SC23385
Analysis Date & Time Completed	07-07-2023 10:37	07-07-2023 10:02	07-07-2023 11:33	07-07-2023 11:02	07-07-2023 12:58	07-07-2023 11:56
Sample Analysis Period in Compliance (≤30-hrs)	23.6	23.0	23.7	23.3	24.7	23.6
(D <sub>s WHH</sub> ) Sample Point WHH Stack Internal Diameter (mm)	100	100	100	100	100	100
(As wнн) Sample Plane Cross Sectional Area (m²)	0.0079	0.0079	0.0079	0.0079	0.0079	0.0079
(T <sub>s wнн</sub> ) Average Stack (Surface) Temperature (°C)	35.2	33.6	34.0	35.8	31.0	33.8
(Ps whh) Average Stack / Surface Pressure (kPa)	101.2	101.2	101.0	101.0	101.0	101.0
(v <sub>s (WHH)</sub> ) Average Grid Stack Air Velocity (m/s)	1.15	1.97	1.16	1.82	0.93	1.92
(Q <sub>а wнн</sub> ) Actual Grid Flow Rate (m³/s)	0.0090	0.0155	0.0091	0.0143	0.0073	0.0151
(D <sub>B WHH</sub> ) WHH Base Internal Diameter (mm)	801	801	801	801	801	801
(A <sub>B WHH</sub> ) WHH Base Cross Sectional Area (m²)	0.504	0.504	0.504	0.504	0.504	0.504
(Q <sub>flux</sub> ) Actual Grid Surface Flux Velocity (m/s)	0.018	0.031	0.018	0.028	0.014	0.030
Odour Concentration (wet) (ou)	215	664	197	235	91	304
EPL Odour Concentration Limit (ou)	500	500	500	500	500	500
Odour Character	dirt, soil, sewage	dirt, soil, sewage	dirt, soil, sewage	sewage	sewage, musty	dirt, soil, sewage



Table 7 Summary of Biofilter Outlet Results – Western Bed – 6 July 2023 – Continued

Parameter	Sample 10A	Sample 10C	Sample 11A	Sample 11C
SLR Sample No.	13549	13550	13551	13552
Sample Start Time	06-07-2023 12:39	06-07-2023 12:37	06-07-2023 13:05	06-07-2023 13:06
Sample Finish Time:	06-07-2023 12:49	06-07-2023 12:47	06-07-2023 13:18	06-07-2023 13:16
NATA Laboratory I.D No.	SC23386	SC23387	SC23388	SC23389
Analysis Date & Time Completed	07-07-2023 13:32	07-07-2023 13:57	07-07-2023 14:18	07-07-2023 14:46
Sample Analysis Period in Compliance (≤30-hrs)	24.7	25.2	25.0	25.5
(D <sub>s wнн</sub> ) Sample Point WHH Stack Internal Diameter (mm)	100	100	100	100
(As wнн) Sample Plane Cross Sectional Area (m²)	0.0079	0.0079	0.0079	0.0079
(T <sub>s wнн</sub> ) Average Stack (Surface) Temperature (°C)	26.1	32.9	30.8	34.8
(Ps wнн) Average Stack / Surface Pressure (kPa)	100.9	100.9	100.9	100.9
(V <sub>s (WHH)</sub> ) Average Grid Stack Air Velocity (m/s)	0.53	1.97	1.32	1.93
(Q <sub>а wнн</sub> ) Actual Grid Flow Rate (m³/s)	0.0042	0.0155	0.0104	0.0152
(D <sub>в wнн</sub> ) WHH Base Internal Diameter (mm)	801	801	801	801
(Ав wнн) WHH Base Cross Sectional Area (m²)	0.504	0.504	0.504	0.504
(Q <sub>flux</sub> ) Actual Grid Surface Flux Velocity (m/s)	0.008	0.031	0.021	0.030
Odour Concentration (wet) (ou)	45	99	99	332
EPL Odour Concentration Limit (ou)	500	500	500	500
Odour Character	Watery, musty	dirt, soil, watery, musty	dirt, soil	dirt, soil, sewage



Table 8 Summary of Biofilter Mass Odour Emission Rates - 5 July and 6 July 2023

Location	(Q <sub>flux</sub> ) Actual Grid Surface Flux Velocity (m/s)	Odour Concentration (wet) (ou)	(SOER) Surface Odour Emission Rate (wet) (ou.m/s)	Biofilter Grid Cross Sectional Area (m²)	Flow through Biofilter during Sampling (m³/hr)	(MOER) Mass Odour Emission Rate per Section (wet) (ou.m³/s)	OIA <sup>1</sup> MOER Modelled Operations (ou.m <sup>3</sup> /s)
Sample 1B	0.020	235	4.8	49.0	3574	452	NA
Sample 2A	0.012	118	1.4	49.0	2090	133	NA
Sample 2C	0.022	140	3.1	49.0	3904	294	NA
Sample 3B	0.019	84	1.6	49.0	3299	149	NA
Sample 4A	0.006	59	0.4	49.0	1127	36	NA
Sample 4C	0.028	215	6.1	49.0	4976	576	NA
Sample 5B	0.018	64	1.1	49.0	3134	108	NA
Sample 5C	0.024	64	1.5	49.0	4179	144	NA
Sample 6A	0.019	83	1.6	49.0	3299	147	NA
Sample 6C	0.018	76	1.4	49.0	3217	132	NA
Sample 7A	0.018	215.0	3.9	56.3	3630	331	NA
Sample 7C	0.031	664.0	20.4	56.3	6218	1,753	NA
Sample 8B	0.018	197.0	3.6	56.3	3661	306	NA
Sample 8C	0.028	235.0	6.7	56.3	5744	573	NA
Sample 9A	0.014	91.0	1.3	56.3	2935	113	NA
Sample 9C	0.030	304.0	9.1	56.3	6060	782	NA
Sample 10A	0.008	45.0	0.4	56.3	1673	32	NA
Sample 10C	0.031	99.0	3.0	56.3	6218	261	NA
Sample 11A	0.021	99.0	2.0	56.3	4166	175	NA
Sample 11C	0.030	332.0	10.0	56.3	6091	859	NA
Total (scaled)				1,726	128,634	7,360	54,168



<sup>&</sup>lt;sup>1</sup> Odour Impact Assessment prepared by The Odour Unit dated 28 August 2015

#### **Biofilter Inlet Results** 8.2

The biofilter inlets were measured on Wednesday 5 July 2023 and Thursday 6 July 2023 in parallel with the biofilter outlet testing. Refer to Table 9 for a detailed summary of the biofilter inlet measured results. Refer to **Appendix A** for Certificates of Analysis.

Table 9 Summary of Biofilter Inlet Results – 5 and 6 July 2023

Parameter	Inlet -East	Inlet -West
SLR Sample No.	13545	13553
Sample Start Time	05-07-2023 12:39	06-07-2023 14:30
Sample Finish Time:	05-07-2023 12:49	06-07-2023 14:40
NATA Laboratory I.D No.	SC23379	SC23390
Analysis Date & Time Completed	06-07-2023 15:43	07-07-2023 15:21
Sample Analysis Period in Compliance (≤30-hrs)	26.9	24.7
(A <sub>s</sub> ) Sample Plane Cross Sectional Area (m <sup>2</sup> )		4.5
(T <sub>s</sub> ) Average Stack Temperature (°C)	36.9	37.1
(Ps) Average Stack Pressure (kPa)		101.11
(Q <sub>a</sub> ) Actual Flow Rate (m <sup>3</sup> /hr)		69,588
Flow through Biofilter Outlet during Sampling (m³/hr)	63,592 <sup>1</sup>	70,934
Odour Concentration (wet) (ou)	6,320	16,400
Mass Odour Emission Rate (MOER) (ou.m³/s)	111,639	317,012
Odour Character	rubber, sewage	rubber, sewage

<sup>1</sup> denotes that SLR have assumed that Biofilter Inlet total air flow is equal to Biofilter Outlet due to no suitable access points being available to conduct air velocity measurements for the Eastern Biofilter Inlet.

#### 8.3 **Biofilter Efficiency Results**

The efficiency of the Western biofilter bed (for which a suitable sampling port for the measurement of air velocity is available) were assessed through the comparison of Inlet vs Outlet MOERs as follows:

{Inlet MOER (317,012 ou.m<sup>3</sup>/s) - Outlet MOER (5,188 ou.m<sup>3</sup>/s)} ÷ Inlet MOER  $(317,012 \text{ ou.m}^3/\text{s})$ 

#### Result ≥ 95% efficiency

For the Eastern biofilter, in the absence of a suitable sample point compliant with the requirements of AS 4323.1 for the measurement representative air flow through the inlet duct, efficiency calculations were assessed using the odour concentrations measured and assuming the flows through the biofilter inlet and outlet are similar.

The efficiency of the Eastern Biofilter has been calculated as follows

• { Inlet Conc. (6,320 ou) - Average Outlet Conc. (114 ou)} ÷ Inlet Conc. (6,320 ou) Result ≥ 95% efficiency.



#### Alternatively:

{Inlet MOER (111,639 ou.m³/s) – Outlet MOER (2,172 ou.m³/s)} ÷ Inlet MOER (111,639 ou.m³/s)

Result ≥ 98% efficiency.

# 9.0 Summary and Comparison against OIA and Previous Measurements

**Table 10** presents a comparison of odour concentrations and emission rates collected as part of this study and compares these against those assumed by the OIA and collected in 2018, 2020, 2021 and 2022. In summary:

- The measured biofilter outlet odour emissions are 86% lower than those assumed by the OIA.
- Peak biofilter outlet odour emissions (based on measured concentrations and maximum flow through the biofilter) are estimated to be 55% lower than those assumed by the OIA.
- The average biofilter outlet odour concentration measured is 171 ou which is 66% lower than the odour concentration assumed by the OIA.
- The average biofilter odour removal efficiency is greater than 95%.

Table 10 Summary of Biofilter results and Comparison against OIA and Previous Measurements

Year	Average Flow through Biofilter during Sampling (m³/hr)	Average Odour Concentration (wet) (ou)	Total Biofilter MOER (wet) (ou.m³/s)	Average Biofilter Efficiency	Maximum Flow through Biofilter (m³/hr)	Maximum Estimated Biofilter MOER (wet) (ou.m³/s)	Change Compared to OIA (%)
OIA		500			390,000	54,168	
2018	204,610	165	9,482	> 95%	390,000	18,073	-67%
2020	189,717	150	8,767	> 95%	402,000	18,576	-66%
2021	193,070	82	4,578	> 95%	402,000	9,533	-82%
2022	233,506	183	11,752	> 95%	402,000	20,231	-63%
2023	122,178	171	7,360	> 95%	402,000	24,215	-55%



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## 10.0 Feedback

At SLR, we are committed to delivering professional quality service to our clients. We are constantly looking for ways to improve the quality of our deliverables and our service to our clients. Client feedback is a valuable tool in helping us prioritise services and resources according to our client needs.

To achieve this, your feedback on the team's performance, deliverables and service are valuable and SLR welcome all feedback via <a href="https://www.slrconsulting.com/en/feedback">https://www.slrconsulting.com/en/feedback</a>. We recognise the value of your time and we will make a \$10 donation to our 2023 Charity Partner - Lifeline, for every completed form.





# Appendix A Certificate of Analysis

## **ELF FARM SUPPLIES**

**Annual Biofilter Testing** 

**Elf Farm Supplies Pty Ltd** 

SLR Project No.: 610.031285.00001

1 September 2023





The Odour Unit Pty Ltd Level 3, 12/56 Church Avenue MASCOT NSW 2020

P: +61 2 9209 4420 E: info@odourunit.com.au

ABN: 53 091 165 061

□ Brisbane Laboratory

The Odour Unit (QLD) Pty Ltd 2/57 Neumann Road CAPALABA QLD 4165

P: +61 7 3245 1700

E: qldinfo@odourunit.com.au

ABN: 87 102 255 765

# **Odour Concentration Measurement Report**

Sampling and Laboratory Information

Organisation SLR Consulting Telephone +61 2 9427 8100
Contact D. Echeverri Email decheverri@slrco

Contact Sampling Site Not disclosed Sampling Method Sampling M

**Order and Project Information** 

D. Echeverri Order requested by Order accepted by A. Schulz TOU Project # Date of order 04/07/2023 N1869 Project Manager Order number 33344 A. Schulz Panel Operator D. Echeverri A. Schulz Signed by

Investigated Item Odour concentration in odour units 'ou', determined by sensory odour concentration measurements, of an

odour sample supplied in a sampling bag.

Identification The odour sample bags were labelled individually. Each label recorded the testing laboratory, sample

number, sampling location (or Identification), sampling date and time, dilution ratio (if dilution was used) and

whether further chemical analysis was required.

Method The odour concentration measurements were performed using dynamic olfactometry according to the

Australian/New Zealand Standard: Stationary source emissions – *Part 3: 'Determination of odour concentration by dynamic olfactometry* (AS/NZS 4323.3). The odour perception characteristics of the panel within the presentation series for the samples were analogous to that for butanol calibration. Any deviation

from the Australian standard is recorded in the 'Comments' section of this report.

Measuring Range The measuring range of the olfactometer is  $2^2 \le \chi \le 2^{18}$  ou. If the measuring range was insufficient the odour

samples will have been pre-diluted. The machine is not calibrated beyond dilution setting 2<sup>17</sup>. This is

specifically mentioned with the results.

Environment The measurements were performed in an air- and odour-conditioned room. The room temperature is

maintained at 22 °C ±3 °C.

Measuring Dates The date of each measurement is specified with the results.

TOU-OLF-004

Laboratory Precision The precision of this laboratory (expressed as repeatability) for sensory quality must be  $r \le 0.477$  in

accordance with the AS/NZS 4323.3. r = 0.461 Compliance – Yes

Laboratory Accuracy The accuracy of this laboratory for sensory quality must be  $A \le 0.217$  in accordance with the AS/NZS 4323.3.

A = 0.216 Compliance – Yes

Lower Detection Limit (LDL) The LDL for the olfactometer has been determined to be 16 ou, which is 4 times the lowest dilution setting.

Traceability The results of the tests, calibrations and/or measurements included in this document are traceable to

Australian/national standards. The assessors are individually selected to comply with fixed criteria and are monitored in time to keep within the limits of the standard. The results from the assessors are traceable to

primary standards of n-butanol in nitrogen. Note Disclaimers on last page of this document.

Accredited for compliance with ISO/IEC 17025 - Testing.
This report shall not be reproduced, except in full.

Date: Tuesday, 18 July 2023 Panel Roster Number: SYD20230706\_049

A. Schulz Authorised Signatory





Odour Sample Measurement Results
Panel Roster Number: SYD20230706\_049

Sample ID / Location	Laboratory ID	Sampling Date & Time	Analysis Date & Time	Panel Size	Valid ITEs	Final Odour Concentration (ou)
1B – ID 13535	SC23369	05.07.2023 1011-1021 hrs	06.07.2023 1007 hrs	4	8	235
2A – ID 13536	SC23370	05.07.2023 1032-1042 hrs	06.07.2023 1037 hrs	4	8	118
2C – ID 13537	SC23371	05.07.2023 1056-1106 hrs	06.07.2023 1104 hrs	4	8	140
3B – ID 13538	SC23372	05.07.2023 1100-1110 hrs	06.07.2023 1130 hrs	4	8	84
4A – ID 13539	SC23373	05.07.2023 1125-1135 hrs	06.07.2023 1158 hrs	4	8	59
4C – ID 13540	SC23374	05.07.2023 1125-1135 hrs	06.07.2023 1313 hrs	4	8	215

Samples Received in Laboratory – From: SLR Consulting (D. Echeverri) Date: 05.07.2023 Time: 1450 hrs

**Note:** The following are not covered by the NATA Accreditation issued to The Odour Unit:

- 1. The collection of samples by a method that is not prescribed by AS/NZS 4323.3.
- 2. Final results that have been modified by the dilution factors where parties other than The Odour Unit have performed the dilution of samples.





Odour Sample Measurement Results
Panel Roster Number: SYD20230706\_049

Sample ID / Location	Laboratory ID	Sampling Date & Time	Analysis Date & Time	Panel Size	Valid ITEs	Final Odour Concentration (ou)
5B – ID 13541	SC23375	05.07.2023 1158-1208 hrs	06.07.2023 1342 hrs	4	8	64
5C – ID 13542	SC23376	05.07.2023 1215-1225 hrs	06.07.2023 1409 hrs	4	8	64
6A – ID 13543	SC23377	05.07.2023 1218-1228 hrs	06.07.2023 1436 hrs	4	8	83
6C – ID 13544	SC23378	05.07.2023 1238-1248 hrs	06.07.2023 1508 hrs	4	8	76
Inlet East – ID 13545	SC23379	05.07.2023 1239-1249 hrs	06.07.2023 1543 hrs	4	8	6,320

Samples Received in Laboratory – From: SLR Consulting (D. Echeverri) Date: 05.07.2023 Time: 1450 hrs

Note: The following are not covered by the NATA Accreditation issued to The Odour Unit:

- 1. The collection of samples by a method that is not prescribed by AS/NZS 4323.3.
- 2. Final results that have been modified by the dilution factors where parties other than The Odour Unit have performed the dilution of samples.





### **Odour Panel Calibration Results**

Reference Odorant	Reference Odorant Panel Roster Number	Concentration of Reference gas (ppb)	Panel Target Range for n-butanol (ppb)	Measured Concentration (ou)	Measured Panel Threshold (ppb)	Does this panel calibration measurement comply with AS/NZS 4323.3 (Yes / No)
n-butanol	SYD20230706_049	44,800	20 ≤ χ ≤ 80	724	62	Yes

Comments Odour characters (non-NATA accredited) as determined by odour laboratory panel:

Laboratory ID	Odour Character	Laboratory ID	Odour Character	Laboratory ID	Odour Character
SC23369 SC23370	dirt, soil, sewage musty, dirty	SC23373 SC23374	dirt, soil dirt, soil	SC23377 SC23378	dirt, soil dirt, soil
SC23371 SC23372	dirt, soil, sewage dirt, soil	SC23375 SC23376	dirt, soil dirt, soil	SC23379	rubber, sewage

#### Departures

Clause 9.5.3 (d) - Cross-sectional distribution of airflow and concentration from port-openings are not checked due to impracticality of the requirement .

Disclaimers

- 1. Parties, other than The Odour Unit, responsible for collecting odour samples have advised that they have voluntarily furnished these odour samples, appropriately collected and labelled, to The Odour Unit for the purpose of odour testing.
- 2. The collection of odour samples by parties other than The Odour Unit relinquishes The Odour Unit from all responsibility for the sample collection and any effects or actions that the results from the test(s) may have.
- 3. Any comments included in, or attachments to, this Report are not covered by the NATA Accreditation issued to The Odour Unit.
- 4. This report shall not be reproduced, except in full, without written approval of The Odour Unit.

### Report Status

Status	Version	Prepared by	Date	Checked by	Date	Change	Reason
Draft	0.1	A. Schulz	17.07.2023	M. Assal	17.07.2023		
Final	1.0	A. Schulz	17.07.2023	M. Assal	17.07.2023		
Revised	1.1						

#### **END OF DOCUMENT**



The Odour Unit Pty Ltd Level 3, 12/56 Church Avenue MASCOT NSW 2020

P: +61 2 9209 4420 E: <u>info@odourunit.com.au</u>

ABN: 53 091 165 061

□ Brisbane Laboratory

The Odour Unit (QLD) Pty Ltd 2/57 Neumann Road CAPALABA QLD 4165

P: +61 7 3245 1700

E: qldinfo@odourunit.com.au

ABN: 87 102 255 765

# **Odour Concentration Measurement Report**

**Sampling and Laboratory Information** 

Organisation SLR Consulting Telephone +61 2 9427 8100
Contact D. Echeverri

Contact Sampling Site Sampling Method

Sampling Method

Sampling Method

D. Echeverri

Sampling Personnel

Sampling Personnel

Laboratory Location

Mascot, NSW

**Order and Project Information** 

D. Echeverri Order requested by Order accepted by A. Schulz TOU Project # Date of order 04/07/2023 N1869 Project Manager Order number 33344 A. Schulz Panel Operator D. Echeverri A. Schulz Signed by

Investigated Item Odour concentration in odour units 'ou', determined by sensory odour concentration measurements, of an

odour sample supplied in a sampling bag.

Identification The odour sample bags were labelled individually. Each label recorded the testing laboratory, sample

number, sampling location (or Identification), sampling date and time, dilution ratio (if dilution was used) and

whether further chemical analysis was required.

Method The odour concentration measurements were performed using dynamic olfactometry according to the

Australian/New Zealand Standard: Stationary source emissions – *Part 3: 'Determination of odour concentration by dynamic olfactometry* (AS/NZS 4323.3). The odour perception characteristics of the panel within the presentation series for the samples were analogous to that for butanol calibration. Any deviation

from the Australian standard is recorded in the 'Comments' section of this report.

Measuring Range The measuring range of the olfactometer is  $2^2 \le \chi \le 2^{18}$  ou. If the measuring range was insufficient the odour

samples will have been pre-diluted. The machine is not calibrated beyond dilution setting 2<sup>17</sup>. This is

specifically mentioned with the results.

Environment The measurements were performed in an air- and odour-conditioned room. The room temperature is

maintained at 22 °C ±3 °C.

Measuring Dates The date of each measurement is specified with the results.

TOU-OLF-004

Laboratory Precision The precision of this laboratory (expressed as repeatability) for sensory quality must be  $r \le 0.477$  in

accordance with the AS/NZS 4323.3. r = 0.461 Compliance – Yes

Laboratory Accuracy The accuracy of this laboratory for sensory quality must be  $A \le 0.217$  in accordance with the AS/NZS 4323.3.

A = 0.216 Compliance – Yes

Lower Detection Limit (LDL) The LDL for the olfactometer has been determined to be 16 ou, which is 4 times the lowest dilution setting.

Traceability The results of the tests, calibrations and/or measurements included in this document are traceable to

Australian/national standards. The assessors are individually selected to comply with fixed criteria and are monitored in time to keep within the limits of the standard. The results from the assessors are traceable to

primary standards of n-butanol in nitrogen. Note Disclaimers on last page of this document.

Accredited for compliance with ISO/IEC 17025 - Testing.
This report shall not be reproduced, except in full.

Date: Tuesday, 18 July 2023 Panel Roster Number: SYD20230707\_050

A. Schulz Authorised Signatory





Odour Sample Measurement Results
Panel Roster Number: SYD20230707\_050

Sample ID / Location	Laboratory ID	Sampling Date & Time	Analysis Date & Time	Panel Size	Valid ITEs	Final Odour Concentration (ou)
7C – ID 13554	SC23380	06.07.2023 1050-1100 hrs	07.07.2023 1002 hrs	4	8	664
7A – ID 13555	SC23381	06.07.2023 1054-1104 hrs	07.07.2023 1037 hrs	4	8	215
8C – ID 13556	SC23382	06.07.2023 1134-1144 hrs	07.07.2023 1102 hrs	4	8	235
8B – ID 13557	SC23383	06.07.2023 1133-1148 hrs	07.07.2023 1133 hrs	4	8	197
9C – ID 13547	SC23384	06.07.2023 1207-1217 hrs	07.07.2023 1156 hrs	4	8	304
9A – ID 13548	SC23385	06.07.2023 1209-1219 hrs	07.07.2023 1258 hrs	4	8	91

Samples Received in Laboratory – From: SLR Consulting Date: 06.07.2023 Time: 1600 hrs

**Note:** The following are not covered by the NATA Accreditation issued to The Odour Unit:

- 1. The collection of samples by a method that is not prescribed by AS/NZS 4323.3.
- 2. Final results that have been modified by the dilution factors where parties other than The Odour Unit have performed the dilution of samples.





Odour Sample Measurement Results
Panel Roster Number: SYD20230707\_050

Sample ID / Location	Laboratory ID	Sampling Date & Time	Analysis Date & Time	Panel Size	Valid ITEs	Final Odour Concentration (ou)
10A – ID 13549	SC23386	06.07.2023 1239-1249 hrs	07.07.2023 1332 hrs	4	8	45
10C – ID 13550	SC23387	06.07.2023 1237-1247 hrs	07.07.2023 1357 hrs	4	8	99
11A – ID 13551	SC23388	06.07.2023 1305-1318 hrs	07.07.2023 1418 hrs	4	8	99
11C – ID 13552	SC23389	06.07.2023 1306-1316 hrs	07.07.2023 1446 hrs	4	8	332
Inlet West – ID 13553	SC23390	06.07.2023 1430-1440 hrs	07.07.2023 1521 hrs	4	8	16,400

Samples Received in Laboratory – From: SLR Consulting Date: 06.07.2023 Time: 1600 hrs

Note: The following are not covered by the NATA Accreditation issued to The Odour Unit:

- 1. The collection of samples by a method that is not prescribed by AS/NZS 4323.3.
- 2. Final results that have been modified by the dilution factors where parties other than The Odour Unit have performed the dilution of samples.





### **Odour Panel Calibration Results**

Reference Odorant	Reference Odorant Panel Roster Number	Concentration of Reference gas (ppb)	Panel Target Range for n-butanol (ppb)	Measured Concentration (ou)	Measured Panel Threshold (ppb)	Does this panel calibration measurement comply with AS/NZS 4323.3 (Yes / No)
n-butanol	SYD20230707_050	44,800	20 ≤ χ ≤ 80	1,024	44	Yes

Comments Odour characters (non-NATA accredited) as determined by odour laboratory panel:

Laboratory ID	Odour Character	Laboratory ID	Odour Character	Laboratory ID	Odour Character
SC23380 SC23381 SC23382	dirt, soil, sewage dirt, soil, sewage sewage	SC23384 SC23385 SC23386	dirt, soil, sewage sewage, musty watery, musty	SC23388 SC23389 SC23390	dirt, soil dirt, soil, sewage rubber, sewage
SC23383	dirt, soil, sewage	SC23387	dirt, soil, watery, musty		

#### Departures

Clause 9.5.3 (d) - Cross-sectional distribution of airflow and concentration from port-openings are not checked due to impracticality of the requirement .

### Disclaimers

- 1. Parties, other than The Odour Unit, responsible for collecting odour samples have advised that they have voluntarily furnished these odour samples, appropriately collected and labelled, to The Odour Unit for the purpose of odour testing.
- 2. The collection of odour samples by parties other than The Odour Unit relinquishes The Odour Unit from all responsibility for the sample collection and any effects or actions that the results from the test(s) may have.
- 3. Any comments included in, or attachments to, this Report are not covered by the NATA Accreditation issued to The Odour Unit.
- 4. This report shall not be reproduced, except in full, without written approval of The Odour Unit.

### Report Status

Status	Version	Prepared by	Date	Checked by	Date	Change	Reason
Draft	0.1	A. Schulz	17.07.2023	M. Assal	17.07.2023		
Final	1.0	A. Schulz	17.07.2023	M. Assal	17.07.2023		
Revised	1.1						

#### **END OF DOCUMENT**

1 September 2023 SLR Project No.: 610.031285.00001

# Appendix B Equipment and Calibration Details

# **ELF FARM SUPPLIES**

**Annual Biofilter Testing** 

**Elf Farm Supplies Pty Ltd** 

SLR Project No.: 610.031285.00001

1 September 2023



Table B1 summarises the equipment details for the equipment need to complete the testing.

Table B-1

Equipment Type	SLR Asset Number	Manufacturer and Model	Calibration Due Date
Pitot Tube	5076	NA	03-04-2024
Anemometer	5000	TSI Velocicalc – Air Velocity Meter – Model 5725	27-03-2024
Manometer	2815	Dwyer series 475 Mark III digital manometer	07-07-2024
Thermometer (digital)	5085	FLUKE thermometer 53/54 II B	19-07-2024
Thermocouple	5090	FLUKE thermocouple	03-02-2024
Thermocouple	5092	FLUKE thermocouple	03-02-2024
Timepiece - AQ	5082	Apple - Iphone	NA
Measuring Tape	1960	Craft Right	24-05-2028
Witches Hats	NA	Client owned	NA
Odour drum	1622	NA	Inspected
Odour drum	1623	NA	Inspected
Air pump	2775	SKC-Aircheck	26-03-2024
Air pump	2776	SKC-Aircheck	26-03-2024
Drycal	5005	Mesa Labs	24-04-2024



# Appendix C Sampling Plane Records and Measurements

# **ELF FARM SUPPLIES**

**Annual Biofilter Testing** 

**Elf Farm Supplies Pty Ltd** 

SLR Project No.: 610.031285.00001

1 September 2023

Description	Results	Measurement Point Pictures
Location	West Inlet	
Date	06-07-2023	
Sampling time	14:10 to 14:30	
Test method	NSW EPA TM-2, AS 4323.1	
Duct diameter	2.4 m	
Upstream requirements		
Type of disturbance	Bend	
Distance from disturbance	8 m	
Number of duct diameters	3.3D	
Ideal minimum distance criterion	2D	
Number of diameters less than ideal	1D	
Sampling Factor	1	
Downstream requirements		
Type of disturbance	Connection	
Distance from disturbance	12 m	
Number of duct diameters	5D	
Ideal minimum distance criterion	6D	
Number of diameters less than ideal	1D	
AS 4323.1 compliance	Compliant, Non-Ideal Sampling Plane	
Sampling Factor	1.05	
Number of sampling points for manual isokinetic sampling		
Minimum number of sampling traverse	2	
Minimum number of access holes	2	
Minimum number of sampling points	2	
Total number of sampling points	24	
Measurements		
Actual volumetric flow	19.33 m³/s	
Normal volumetric flow	16.24 m³/s	
Average velocity	4.27 m/s	

Description	Results	Measurement Point Pictures
Average Temperature	37.1 °C	
Dry temperature	34.5 °C	
Wet temperature	17.6 °C	
Moisture content	4.4%	
Static pressure	1.02 kpa	
Total absolute stack pressure	101.11 kpa	
BOM ambient pressure	101.9 kpa	
Additional notes	None	
Testing officer	Danny Echeverri	



# **APPENDIX G**

**ANNUAL RETURNS AND WASTE SUMMARY** 

# **Annual Return**



### **ELF FARM SUPPLIES PTY LTD**

Licence 6229

### A. Statement of Compliance - Licence Details

ALL Licence holders must check that the Licence details in Section A are correct.

If there are changes to any of these details, you must advise Environment Protection Authority (EPA) and apply as soon as possible for a variation to your Licence or for a Licence transfer.

Licence variation and transfer application forms are available on the EPA website at: http://www.epa.nsw.gov.au/licensing-and-regulation/licensing or from regional offices of the EPA, or by contacting by telephone 02 9995 5700.

If you are applying to vary or transfer your Licence, you must still complete and submit this Annual Return.

### A1. Licence holder

Licence number

: 6229

Licence holder

: ELF FARM SUPPLIES PTY LTD

Trading name (if applicable)

ABN

: 71 131 333 830

ACN

.

Reporting period

: From: 20-5-2022 To: 19-5-2023

### A2. Premises to which Licence Applies (if applicable)

Common name (if any)

: ELF FARM SUPPLIES PTY LTD

**Premises** 

: 108 MULGRAVE ROAD MULGRAVE 2756 NSW

### A3. Activities to which Licence Applies

Composting

Waste storage

### A4. Other Activities (if applicable)

### A5. Fee-Based Activity Classifications

Note that the fee based activity classification is used to calculate the administrative fee.

Fee-based activity	Activity scale	Unit of measure
Composting	> 5,000.00 - 50,000.00	T annual capacity to receive organics
Waste storage - other types of waste	> 0.00	other types of waste stored

# **Annual Return**



**ELF FARM SUPPLIES PTY LTD** 

Licence 6229

### A6. Assessable Pollutants (if applicable)

Note that the identification of assessable pollutants is used to calculate the load-based fee.

The following assessable pollutants are identified for the fee-based activity classifications in the licence:

## B. Monitoring and Complaints Summary

### **B1. Number of Pollution Complaints**

Pollution Complaint Category	Complaints
Air	2
Water	, 0
Noise	0
Waste	0
Other	0
Total complaints recorded by the licensee during the reporting period	2

### **B2. Concentration Monitoring Summary**

For each concentration monitoring point identified in your licence, details are displayed below. If concentration monitoring is not required by your licence, **no data** will appear below.

If data was provided from an uploaded file, the file name will be displayed below instead of any data.

Note that this does not exclude the need to conduct appropriate concentration monitoring of assessable pollutants as required by load-based licensing (if applicable).

### B3. Volume or Mass Monitoring Summary

For each volume or mass monitoring point identified in your licence, details are displayed below. If volume or mass monitoring is not required by your licence, **no data** will appear below.

If data was provided from an uploaded file, the file name will be displayed below instead of any data.

Note that this does not exclude the need to conduct appropriate volume or mass monitoring of assessable pollutants are required by load-based licensing (if applicable).

# C. Statement of Compliance - Licence Conditions

### C1. Compliance with Licence Conditions

Were all conditions of the licence complied with (including monitoring	Yes
and reporting requirements)?	

# **Annual Return**



**ELF FARM SUPPLIES PTY LTD** 

Licence 6229

### D. Statement of Compliance - Load Based Fee Calculation

If you are not required to monitor assessable pollutants by your licence, no data will appear below.

If assessable pollutants have been identified on your licence, the following worksheets for each assessable pollutant will determine your load based fee for the licence fee period to which this Annual Return relates.

Loads of assessable pollutants must be calculated using any of the methods provided in EPA's Load Calculation Protocol for the relevant activity. A Load Calculation Protocol would have been already sent to you with your licence. If you require additional copies, you can download the Protocol from the EPA's website or you can contact us on telephone 02 9995 5700.

You are required to keep all records used to calculate licence fees for four years after the licence fee was paid or became payable, whichever is the later date.

# E. Statement of Compliance - Requirement to Prepare PIRMP

33A of the Protection of the Environment	Yes
Is the PIRMP available at the premises?	
nent position on a publicly accessible website?	Yes
ne PIRMP can be accessed ▼	
	Yes
The PIRMP was last tested on 11-11-2022	
	Yes
The PIRMP was last updated on 27-10-2022	
activated in this reporting period?	1
Flood in Hawkesbury July 2022 - Flood preparedness - incident occurred	No pollution
	nent position on a publicly accessible website?  he PIRMP can be accessed ▼  11-11-2022  27-10-2022  activated in this reporting period?  Flood in Hawkesbury July 2022 - Flood preparedness -

# F. Statement of Compliance - Requirement to Publish Pollution Monitoring Data

Are there any conditions attached to your licence that require pollution monitoring to be undertaken as required under section 66(6) of the Protection of the Environment Operations (POEO) Act 1997?	Yes
Do you operate a website?	Yes

# NSW Mining

### **Annual Return**

**ELF FARM SUPPLIES PTY LTD** 

Licence 6229

Is the pollution monitoring data published on your website in accordance with the EPA's written requirements for publishing pollution monitoring data?	Yes
Address of the web page where the pollution monitoring data can be accessed ▼	
www.elffarmsupplies.com.au	

# G. Statement of Compliance - Environment Management System and Practices

Do you have an ISO 14001 certified Environmental Manageme OR any other system that EPA considers is equivalent to the acceprocedures, documentation and record keeping requirements certified EMS?	ountability, of an ISO 14001	Yes
When was the last check (As per ISO 14001) of the EMS completed?	23-9-2021	
When was the last check (As per ISO 14001) of the EMS completed?  Were there any non-conformances related to environmental issues identified the EMS?	1-22-2-2-1	Yes

### H. Signature and Certification

This Annual Return may only be signed by person(s) with legal authority to sign it as set out in following categories: an Individual, a Company, a Public authority or a Local council.

It is an offence under section 66 of the Protection of the Environment Operations Act 1997 to supply any information in this form that is false or misleading in a material respect, or to certify a statement that is false or misleading in a material respect. There is a maximum penalty of \$250,000 for a corporation and \$120,000 for an individual.

### I/We

- declare that the information in the Monitoring and Complaints Summary in Section B of this Annual Return application is correct and not false or misleading in a material respect, and
- certify that the information in the Statement and Compliance in sections A, C, D, E, F, G and H and
  any other pages attached to Section C is correct and not false or misleading in a material respect.

Signature	R. N. Jalson	Signature	
Name	Robert, N. To (son	Name	Niall Blan
Position	M.P.	Position	Chairperson
Date	20'6 23	Date	21 6 23

# NSW MINISTRACTION OF THE PROPERTY OF THE PROPE

# **Annual Return**

### **ELF FARM SUPPLIES PTY LTD**

Licence 6229

### Declaration

I declare that the information in the Monitoring and Complaints Summary in section B of this Annual Return is correct and not false or misleading in a material respect, and

I certify that the information in the Statement of Compliance in section A,C,D,E,F and G and any pages attached to Section C is correct and not false or misleading in a material respect.

### Declaration

I declare that the information in the Monitoring and Complaints Summary in section B of this Annual Return is correct and not false or misleading in a material respect, and

I certify that the information in the Statement of Compliance in section A,C,D,E,F and G and any pages attached to Section C is correct and not false or misleading in a material respect.

Reporting Period: 2022 - 2023

Status: Certified

Printed on: 8/16/2023, 7:49 AM

Due: **29 August 2023** Report Version: **1** 

Printed by: Blake Edwards, Certifier



Waste Received		Metropolitan Levy Area
lunicipal		
Received/Source	Waste type	Quantity (tonnes)
	Total Municipal	0.00
Commercial and Industrial		
Received/Source	Waste type	Quantity (tonnes)
6229 - Elf Farm Supplies Pty Ltd	Biosolids or Manures	19,874.74
	Vegetation or Garden	21,410.60
	Total Commercial and Industrial	41,285.34
Construction and Demolition		
Received/Source	Waste type	Quantity (tonnes)
	Total Construction and Demolition	0.00
Jnknown		
Received/Source	Waste type	Quantity (tonnes)
	Total Unknown	0.00
Waste Received		Interstate
lunicipal		
Received/Source	Waste type	Quantity (tonnes)
	Total Municipal	0.00
Commercial and Industrial		
Received/Source	Waste type	Quantity (tonnes
Other - VIC	Vegetation or Garden	5,355.68

Environment Protection Authority Locked Bag 5022, Parramatta, NSW, 2124 http://www.epa.nsw.gov.au/ Phone: 131 555

ABN 43 692 285 758

Email: waste.levydata@epa.nsw.gov.au Waste and Resource Reporting Portal (WARRP): https://warrp.epa.nsw.gov.au/

Reporting Period: 2022 - 2023

Status: Certified

Printed on: 8/16/2023, 7:49 AM

Due: **29 August 2023** Report Version: **1** 

Printed by: Blake Edwards, Certifier



Received/Source	Waste type	Quantity (tonnes)
	Total Commercial and Industrial	5,355.68
Construction and Demoli	tion	
Received/Source	Waste type	Quantity (tonnes)
	Total Construction and Demolition	0.00
Unknown		
Received/Source	Waste type	Quantity (tonnes)
	Total Unknown	0.00

Reporting Period: 2022 - 2023

Status: Certified

Printed on: 8/16/2023, 7:49 AM

Due: **29 August 2023** Report Version: **1** 

Printed by: Blake Edwards, Certifier



Waste type				Quantit
		Т	otal	0.0
aste transported from s	ite under a Resource	e Recovery Orde	r	
RRO	Waste type			Quantit
*Specific RRO	Composts or Mulches			102,309.0
Estimate of waste stream at ime of receipt	Unknown	MUN: 0.00%	C&I: 100.00%	C&D: 0.00%
	Liquid Waste			2,433.7
Estimate of waste stream at ime of receipt	Unknown	MUN: 0.00%	C&I: 100.00%	C&D: 0.00%
			Tota	al <b>104,742.7</b>
aste transported from s	ite for lawful recover			
Waste type		-		Quantit
		т	otal	0.

Reporting Period: 2022 - 2023

Status: Certified

Printed on: 8/16/2023, 7:49 AM

Due: **29 August 2023** Report Version: **1** 

Printed by: Blake Edwards, Certifier



### **Summary Details**

#### **Details**

Details	
	Tonnes
Waste Received - Waste received - Metropolitan Levy Area	41,285.34
Waste Received - Waste received - Interstate	5,355.68
Waste transported from site	104,742.71
Net position for reporting preiod	-58,101.69

### **Certification Statement**

I Blake Edwards certify that the information contained in the report in respect of waste facility Elf Farm Supplies Pty Ltd located at 108 Mulgrave Road, Mulgrave , 2756 for the reporting period 2022 - 2023 is true and correct.

I further certify that the occupier of the waste facility has kept the necessary records to substantiate the information provided in this report in accordance with the Protection of the Environment Operations (Waste) Regulation 2014.

Please select the option that applies to you:

I am a person delegated to sign on the occupier's behalf and approved by the EPA in writing to sign this report

ABN 43 692 285 758



# **APPENDIX H**

# **INDEPENDENT BI-ANNUAL AUDIT**

# INDEPENDENT ENVIRONMENTAL AUDIT

# Prepared for:

Elf Farm Supplies Pty Ltd PO Box 615 WINDSOR NSW 2756



SLR Ref No: 610.18204-R03\_v1.0 September 2023

### PREPARED BY

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### **BASIS OF REPORT**

This report has been prepared by SLR Consulting Australia Pty Ltd with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with Elf Farm Supplies Pty Ltd (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of the Client. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR

SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.

### DOCUMENT CONTROL

Reference	Date	Prepared	Checked	Authorised
610.18204-R03-V1.0	20 September 2023	Sandy Lonergan	Mike Brecko & Varun Marwaha	Sandy Lonergan



### SLR Ref No: 610.18204-R03\_v1.0 September 2023

### **EXECUTIVE SUMMARY**

SLR Consulting Australia Pty Ltd (SLR) was commissioned by Elf Farm Supplies Pty Ltd (Elf) to undertake an Independent Environmental Audit (IEA) for its Mulgrave Substrate Plant facility, Mulgrave, New South Wales (the Site). The IEA was performed in accordance with Condition 3A of Schedule 5 of Project Approval MP 08\_0255, first approved on 11 January 2012 and the modified approval (MOD 1) dated 14 March 2016 (Project Approval).

This is the fourth IEA to be conducted against this Project Approval, the first was conducted at the end of 2016, Report Number 610.16730.00000-R01-v3.0. The 2016 IEA covered the period from 11 January 2012 to 1 March 2017. The second IEA reporting period was from 1 March 2017 to 14 March 2019, whilst the third period was 15 March 2019 to 12 March 2021. This IEA reporting period is from 13 March 2021 to 12 March 2023.

The modification (MOD 1) relates to the Substrate Plant site only as approved under MOD 1 and includes:

- A new odour management system in the form of a biofilter and six ammonia scrubbers;
- An additional six (6) phase 2/3 tunnels; and
- The continued use of fill associated with the biofilter pad.

Elf Farm Supplies had until March 2018 to complete the construction of the MOD1 facilities, Stage 1. At the beginning of 2018, Elf requested an extension of time for completion from the Department of Planning and Environment. This extension was granted on 14 March 2018, with a revised construction completion date of 30 June 2018. Elf met this revised completion date.

This audit was carried out in August and September 2023, with SLR being supplied information as requested.

Two additional modifications have been made to the original consent since MOD 1, modifications 2 (MOD2) and 3 (MOD3). MOD2 was approved on 4 November 2019, with MOD3 on 16 March 2020. It is noted that Elf Farm Supplies has not commenced MOD3 at the time of this audit.

The Project Approval MP 08\_0255 consists of 120 conditions in total. Of the 120 Conditions, 80 (67%) were considered not triggered. Note this number is considerably higher than the previous two IEA reports, this is a result of auditor including the mushroom farm Schedule 4 conditions (38) and previously "closed" conditions now categorised as not triggered.

Of the 120 conditions, 39 were audited, of the 39 auditable conditions, compliance was achieved for 33 (85%), non-compliance recorded for 6 conditions (15%). It is noted that one of the non-compliances related to two odour complaints related to the western dam which the EPA believes was caused by nutrient rich flood waters entering the western dam during floods. All other non-compliances were assessed to be of a low risk.

85% is a slight decrease from the 87.8% compliance recorded in 2021 IEA but will still a marked in improvement on the 70% compliance achieved in 2019 IEA and 61% in the 2016 IEA.

During the process, a high degree of senior management commitment at Elf to minimising the impact on the environment was evident. Elf was commended for their proactive nature on managing environmental matters. During the audit, Elf management appeared receptive and encouraged the auditor to identify opportunities for improvement.



# **EXECUTIVE SUMMARY**

Elf has also demonstrated continuous environmental improvement during this IEA reporting period by

- Installing additional balance tanks to assist with water and odour management on-site;
- Installation of a surface aerator in the Western Dam and adding Biostim powder to ensure dam remains aerobic;
- Changing the biofilter media; and
- Installation of solar panel system.

In conclusion, the environmental performance of the site has remained stable since the completion of construction and commencement of the odour control system.



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- Appendix B Photographs from Site Inspection
- Appendix C Odour Audit
- Appendix D Consultation with Key Stakeholders
- Appendix E Attendance Registers
- Appendix F Independent Audit Certification form
- Appendix G Auditors CVs and Department Approval Letter



# 1 Introduction

# 1.1 Background

SLR Consulting Australia Pty Ltd (SLR) was commissioned by Elf Farm Supplies Pty Ltd (Elf) to undertake an Independent Environmental Audit (IEA) for its Mulgrave Substrate Plant facility, Mulgrave, New South Wales (the Site). The IEA was performed in accordance with Condition 3A of Schedule 5 of Project Approval MP 08–0255, first approved on 11 January 2012 (Project Approval).

This is the fourth IEA to be conducted against this Project Approval, the first was conducted at the end of 2016, Report Number 610.16730.00000-R01-v3.0. The 2016 IEA covered the period from 11 January 2012 to 1 March 2017. The second and third IEA reporting period were from 1 March 2017 to 14 March 2019 and 15 March 2019 to 12 March 2021 respectively. This IEA reporting period is from 13 March 2021 to 12 March 2023.

Elf Farm Supplies applied for a modification to project approval (MOD1) and this was approved on 14 March 2016. MOD 1 related to the Substrate Plant site only and included:

- A new odour management system in the form of a biofilter and six ammonia scrubbers;
- An additional six (6) phase 2/3 tunnels; and
- The continued use of fill associated with the biofilter pad.

Elf Farm Supplies had until March 2018 to complete the construction of the MOD1 facilities, Stage 1. At the beginning of 2018, Elf requested an extension of time for completion from the Department of Planning and Environment. This extension was granted on 14 March 2018, with a revised construction completion date of 30 June 2018. Elf met this revised completion date.

It is noted that Elf Farm Supplies has had two further modification applications approved since MOD1, being MOD2 and MOD3.

MOD2 related to a Section 75W application seeking to the following modifications to the Concept Approval:

- Increase in the building floor area to 88,178m<sup>2</sup> and
- Modification to ancillary works including access road, parking, landscaping, stormwater and dam design to suit revised building footprint.

MOD2 was approved on 4 November 2019.

MOD3 included an extension of the straw bale storage area and associated works, amended stormwater management system and western tree corridor. This modification was approved on 16 March 2020. It is noted that Elf Farm Supplies has not commenced MOD3 at the time of this audit.



### 1.2 Audit Team

The audit team comprised of Sandy Lonergan (Lead Auditor, certified by SAI Global) and Varun Marwaha.

Ms Lonergan has over 25 years auditing experience, has been a third party certification auditor for NCSI and has conducted numerous independent compliance audits for the Commonwealth Government, Planning Departments, and Environment Protection Authorities or equivalent in New South Wales and Queensland.

Varun Marwaha has over 10 years of environmental and processing experience. Mr Marwaha has acquired broad environmental experience including air quality and odour, impact assessments, emission inventories (including National Pollutant Inventory), air quality dispersion modelling (including Ausplume, CALPUFF and CAL3QHCR), air quality monitoring (including odour), meteorological monitoring, meteorological modelling (The Air Pollution Model [TAPM] & CALMET), greenhouse gas assessments and overall project management. He has conducted numerous environmental audits for a range of industries throughout Australia.

# 1.3 Audit Objectives

The audit objectives were:

- 1. To carry out the audit in accordance with Condition 3A of Schedule 5 of Project Approval 08\_0255 and subsequent modifications; and
- 2. To carry out the audit generally in accordance with the Department of Planning and Environment's document titled *Independent Audit Post Approval Requirements*, May 2020.

### 1.4 Audit Period

This audit period was from 13 March 2021 to 12 March 2023.

# 1.5 Audit Scope

This IEA and subsequent report were prepared pursuant to Condition 3A of Schedule 5 of Project Approval MP 08\_0255. **Table 1** lists the requirements of this condition and indicates where each has been addressed in this IEA report.



Table 1 Audit Conditions and Where Each Requirement is Addressed in this Report

Condition	Description of Condition	Where Addressed in this Report
3A	By 31 March 2021 and every two years thereafter, unless otherwise agreed by the Secretary, the Proponent must commission and pay the cost of an Independent Environmental Audit of the Project. This audit must:	This Audit Report
3A (a)	Be conducted by suitably qualified, experienced and independent team of experts (including and odour expert) whose appointment has been endorsed by the Secretary;	Appendix G
3A (b)	Include consultation with the relevant agencies;	Section 3.8, Appendix D
3A (c)	Include a full odour audit of the Project, taking into consideration of the relevant technical guidelines and any odour complaints made since the previous audit;	Appendix C
3A (d)	Assess the environmental performance of the project and assess whether it is complying with the relevant requirements in this approval and any other licenses and approvals that apply to the project (including any assessment, plan or program required under these approvals);	Sections 3.2, 3.3, 3.4, 3.7 and Appendix A.
3A (e)	Review the adequacy of strategies, plans or programs required under these approvals and if appropriate;	Section 3.6
3A (f)	Recommend measures or actions to improve the environmental performance of the project, and or any assessment, plan or program required under these approvals.	Section 4
	Within six (6) weeks of the completion of this audit, or as otherwise agreed by the Secretary, the Proponent must submit a copy of the audit report to the Secretary, together with its response to any recommendation contained in the audit report.	This Audit report

# 1.6 Report Structure

This report was structured as follows:

- Section 1 provides an introduction, background, description, scope of the audit, limitations and provides a
  guide to the structure of the report;
- Section 2 outlines the audit methodology. This includes the auditor approval, scope development, compliance evaluation and assessment criteria sections;
- Section 3 summarises the audit findings including;
  - Approval and documentation list;
  - Compliance performance;
  - Summary of Agency Notices, Orders or Penalty Notices;
  - Non-compliances;
  - Previous audit recommendations;
  - Review of plans including sub-plans;
  - Environmental performance;



- Consultation outcomes;
- Complaints summary;
- Incidents;
- Actual versus predicted impacts;
- Site inspections;
- Site interviews; and
- Key strengths.
- Section 4 outlines the recommendations from the audit for the non-compliances and opportunities for improvement; and
- Section 5 is the conclusion;
- Appendix A contains the complete list of all the conditions in the DA and details the audit findings;
- Appendix B contains a selection of photographs from the site visit;
- Appendix C contains the Odour Audit report;
- Appendix D contains Consultation with Key Stakeholders;
- Appendix E contains Attendance Registers;
- Appendix F contains the completed Independent Audit Certification forms; and
- Appendix G contains the audit team CVs and associated approval letter from the Department of Planning & Environment.

### 1.7 Limitations

This report has been prepared for Elf Farm Supplies (Elf) to fulfil the requirements of the IEA as specified in the Project Approval. The IEA only pertains to the Substrate Plant.

The scope of the audit, and subsequent report was limited and should not be used for any purpose other than that described above.

The following should be taken into account when reading and using this report:

- One site visit was undertaken during this audit to familiarise the auditor with the site layout, site conditions and natural environment. Whilst the auditor requested to be shown all features of the sites impacted (environmentally) by the operations, the auditors have relied on information provided by Elf representatives during these site visits, including the selection of the areas of the site for the site inspections; and
- 2 Elf provided (at their sole discretion) all documentation that has been accessible to the auditors. The auditors relied on the information and documentation provided and Elf to provide all relevant and pertinent information. It should be noted that the range of documentation provided may not have included all relevant environmental records held. The auditors asked to receive all relevant documentation. The auditors have not had the opportunity to verify any of the information provided nor have they had the opportunity to consult with any party other than Elf's nominated representatives during this audit.



# 2 Audit Methodology

## 2.1 Auditor Approval

Ms Lonergan and Mr Marwaha were approved as the auditors by the Department of Planning and Environment (DPE) on the 22 March 2023. Refer to **Appendix G** for the auditors CV's and letter of approval from the DPE.

## 2.2 Scope Development

The auditors consulted with the following agencies and other relevant stakeholders to obtain their input into the Scope of the Audit:

- Department of Planning and Environment (DPE);
- Environment Protection Authority (EPA); and
- Hawkesbury Local Council.

Any correspondence received from the stakeholders is summarised in **Section 3.8**.

## 2.3 Compliance Evaluation

The auditor used the following methodologies to gather evidence and evaluate compliance, where applicable:

- A desktop review of records requested;
- Review of records on-site;
- Interviews with key personnel;
- Photographs from site visit/inspection; and
- Observations from the site visit/inspection.

The site visit was undertaken on the 15 August 2023 and involved attendance at the site induction, a site walkaround, taking photographs and interviews with key staff.

Information obtained and statements recorded during the interviews conducted whilst on site were directly recorded as evidence (see **Appendices A and C**). The auditors also used the interviews as an opportunity to gain an appreciation of the extent to which the systems in place to manage environmental impacts from site operations were understood and implemented. Refer to **Section 3.12** for a list of the personnel interviewed.



### 2.4 Assessment Criteria

SLR adopted the compliance status descriptors outlined in Section 3.8 and reproduced below in **Table 2**, in the NSW Government, *Independent Audit Post Approval Requirements*, May 2020.

 Table 2
 Compliance Status Descriptors

Assessment	Criteria
Compliant	Where the auditor has collected sufficient verifiable evidence to demonstrate that <b>all</b> elements of the requirement have been complied with within the scope of the audit.
Non-compliant	Where the auditor has determined that one or more specific elements of the conditions or requirements have not been complied with within the scope of the audit.
Not triggered	A requirement has an activation or timing trigger that has not been met at the temporal scope of the audit being undertaken (maybe a retrospective or future requirement), therefore an assessment of compliance is not relevant.

The following has been extracted from Section 3.8 from the *Independent Audit Post Approval Requirements*.

The terms partial compliance, partial non-compliance or not verified or administrative non-compliance or other similar terms must not be used.

As part of the Audit evaluation, the auditor may make observations including identifying any opportunities for improvement in relation to any compliance requirement or any other aspect of the project. Any observations or notes are in addition to the compliance status descriptor assigned to each compliance requirement, limited to the descriptors listed in Table 2.

Note: As discussed with the DPIE in October 2022, where a condition was related to a previous IEA period, it will now be listed as "Not triggered" as opposed to "Closed".



#### SLR Ref No: 610.18204-R03-V1.0 September 2023

# 3 Audit Findings

### 3.1 Approval and Document List

The following key documents were reviewed during the audit:

- Project Approval 08\_0255 granted by the then Minister for Planning and Infrastructure for modification 3 (MOD 3);
- Project Approval 08\_0255 updated Condition of Approval including MOD 3;
- Environment Protection Licence (EPL) No. 6229;
- Production data for the reporting period;
- Elf Farm Supplies Mushroom Substrata Facility Annual Environmental Management Review, September 24 2021;
- Elf Farm Supplies Mushroom Substrata Facility Annual Environmental Management Review, October 11, 2022;
- Elf Farm Supplies Mushroom Substrata Plant, Mulgrave, Water Management Plan, Issue 03, June 2020;
- Substrata Plant Mulgrave, Operational Noise Management Plan, prepared by Acoustic Consulting Engineers Pty Ltd, Report No: 160787-01-02R-DD Revo02, dated 17 January 2019;
- Elf Farm Supplies training needs analysis and training records;
- Environmental incident reports prepared by Elf Farm Supplies;
- SLR Consulting Australia Pty Ltd, Elf Farm Supplies Biofilter Testing, September 2020. SLR Ref: 610.30048-R01;
- EPA Environmental Risk Assessment -Assessment No. 4014836 Total Calculated Risk Score 40 Overall Regulatory Priority Low
- EPA Management Category, Assessment No. 4018173, Assessment Period 20/5/2019 to 19/05/2022
- Environment Protection Authority EPA Licensing quideline Environmental risks levels, March 2022.
- Todoroski Air Sciences, *Odour Management Plan Elf Farm Supplies Substrate Facility*, Prepared for Elf Farm Supplies Pty Ltd, January 2023;
- SLR Consulting Australia Pty Ltd, Elf Farm Supplies Biofilter Testing, September 2021. SLR Ref: 610.30446-R01, Version No. v1.0.
- SLR Consulting Australia Pty Ltd, *Elf Farm Supplies Biofilter Testing*, August 2022. SLR Ref: 610.30900-R01, Version No. v1.0.
- The Odour Unit, Elf Farm Supplies Pty Ltd, Mushroom Substrate Plant Modification to Approved Expansion, Odour Impact Assessment, Mulgrave, NSW. Final Report. 08.01.2015;
- Air Quality Assessment, Expansion of Substrate Facility, Mulgrave, Elf Farm Supplies, 9 December 2010, PAE Holmes:
- EPA Annual Returns for this reporting period;
- EPA Notice of Variation to Licence No. 6229 dated 17 December 2020; and
- Various emails and letter correspondence between Elf Farm Supplies, EPA and DPE.



### 3.2 Compliance Performance

#### 3.2.1 Development Consent

The Development Consent Conditions for the site were audited as per the requirements of Condition 3A.

**Table 3** shows a summary of the findings of this audit in relation to the Development Consent Conditions.

Table 3 Summary Table of Compliance with MP 08\_0255

Section	Total No. of Conditions	Conditions Audited	Compliance	Non- Compliance	Not Triggered
1 (Sch 2)	19	8	8	0	11
2 (Sch 3)	53	23	20	3	30
3 (Sch 4)	38	0	0	0	38
4 (Sch 5)	10	8	5	3	2
Total	120	39	33	6	81

#### 3.2.2 EPL 6229

The Site operates under EPL No. 6229. During this IEA period, the EPL was varied as per the letter dated 17 December 2020. The following variations were made to the licence:

- Condition R4.1 has been varied to require "The Licensee must retain records detailing irrigation of waste water from the dam at the premises for four years. These records shall be made available to EPA officers upon request.";
- Condition O4.2 has been varied to require "The licensee must ensure that the area in which the prewet is conducted is fully enclosed within a building which is under negative pressure and ventilated through the Bio-filter."; and
- Condition O4.7 has been removed.

In general, the site was generally operating in compliance with the EPL conditions during the IEA reporting period. However, Condition L4 was not complied with during the reporting period. Two odour complaints were received. Refer to Section 3.2.3 for further details.

There are no monitoring requirements specified under the EPL. The EPL is due to be reviewed on 15 August 2023.

Elf Farm Supplies has submitted two EPA Annual Returns during this IEA reporting period:

- 1. Reporting period 20-05-2020 to 19-05-2021; and
- 2. Reporting period 20-05-2021 to 19-05-2022.

A review of the EPA website (Public Register) showed no non-compliances recorded against Elf for the two last reporting periods. For the two reporting periods both returns were submitted on-time, that is within 60 days of the end date of the reporting period. The Pollution incident management plan was last tested on 1 March 2022. The current environmental risk level is Level 1.



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As identified in the previous three IEA reports and still current for this IEA, SLR identified the following additional non-compliance, not already identified in this audit report:

• E1.4 f) Odour Complaint Report – Condition f) requires the oxygen content of the compost in the pre-wet processing phase to be recorded from one hour preceding the odour incident until the time the incident is reported to have ceased. This has not been occurring and is not possible as complainants do not usually advise of stop times for odour complaints. In the previous IEA it was recommended that discussions be held with the EPA to remove this condition. SLR has been advised this did not occur.

SLR also reviewed two documents (Assessment Nos. 4018173 and 4014836) from the EPA received by Elf Farm Supplies, which specified the Environmental Management Category (EMC) and Environmental Risk Assessment. The assessment period for the EMC was from 20 May 2019 to 19 May 2022.

The EMC is determined is set out in the Environmental Management Calculation Protocol. The EMC is used to calculate the licence administrative fee and determine the risk level for the licence.

In the assessment the EMC was Category A and overall environmental risk level 1. This is the lowest risk level possible.

As per the EPA Environmental Licensing guideline (March 2022), *The risk-based licensing system aims to ensure that all activities licensed under the Protection of the Environment Operations Act 1997 (POEO Act) receive an appropriate level of regulation based on the level of risk they pose to the environment and human health.* 

Section 5.1 Level 1 licenses – Low-risk and good environmental performers.

Generally a level 1 license is for an activity (or activities) that poses a low risk to the environment because:

- It generates minimal or no discharges (due to its nature, or because there are good environmental controls and management procedures in place) or
- It is not situated in a sensitive environment.

#### 3.2.3 Odour Audit Findings

SLR completed an odour audit as per the requirements of the Condition. Details of the Odour Audit are located in **Appendix C**.

A summary of the findings of the odour audit are as follows:

- 50% of the Biofilter bed was changed over in May 2022. Elf advised the bed media was changed to minimise potential for media compaction.
- Based on the site observations, review of the odour monitoring data, odour complaints, odour impact
  assessment report and the EPA letters SLR deems the MOD1 to be achieving the desired objective to
  minimise odour emissions from the site and achieving the predictions in the Odour Impact Assessment; and
- Three odour complaints were received via the EPA during the reporting period, which related to nutrient loaded flood waters entering the western dam when the Hawkesbury river was in flood. The investigation concluded that the western dam likely source of odour due to the high nutrient load from the flood waters. Elf engaged a third party to assist in odour controls during this period and the measures were implemented and details emailed to the EPA. No further complaints have been received by Elf or the EPA.



• The SLR IEA audit team recommends that the annual biofilter testing is carried out every 18 months and within 3 months of the biofilter media being changed.

#### 3.2.4 Water Management and Stormwater System Assessment

During this reporting period the Water Management Plan for the site has been updated (Issue 03 June 2022). The updated plan was approved by the DPE on 9 September 2022.

The site continues to operate generally in accordance with the Water Management Plan as observed by the auditor during the site component of the audit.

Conditions 17B and 17C requirements are covered in the Plan. Condition 17B of Schedule 3 of the project approval requires that the farm dam not be used to receive process water. Condition 17C permits that the farm (western) dam may be used during an emergency, including a high rainfall event or plant breakdown.

Condition 17C permits the use of the Western dam during an emergency, including high rainfall or plant breakdown. When this occurs, the Consent condition requires the DPE to be notified within 7 days. The same reporting is also required to be submitted to the EPA in the same time-frame. There were two incidents within this IEA reporting period where the 7 days was not met.

Below is a summary of the use of the farm dam for the past 7 years due to heavy rainfall/flooding or plant failure (one event)

- 2022 3 times (20 March 2021, 4 April 2021, 30 November 2021)
- 2021 3 times (24 February 2022, 3 March 2022, 4 to 8 July 2022)
- 2020 4 times
- 2019 2 times
- 2018 2 times;
- 2017 2 times; and
- 2016 5 times.

During the audit, Elf advised that an additional 2 balance tanks (25,000 litres each in capacity) have been installed to increase rainfall/stormwater storage capacity of the recycle pit to compensate for the stormwater generated on site during rainfall events.

Elf Farm Supplies continues to monitor weather conditions such as La Nino.

# 3.3 Summary of Agency Notices, Orders or Penalty Notices

No order, nor penalty notices were issued to Elf Farm Supplies during the audit period.

# 3.4 Non-compliances

**Table 4** summarises the non-compliances identified, with relevant comments. Note in some instances the entire condition has not been documented in the table and is included at the end of these conditions. Refer to **Appendix A** for the condition in its entirety.



# Table 4 Summary of Non-Compliances

Schedule	Condition	Requirement (Summary)	Comment
3	2	The Proponent must not cause or permit the emission of offensive odours from the Substrate Plant Site, as defined under Section 129 of the POEO Act.	Three odour complaints were received by the EPA in August and September 2022. Investigations were carried out by Elf and EPA and it was concluded the likely source was the Western Dam which was breached during recent flood events and the odours are likely to be a result of this flood water.  Elf engaged third party to nominate mitigation measures to deal with the anaerobic conditions. Elf installed a surface aeration and applied the Biostim powder as recommended.  Action: No further action required.
3	17C	Notwithstanding Condition 17B of Schedule 3, in the event of an emergency such as a high rainfall event or plant breakdown, the Proponent may use the western dam. Notification of any emergency use of the dam must be provided to the Secretary in writing within 7 days of the emergency.	Two times notification did not occur within the 7 days period. Emergency use of the dam on 12 January 2022 was reported on 21 January 2022 and emergency use of the dam on 3 March 2022 was reported on 11 March 2022.
3	21A	The Proponent must continue to implement the "other noise mitigation measures" approved by the Department in its letter dated 18 July 2016 until the noise barrier referred to in Schedule 3, Condition 21 of this approval is constructed.	DPE letter dated 14 December 2022 – Warning Letter – breach of Schedule 3 Condition 21A – removal of hay bales from the temporary noise wall.

Schedule	Condition	Requirement (Summary)	Comment
5	3	By the 30 September 2020, and annually thereafter, unless otherwise agreed by the Secretary, the Proponent must review the environmental performance of the Project to the satisfaction of the Secretary. This review must:  (a) describe the operations that were carried out during the reporting period;  (b) analyse the monitoring results and complaints records of the Project during the reporting period, which includes a comparison of these results against the:  i. relevant statutory requirements, limits or performance measures/ criteria;  ii. monitoring results of previous years; and  iii. relevant predictions in the EA;  (c) identify any non-compliance during the reporting period, and describe what actions were (or are being) taken to ensure	DPE letter to Elf, 26 October 2018 specifying requirements for future AEMRs.  Non-compliance against several aspects – Items 5, 6 and 7 not complied with in both or one of the AEMRs reviewed for this reporting period.
		compliance; (d) identify any trends in the monitoring data over the life of the Project; and (e) describe what measure(s) will be implemented during the next reporting period to improve the environmental performance of the Project.	
5	7	The approved Strategy (as revised and approved by the Secretary from time to time), must be implemented for the life of the Project as soon as written endorsement by the Secretary is received.	Implementation of the Community Consultation Strategy last occurred in March 2018 which precedes the completion of construction works in June 2018. There has also been no media release for construction being completed as specified in the Strategy.  Action: Elf to update the Community as per the strategy regarding the completion of the construction works.



Schedule	Condition	Requirement (Summary)	Comment
5	8	Within three months from the date of the approval of MOD 3 the Proponent must make the following information (unless commercially sensitive) freely available on a publicly accessible website, as it is progressively required under the approval:  (a) all current statutory approvals, including this approval and any modifications to it;  (b) plans and programs required under this approval;  (c) technical analysis/reports of monitoring results, which have been reported in accordance with the various plans and programs approved under the conditions of this approval;  (d) a complaints register, which is to be updated on a monthly basis;  (e) a copy of any review as required under Condition 3 of Schedule 5 (over the last five years);  (f) updates on the progress of the construction works associated with MOD 1; MOD 2 and MOD 3 and  (g) any other material as required by the Secretary	Auditor did not deem Elf was complying with (c) technical reports being freely available. Annual Biofilter Testing reports for 2021 and 2022 and the 2021 IEA were not located on Elf Farm Supplies website under Environmental Reporting.  The above reports are located on the website but the public would need to search for them as they are located in AEMRs.  Action: Elf to update website and uploaded all IEAs and all Annual Biofilter Testing reports to the website under Environmental Reporting.  Condition 8(f) was also not complied with. Construction updates ceased in March 2018 however, construction was completed in June 2018 but no update has occurred.  Action: Elf to update the Community as per the strategy regarding the completion of the construction works.



# 3.5 Previous Audit Recommendations

**Table 5** summarises the recommendations made in the 2016 IEA and provides an updated on whether ELF implemented the recommendations, if it is still outstanding (ongoing), or Elf decided not to proceed. Table 6 summarises the recommendations made in the 2019 IEA and Table 7 summarises the recommendations made in the 2021 IEA.

Table 5 2016 IEA Recommendations

2016 Recommendation	Update	Status
Hold discussions with the Department of Planning and seek amendment to the Conditions of Approval and remove the necessary to have formal Environmental Management Strategy and have it replaced with a modified environmental management system.	Elf held discussions on 30 November 2016 with the Department to confirm that using an EMS framework to address all the elements of the condition would be acceptable.  Elf anticipated completion date was 21 April 2017. This was not achieved and still on-going. Closed as Elf is not pursuing this.	Closed
SLR recommends that a formal document control procedure and register be developed for all environmental (and possibly quality and health and safety) procedures, forms, guidelines, plans etc for the site.	The existing safety document control procedure and register was to be adapted.  Elf anticipated completion date was 20 March 2017. This was not achieved and still on-going.  Elf advised they are satisfied with current system no changes to be implemented.	Not implemented and closed
CEMP to be reviewed and updated to include Statement of Commitments which have not been incorporated.	Elf agreed to this recommendation originally. However not implemented prior to construction being completed and hence CEMP no longer required.	Not implemented and closed
Update the Environmental Site Inspection Checklists to include requirements from Schedule 3, Condition 8.  (a) all areas are maintained in a condition to minimise the emission of wind-blown or traffic-generated dust	Recommendation implemented. Revised Environmental Site Inspection Checklist sighted.	Implemented and closed
Update Environmental Site Inspection Checklists to reflect key actions/measures outlined in the CEMP or alternatively development CEMP Audit Checklist which is more detailed and undertaken once a month.	Recommendation implemented. Revised Environmental Site Inspection Checklist sighted.	Implemented and closed
Complaints procedure - update the Complaints procedure to include documenting corrective action taken and root cause analysis where applicable (Section 6.4.3 of the procedure).	Decision was made not to implement this recommendation.	Not implemented and closed
The Complaints Line form to be updated to include other potential complaints (dust, lighting, other) and section for corrective action to be completed/taken if complaint is legit and Elf is the source. Alternatively, this could be documented/incorporated into the Non-compliance Form.	Recommendation implemented. Revised Complaints Line form sighted.	Implemented and closed



2016 Recommendation	Update	Status
Update Section 7.3 of the <i>Mushroom Substrate Plant</i> , <i>Mulgrave, Environmental Management Strategy, Report</i> 134R2, May 2012, which outlines noise monitoring requirements during operational phase. The table in Section 7.3 is now outdated as noise criteria has changed at several locations and this section of the Strategy needs to be updated to reflect Condition 19 limits.	Recommendation implemented. Revised Environmental Management Strategy, dated 16 January 2017 sighted. However, Section 7.3 does not have the current noise levels specified.	Closed as updated Strategy has been reviewed as part of 2023 IEA audit.
When the Operational Noise Management Plan Substrate Plant Mulgrave, 42.6411.ONMP_Mul:CFCD5, Rev 2 is updated as per Condition 22B it is recommended that a section on the noise mitigation measures that will be implemented during the operation of the facility once the Project (MOD 1) is completed to minimise noise from the operation.	Recommendation implemented. Revised Operational Noise Management Plan, dated 26 June 2018, sighted.	Implemented and closed
Recommend all emergency scenarios in the Pollution Incident Response Management Plan (PIRMP) are tested at least annually.	Elf incorporated into the projects compliance tracking and tasks management log. Evidence sighted of annual test.	Implemented and closed
<ul> <li>Update Elf's NON-COMPLIANCE FORM to include:</li> <li>Name of person writing up non-compliance;</li> <li>Unique non-compliance referencing number (as per incident reporting);</li> <li>Name of person responsible for implementing corrective action and proposed due date;</li> <li>A "root cause analysis" section; and</li> <li>A "Closed Out" section, where person has reviewed that all corrective actions were implemented and determines if the action were successful (need to document evidence). Need name and date of person who has signed off that the non-compliance had been adequately addressed.</li> </ul>	Implemented.	Implemented and closed
SLR recommends a non-compliance log (simply excel spreadsheet) to be developed to record non-compliances. For example: Incident No. Date. Nature of Non-compliance.	Implemented.	Implemented and closed

### Table 6 2019 IEA Recommendations

2019 Recommendation	Update	Status
Ensure that the critical spares for machinery and equipment relating to the new facility is obtained from Europe as soon as possible.	Elf Farm Supplies advised this occurred and now considered closed.	Closed
Elf to implement a system to ensure compliance with meeting reporting requirements.	Elf has a projects compliance tracking and tasks management log.	Closed
Elf to specify what is considered to be a "high rainfall" event and document that in the Water Management Plan and ensure the Department is notified accordingly.	Elf advised no longer applicable as additional balance tanks have been installed.	Closed
Elf to update the Community as per the Community Consultation strategy regarding the completion of the construction works.	Not completed.	Closed
Elf to update their website as per the requirements of Schedule 5, Condition 8.	Elf agreed with recommendation and uploaded documents.	Closed



2019 Recommendation	Update	Status
Environmental Management Strategy, Section 7.3, needs to be updated to reflect the current criteria.		
Environmental Management Strategy including appendices need to be reviewed and updated	Elf completed review and update of the EMS in June 2022 which was subsequently accepted by DPE 9 September 2022.	Closed
Update the Water Management Plan to include the two additional 100,000 litres tanks recently installed to assist with managing the site water and wastewater.	Completed when Water Management Plan amended for MOD 3 application.	Closed
Update the Odour Management Plan to include the covering and extraction of air from the western pit to the biofilter control system and the additional tanks.	Not completed.	Closed

### Table 7 2021 IEA Recommendations

Recommendation	Justification	Update	Status
AEMR – do not use administrative non-compliance in Compliance Table	The use of Administrative non- compliance is not permitted under the NSW Government, Requirement 1, Compliance Reporting – Post Approval Requirements, May 2020.	Review of 2021 and 2022 AEMRs still had Administrative non- compliance (page 8 – 2021 report and 11 – 2022 report)	On-going
AEMR – add additional one line in each Management and Monitoring section  - Reference the Management Plan/Strategy which addresses this matter	The letter from the Department of Planning and Environment dated 28 October 2018 required (item 2) Brief summarises on the effectiveness of the management plans applicable to the Substrate plant. Including the reference to the relevant plan or strategy would ensure compliance with this requirement.	Review of 2021 and 2022 AEMRs has line item – trend, key management actions and another line proposed management actions. Both AEMRs accepted by DPE. Considered closed.	Completed and closed.
AEMR – include aerial photograph of the site showing the operational disturbance footprint.	Ensure compliance with the letter from the Department of Planning and Environment dated 26 October 2018 (item 5).	Review of 2021 and 2022 AEMRs showed this has not been completed.	On-going
AEMR – include Appendix which has Compliance table as per Department Compliance Reporting – Post Approval Requirements document which covers ALL conditions	Ensure compliance with the letter from the Department of Planning and Environment dated 26 October 2018 (item 6).	Review of 2021 and 2022 AEMRs showed this has not been completed.	On-going
AEMR – include Appendix Department of Planning – Annual Review letter (26 October 2018)	Ensure compliance with the letter from the Department of Planning and Environment dated 26 October 2018 (item 7).	Review of 2021 and 2022 AEMRs showed this has not been completed.	On-going



Recommendation	Justification	Update	Status
AEMR – include a section in the main report Action items from the previous AMER and provide update on status	This is to ensure that Elf is continuously improving and does not miss implementing actions from the previous 12 months.	Review of 2021 and 2022 AEMRs showed this has not been completed.	On-going
AEMR – include section under Section 4 relating to annual testing of the PIRMP.	To act as a reminder to Elf to undertake annual testing of the PRIMP as required by the EPA and record compliance with this requirement in the AMER as it is a regulatory requirement.	Review of 2021 and 2022 AEMRs showed this has not been completed.	On-going
2019 Outstanding Recommendations			
Environmental Management Strategy, Section 7.3, needs to be updated to reflect the current criteria.	The Operational Noise Management Plan refers to in Section 2.1 the Department of Planning replacing the noise assessment objectives set out in Condition 19 of Schedule 3. Evidence of this change sighted in Modification of Minister's Approval issued on 14 March 2016 for Project Approval MP 08_0255.	Strategy was updated in June 2022 but the Table was removed completely however Section 5.2.1 states Condition 19 specifies operation noise criteria that are reproduced in Section 7.3	Closed as will be addressed in 2023 IEA recommendations.
Environmental Management Strategy including appendices need to be reviewed and updated		Strategy was updated in June 2022	Closed
Update the Water Management Plan to include the two additional 25,000 litres tanks recently installed to assist with managing the site water and wastewater.	To ensure that the Water Management Plan reflects all current practices on site to manage water.	Not completed. Elf advised that any change even minor means approval for the update Plan is required from the Department. Elf to update when MOD3 occurs.	Closed
Update the Odour Management Plan to include the covering and extraction of air from the western pit to the biofilter control system and the additional tanks.	To ensure that the Odour Management Plan reflects all the current practices on site for managing odour.	Not completed and given Odour Management Plan was updated in January 2023 it is being recorded as not implemented and closed.	Closed
Develop and implement a modified environmental management system.	This was a recommendation from 2016 IEA that Elf agreed to implement and is still ongoing.	Elf satisfied with current system. Not implemented and closed.	Closed
SLR recommends that a formal document control procedure and register be developed for all environmental (and possibly quality and health and safety) procedures, forms, guidelines, plans etc for the site.	This was a recommendation from 2016 IEA and 2019 IEA that Elf agreed to implement and is still ongoing.	Not implemented.	Closed
Implementation of the recommendations from the Odour Emissions and Biofilter Control System audit.	To assist with maintaining compliance with the EPA requirements of managing offensive odours beyond the boundary.	Not implemented.	Closed



# 3.6 Review of Plans, Sub-Plans

During the audit, the auditor sighted and reviewed a number of Annual Environmental Management Reports (AEMRs), environmental management plans including but not limited to the Operational Noise Management Plan, Water Management Plan, Odour Management Plan and the Environmental Management Strategy for the Site. It is clear that the plans and Strategy have evolved over a number of years in line with the Conditions of Approval granted by the Department of Planning in 2012 and then MOD 1. The Environmental Strategy has been updated since the last IEA period, June 2022.

#### 3.7 Environmental Performance

#### 3.7.1 Summary

A review was undertaken of the following information:

- Monitoring reports
- Two Annual Environmental Management Reports (AEMR) prepared for the site by Elf covering the periods:
  - September 2020 to August 2021; and
  - September 2021 to August 2022.
- EPA correspondence
- Complaints Register

Overall, the environmental performance of the facility has improved since the last IEA gauged on the number of non-compliances identified in the IEA and the investments in new infrastructure over the 2 year period. The number of complaints has significantly reduced (as outlined in Section 4.3.6 Tables 11 and 12 and this is supported by the annual odour monitoring of the biofilter and odour field surveys conducted in 2019 and 2020 (Odour Audit – Appendix C). This improvement is also reflected in the EPA EMC and overall environmental risk which is now at the lowest (best) level possible.

All EPL and Project Approval monitoring required in 2021 and 2022 (odour monitoring) has been carried out and compliance achieved.

In response to the AEMR submitted to the Department covering the reporting period of September 2017 to August 2018, the Department requested additional information be incorporated into future reports. This was specified in a letter dated 26 October 2018.

**Table 8** summarises the additional requirements and whether the additional requirements were incorporated into the AEMRs for 2021 and 2022.



Table 8 Department of Planning and Environmental – Additional Requirements for AEMR

Planning Requirement	2021 AEMR Compliance	2022 AEMR Compliance
A production and dispatch summary for the Substrata Plant consistent with Table 1 in Attachment 1	Yes – Table C – Section 5	Yes – Table C – Section 5
Brief summaries on the effectiveness of the management plans applicable to the substrate plant. Please include details of any improvement measures that Elf Farm proposes to undertake with respect to its management plans in the next reporting period	Yes – Sections 4.3 to 4.8	Yes – Sections 4.3 to 4.8
A title block at the beginning of the annual review that is consistent with Table 2 in Attachment 2	Yes – page i	Yes – Page i
Contact details of key personnel who are responsible for the environmental management of the site in the introduction section of the report.	Yes – Section 2 Introduction	Yes – Section 2 – Introduction
Maps and aerial photography of the main body of the annual review showing the operational disturbance footprint and offset areas	No – no map or aerial photograph in main body of the report. It is noted that the Project Approval conditions in Appendix A has some site layouts as an appendix	No – no map or aerial photograph in main body of the report. It is noted that the Project Approval conditions in Appendix A has some site layouts as an appendix
Summaries table assessing the compliance status of all conditions of the approval as an attachment to annual review and not in the main body of the report. The summaries table should be consistent with the Attachment A – Compliance Table Example in Compliance Reporting Post Approval Requirements.	Yes – IEA Report included as an Appendix	No
A copy of this letter as an attachment to the main report	No	No

#### 3.7.2 **Noise**

As outlined in Section 3.2.2, the site operates under EPL 6229, under the EPL there is no specific noise monitoring requirements.

Section 6.1 Noise Monitoring of the approved Operational Noise Management Plan states:

Schedule 3 – Condition 22 requires noise monitoring to evaluate noise compliance. Accordingly this ONMP recommends that noise monitoring be incorporated into the site Environmental Management Plan.

The Atkins Acoustics' report recommends that within six (6) months of completion of each stage of the proposed upgrade of the substrata plant, noise monitoring be conducted at two (2) reference locations consistent with the closest residential receivers identified in Table 1, specifically Chisholm Place to the west and Railway Road/126 Mulgrave Road to the south-east. Where access to the identified receiver is not practical, alternative locations representative of the subject receiver/s could be considered.

Where practical, near-field measurements of fixed and mobile plant and equipment would also be conducted within six (6) months of completion of each stage of the proposed upgrade or when there is significant changes to site plant, to ensure compliance.



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Noise measurements were undertaken at the end of the previous IEA period and it noise levels were deemed to be complying with Condition of Approval noise limits. As no other stage of the proposed upgrade of the substrata plant has occurred in this reporting period and no noise complaints received, there has been no noise monitoring conducted during this period.

It was noted by the auditor that Elf self reported a non-compliance with Schedule 3 Condition 21A in the 2022 AEMR. The non-compliance related to the removal of the temporary noise wall (made up of hay bales). A number of hay bales were removed and used on site due to shortage of straw (hay bales) due to floods. As soon as the supply increased the section of the noise barrier removed was re-built.

During the audit it was noted that the noise barrier was built.

#### 3.7.3 Water and Stormwater Management (including irrigation management)

As outlined in Section 3.2.4, Elf Farm Supplies continues to operate in accordance with the facility's Water Management Plan. Irrigation has continued to occur as per Section 4.5.2 of the Plan.

Elf increased on-site storage of first flush system by another 50,000 litres during the reporting period.

No incidents of water pollution have been recorded in this reporting period.

#### 3.7.4 Flooding

Part of the site is located on a flood plain (as shown in Figure 1 of the Water Management Plan). The plant was constructed on a filled platform raised to 16 metres AHD to provide protection against most floods. The 100 Year ARI flood level is stated by Hawkesbury City Council to be 17.3 metres AHD. The plant can continue to operate during times of minor flooding, when the levels remain below the bench height of the plant. For example, this occurred during the Hawkesbury floods in the first quarter of 2022. If there is a major flood the facility implements the procedures outlined in the Environmental Management Strategy.

#### 3.7.5 Erosion and Sediment Controls

Erosion and sediment controls were required to be specified in the Construction Management Plan for the MOD1. This project this now complete. The Water Management Plan outlines how stormwater is managed on site to minimise potential for erosion to occur. During the audit, the irrigation area had no bare patches and there was no evidence of erosion issues.

#### 3.7.6 Hazards – Fuels and Chemicals

As outlined in the Environmental Management Strategy, the facility stores fuels on site (above and below ground) to enable machinery to be refuelled on site when required. Refuelling areas are bunded to collect any spillage and there a canopy over the above ground tank to prevent the bunded area from being filled with rainwater. There are also appropriate spill kits are available.

No chemicals are used in the production process. The only chemicals stored on site various cleaning chemicals, pesticides. A register of the dangerous goods is contained in the site's Dangerous Goods manifest.

#### 3.7.7 Visual

Elf Farm Supplies have planted a large number of native trees and shrubs around the plan to provide screening from adjacent roads. As the trees and shrubs continue to grow the visibility of the plant will be reduced.



#### 3.8 Consultation Outcomes

Condition 3A(b) requires the independent auditor to consult with the relevant agencies during the IEA of the Project. SLR contacted the DPE, EPA and Hawkesbury City Council.

Refer to Appendix D for extracts from the correspondence received.

### 3.9 Complaints Summary

No complaints have been recorded by Elf during this IEA period. Three complaints were received by the EPA regarding alleged odour coming from Elf operations. These were investigated by Elf and report supplied to the EPA.

EPA advised via email the following on 19 October 2022

As discussed on the day, the EPA note that the main source of odour observed at the premises during the inspection was from the emergency dam water. The EPA understand that this dam was breached during recent flood events and the odours are likely a result of this flood water. This flood water may have been impacted by the nearby sewage treatment plant, and the dam has potentially become anaerobic due to the excessive nutrient load. It is also noted that leachate from the biofilter flows into the dam and is an ongoing operational source of inflow into the dam.

Elf engaged a third party to assist in odour management controls for the Western Dam and by 31 October 2022 they had implemented the recommendations of the third party and installed a surface aerator and applied Biostim powder. The details were emailed to the EPA on 31 October 2022. No further complaints have been received by Elf or the EPA.

The auditor sighted the aerator and was advised that the powder is being used.

Elf Farm Supplies has an established and well document complaints procedure. SLR noted that complaints are recorded and investigated as per their EPL requirements.

#### 3.10 Incidents

No environmental incidents were recorded during this IEA period for the site. A high level of environmental management was observed. Note the auditor does not consider notification for emergency use of the western dam as an environmental incident, as use of the dam is permitted under certain circumstances.

# 3.11 Site Inspection

Refer to detailed **Appendices A and C** for observations made during the site inspection, while **Appendix B** contains photographs taken during the site inspection.

#### 3.12 Site Interviews

**Table 9** lists the personnel interviewed during the site visit component of the audit.



#### Table 9 Personnel Interviewed During the Audit

Name	Title
Blake Edwards	WHS & HR Manager
David Tolson	General Manager

The interviews conducted allowed the auditor to form the opinion that the approach to environmental management and environmental controls (and operations more broadly) is well understood by senior staff.

# 3.13 Key Strengths

The following strengths in terms of environmental management were identified:

- Commitment from senior management to protection of the environment;
- Resources dedicated to environmental management within the business;
- Knowledge of senior management of their environmental management processes;
- Well established and documented plans;
- Regular inspections of key environmental issues; and
- Well established environmental training for employees and contractors.



# 4 Recommendations

# 4.1 Non-compliances

**Table 10** summarises the non-compliances identified during the audit against the DA conditions and puts forward recommendations for Elf Farm Supplies to consider to assist in resolving these if action is required.

Table 10 Recommendations to Address Non-compliances with Project Conditions

Schedule	Condition	Topic of Non-Compliance	SLR Recommendation (Actions)
5	3	AEMR not including DPE requirements	Prepare template AEMR and have it reviewed to ensure covers all element of DPE letter dated October 2018 as well as letters from DPE.
5	7 and 8	Community Consultation Strategy implementation	Elf to update the Community as per the strategy regarding the completion of the construction works.
5	8	Make freely available on a publicly accessible website	Elf to update website and uploaded all IEAs and all Annual Biofilter Testing reports to the website under Environmental Reporting.

# 4.2 Plans and Procedures - Opportunities for Improvement

**Table 11** summarises other recommendations that have come from reviewing Elf's AEMR's, Environmental Management Strategy, Plans, procedures and associated forms.

Table 11 Recommendations for Improvement for Plans and Procedures

Recommendation	Justification
AEMR – do not use administrative non-compliance in Compliance Table	The use of Administrative non-compliance is not permitted under the NSW Government, Requirement 1, Compliance Reporting – Post Approval Requirements, May 2020.
AEMR – add additional one line in each Management and Monitoring section - Reference the Management Plan/Strategy which addresses this matter	The letter from the Department of Planning and Environment dated 28 October 2018 required (item 2) Brief summarises on the effectiveness of the management plans applicable to the Substrate plant. Including the reference to the relevant plan or strategy would ensure compliance with this requirement.
AEMR – include aerial photograph of the site showing the operational disturbance footprint.	Ensure compliance with the letter from the Department of Planning and Environment dated 26 October 2018 (item 5).
AEMR – include Appendix which has Compliance table as per Department Compliance Reporting – Post Approval Requirements document which covers ALL conditions	Ensure compliance with the letter from the Department of Planning and Environment dated 26 October 2018 (item 6).
AEMR – include Appendix Department of Planning – Annual Review letter (26 October 2018)	Ensure compliance with the letter from the Department of Planning and Environment dated 26 October 2018 (item 7).
AEMR – include a section in the main report Action items from the previous AMER and provide update on status	This is to ensure that Elf is continuously improving and does not miss implementing actions from the previous 12 months.
AEMR – include section under Section 4 relating to annual testing of the PIRMP.	To act as a reminder to Elf to undertake annual testing of the PRIMP as required by the EPA and record compliance with this requirement in the AMER as it is a regulatory requirement.
2019 Outstanding Recommendations	

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Recommendation	Justification
Environmental Management Strategy, Section 7.3, needs to be updated to reflect the current criteria.	The Operational Noise Management Plan refers to in Section 2.1 the Department of Planning replacing the noise assessment objectives set out in Condition 19 of Schedule 3. Evidence of this change sighted in Modification of Minister's Approval issued on 14 March 2016 for Project Approval MP 08_0255.
Environmental Management Strategy including appendices need to be reviewed and updated	For examples, Sections 4.3, 5.2.2, 5.3, 5.9.3, 7.2, 7.3 and 8.2 are not current. The Figures in the Strategy should also be updated. Reporting section of the report needs to be updated to include the additional information that the Department of Planning and Environment requires in the Annual Management Environmental Review report as per their letter dated 26 October 2018.  Appendices to be updated to ensure personnel have current plans and licences to refer to and ensure correct management practices and procedures are followed.  Appendix A has obsolete EPL, Appendix C has obsolete Water Management Plan, Appendix D has obsolete Operational Noise Management Plan. Appendix E has obsolete Odour Management Plan.
Update the Water Management Plan to include the two additional 25,000 litres tanks recently installed to assist with managing the site water and wastewater.	To ensure that the Water Management Plan reflects all current practices on site to manage water.
Update the Odour Management Plan to include the covering and extraction of air from the western pit to the biofilter control system and the additional tanks.	To ensure that the Odour Management Plan reflects all the current practices on site for managing odour.

Note: The auditor acknowledges that each time Elf updates a Management Plan for the site, Elf is required to seek approval from the Department. This process is time consuming as such the recommendation made in Table 11 regarding updating the Strategy and management plans will be completed when Elf submits it next Modification.

# 4.3 Additional Opportunities for Improvement

**Table 12** summarises additional opportunities for improvement suggested for consideration by Elf to aid in environmental management on site and reduce the risk for potential environmental harm.

Table 12 Additional Recommendations and Opportunities for Improvement

Opportunities / Recommendations	Justification
Document Management Index – create a separate tab for Environment Documents and include the Environmental Management Strategy and all the management plans developed for the site, as well as a last reviewed date column	The current Document Management index does not include any of the management plans for the site, odour, noise, water nor the Environmental Management Strategy. Having documents listed enables Elf to know all the relevant plans and strategies which are to be implemented, the last version number and last review date.
Western Dam usage. When the Western Dam receive water as per the management plan and the EPA and DPE are to be notified, recommend that these are called "Notifications" reports and not "Incident" reports	There are not incidents.



# 5 Conclusions

The Project Approval MP 08\_0255 consists of 120 conditions in total. This IEA covers the period from 13 March 2021 to 12 March 2023. The audit was carried out in August and September 2023, with SLR being supplied information as requested.

Of the 120 Conditions, 81 (68%) were considered not triggered. Note this number is considerably higher than the previous two IEA reports, this is a result of auditor including the mushroom farm Schedule 4 conditions (38) and previously "closed" conditions now categorised as not triggered.

Of the 120 conditions, 39 were audited, of the 39 auditable conditions, compliance was achieved for 33 (85%), non-compliance recorded for 6 conditions (15%). It is noted that one of the non-compliances related to two odour complaints related to the western dam which the EPA believes was caused by nutrient rich flood waters entering the western dam during floods. All other non-compliances were assessed to be of a low risk.

85% is a slight decrease from the 87.8% compliance recorded in 2021 IEA but will still a marked in improvement on the 70% compliance achieved in 2019 IEA and 61% in the 2016 IEA.

During the process, a high degree of senior management commitment at Elf to minimising the impact on the environment was evident. Elf was commended for their proactive nature on managing environmental matters. During the audit, Elf management appeared receptive and encouraged the auditor to identify opportunities for improvement.

Elf has also demonstrated continuous environmental improvement during this IEA reporting period by installing surface aerator and applying Biostim powder to the western dam to ensure it remains aerobic, installing additional balance tanks to assist with water and odour management on-site, changing the biofilter media and installation of solar panel system.

In conclusion, the environmental performance of the site has remained stable since the completion of construction and commencement of the odour control system.



# **APPENDIX A**

**Detailed Audit Findings** 



08\_255 MOD 1 – Approved 14 March 2016

08\_255 MOD 2 – Approved 4 November 2019

08\_255 MOD 3 – Approved 16 March 2020



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#### Schedule 2 of MOD 1 – Administrative Conditions

**Table 13 Administrative Conditions** 

Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
Obligation to	o minimise harm to the environment			
1	The Proponent must implement all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the construction, operation or decommissioning of the Project.	Interview: General Manager – advised all measures have been implemented thus far to prevent harm to the environment.	<ul> <li>Elf Farm Supplies Mushroom Substrate         Facility – Annual Environmental         Management Review, Mulgrave, NSW,         Revision 0, September 24 2021, prepared         by Elf Farm Supplies Pty Ltd.</li> <li>Elf Farm Supplies Mushroom Substrate         Facility – Annual Environmental         Management Review, Mulgrave, NSW,         Revision 1, October 11 2022, prepared by         Elf Farm Supplies Pty Ltd.</li> <li>DPE letter dated 14 December 2022 –         Warning Letter – breach of Schedule 3         Condition 21A – removal of hay bales from         the temporary noise wall.</li> <li>DPE letter dated 21 December 2021 –         Warning Letter – breach of Schedule 3,         Condition 23 – Failure to establish riparian         corridor and Schedule 5, Condition 4(d) –         failure to review EMS.</li> <li>EPA Environmental Risk Assessment -         Assessment No. 4014836 Total Calculated         Risk Score – 40 Overall Regulatory Priority         – Low</li> <li>EPA Environmental Management Category         – Assessment No. 4018173, Assessment         Period – 20/5/2019 to 19/5/2022 – Total         Score of Environmental Management – 0 –         Environmental management category A</li> </ul>	Compliant

			Category A is Level 1 taking into account Low overall priority under Section 5.1 – Level 1 licences – low-risk and good environmental performers.  • EPA Licensing guidelines – Environmental risk levels – March 2022.  No penalty notices have been issued to Elf in the past two reporting periods by either the EPA or Planning.  No letters received from EPA or Planning concerning any environmental incidents that could cause harm to the environment.	
Terms of App	The Proponent must carry out the Project in accordance with the  (a) EA;  (b) Statement of commitments (See Appendix 1);  (c) Site layout plans and drawings in the EA;  (d) MOD 1  (e) MOD 2; and  (f) MOD 3	Site inspection – MOD 1 completed generally in accordance with the plan.  MOD 1 construction completed on 3 October 2018.  MOD 3 has not commenced.  Interview – Administration Manager	<ul> <li>Elf Farm Supplies, Staged Development of Mushroom Substrate Plant, Construction Environmental Management Plan, Revision No.1 July 2016, Prepared By Perram &amp; Partners.</li> <li>2015 EA Titled Mushroom Substrate Plant Modification to Approved Project, Environmental Assessment (Perram &amp; Partners, February 2015)</li> <li>Other documents sighted included:         <ul> <li>Elf Farm Supplies Pty Ltd and Elf Mushrooms Pty Ltd Mushroom Expansion in Western Sydney, Preliminary Environmental Assessment, Perram &amp; Partners, November 2008 121R1.</li> <li>Elf Farm Supplies Mushroom Substrate Facility – Annual Environmental Management Review, Mulgrave, NSW, Revision 0, September 24 2021, prepared by Elf Farm Supplies Pty Ltd.</li> <li>Elf Farm Supplies Mushroom Substrate Facility – Annual Environmental</li> </ul> </li> </ul>	Compliant

			Management Review, Mulgrave, NSW, Revision 1, October 11 2022, prepared by Elf Farm Supplies Pty Ltd.  No penalty notices have been issued to Elf in the past two reporting periods by either the EPA or Planning.  No letters received from EPA or Planning concerning any environmental incidents that could cause harm to the environment.	
3	If there is any inconsistency between the above documents, the conditions of this approval must prevail to the extent of any inconsistency.			Not triggered.
4	The Proponent must comply with any reasonable requirement/s of the Secretary arising from the Department's assessment of:  a) any reports, plans, strategies, programs or correspondence that are submitted in accordance with this approval; and b) the implementation of any actions or measures contained in these reports, plans, strategies, programs or correspondence.	Interviews - General Manager, WHS Manager provided evidence of meeting requests from the Department. For example submitting documents on time. Started submitting on-line for 2020 AEMR. Managers did state that Department does not provide any notification back to Elf that it was received, hence no evidence available.	<ol> <li>Documents viewed:</li> <li>Proponents to submit all post approval and compliance documents online, via the Major Projects Website.</li> <li>Elf Farm Supplies website review - AEMRs and IEA reports, Elf responses sighted.</li> </ol>	Compliant
5	This approval must lapse if the Proponent does not physically commence the proposed development association with this approval within 5 years of the date of this approval.	Site inspection – MOD1 EA - civil works began on 22 August 2016.	Modification of Minister's Approval, dated 14 March 2016, Project Approval: MP 08_0255 granted by the Minister for Planning on 11 January 2012, Modification Number MP 08_0255 MOD 1.	Compliant
Limits of Ap	proval			
6	<ul> <li>(1) The Proponent must ensure that the Project on the Substrate Plant site does not:</li> <li>a) Product more than 3,200 tonnes per week of phase 1 substrate; subject to (2) below and</li> <li>b) Dispatch more than 1,920 tonnes of phase 3 substrate per week</li> </ul>		Documentation viewed:  Planning letter dated 31 October 2019 – Approval to increase production Phase 1 substrate to 2,400 tonnes per week.  Excel production data spreadsheet supplied by Elf.	Compliant

			Phase 1 – Average weekly tonnes per week for the period March 2021 to March 2023 – 1,924 tonnes per week Phase 3 – Average weekly tonnes per week sold for the period March 2021 to March 2023 was 1052 tonnes per week.	
	(2) The proponent must not produce on the Substrate Plant site more than 1,000 tonnes of phase 1 substrate per week except in accordance with a staged approval granted by the Secretary in accordance with condition 7 Schedule 2 below.		Documentation viewed:  Planning letter dated 31 October 2019 – Approval to increase production Phase 1 substrate to 2,400 tonnes per week.  Production data for Phase 1 substrate from April 2019 to the end of February 2021.	Compliant
7	(1) The Proponent may apply to the Secretary for approval to increase production of substrate up to the rate of 1,600 tonnes of phase 1 substrate a week on the Substrate Plant site if – a) The Odour Management Plan required under condition 6 of Schedule 4 has been prepared to the satisfaction of the Secretary and is being implemented; and b) An independent odour audit has been prepared and submitted in accordance with Condition 5 of Schedule 3.	Notes – original conditions. Note conditions referenced no longer exist. The condition should read Condition 4 of Schedule 4 not condition 6.	This condition related to previous IEA.	Not triggered
	(2) The Proponent may apply to the  Secretary for approval to increase production of substrate up to the rate of 2,400 tonnes of phase 1 substrate a week on the Substrate Plant site if – a) The site has been producing phase 1 substrate at a rate between 1,500 and 1,600 tonnes per week in accordance with an		Documentation viewed:  Planning letter dated 31 October 2019 – Approval to increase production Phase 1 substrate to 2,400 tonnes per week.	Compliant

approval granted by the Secretary under this condition; and b) An independent audit of the site operating in this range has been prepared and submitted in accordance with Condition 5(c) of Schedule 3.  Production of up to 2,400 tonnes of phase 1 substrate a week may not occur until the Proponent has received written approval of the Secretary.			
(3) The Proponent may apply to the Secretary for approval to increase production of substrate up to the rate of 3,200 tonnes of phase 1 substrate a week on the Substrate Plant site if – c) The site has been producing phase 1 substrate at a rate between 2,300 and 2,400 tonnes per week in accordance with an approval granted by the Secretary under this condition; and d) An independent audit of the site operating in this range has been prepared and submitted in accordance with Condition 5(c) of Schedule 3.  Production of up to 3,200 tonnes of phase 1 substrate a week may not occur until the Proponent has received written approval of the Secretary.	Not applicable.	Not applicable.	Not triggered
(4) In deciding whether to approve an increase in substrate production under this condition, the Secretary must:	Not applicable.	Not applicable.	Not triggered

This condition related to previous IEA (2019).  Unless otherwise agreed in writing by the Secretary, the Proponent must ensure that the work associated with MOD 1, with the exception of the additional Phase 2/3 tunnels and the prewet tunnels to be constructed as part of Stage 3 (as identified on the plan in Appendix 2) has been constructed and is operating within two years from the date of the approval of MOD 1.  Nothing in this approval permits the construction of the landscaped mound along the Substrate Plan site's western boundary identified in the letter from WMA Water dated 21 January 2016.  Mushroom Farm Site  The Proponent must ensure that the Mushroom Farm site does not produce more than 220 tonnes mushrooms production levels and details of the break-down of the total volume distributed must	
of the landscaped mound along the Substrate Plan site's western boundary identified in the letter from WMA Water dated 21 January 2016.  Mushroom Farm Site  The Proponent must ensure that the Mushroom Farm site does not produce more than 220 tonnes mushrooms per week. Records of weekly mushroom production levels and details of the  progress.  Interview: WHS & HR Manager advised in writing in March 2023 that the mushroom farm has not been constructed.  Not triggered.  Not triggered.	Not triggered
The Proponent must ensure that the Mushroom Farm site does not produce more than 220 tonnes mushrooms per week. Records of weekly mushroom production levels and details of the	Not triggered
Farm site does not produce more than 220 tonnes mushrooms per week. Records of weekly mushroom production levels and details of the	
be kept on site at all times and made immediately available to the Secretary on request.	Not triggered.



9	The Proponent must surrender all existing development consents in accordance with Clause 97 of the EP&A Regulation for the land referred to in Schedule 1, within 12 months of commencement of Stage 1 operations, or as otherwise agreed by the Secretary.  Note: This requirements does not extend to the surrender of construction and occupation certificates for existing and proposed building works under Part 4A of the EPA&A Act.  Surrender of a consent or approval should not be understood as implying that works legally constructed under a valid consent or approval can no longer be legally maintained or used.		This condition related to previous IEA (2016).	Not triggered
Transition	nal Arrangements			
10	All existing environmental management plans that apply to Substrate Plant site under DA No. 0623/02, DA No. 0571/06, DA No. 0921/06, DA No. 0701/07 and DA No. 0120/09 must continue to be fully applied until replaced under this approval.		All consents have been surrendered as per Condition 9. This condition considered closed.	Not triggered
Structura	l Adequacy			
11	The Proponent must ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures are constructed in accordance with the relevant requirements of the BCA.  Notes:  • Under Part 4A of the EP&A Act, the Proponent is required to obtain construction and occupation certificates for the proposed building works.  • Part 8 of the EP&A Regulation sets out the requirements for the certification of the Project.	WHS/HR Manager advised in writing in April 2023 that this project (MOD3) has not commenced.	This condition related to previous IEA (2019) and MOD3 construction has not commenced.	Not triggered

11A	The Proponent must ensure that any structures which require a relevant alternate solution developed to meet the performance requirements of the BCA must be designed in consultation with Fire and Rescue.	WHS/HR & Compliance Manager advised in writing in April 2023 that this project (MOD 3) has not commenced.	This condition related to previous IEA (2019) and MOD3 construction has not commenced.	Not triggered
Demolition	n			
12	The Proponent must ensure that all demolition work is carried out in accordance with Australian Standard AS 2601:2001: The Demolition of Structures, or its latest version.	Site inspection: Phase 1 tunnel and existing weighbridge sighted. No demolition of structures has occurred in this reporting period.	<ul> <li>Documentation viewed (reference only on what was proposed):</li> <li>Perram &amp; Partners, July 2016, Elf Farm Supplies, Staged Development Of Mushroom Substrate Plant, Construction Environmental Management Plan, Revision No1, 137R1.</li> <li>Section 2.2.2 states There is no significant demolition associated with the project. Minor demolition works including 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.</li> </ul>	Not triggered
Operation	of Plant and Equipment			
13	The Proponent must ensure that all plant and equipment used for the Project is:  a) Maintained in a proper and efficient condition and  b) Operated in a proper and efficient manner.	WHS/HR & Compliance Manager advised in August 2023 – 4 full time maintenance staff including Maintenance Manager, Elf manages plant and equipment via a number of mechanisms including:  • Equipment Register (since 2015)  • Daily maintenance records thru employee diaries  • Maintain a Major Plant Item spreadsheet  • Have Standard Operating Procedures (SOPs) for all major pieces of plant  • Training needs analysis process in place for personnel to ensure they are competent to operate plant and equipment.	<ul> <li>Master Document Management Index 2023 – includes Training Policy, Contractors Equipment Policy, Contractors Critical Rules Policy.</li> <li>Training Needs Analysis (TNA) records sighted for Steven Duff (Loader Operator) (December 2021), Elliot Black (Machine Operator) (March 2022) &amp; Justin Scott (General Hand) (June 2022).</li> </ul>	Compliant

Utilities				
14	Prior to the construction of any utility works, the Proponent must obtain the necessary approvals from relevant service providers.	WHS/HR & Compliance Manager advised in writing in April 2023 that no utility works has occurred during this IEA reporting period.		Not triggered
Submiss	ion of Plans or Programs			
15	With the written approval of the Secretary, the Proponent may:  a) Submit any reports, plans, strategies or programs required by this approval on a progressive basis; and  b) Combine any reports, plans, strategies or programs required for the Substrate Plant site with any similar reports, plans, strategies or programs for the Mushroom Farm site.  c) Separate any reports, plans, strategies or programs required for the Substrate Plant site with any similar reports, plans, strategies or programs for the Mushroom Farm site.		<ul> <li>Planning letter dated 31 October 2019 –         Approval to increase production Phase 1         substrate to 2,400 tonnes per week.</li> <li>Letter from Department of Planning and         Environment dated 20 December 2019         advising that the AEMR and IEA reviewed         both documents and is satisfied that they         meet the requirements of Schedule 5,         Condition 3 and 3A of the Consent.</li> </ul>	Compliant
16	Where conditions of this approval require consultation with an identified party, the Proponent must:  (a) Consult with the relevant party prior to submitting the subject document to the Secretary for the approval; and  (b) Provide details of the consultation undertaken, matters resolved and unresolved and  (c) Details of any disagreement remaining between the party consulted and the Proponent and how the Proponent has addressed the matters not resolved.	WHS/HR & Compliance Manager advised in writing in April 2023 that this project has not commenced.	This condition relates to MOD3 which was approved on 16 March 2020. This has not been triggered in relation to any new or amended plans.	Not triggered

### Schedule 3 – Specific Environmental Conditions

**Table 14 Specific Environmental Conditions** 

Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status			
Constructio	onstruction Environmental Management Plan						
1	The Proponent must 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 DPIE Water and the 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; including details of erosion and sediment control measures to be used on site  • A flora and fauna management plan • A heritage management plan; and		This condition related to previous IEA period (2016) and is now closed.	Not triggered			
	A waste management plan						
1A	The Proponent must update the CEMP required by Condition 1 of Schedule 3 to include the works associated with MOD 1. The updated plan must be submitted to and approved by the Secretary prior to the commencement of any construction works associated with MOD 1.  The revised CEMP must be implemented throughout the construction works.		This condition related to previous IEA period (2019) and is now closed.	Not triggered			

Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
1B	Prior to the commencement of the MOD 3 construction works, the Proponent must prepare an updated Construction Environmental Management Plan (CEMP) for the Substrate Plant site to the satisfaction of the Secretary. The updated CEMP must:  (a) Be prepared in consultation with the requirements of Schedule 3, Condition 1 and Schedule 5, Condition 2 of this Approval;  (b) Be prepared in consultation with Sydney Trains  (c) Detail the measures that are to be implemented to minimise the impacts associated with MOD 3 construction works and  (d) Include:  (l) Plans which confirm the stormwater management system will not result in ponding or stormwater impacts to the Rail Corridor and  (II) Certification from a suitably qualified and experienced geotechnical or structural engineer which confirms the construction of the noise barrier and filling of the open bale storage area will not impact upon the adjacent Rail Corridor.	WHS/HR & Compliance Manager advised in writing in April 2023 that this project has not commenced.		Not triggered
1C	The Proponent must:  (a) Not commence the MOD 3 construction until the updated CEMP is approved by the Secretary; and  (b) Implemented the most recent version of the updated CEMP approved by the Secretary for the duration of the MOD 3 construction works.	WHS/HR & Compliance Manager advised in writing in April 2023 that this project has not commenced.		Not triggered

Condition Requirement	Int	nterviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
·	use or permit the emission of substrate Plant Site, as defined DEO Act.		<ul> <li>Complaints Register on the Elf Farm Supplies website. No complaints have been received by Elf Farm Supplies during this reporting period.</li> <li>EPA email to Elf dated 6 September 2022, EPA received 2 reports alleging odour impacts from Elf Farms (31/8/22 and 5/9/22). Elf asked to investigate and provide EPA with information.</li> <li>Letter from Elf to EPA dated 7 September 2022 – response to EPA email re alleged odour complaints.</li> <li>Email from EPA to Elf dated 19 October 2022.</li> </ul>	Non-compliant

Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
3	Prior to the commencement of construction of the works associated with MOD1, the Proponent must commission and pay the full cost of an independent odour specialist to review the detailed design of the odour emissions plant and assess its capacity to meet the performance criteria within the Environmental Assessment for MOD1. The review must:  a) Be provided to the Secretary and the EPA within two weeks of finalisation of the review; and b) Be endorsed by the Secretary in consultation with the EPA prior to the commencement of construction of the works associated with MOD 1.  Should the review not certify that the odour emissions plant has the capacity to meet the performance criteria within the Environmental Assessment for MOD 1, then the Proponent must undertake additional design to meet the criteria, to the satisfaction of the Secretary within the timeframe specified by the Secretary. The additional design is to be endorsed by the independent odour specialist.		This condition related to previous IEA period.	Not triggered
3A	The Proponent must construct the odour emissions plant in accordance with the final design endorsed by the independent occur specialist required by Condition 3.		This condition related to previous IEA period (2019).	Not triggered
3B	Prior to the commencement of operation of the odour emissions plant, the Proponent must commission and pay the full cost of an independent odour specialist to certify that the 'as constructed' odour emissions plant has been undertaken in accordance with the final detailed design with reference to the Environmental Assessment for MOD 1 and the outcomes of Condition 3 of Schedule 3. A copy of the certification is to be provided to the Secretary and the EPA within one week of its finalisation.		This condition related to previous IEA period (2019).	Not triggered

Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
3C	The Proponent must implement all reasonable and feasible measures to ensure that all new structures are constructed to prevent corrosion from the atmosphere contained within those structures.		This condition related to previous IEA period (2019).	Not triggered
Odour Mana	agement Plan			
4	The Proponent must prepare and implement an Odour Management Plan for the Substrate Plant site to the satisfaction of the Secretary. This plan must:		This condition related to previous IEA reporting period (2016).	Not triggered
	(a) be prepared in consultation with the EPA by a suitably independent, qualified and experienced expert whose appointment has been endorsed by the Secretary;			
	(b) be submitted to the Secretary for approval within 3 months of the date of this approval;			
	(c) describe in detail the measures that would be implemented on site to minimise the odour impacts of the Project, such as storing the stable bedding in the prewet shed extension building in Stages 2 and 3, and to ensure that these measures remain effective over time;			
	<ul><li>(d) identify triggers for remedial and contingency action; and</li><li>(e) include a program for monitoring the odour impacts of the Project.</li></ul>			

Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
4A	The Proponent must update the Odour Management Plan for the Substrate Plant site, in consultation with the EPA, to the satisfaction of the Secretary. This plan is to update the plan approved under Condition 4 of Schedule 3 and must:  (a) be prepared a suitably independent, qualified and experienced expert whose appointment has been endorsed by the Secretary; (b) be submitted to the Secretary for approval within one month of the date of endorsement by the Secretary of the odour emissions plant design as required under Condition 3(a) of the approval; (c) identify of all major sources of odour; (d) include management measures to ensure no offensive odours from the Substrate Plant site; (e) include procedures for the monitoring of odour emissions, in accordance with the requirements of the Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales and any requirements of the EPA. The odour monitoring program must include, but not be limited to: i. results of the complaints handling system; and ii system and performance review for continuous improvement; (f) include odour management performance parameters that are consistent with the manufacturers' performance guarantees provided for the biofilter and scrubbers; (g) include measures to prevent and/or mitigate fugitive emissions; (h) include triggers for remedial and contingency action; (i) include contingency measures in the event of failure of any component of the odour emissions plant and biofilter system or identification of fugitive emissions from the facility. Contingency measures must include enclosing the West Water Recycle pit and treating the post 36 hour / emissions from the Phase 2/3 building via the ammonium scrubbers and biofilter.		This condition related to previous IEA reporting period (2016).	Not triggered

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Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status		
4B	The approval updated Plan (as revised and approved by the Secretary from time to time), must be implemented for the life of the Project as soon as written endorsement by the Secretary is received.	Auditor sighted odour controls in place during the inspection – ducting, negative pressure in buildings, scrubbers, biofilter.		Compliant		
Odour Emiss	Odour Emissions and Biofilter Control System Audit					

Condition Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
The Proponent must undertake an Odour Emissions and Biofilter Control System Audit to quantify the odour abatement efficiency of the odour emissions plant and assess the effectiveness of all other odour controls on th Substrate Plant site:  (a) within six weeks of the commissioning of the biofilter (b) within six weeks of the decommissioning of the bioscrubber;  (c) prior to the commencement of each increase in production, in accordance with Conditions 7(2) and 7(3) of Schedule 2;  (d) and as directed by the Secretary;  (e) each audit required under (a) to (d) inclusive, must:  i. be undertaken and prepared by a suitably qualified, experienced and independent expert whose appointment has been endorsed by the Secretary;  ii. be prepared in consultation with the EPA;  iii. report on the results of the source emissions sampling and analysis undertaken in accordance with the Odour Management Plan (required by Condition 4A of Schedule 3) or as otherwise agreed to in writing by the EPA;  iv. review the Proponent's production data (that are relevant to the audit) and complaints record;  v. review any complaints received during the relevant period;  vi. determine whether the Project is complying with condition 2 of Schedule 3; and, if necessary;  vii. recommend whether any additional management works and/or management practices are required to	WHS/HR & Compliance Manager confirmed this Condition has not been triggered in this reporting period.	Note: the previous IEA (2019) addressed the Odour Emissions and Biofilter Control System Audit relating to the commissioning of the biofilter.  Previous IEA period (2021), EIf Farm Supplies were seeking approval to increase production. Hence this audit will focus on the Odour Emissions and Biofilter Control System Audit prepared for this specific activity.  Email from WHS/HR & Compliance Manager dated 9 August 2023 confirming no application has been made to increase tonnage again.	Not triggered

Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
6	Within 2 weeks of this audit being completed, or in a timeframe as otherwise agreed by the Secretary, the Proponent must submit a copy of the audit report to EPA and the Secretary together with an action plan demonstrating how the findings of the audit are to be implemented.	WHS/HR & Compliance Manager confirmed this Condition has not been triggered in this reporting period.		Not triggered
6A	Two months after the completion of the audits required under Conditions 5 (a) and 5(b) of Schedule 3, the Proponent must submit to the satisfaction of the Secretary, a report verifying that any actions identified in the audit have been implemented.	WHS/HR & Compliance Manager confirmed this Condition has not been triggered in this reporting period.		Not triggered
Dust				
7	The Proponent must implement all reasonable and feasible measures to minimise dust generated at the Substrate Plant site.	Site inspection: dust levels were low during the site audit in August 2023.	<ul> <li>Complaints Register on the Elf Farm Supplies website. No complaints have been received by Elf Farm Supplies or via NSW EPA for entire period of March 2021 and March 2023.</li> <li>Elf Farm Supplies Mushroom Substrate Facility – Annual Environmental Management Review, Mulgrave, NSW, Revision 0, September 24 2021, prepared by Elf Farm Supplies Mushroom Substrate Facility – Annual Environmental Management Review, Mulgrave, NSW, Revision 1, October 11 2022, prepared by Elf Farm Supplies Pty Ltd.</li> </ul>	Compliant

Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
8	During the construction and operation of the project, the Proponent must 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.	Site inspections: dust levels were low during the site audits in August 2023. No visible dirt was sighted on the public road network entering Elf Farm Supplies.	Documents viewed:	Compliant

The proponent must prepare and implement an Energy Efficiency Plan on the Substrate Plant site to the satisfaction of the Secretary. This plan must:

- (a) Be submitted to the Secretary for approval prior to the commencement of operations on the site:
- (b) Describe the measures that would be implemented to minimise energy use on the site;
- (c) Explore the possibility of using renewable energy use to generate power and
- (d) Include a program to monitor the effectiveness of these measures and a protocol to periodically review the plan

WHS/HR & Compliance Manager confirmed that the 1.69 MW Solar panel system has now been installed (July 2023).

Auditor sighted the solar panel system during site audit in August 2023.

He also confirmed the changing of the biofilter media also reduced back pressures which has allowed fans to run at lower speeds for same output, saving energy.

Documentation viewed:

- Energy Efficiency Plan
- DPE letter to Elf dated 9 September 2022

   Updated Environmental Management
   Strategy for the Elf Farm and Substrata
   Plant Project (Schedule 5, Condition 1). In letter DPE approve updated EMS dated
   June 2022 issue V02.0 and Energy
   Efficiency Plan prepared by Elf Farm
   Supplies Pty Ltd, dated May 2022, issue 002.
- Excel spreadsheet summarising Power, Gas and Water July 2021 to 28 February 2023.
- Elf Farm Supplies Mushroom Substrate
   Facility Annual Environmental
   Management Review, Mulgrave, NSW,
   Revision 0, September 24 2021, prepared
   by Elf Farm Supplies Pty Ltd. Sections 4.5
   and 5.
- Elf Farm Supplies Mushroom Substrate
   Facility Annual Environmental
   Management Review, Mulgrave, NSW,
   Revision 1, October 11 2022, prepared by
   Elf Farm Supplies Pty Ltd. Sections 4.5 and
  5
- Mushroom Substrate Plant, Mulgrave, Environmental Management Strategy, Report 134R2, June 2022 Version 02.0.
   Section 5.5 outlines designs features and management procedures in place to maximise energy efficiency.
   The Environmental Management Strategy (including the Energy Efficiency Plan) was updated in June 2022 following audit and reviewed in October 2022 after AEMR

ompliant

Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
			2022 report was complete (DPE approved September 2022).	
Fire Manage	ment			

10 The proponent must;

a) Implement suitable measures to minimise the risk of fire on the Substrate Plant site;

b) Ensure straw bales stored in the open bale storage area are:

- (i) Readily accessible by firefighting crews and
- (ii) Separated from buildings and other assets (excluding the noise barrier and northern perimeter wall) to prevent a fire spreading.
- c) Extinguish any fires on the Substrate Plant site promptly; and
- Maintain adequate fire-fighting capacity on the Substrate Plant site.

Documentation viewed:

Fire Essential Services Group Service
Reports for Monthly Test of Fire Panel and
EWS: Report ID 44833 (17 March 2021),
Report ID 46538 (20 May 2021), Report ID
48057 (15 July 2021), Report ID 49013 (19
August 2021), Report ID 51074 (28
October 2021), Report No. 52467 (16
December 2021), Report ID 53903 (17
February 2022), Report ID 57018 (16 June
2022), Report No. 59960 (23 September
2022), Report No. 61524 (17 November
2022)

- Fire Essential Services Group Service Reports for Monthly Test of Fire Panel and EWS, Monthly Testing of Fire Pumps & Tanks: Report ID 53105 (20 January 2022), Report ID 56185 (19 May 2022), Report ID 59960 (29 September 2022), Report ID 61524 (17 November 2022)
- Fire Essential Services Group Service Report for Annual Fire Trip and Interface Test Report ID 51122 (30 October 2021)
- Fire Essential Services Group Service
  Report for 6 monthly Fire Door Inspection,
  6 Monthly Testing of Hose Reels, 6
  Monthly Testing of Hydrants, 6 Monthly
  Test of Portable Fire Equipment Report ID
  55802 (5 May 2022)
- Fire Essential Services Group Service Report for Annual Inspection of Paths of Travel, Annual EWS Test, Annual Fire Detection & Alarm System Test Report ID 51124 (1 November 2021)
- Fire Essential Services Group Service Report for Annual Inspection of Water Storage Tanks, Annual Service of Fire

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Report ID 51153 (	ıal Hydrant Flow Test, (2 November 2021) &
Fire Essential Sen Report for Annua Annual Hydrant S Doors Inspection, Fire Equipment, Fire Equipment, Fire Equipment, Fire Equipment Poccember 2021) December 2022)  Mushroom Substite Environmental Micromomental	rvices Group Service al Testing of Hose Reel, System Test, Annual Fire A, Annual Test of Portable Report ID 51625 (18 A Report ID 62242 (9  **Irrate Plant, Mulgrave, Management Strategy, Ine 2022 Version 02.0. Itlines designs features and ocedures in place to a of fire and refers to fire ategy for the site.  Ifrom Fire 7 Safety ment of Attainments following employees in ate as part of an rol organisation - Scott No. 00134605), Shane cate No. 00134604), ertificate No. 0013602), Certificate No. 00134610),

Hazards		Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
ha Su Go of	The Proponent must ensure that all dangerous goods and nazardous substances are stored and handled on the Substrate Plant site in accordance with the Dangerous Goods Code and AS 1940-2004: The storage and handling of flammable and combustible liquids and AS 3780-2008 The Storage and Handling of Corrosive Substances	Site inspection: SLR sighted a double skinned tank was used for the above ground diesel fuel storage near the weighbridge. The other two diesel fuel tanks were below ground. Each diesel fuel area had spill kits located adjacent. Spill pallets also sighted during walk around.	<ul> <li>POL0002.05, Company Policy and Commitment, Use of Hazardous Substances Policy, Revision No: 0, Date 08.05.2015</li> <li>Elf Farm Supplies Pty Ltd, EFS.OHS.053, Workplace Substances Procedure, reviewed date: 17.11.2016</li> <li>Environmental Property Services (EPS), December 2022, Pollution Incident Response Management Plan, prepared for Elf Farm Supplies, Reference No. 11586. Section 6 – Inventory of Pollutants and Appendix 1 – Hazardous Chemicals Manifest, Appendix 3 – Emergency Procedure, Appendix 4 – Chemical Spill Procedure, Appendix 12, Safety and Fire Equipment Location Map.</li> </ul>	Compliant

Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
12	The Proponent must store cause, permit, or allow any waste generated outside the Substrate Plant site to be received at the site for storage, treatment, processing, reprocessing or disposal of at the Substrate Plant site, except with the approval of the Secretary and as expressly permitted by a licence under the Protection of the Environment Operations Act 1997.	Interview: WHS/HR & Compliance Manager confirmed that they only bring any waste generated outside the Plant site on site that is permitted under the Environment Protection Licence.	Not applicable.	Compliant
Bunding 13	The Proponent must store all chemicals, fuels and oils used on the Substrate Plant site in appropriately bunded areas, with impervious flooring and sufficient capacity to contain 110% of the largest container stored within the bund, unless double-skinned tanks are used. Any bunds must be designed and installed in accordance with the requirements of all relevant Australian Standards, and/or DECCW's Storage and handling liquids: Environmental Protection – Participant's Manual.	Site inspection: SLR sighted a double skinned tank was used for the above ground diesel fuel storage near the weighbridge. The other two diesel fuel tanks were below ground. Each diesel fuel area had spill kits located adjacent. Spill pallets also sighted during walk around.	<ul> <li>Documentation viewed:</li> <li>Environmental Property Services (EPS),         December 2022, Pollution Incident         Response Management Plan, prepared for         Elf Farm Supplies, Reference No. 11586.         Section 6 – Inventory of Pollutants and         Appendix 1 – Hazardous Chemicals         Manifest, Appendix 3 – Emergency         Procedure, Appendix 4 – Chemical Spill         Procedure, Appendix 12, Safety and Fire         Equipment Location Map.</li> <li>POL0002.05, Company Policy and         Commitment, Use of Hazardous         Substances Policy, Revision No: 0, Date         08.05.2015</li> <li>Elf Farm Supplies Pty Ltd, EFS.OHS.053,         Workplace Substances Procedure,         reviewed date: 17.11.2016</li> </ul>	Compliant

Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
14	Except as may be expressed provided by an EPL for the Substrate Plant site, the Proponent must comply with Section 120 of the POEO Act.	WHS/HR & Compliance Manager confirmed no incidents that could cause environmental harm associated with the pollution of waters associated with MOD 1.	Section 120 of the POEO states:  A person who pollutes any waters is guilty of an offence.  Documentation viewed:  EPA website – no water pollution penalty notices issued during this IEA period.  Elf Farm Supplies Mushroom Substrate Facility – Annual Environmental Management Review, Mulgrave, NSW, Revision 0, September 24 2021, prepared by Elf Farm Supplies Pty Ltd. No water pollution incidents reported.  Elf Farm Supplies Mushroom Substrate Facility – Annual Environmental Management Review, Mulgrave, NSW, Revision 1, October 11 2022, prepared by Elf Farm Supplies Pty Ltd. No water pollution incidents reported.	Compliant

Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
15	The Proponent must ensure that only VENM and/or ENM or material approved by the EPA is used as a fill.		<ul> <li>Supplementary Report to Elf Farm         Supplies on Compaction Report for         Biofilter Imported Fill Material at 108         Mulgrave Road, Mulgrave NSW, dated 11         May 2016, prepared by Compaction &amp; Soil         Testing Services Pty Limited. Section 2         states that processed product described         as recycled screened soil was used as the         fill material for the biofilter area. Section         3.1 states that Hawkesbury Council         granted approval for the use of this         material within the project.</li> <li>Elf Farm Supplies, Staged Development of         Mushroom Substrate Plant, Construction         Environmental Management Plan,         Revision 1, July 2016 Perram &amp; Partners,         Section 2.2.3 states "that 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. Imported fill is excavated         natural material certified to be free from         contamination."</li> </ul>	Compliant
16	The Proponent must ensure that filling of the manoeuvring area must be undertaken in accordance with plans submitted with DA 0571/06.		This condition related to previous IEA reporting period (2016).	Not triggered
16A	The Proponent must ensure that the earthworks associated with the biofilter pad do not act as a source of sedimentation. The Proponent must stabilise the area of fill associated with the biofilter within one week of the approval of MOD 1.		This condition related to previous IEA reporting period (2016).	Not triggered

Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
16B	Prior to the commencement of construction of the biofilter, the Proponent must 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).		This condition related to previous IEA reporting period (2016).	Not triggered

Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
17	The Proponent must prepare and implement a Water Management Plan for the Substrate Plant site to the satisfaction of the Secretary. The plan must be submitted to the Secretary for approval prior to the commencement of operation of Stage 1 and be prepared in consultation with EPA and NOW.		Note: the preparation and submission aspects of this condition relate to previous IEA reporting period (2016). The only aspect to be audited is the implementation.  Documentation viewed  • EPA Licence Variation dated 17 December 2020. One of the changes was removal of old condition (R4.1) – The licensee must notify the EPA in writing at least 24 hours prior to irrigating wastewater from the dame on the premises. This condition has been changed to The licensee must retain records detailing irrigation of waste water from the dame at the premises for four years. These records shall be made available to EPA officers upon request.  • Elf Farm Supplies Mushroom Substrate Plant, Mulgrave, Water Management Plan, Issue 03 June 2020.  • Emails to DPE and EPA during 2021 and 2022 relating to the notification of the emergency use of the western dam and the flooding of the western dam from flood waters.  Elf is managing the water levels in the dam as per the WMP. Elf is notifying the EPA as per EPL condition of their plans to irrigate.	Compliant

Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
17A	The Proponent must prepare an updated Water Management Plan for the Substrate Plant site required by Condition 17 of Schedule 3 to include the works associated with MOD 1. The plan must be submitted to the Secretary for approval prior to the commencement of operation of MOD 1.  Operation of works associated with MOD 1 must not commence until the Proponent has received written approval of the plan. The approved Plan must be implemented for the life of the Project.	Site inspection: August 2023, the auditor sighted the discharge points as per the Catchment Plan in the updated Water management Plan, along with the sighting the western dam, basins and stormwater drainage points.	Note that preparation of an updated Water Management Plan and subsequent approval was covered in the previous IEA (2019). This IEA reporting period reviews compliance with the approved Plan's implementation.  Documentation viewed:  • Elf Farm Supplies Mushroom Substrate Plant, Mulgrave, Water Management Plan, Issue 03 June 2020.  • Refer to evidence provided in Condition 17B relating to notification to DPE and EPA of use of Western Dam as per the Water Management Plan.	Compliant

17B	The Proponent must ensure that the western dam at the	· Documentation viewed	Compliant
	Substrate Plant site (identified on the plan in Appendix 2 of this approval) does not receive process water.	Elf Farm Supplies Mushroom Substrate     Plant, Mulgrave, Water Management	
	Notes: The dam may receive water from direct rainfall,	Plan, Issue 03 prepared by Perram &	
	area runoff and groundwater and during times of	Partners June 2020.	
	emergency.	Water Management Incident Report,      Water Management Management Report,      Water Management Management Report,      Water Management Managemen	
		prepared by Elf Farm Supplies on 26 March 2021 relating to excess water from	
		heavy rain and flood waters entering dam	
		from flooded Hawkesbury river. Incident date 20 March 2021. Prepared by Blake	
		Edwards, WHS/HR Manager, incident	
		investigation by Mark Hengst.	
		Examples of other water management  in aid to the contract of the contrac	
		incidents reports were prepared for events on	
		: 25-26 November 2021 – High rainfall	
		(report dated 30 November 2021)	
		: 12-13 January 2022 – High rainfall (report dated 17 January 2022)	
		: 22-23 February 2022 – High rainfall	
		(report dated 24 February 2022)	
		: 3 March 2022 – Flood waters entered	
		western dam (report dated 11 March 2022)	
		: 4 July 2022 – flood waters entered	
		western dam (report dated 8 July 2022)	
		Emails to EPA dated 17 January 2022 (re	
		12-13/1/2022), 30 November 2021 (re 25- 26/11/2021), 2 March 2022 (re 2/3/2022),	
		24 February 2022 (re 22-23/2/22), 26	
		March 2021 (re 20/3/2021)	
		<ul> <li>Email from Elf to EPA and DPE on 26</li> <li>March 21 relating to emergency use of</li> </ul>	
		western dam and the flooding of western	
		dam from flood waters on 20 March 2021.	

Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
			Email from DPE to Elf dated 21 January 2022 Emergency use of Western Dam 12012022, relates to 17B and 17C. Refers to Incident report that occurred on 12 January 2022.	
			<ul> <li>Email from DPE to Elf dated 1 December 2021 Emergency use of Western Dam, relates to 17C. Refers to Incident report that occurred on 25-26 November 2021.</li> <li>Email from DPE to Elf dated 4 March 2022 – acknowledging receipt of incident report – 2 March 2022. No comments.</li> <li>Email from DPE to Elf dated 22 July 2022 –</li> </ul>	
			Email from DPE to Elf dated 22 July 2022 – acknowledging receipt of incident report – 4 March 2022. No comments.	

17C	Notwithstanding Condition 17B of Schedule 3, in the	Documentation viewed	Non-compliant
	event of an emergency such as a high rainfall event or plant breakdown, the Proponent may use the western dam. Notification of any emergency use of the dam must be provided to the Secretary in writing within 7 days of	<ul> <li>Elf Farm Supplies Mushroom Substrate         Plant, Mulgrave, Water Management         Plan, Issue 03 prepared by Perram &amp;         Partners June 2020.</li> </ul>	
	the emergency.	Water Management Incident Report, prepared by Elf Farm Supplies on 26     March 2021 relating to excess water from heavy rain and flood waters entering dam from flooded Hawkesbury river. Incident date 20 March 2021. Prepared by Blake Edwards, WHS/HR Manager, incident investigation by Mark Hengst.	
		<ul> <li>Examples of other water management incidents reports were prepared for events on</li> <li>: 25-26 November 2021 – High rainfall</li> </ul>	
		(report dated 30 November 2021) : 12-13 January 2022 – High rainfall (report dated 17 January 2022) : 22-23 February 2022 – High rainfall (report dated 24 February 2022)	
		: 3 March 2022 – Flood waters entered western dam (report dated 11 March 2022)	
		: 4 July 2022 – flood waters entered western dam (report dated 8 July 2022)	
		<ul> <li>Emails to EPA dated 17 January 2022 (re 12-13/1/2022), 30 November 2021 (re 25-26/11/2021), 2 March 2022 (re 2/3/2022), 24 February 2022 (re 22-23/2/22), 26 March 2021 (re 20/3/2021)</li> </ul>	
		Email from Elf to EPA and DPE on 26     March 21 relating to emergency use of     western dam and the flooding of western     dam from flood waters on 20 March 2021.	

Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
			<ul> <li>Email from DPE to Elf dated 21 January 2022 Emergency use of Western Dam 12012022, relates to 17B and 17C. Refers to Incident report that occurred on 12 January 2022.</li> <li>Email from DPE to Elf dated 1 December 2021 Emergency use of Western Dam, relates to 17C. Refers to Incident report that occurred on 25-26 November 2021.</li> <li>Email from DPE to Elf dated 4 March 2022 – acknowledging receipt of incident report – 2 March 2022. No comments.</li> <li>Email from DPE to Elf dated 22 July 2022 – acknowledging receipt of incident report – 4 March 2022. No comments.</li> </ul>	
17D	Prior to the commencement of construction of stormwater management system approved under MOD 3, the Proponent must prepare an updated Water Management Plan (WMP) for the Substrate Plant site to the satisfaction of the Secretary. The updated WMP must:  (a) Be prepared in accordance with the requirements of Schedule 3, Conditions 17 to 17C of this approval;  (b) Be prepared in accordance with the updated Stormwater Catchment Plan for the Substrate Plant site (see Appendix 2A of this Approval); and  (c) Detail the measures that are to be implemented to manage stormwater impacts associated with the MOD 3 works.	WHS/HR & Compliance Manager advised in writing in April 2023 that this project has not commenced.		Not triggered

Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
17E	The Proponent must:  (a) Not commence operation of the MOD 3 stormwater management system until the updated WMP is approved by the Secretary; and  (b) Implement the most recent version of the updated WMP approved by the Secretary.	WHS/HR & Compliance Manager advised in writing in April 2023 that this project has not commenced.		Not triggered
17F	The Proponent must ensure any structures approved under MOD 3 that are built below the 100-year ARI flood level, including the noise barrier and the northern perimeter wall, are constructed from compatible building components.  Note: the 100-year ARI flood level at the Substrata Plant site is RL 17.3 metres AHD.	WHS/HR & Compliance Manager advised in writing in April 2023 that this project has not commenced.		Not triggered

Condition	Requirement		Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
Noise – Cor	nstruction Noise Criteria				
18	The Proponent must ensure that th generated at the Substrate Plant's criteria in Table 1 Table 1: Construction Noise impact asse	ite does not exceed the		No construction occurred during this reporting period.	Not triggered
	Receiver/Location	Day LAeq(15 minute)			
	R1 - 46 Mulgrave Road, Mulgrave R2- Mulgrave Industrial area R3 - 2 Railway Road, Mulgrave R4- 126 Mulgrave Road, Mulgrave R5- Chisholm Place, South Windsor	46 Mulgrave Road, 52 grave 65 Mulgrave Industrial area 52 2 Railway Road, Mulgrave 52 126 Mulgrave Road, 51 grave 51 Chisholm Place, South			
	Notes: Noise generated by the Project is to be relevant procedures and exemptions (in conditions) of the NSW Industrial Noise	cluding certain meteorological			

Condition	Requirement			Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
Noise – Opera	ational Noise Criteria					
19	The Proponent must ensure noise generated by the Sure not exceed the criteria in Table 2: Operational Noise in dB(A)  Receiver/Location  R1 - 46 Mulgrave Road, Mulgrave R2- Mulgrave Industrial area R3 - 2 Railway Road, Mulgrave R4- 126 Mulgrave Road, Mulgrave Road, Mulgrave Road, Mulgrave Road, Mulgrave Rood, Mulgrave R5- Chisholm Place, South Windsor  Notes: Noise generated by the Project of	Day LAeq(15 minute)  43 42 44 44 44	Night LAeq(15 minute)  43 42 37 41 42	Interview: WHS/HR & Compliance Manager advised no requests have been received from the EPA requesting any further noise monitoring since noise monitoring after completion of MOD1 works.  Note: Elf carried out noise monitoring after completion MOD1 October 2018 as per their Operational Noise Management Plan. The plant has been operating in steady state since that time.	<ul> <li>Documentation viewed:</li> <li>EPA website – no noise pollution penalty notices issued during this IEA period.</li> <li>Complaints Register on the Elf Farm Supplies website. No complaints have been received by Elf Farm Supplies or via NSW EPA for entire period from 13 March 2021 to 12 March 2023.</li> <li>Acoustic Consulting Engineers, Operational Noise Compliance Measurement, Substrate Plant Mulgrave, Reference number 160787-01-03L-DD, date 5 November 2018.</li> <li>Acoustic Consulting Engineers, Substrate Plant Mulgrave, Operational Noise Management Plan, Report No. 160787-01-02R-DD Rev02, date 17 January 2019. No monitoring unless compliant received.</li> <li>EPL 6229. There is no specific noise monitoring specified as part of the Environment Protection Licence for the site.</li> </ul>	Compliant

Condition	Requirement	Requirement		Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
Noise – Ho	urs of Work					
20	The Proponent must 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 - 7.00am -		Substrate to in writing		Documentation viewed:  Elf Farm Supplies Mushroom Substrate Facility  - Annual Environmental Management Review, Mulgrave, NSW, Revision 0, September 24 2021, prepared by Elf Farm Supplies Pty Ltd. No complaints received regarding operating hours.	Compliant
	Operation	Friday Saturday Sunday and Public Holidays All days	6.00pm 8.00am – 1.00pm Nil Anytime		<ul> <li>Elf Farm Supplies Mushroom Substrate Facility         <ul> <li>Annual Environmental Management Review,                 Mulgrave, NSW, Revision 1, October 11 2022,                 prepared by Elf Farm Supplies Pty Ltd.                 No complaints received regarding operating                 hours.</li> </ul> </li> <li>Review of Elf Farm Supplies Complaints         <ul> <li>Register</li> </ul> </li> </ul>	
Noise – Ado	ditional Noise Mitigation	n Measures				
21	The Proponent must ensure the noise barrier is constructed:  (a) Prior to the importation of fill for the expansion of the open bale storage area; or  (b) As otherwise agreed to in writing by the Secretary		fill for the e storage	WHS/HR & Compliance Manager advised in writing in April 2023 that this project has not commenced.		Not triggered
21A	The Proponent must continue to implement the "other noise mitigation measures" approved by the Department in its letter dated 18 July 2016 until the noise barrier referred to in Schedule 3, Condition 21 of this approval is constructed.		pproved by 3 July 2016 Schedule 3,	Site inspection: the auditor sighted the use of straw bales as the noise mitigation measure.	Documentation viewed:     DPE letter dated 14 December 2022 – Warning Letter – breach of Schedule 3 Condition 21A – removal of hay bales from the temporary noise wall.	Non-compliant

Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
22	The Proponent must prepare and implement a Noise Management Plan for the Substrate Plant site in consultation with EPA to the satisfaction of the Secretary. The Plan must be submitted to the Secretary for approval prior to commencement of operations, and include a noise monitoring protocol for evaluating compliance with the noise impact assessment criteria in this approval		This condition related to previous IEA reporting period (2016).	Not triggered
22A	The Proponent must update the Noise Management Plan for the Substrate Plant site, to the satisfaction of the Secretary. This plan is to update the plan approved under Condition 22 of Schedule 3 and must include: (a) the works associated with MOD 1; and (b) a revised monitoring protocol for evaluating compliance with the noise impact assessment criteria in this approval once all construction works associated with MOD 1 are complete.		This condition related to previous IEA reporting period (2019).	Not triggered
22B	Operation of works associated with MOD 1 must not commence until the Proponent has received the Secretary's written approval of the plan. The approved Plan (as revised and approved by the Secretary from time to time), must be implemented for the life of the Project as soon as written endorsement by the Secretary is received.	<ul> <li>Site inspection: Auditor sighted the following noise mitigation measures being implemented:         <ul> <li>Truck access arrangements to allow the forward travel throughout the site</li> <li>Inspection/maintenance/repair program for mobile mechanical plant</li> <li>New processing tunnels to be concrete construction</li> <li>20 km/hour speed limit signs on internal roads.</li> <li>Doors into the various building being closed at all times</li> </ul> </li> </ul>	Note: The approval of the updated Operational Noise Management Plan was addressed in the previous IEA (2019). This IEA considers the implementation of the Plan.  Documentation viewed:  • Acoustic Consulting Engineers, Substrate Plant Mulgrave, Operational Noise Management Plan, Report No. 1607870-01-02R-DD, date 17 January 2019.	Compliant

Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
Biodiversity	y – Riparian Management Area			
23	The Proponent must establish a fenced, 35 metre wide riparian corridor along the length of South Creek within 12 months of commencement of operation of Stage 1. The Proponent must consult with the Hawkesbury-Nepean Catchment Management Authority on Methods and species selection to ensure that best practice techniques are used at the site, to the satisfaction of the Secretary.	Interview: WHS/HR Manager Manager advised that the MOD3 has now been approved however submission for MOD 3 retracted and Riparian Management Area has been established.  Site inspection: Auditor sighted the 35 metre wide riparian corridor along the length of South Creek. Area was fenced off as per condition requirement.	<ul> <li>This condition relates to the previous IEA reporting period (2016 and 2019). In 2016, 2019 and 2021 non-compliance was recorded against this condition.</li> <li>Documentation viewed: <ul> <li>Letter from Perram &amp; Partners to Planning dated 18 January 2017 seeking modification to the development including deleting condition 23.</li> <li>Elf Farm Supplies Mushroom Substrate Facility – Annual Environmental Management Review, Mulgrave, NSW, Revision 0, 28 September 2020, prepared by Elf Farm Supplies Pty Ltd. Appendix D has photo of the riparian zone. Non-compliance was recorded as the area was not established within 12 months of commencement of Stage 1 – no further action required.</li> <li>DPE letter dated 21 December 2021 – Warning Letter – breach of Schedule 3, Condition 23 – Failure to establish riparian corridor and Schedule 5, Condition 4(d) – failure to review EMS.</li> </ul> </li> </ul>	Non-compliant

Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
24	The Proponent must ensure that all external lighting associated with the Substrate Plant site:  a) Does not create nuisance to surrounding properties or roadways and b) Complies with AS4282 (INT) 1995 – Control of Obtrusive Effects of Outdoor Lighting.	WHS/HR & Compliance Manager confirmed no new external lighting was installed during this reporting period.	<ul> <li>Elf Environmental Complaints Register –         March 2021 to March 2023. No lighting         complaints recorded.</li> <li>Elf Farm Supplies Mushroom Substrate Facility         – Annual Environmental Management Review,         Mulgrave, NSW, Revision 0, September 24         2021, prepared by Elf Farm Supplies Pty Ltd.         No lighting complaints received.</li> <li>Elf Farm Supplies Mushroom Substrate Facility         – Annual Environmental Management Review,         Mulgrave, NSW, Revision 1, October 11 2022,         prepared by Elf Farm Supplies Pty Ltd.         No lighting complaints received.</li> <li>Note the Auditor is not familiar with AS4282 and         has not conducted an audit against this standard         as part of this audit.</li> </ul>	Compliant

Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
24A	The Proponent must prepare a Landscape Management Plan for the Substrate Plant site. The plan must: (a) be prepared in consultation with Council; (b) identify screen planting to minimise visual impacts of the site, particularly the new biofilter; and (c) be approved by the Secretary prior to the commencement of construction of the works associated with MOD 1.		This condition related to the previous IEA reporting period (2016).	Not triggered
24B	The landscaping around the site of the new biofilter required under MOD 1 must be installed within three months following the completion of the construction of the biofilter. All other landscaping must be installed prior to the commencement of operation of the works associated with MOD 1.		This condition was met during the previous IEA reporting period (2016).	Not triggered
Signage				
25	The Proponent must not install any advertising signs on the Substrate Plant site without the written approval of the Secretary.	WHS/HR & Compliance Manager confirmed in writing and again on site no advertising signs have been erected on the property.	Not applicable.	Compliant
Transport				
26	The Proponent must ensure that: (a) car parking is constructed in accordance with the relevant requirements of the latest version of AS 2890. 1; and (b) vehicles associated with the Substrate Plant site do not park or queue on the public road network at any time	Site inspection: no queueing was sighted during the site visits and no parking on public roads was occurring.	Documentation viewed:  • Letter from Commercial Design Consolidated (NSW) Pty Limited, dated 12 January 2017 states in the conclusion section "The designs and details as presented on the documents supplied appear satisfactory and comply with the requirements of the relevant codes."	Compliant

Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
27	Before the commencement of MOD 3 construction works, the Proponent must:  (a) Consult with the relevant owner and provider of services that are likely to be affected by the MOD 3 construction works to make suitable arrangements for access to, diversion, protection and support of the affected infrastructure;  (b) Prepare a dilapidation report identifying the condition of all public infrastructure in the vicinity of the site (including roads, gutters and footpaths)  (c) Submit a copy of the dilapidation report to	WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again on-site.		Not triggered
28	the Secretary and Council.  Unless the Proponent and the applicable authority agree otherwise, the Proponent must:  (a) Repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the carrying out of MOD 3 construction works;  (b) Relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the MOD 3 construction works.	WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again on-site.		Not triggered
Works As E	xecuted Plans			
29	Before the issue of the final occupation certificates for the works associated with MOD 3, works-as-executed drawings signed by a registered surveyor demonstrating that the stormwater drainage and finished ground levels have been constructed as approved, must be submitted to the PCA and Sydney Trains.	WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again on-site.		Not triggered

Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
30	The Proponent must ensure:  (a) No construction or maintenance works associated with MOD 3 occur within the Rail Corridor or is associated easements.  (b) Stormwater drainage associated with MOD 3 is not discharged into the Rail Corridor; and  (c) Fill is not spread or stockpiled within the Rail Corridor or its associated easements.  Except with the prior approval of Sydney Trains.	WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again on-site.		Not triggered
31	The Proponent must ensure that straw bales stacked immediately adjoining the southern section of the noise barrier (adjacent to the Rail Corridor) do not exceed the height of the noise barrier.	Auditor sighted the hay bales being stacked as required. Note that section of the wall is open to allow emergency vehicle access to the site.		Compliant

## SCHEDULE 4 – SPECIFIC ENVIROMENTAL CONDITIONS – MUSHROOM FARM SITE

Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status			
Constructio	Construction Environmental Management Plan						
1	The Proponent must prepare and implement a Construction Environmental Management Plan for the Mushroom Plant site to the satisfaction of the Secretary. This Plan must:  (a) be prepared in consultation with DPIE Water 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 15 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, including the programs/procedures to be implemented in the event that previously unidentified relics are discovered (Condition 21)  - a waste management plan and	WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again onsite.		Not triggered			
	<ul> <li>a construction traffic management plan which addresses haulage routes, traffic safety and the number of truck movements required to import the identified fill for the site.</li> </ul>						
2	The Proponent must not cause or permit the emission of offensive odours from the Mushroom Farm site, as defined under Section 129 of the POEO Act.	WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again onsite.		Not triggered			



Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
3	The Proponent must implement all reasonable and feasible measures to minimise dust generated at the Mushroom Farm site.	WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again onsite.		Not triggered
4	During the construction and operation of the project, the Proponent must ensure that:  (a) all trucks entering or leaving the Mushroom Farm 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.	WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again onsite.		Not triggered
5	The Proponent must prepare and implement an Energy Efficiency Plan on the Mushroom Farm site to the satisfaction of the Secretary. This plan must:  (a) be submitted to the Secretary for approval prior to the commencement of operations on the site;  (b) describe the measures that would be implemented to minimise energy use on the site;  (c) explore the possibility of using renewable energy use to generate power; and  (d) include a program to monitor the effectiveness of these measures, and a protocol to periodically review the plan.	WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again onsite.		Not triggered

Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
6	<ul> <li>The Proponent must: <ul> <li>(a) provide and manage a 24 25 metre wide APZ between the buildings on the Mushroom Farm site and any bushfire hazard;</li> <li>(b) implement suitable measures to minimise the risk of fire on the Mushroom Farm site;</li> <li>(c) extinguish any fires on the Mushroom Farm site promptly;</li> <li>(d) maintain adequate fire-fighting capacity on the Mushroom Farm site.</li> <li>(e) Construct the proposed office building in compliance with section 7 (BAL 29) Australian Standard AS3959 2009 Construction of buildings in bush fire prone areas and section A3.7 Addendum Appendix 3 of Planning for Bushfire Protection 2006.</li> </ul> </li> </ul>	WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again onsite.		Not triggered
7	The Proponent must ensure that all dangerous goods and hazardous substances are stored and handled on the Mushroom Farm site in accordance with the Dangerous Goods Code and XS 1940-2004: The storage and handling of flammable and combustible liquids.	WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again onsite.		Not triggered
8	The Proponent must not cause, permit or allow any waste generated outside the Mushroom Farm site to be received at the site for storage, treatment, processing, reprocessing or disposal of at the site, except with the approval of the Secretary and as expressly permitted by a licence under the Protection of the Environment Operations Act 1997.	WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again onsite.		Not triggered
9	Except as may be expressly provided in an EPL for the Mushroom Farm site, the Proponent must comply with Section 120 of the POEO Act.	WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again onsite.		Not triggered

Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
10	The Proponent must store all chemicals, fuels and oils used on the Mushroom Farm site in appropriately bunded areas, with impervious flooring and sufficient capacity to contain 110% of the largest container stored within the bund, unless double-skinned tanks are used. Any bunds must be designed and installed in accordance with the requirements of all relevant Australian Standards, and/or DECCW's Storage and handling liquids: Environmental Protection - Participant's Manual.	WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again onsite.		Not triggered
11	The Proponent must ensure that the use of chemicals (including pesticides and herbicides) on the Mushroom Farm site carried out in accordance with:  (a) Agricultural and Veterinary Chemicals Act 1 994; and (b) Agricultural and Veterinary Chemicals (NSW) Regulation 2000	WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again onsite.		Not triggered
12	The Proponent must ensure that only VENM and/or ENM or material approved by the EPA is used as fill.	WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again onsite.		Not triggered

Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
13(1)	The Proponent must prepare and implement an operational Water Management Plan for the Project on the Mushroom Farm site in consultation with EPA, Penrith City Council and NOW DPIE Water to the satisfaction of the Secretary. The plan must:  (a) be submitted to the Secretary for approval prior to the commencement of operations:  (b) include:  - a detailed Stormwater Operation and Management Plan that includes the measures outlined in the Stormwater Management report prepared by Barker Ryan and Stewart reference 20070166 Revision G dated 1 1 April 2016 as supplemented by addendum Stormwater Management report prepared by Harris Environmental Consulting dated 15 March 2018: and a Recycled Water Management Plan	WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again onsite.		Not triggered
13(ii)	Prior to the commencement of construction, the proponent shall seek approval from Penrith Council under Section 68 of the Local Government Act to install and operate the Onsite Sewage Management System.  The application shall include an Effluent Management Plan detailing monitoring and maintenance arrangements.	WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again on- site.		Not triggered
NOISE				
Construction	on Noise Mitigation			
14.	The Proponent must install the northern environmental bund prior to commencement of any other construction works at the Mushroom Farm site.  Installation of the northern environmental bund must be completed within a period of not more than 3 months.			



Condition	Requirement		Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
15	The Proponent must ensure that the cons generated at the Mushroom Farm site do criteria in Table 4. Table 4: Construction noise criteria dB(A)		WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again onsite.		Not triggered
	Receiver/Location	Day LAeq(15 minute)			
	Receiver 1 – 503 The Northern Road, Londonderry	49			
	Receiver 2 – 509 The Northern Road, Londonderry	54			
	Receivers – 1 Thomas Road, Londonderry	54			
	Receiver 4 6-16 Timothy Road, Londonderry	45			
	Notes:				
	Noise generated by the Project is to be mea with the relevant procedures and exemption meteorological conditions) of the NSW India	ns (including certain			
	The construction noise criteria do not apply associated with tire installation of the nort bund (Condition 14 above).				

Condition	Requirer	nent						Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
16	The Proponent must ensure that the operational noise generated by the Mushroom Farm site does not exceed the criteria in Table 5.  Table 5: Project Noise Trigger Levels dB(A)							WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again onsite.		Not triggered
	Receiver/ Location	Shoulder period* (5am – 7am) LAeq(15 minute)	Day LAeq(1 5 minute	Evening LAeq(1 5 minute	Night LAeq(1 5 minute		Sturbance 5 minute Shoulder period (5am – 7am)			
	R1 – 503 The Northern Road	44	44	44	38	52	54			
	R2 – 509 The Northern Road	47	48	45	38	52	57			
	R3- 1 Thomas Road	47	48	45	38	52	57			
	R4 – 6-16 Timothy Road	40	40	40	38	52	52			
					(includin rial Noise	g certain Policy for				

Condition	Requirement			Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
17		•		WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again onsite.		Not triggered
	Activity	Day	Hours			
		Monday – Friday	7am – 6pm			
	Construction	Saturday	8am – 1pm			
		Sunday & Public Holidays	Nil			
	Operation	All days	Any time			

Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
18	The Proponent must prepare and implement a Noise Management Plan for the Mushroom Farm site in consultation with EPA and property owner of 1 Thomas Road, Penrith (identified as location "R3") to the satisfaction of the Secretary. The Plan must be submitted to and approved by the Secretary for approval prior to commencement of operation construction, and include a noise monitoring protocol for evaluating compliance with the noise impact assessment criteria in Conditions 15 and 16 of this approval.  The Noise Management Plan must also include all mitigation measures for both the construction and operations identified in the acoustic reviews titled 'Acoustic Review Modified Operations Mushroom Farm  Londonderry' dated 5 April 2016 prepared by Atkins Acoustics and Associates Pty Ltd and 'Acoustic Review (Amended Development Application) Modified Operations, Mushroom Farm, 521 The Northern Road, Londonderry dated 5 February 2019 prepared by Acoustic Consulting Engineers Pty Ltd. Mitigation measures must be implemented at the commencement of construction or as identified in the reports.  The Noise Management Plan must also include measures that restrict operations along the southern side of the building during night-time hours to mitigate intermittent noise impacts associated with truck movements and air brake release.	WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again onsite.		Not triggered
BIODIVERS				
Vegetation	Management Plan			
19	The Proponent must establish a Vegetation Management Area at the Mushroom Farm site (as shown in Appendix 5).	WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again onsite.		Not triggered
Vegetation	Management Plan			



20(i)	The Proponent must prepare and implement a Plan for the	WHS/HR & Compliance Manager	Not triggered
	Vegetation Management Area to the satisfaction of the	confirmed MOD3 construction has not	
	Secretary. This plan must be prepared in consultation with OEH EESG by a suitably qualified and experienced expert/s	commenced both in writing and again onsite.	
	whose appointment has been approved by the Secretary.	site.	
	The plan must:		
	(a) be submitted to and approved by the Secretary for approval prior to the commencement of construction on the Mushroom Farm site:		
	<ul><li>(b) identify all vegetation that is present within the vegetation management area (as shown in Appendix 5);</li></ul>		
	(c) include the recommendations of the 'Addendum Flora and Fauna Assessment 521 The Northern Road Londonderry' dated 7 July 2015 and prepared by Fraser Ecological Consulting;		
	<ul> <li>(d) include details of the mechanism that will be used to ensure that the vegetation within the area is protected in perpetuity;</li> </ul>		
	(e) describe the management measures that will be implemented to maintain and enhance the vegetation within the area over time, including fencing of Dillwynia tenuifolia and Persoonia nutans. This should also include management measures aimed at ensuring that the implementation and management of the APZ protects the <i>Dillwynia tenuifolia</i> and <i>Persoonia</i> nutans:		
	(f) provide details of all trees scheduled for removal noting that trees to be felled with a Diameter at Breast Height (DBH) of 30cm or greater, once felled, are to be sawn into 2-6m lengths and relocated into the proposed conservation area identified in Appendix 5; and		
	(g) include a detailed weed condition map as a baseline from which site rehabilitation/management can be measured.		
	Note: all vegetation rehabilitation work is to be supervised by an appropriately qualified and experienced person with minimum		



Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
	qualifications of TAPE Certificate III in Bush Regeneration or Conservation and Land Management – Natural Area Restoration and 4 years bush regeneration experience:			
Fauna Insp	ection			
20(ii)	Prior to the commencement of works, including the removal of any trees associated with the approved development, an inspection for resident threatened fauna (including an inspection of hollows) must be undertaken by a qualified wildlife handler/expert and any fauna found relocated.	WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again onsite.		Not triggered
HERITAGE				
21	The Proponent must prepare and implement a Heritage Management Plan for the Project to the satisfaction of the Secretary. This Plan must:  (a) be prepared in consultation with OEH by a suitably qualified and experienced expert;  (b) be submitted to the Secretary for approval prior to commencement of construction;  (c) include programs/procedures for:  - managing the discovery of previously unidentified heritage relics including halting of works in the vicinity, notification of OEH and the Department;  - managing the discovery of human remains including the halting of works in the vicinity,  - notification of the NSW Police, the Department, the OEH and Aboriginal stakeholders and not recommencing any works in the area unless authorised to do so by the Department and/or the NSW Police (whichever is relevant); and heritage inductions for construction personnel (including procedures for keeping records of inductions).	WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again onsite.		Not triggered

Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
22	Prior to commencement of construction works, the Proponent must prepare and implement a Landscape Management Plan for the Project to the satisfaction of the Secretary. This Plan must:  (a) be prepared in consultation with Penrith City Council  (b) be submitted to and approved by the Secretary prior to commencement of construction works;  (c) where practicable, provide for the early planting of advanced plants along the northern, and southern boundaries to minimise the visual impacts of the Project; and  (d) use predominantly endemic species,  (e) where practicable, provide for the early planting of advanced plants along the northern, and southern boundaries to minimise the visual impacts of the Project; and  (f) provide for the maintenance of landscaping on site and  (g) provide for the early planting of advanced plants along the northern, southern and eastern boundaries to screen and soften the expanse of the main structure.	WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again onsite.		Not triggered
22A	Prior to the commencement of construction works of the main building, the Proponent shall prepare a schedule of materials and finishes. To reduce glare and minimise visual intrusiveness, the visible light reflectivity from the materials and finishes must not exceed 20% reflectivity. The schedule of materials and finishes and evidence that these are consistent with the 20% reflectivity must be submitted to and endorsed by the Secretary prior to the issue of the relevant Construction Certificate.	WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again on- site.		Not triggered

Condition	Requirement		Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
23	Prior to the commencement of construction on the Mushroom Farm site the Proponent must offer and implement (if the offer is accepted) landscaping treatments to the residences in Table 7 below. These measures must be reasonable and feasible, and directed toward minimising the visibility of the operations from the residences on the land.  Table 7 - residences at which landscape treatment will be offered		WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again onsite.		Not triggered
		Residences			
	Residence 1	493 The Northern Road Londonderry			
	Residence 2	509 The Northern Road Londonderry			
	Residence 3	1 Thomas Road Londonderry			
	and the owner canr or there is a dispute	of receiving the offer, the Proponent not agree on the landscaping treatment, about the implementation of these her party may refer the matter to the tion.			
24	Prior to installing any boundary fencing on Mushroom Farm site, the Proponent must submit detailed plans of this fencing to the Secretary for approval. These plans must be prepared in consultation with Penrith City Council. Following approval, the Proponent must ensure that the fencing is installed in accordance with the approved plans		WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again onsite.		Not triggered
Lighting					
25	associated with the (a) does not creat or roadways; a (b) complies with	t ensure that all external lighting Project on the Mushroom Farm site: e a nuisance to surrounding properties nd AS 4282(INT) 1 995 - Control of ets of Outdoor Lighting.	WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again onsite.		Not triggered

Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
26	The Proponent must not install any advertising signs on the Mushroom Farm site without the written approval of the Secretary.	WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again onsite.		Not triggered
ACCESS RO	AD WORKS			
27	Prior to the commencement the operation of stage 1, the Proponent must design and construct the Mushroom Farm site access as a "Type CHR' Rural Intersection, in accordance with the RMS's Road Design Guide and relevant Austroads guidelines, to the satisfaction of the RMS.  In finalising the design of the site access, the Proponent must:  (a) ensure that the swept path of the largest vehicle entering/exiting the site and manoeuvrability through the site is in accordance with the relevant Australian Standard and to Penrith City Council's satisfaction: and  (b) sign a Works Authorisation Deed with the RMS.	WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again onsite.		Not triggered
TRANSPOR	rt			
Car Parking	]			
28	The Proponent must engage a suitably qualified and experienced expert to prepare a car parking study to re-evaluate parking requirements for stages 2 to 5 of the Project on the Mushroom Farm site. The study must:  (a) be submitted to the satisfaction of the Secretary prior to commencement of construction works for stage 2; and  (c) provide recommendations as to whether the car parking is sufficient.	WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again on- site.		Not triggered

Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
29	The Proponent must ensure that:  (a) the layout of the proposed parking areas (including driveways, grades, turn paths, sight distances requirements in relation to landscaping and/or fencing, aisle widths, aisle lengths, and parking bay dimensions) must comply with AS 2890.1-2004, AS2890.6-2009 for cars and AS2890.2 for heavy vehicles;  (b) vehicles associated with the Project do not park or queue on the public road network at any time; and  (c) all vehicles enter and leave the site in a forward direction; and	WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again on- site.		Not triggered
Operation	al Traffic Management Plan			
30  Bushfire Pr	Prior to the commencement of operation, the Proponent must prepare an Operational Traffic Management Plan (OTMP) for the development to the satisfaction of the Secretary.  The Plan must be prepared by a suitably qualified and experienced person(s) as approved by the Secretary and must:  (a) be prepared in consultation with Council and RMS;  (b) detail the measures to be implemented to ensure road safety and network efficiency;  (c) detail heavy vehicle routes, access and parking arrangements;  (d) detail measures aimed at minimising conflict between heavy vehicle and light vehicles accessing the site;  (e) include a Driver Code of Conduct;  (f) include onsite traffic control measures: and  (g) include measures to minimise traffic noise in particular from reversing, loading and unloading and noise from exhaust brakes.	WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again onsite.		Not triggered

Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
31	At the commencement of building works and for the perpetuity of the development, a minimum 25 metre distance shall be maintained as an inner protection (IPA) as outlined in Section 4.1.3 and Appendix 5 of 'Planning for Bush Fire Protection 2006', and the NSW Rural Fire Services document 'Standards for asset protection zones'.	WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again onsite.		Not triggered
32	All new construction shall comply with Sections 3 and 8 (BAL 40) of Australian Standard AS3959-2009 'Construction of buildings in bush fire prone areas' and section A3.7 Addendum Appendix 3 of Planning for Bush Fire Protection'.	WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again onsite.		Not triggered
33	The provision of water, electricity and gas is to comply with section 4.1.3 of <i>Planning for Bush Fire Protection 2006'</i> .	WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again onsite.		Not triggered
34	Property access roads must comply with section 4.2.7 of 'Planning for Bushfire Protection 2006'.	WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again onsite.		Not triggered
35	Emergency and evacuation arrangements must comply with section 4.2.7 of 'Planning for Bush Fire Protection 2006'.	WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again onsite.		Not triggered
Integrated	Bushfire and Vegetation Management			
36	Prior to the commencement of construction works on the Mushroom Farm Site, the Proponent must demonstrate to the satisfaction of the Secretary that:  (a) a minimum 25 metre wide APZ; and  (b) appropriate landscaping to screen and soften the appearance of the structure can both be provided.	WHS/HR & Compliance Manager confirmed MOD3 construction has not commenced both in writing and again onsite.		Not triggered



### **SCHEDULE 5 – ENVIRONMENTAL MANAGEMENT AND REPORTING CONDITIONS**

Table 15 Environmental Management and Reporting Conditions



Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
Environmen	tal Management Strategy			
1	<ul> <li>The Proponent must prepare and implement an Environmental Management Strategy for the Project to the satisfaction of the Secretary. The Strategy must: <ul> <li>a) Be submitted to the Secretary for approval prior to the commencement of operation;</li> <li>b) Provide the strategic framework for environmental management of the Project;</li> <li>c) Identify the statutory approvals that apply to the Project;</li> <li>d) Describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the Project</li> <li>e) Describe the procedures that would be implemented to: <ul> <li>Keep the local community and relevant agencies informed about the operation and environmental performance of the Project;</li> <li>Receive, handle, respond to and record complaints;</li> <li>Resolve any disputes that may arise during the course of the project;</li> <li>Respond to any non-compliance; and</li> <li>Respond to emergencies.</li> </ul> </li> <li>f) Include <ul> <li>Copies of the various strategies, plans and programs that are required under the conditions of this approval once they have been approved and</li> <li>A clear plan depicting all the monitoring currently being carried out within the Project Area.</li> </ul> </li> </ul></li></ul>	Inspection: The following elements of the Environmental Management Strategy were sighted during the August 2023 inspection of the facility:  Traffic controls  Odour controls  Chemical handling – spill kits, dangerous good register  Water management – western dam, water recycling pit operations	<ul> <li>Elf Farm Supplies Pty Ltd, Mushroom         Substrate Plant, Mulgrave, Environmental         Management Strategy, Issue 2.0 June         2022     </li> <li>DPE letter to Elf dated 9 September 2022 –         Updated Environmental Management         Strategy for the Elf Farm and Substrata         Plant Project (Schedule 5, Condition 1). In         letter DPE approve updated EMS dated         June 2022 issue V02.0 and Energy         Efficiency Plan prepared by Elf Farm         Supplies Pty Ltd, dated May 2022, issue         002.</li> </ul>	Compliant

Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
2	The Proponent must ensure that the management plans required under this approval are prepared in accordance with any relevant guidelines, and include:  a) detailed baseline data; b) a description of:  • the relevant statutory requirements (including any relevant approval, licence or lease conditions);  • any relevant limits or performance measures/criteria; and  • the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of, the Project or any management measures; (c) a description of the measures that would be implemented to comply with the relevant statutory requirements, limits, or performance measures/criteria (d) a program to monitor and report on the:  • impacts and environmental performance of the Project;  • effectiveness of any management measures (see c above);  e) a contingency plan to manage any unpredicted impacts and their consequences; f) a program to investigate and implement ways to improve the environmental performance of the Project over time; g) a protocol for managing and reporting any:  • incidents;  • complaints;  • non-compliances with statutory requirements; and  • exceedances of the relevant limits and/or performance measures/criteria; and h) a protocol for periodic review of the plan		In the previous IEA reports the following original management plans were prepared and approved:  - Odour Management Plan - Operational Noise Management Plan - Construction EMP - Energy Management Plan - Water Management Plan For this reporting period the following plans were required to be updated: - Operational Noise Management Plan - Water Management Plan Documentation viewed:  • Substrate Plant Mulgrave Operational Noise Management Plan, date 26 June 2018, prepared by Acoustic Consulting Engineers. This updated plan was not required to be approved.  • Letter from Planning dated 4 February 2019 approving the Operational Noise Management Plan.  • Elf Farm Supplies Mushroom Substrate Plant, Mulgrave, Water Management Plan Issue 02, May 2018, Perram & Partners.	Compliant

By the 30 September 2020, and annually thereafter, unless otherwise agreed by the Secretary, the Proponent must review the environmental performance of the Project to the satisfaction of the Secretary. This review must:

- (a) describe the operations that were carried out during the reporting period;
- (b) analyse the monitoring results and complaints records of the Project during the reporting period, which includes a comparison of these results against the:
- i. relevant statutory requirements, limits or performance measures/ criteria:
- ii. monitoring results of previous years; and
- iii. relevant predictions in the EA;
- (c) identify any non-compliance during the reporting period, and describe what actions were (or are being) taken to ensure compliance;
- (d) identify any trends in the monitoring data over the life of the Project; and
- (e) describe what measure(s) will be implemented during the next reporting period to improve the environmental performance of the Project.

Documentation viewed:

- DPE letter to Elf, 26 October 2012 specifying requirements for future AEMRs.

  Non-compliance against several aspects Items 5, 6 and 7 not complied with in both or one of the AEMRs reviewed for this reporting period.
- Elf Farm Supplies Mushroom Substrate
   Facility Annual Environmental
   Management Review, Mulgrave, NSW,
   Revision 0, September 24 2021, prepared
   by Elf Farm Supplies Pty Ltd.
- Elf Farm Supplies Mushroom Substrate Facility – Annual Environmental Management Review, Mulgrave, NSW, Revision 1, October 11 2022, prepared by Elf Farm Supplies Pty Ltd.
- DPE letter to Elf dated 30 September 2021

  Letter states the Department has reviewed the Annual Review (1 October 2020 to 30 September 2021) and considers it to be generally in accordance with the reporting requirements of the consent and letter.
- DPE letter to Elf dated 14 December 2022

   Letter Appendix A comments on the revised 2021-2022 AEMR as follows:
   Schedule 5, Condition 3b), c) and d) not adequately addressed.

Non-compliant



Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
Independe	nt Environmental Audit			
3A	By 31 March 2021, and every two years thereafter, unless otherwise agreed by the Secretary, the Proponent must commission and pay the full cost of an Independent Environmental Audit of the Project. This audit must:  (a) be conducted by suitably qualified, experienced and independent team of experts (including an odour expert), whose appointment has been endorsed by the Secretary;  (b) include consultation with the relevant agencies;  (c) include a full odour audit of the Project, taking into consideration the relevant technical guidelines and any odour complaints made since the previous audit;  (d) assess the environmental performance of the project and assess whether it is complying with the relevant requirements in this approval and any other licenses and approvals that apply to the project, (including any assessment, plan or program required under these approvals);  (e) review the adequacy of strategies, plans or programs required under these approvals; and, if appropriate;  (f) recommend measures or actions to improve the environmental performance of the project, and/or any assessment, plan or program required under these approvals.  Within six weeks of the completing of this audit, or as otherwise agreed by the Secretary, the Proponent must submit a copy of the audit report to the Secretary, together with its response to any recommendations contained in the audit report.		<ul> <li>610.18204-ELF IEA 2023 v1.0 20230220 – Offer of Services sighted from SLR Consulting Australia Pty Ltd Offer related to Schedule 5, Condition 3A.</li> <li>Sighted Elf Farm Supplies Pty Limited, signed agreement with SLR (Formal Instrument of Agreement) dated 29 March 2023, Purchase Order Number C24887. Signed by Blake Edwards WHS/HR Manager.</li> <li>This report: <ul> <li>(a) Compliant - Letter dated 28 March 2023 from Planning to Elf Farm Supplies endorsing Ms Lonergan and Mr Mawaraha as independent environmental auditors.</li> <li>(b) Compliant – refer to Section 3.8 and Appendix D of this report.</li> <li>(c) Compliant – Section 3.7 of this report.</li> <li>(d) Compliant – Section 3.6 of this report.</li> <li>(e) Compliant – Section 4 of this report.</li> </ul> </li> </ul>	Compliant

4 Within three months:

- (a) the submission of an incident report under condition 5 of schedule 5;
- (b) the submission of an annual review condition 3 of schedule 5, and
- (c) the submission of an independent environmental audit under condition 3A of Schedule 5; and
- (d) the approval of any modification of the Conditions of this approval,

The strategies, plans and programs required under this approval must be reviewed.

Note MOD 3 was approved on 16 March 2020. Documentation reviewed:

- Elf Farm Supplies Mushroom Substrate
   Facility Annual Environmental
   Management Review, Mulgrave, NSW,
   Revision 0, September 24 2021, prepared
   by Elf Farm Supplies Pty Ltd. No incidents
   to report Notifications were made of use
   of emergency dam but no incident reports.
- SLR report 610.18201.00200-R02-V2.0 IEA\_2021\_R1\_20210924 Independent Environmental Audit Elf Farm Supplies.
- Emails between Elf and Perram & Partners re annual review of 2021 of plans.
   Compliance with Condition.
- Invoice from Perram & Partners Invoice No 971, dated 30 November 2021. Full revision of EMS following audit (Nov 21). Compliance with Condition.
- Elf Farm Supplies Mushroom Substrate
   Facility Annual Environmental
   Management Review, Mulgrave, NSW,
   Revision 1, October 11 2022, prepared by
   Elf Farm Supplies Pty Ltd. No incidents to
   report Notifications were made of use of
   emergency dam but no incident reports.
- Review of Management Plans and Strategies – reviewed in October 2022 (this relates to the AEMR covering 2021-2022). Compliance with Condition.
- DPE letter to Elf dated 9 September 2022 –
   Updated Environmental Management
   Strategy for the Elf Farm and Substrata
   Plant Project (Schedule 5, Condition 1). In
   letter DPE approve updated EMS dated
   June 2022 issue V02.0 and Energy
   Efficiency Plan prepared by Elf Farm

Complaint



Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
			Supplies Pty Ltd, dated May 2022, issue 002.  The auditor notes that some plans are required to be updated in relation to MOD 3 activities, however as MOD 3 has not commenced these are not relevant to this condition.	
4A	If necessary to improve the environmental performance of the project or cater for a modification, the strategies, plans and programs required under this approval must be revised, to the satisfaction of the Secretary. Where revisions are required, the revised document must be submitted to the Secretary for approval within six weeks of the review required by Condition 4 of Schedule 5.  Note: This is to ensure the plans and programs are updated on a regular basis, and incorporate any recommended measures to improve the environmental performance of the Project.		DPE letter to Elf dated 9 September 2022 – Updated Environmental Management Strategy for the Elf Farm and Substrata Plant Project (Schedule 5, Condition 1). In letter DPE approve updated EMS dated June 2022 issue V02.0 and Energy Efficiency Plan prepared by Elf Farm Supplies Pty Ltd, dated May 2022, issue 002.	Compliant
Incident				
5	The Proponent must notify the Secretary and any other relevant agencies of any incident associated with the Project as soon as practicable after the Proponent becomes aware of the incident. Within 7 days of the date of the incident, the Proponent must provide the Secretary and any relevant agencies with a detailed report on the incident.	Interview: WHS/HR & Compliance Manager advised no reportable incidents. The Incident reports prepared for 17C are notification reports as no environmental harm reported.		Not triggered

Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
6	The Proponent must prepare a Community Consultation Strategy for the Substrate Plant site to address existing and future operations at the Substrate Plant site, including construction of works associated with MOD 1. This Plan must:		This condition related to the previous IEA period (2016).	Not triggered
	(a) be submitted to the satisfaction of the Secretary within one month from the approval of MOD 1;			
	(b) include procedures for updating the community on the general operation of the site as well as the progress of any construction works; including			
	i. a newsletter for the local community which details the			
	<ul> <li>construction activities and the expected duration of works;</li> </ul>			
	• a general summary of the environmental management to be implemented; and			
	• telephone number for taking complaints or enquiries in relation to the activities;			
	ii. the website required by Condition 7 of Schedule 5; and			
	iii. public meetings;			
	(c) describe the distribution area for the newsletter (at a minimum all residents within 2 km from the site boundary), prepared in consultation with Council; and			
	(d) include procedures for handling and monitoring all complaints received; and detail what management and/or contingency actions will be taken if complaints are received			

Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
7	The approved Strategy (as revised and approved by the Secretary from time to time), must be implemented for the life of the Project as soon as written endorsement by the Secretary is received	WHS & HR Manager showed the website which has stated MOD 1 completed March 2016.	Documentation viewed:     Community Consultation Strategy Elf Farm Supplies, 17 May 2016, Revision 1, prepared by Straight Talk.  Section 6.2.3 Media release issued on completion of the construction works. This has still not been completed.  Reviewed Elf website and sighted online complaints form under Contact Us, as per Section 6.2.5 of the Community Consultation Strategy.	Non-compliant



Condition	Requirement	Interviews and Inspections	Documentation Viewed / Assessment Status	Compliance Status
8	Within three months from the date of the approval of MOD 3 the Proponent must make the following information (unless commercially sensitive) freely available on a publicly accessible website, as it is progressively required under the approval:  (a) all current statutory approvals, including this approval and any modifications to it;  (b) plans and programs required under this approval;  (c) technical analysis/reports of monitoring results, which have been reported in accordance with the various plans and programs approved under the conditions of this approval;  (d) a complaints register, which is to be updated on a monthly basis;  (e) a copy of any review as required under Condition 3 of Schedule 5 (over the last five years);  (f) updates on the progress of the construction works associated with MOD 1; MOD 2 and MOD 3 and  (g) any other material as required by the Secretary		<ul> <li>In relation to progressively maintaining the site</li> <li>a) Compliance – sighted current approvals on the website (link to Planning website);</li> <li>b) Compliance – Environmental Management Strategy was sighted main strategy compliance (June 2022).</li> <li>Compliance – the Odour Management Plan, Water Management Plan (June 2020) and Operational Noise Management Plan were located on the website under Approved management plans.</li> <li>c) Non-compliance – the Odour reports were located in the AEMRs for reports prepared during this reporting period for example Appendix E – Monitoring Reports in AEMR 2021 and Appendix E in AEMR 2022, auditor did not deem to be freely available</li> <li>d) Compliance – Complaints Register located under Environmental Reporting;</li> <li>e) Compliance – AEMRs for 2021 and 2022 were uploaded to the website.</li> <li>f) Not applicable – no construction activities occurred during this reporting period.</li> </ul>	Non-compliant Non-compliant

# **APPENDIX B**

Photographs from Site Inspections



Photo 1 Solar Power Panels and Odour Control Ducting

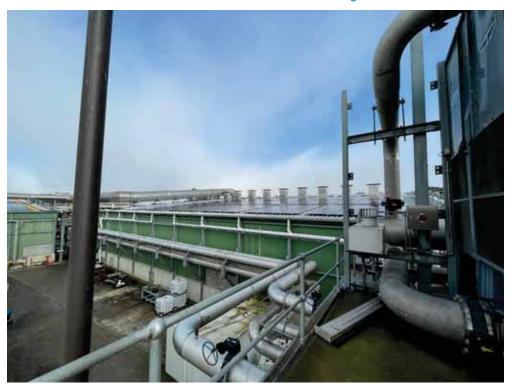


Photo 2 Solar Power Panels, Odour Control Ducting and General Site



Photo 3 Biofilter – Lower Section



Photo 4 Biofilter – Upper Section



Photo 5 Surface Aerator and Vegetation Screening/Landscaping



Photo 6 Enclosed Wastewater Pit



Photo 7 Control Room



Photo 8 Control Room



Photo 9 Control Room - Camera Panel - Site



Photo 10 Internal Photo - Phase 1



Photo 11 Scrubber area and Ducting to Biofilter



Photo 12 Double Skin Storage and Spill Kit



Photo 13 Temporary Noise Barrier – Note Emergency Exit Clear for Use



**Photo 14** Temporary Noise Barrier



**Photo 15** Temporary Noise Barrier

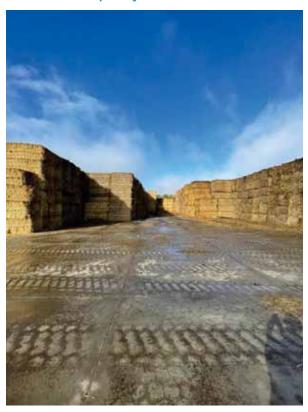


Photo 16 Example of Storage



Photo 17 Example of Bund Usage



Photo 18 Dust and Weed Control



Photo 19 No Queuing At Front Entrance



## **APPENDIX C**

Odour Audit



## **Odour Audit**

#### Introduction

This section of the report addresses the odour audit of the Project (MOD 1).

SLR has utilised two odour related reports which were prepared during this IEA reporting period by independent teams (two from SLR). SLR was engaged by Elf Farm Supplies to conduct annual odour emission testing in 2021 and 2022 on the Biofilter control system serving the Substrate facility in Mulgrave.

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As outlined in the reports, the purpose of the annual odour emission testing was to measure the odour concentration, odour emission rate and odour removal efficiency of the biofilter and compare these against measurements taken in 2018 and those adopted by the Odour Impact Assessment prepared by The Odour Unit dated 28 August 2015.

The IEA audit team have incorporated the results and findings of the reports prepared by SLR required under the IEA. The audit included:

- Site visit to determine compliance with the design features and process management actions to minimise odour emissions as outlined in the revised Odour Management Plan.
- Review of documentation to determine if odour concentrations and mass emission rates used in the Odour Impact Assessment were being achieved once the facility was built and operational.
- Review of documentation to determine if facility achieving the desired odour reduction outcomes.

#### **Documentation Reviewed**

The following relevant technical guidelines were reviewed and considered in the odour audit:

- Department of Environment and Conservation NSW Technical Framework Assessment and management of odour from stationary sources in NSW, November 2006
- Department of Environment and Conservation NSW Technical Notes Assessment and management of odour from stationary sources in NSW, November 2006

The following Elf documents were reviewed and considered in the odour audit:

- SLR Consulting Australia Pty Ltd, Elf Farm Supplies Biofilter Testing, September 2021. SLR Ref: 610.30446-R01, Version No. v1.0.
- SLR Consulting Australia Pty Ltd, *Elf Farm Supplies Biofilter Testing*, August 2022. SLR Ref: 610.30900-R01, Version No. v1.0.
- EPA Environmental Risk Assessment -Assessment No. 4014836 Total Calculated Risk Score 40 Overall Regulatory Priority Low
- EPA Management Category, Assessment No. 4018173, Assessment Period 20/5/2019 to 19/05/2022
- Environment Protection Authority EPA Licensing guideline Environmental risks levels, March 2022.
- Todoroski Air Sciences, *Odour Management Plan Elf Farm Supplies Substrate Facility*, Prepared for Elf Farm Supplies Pty Ltd, January 2023.

• The Odour Unit, Elf Farm Supplies Pty Ltd, Mushroom Substrate Plant – Modification to Approved Expansion, Odour Impact Assessment, Mulgrave, NSW. Final Report. 08.01.2015.

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 Air Quality Assessment, Expansion of Substrate Facility, Mulgrave, Elf Farm Supplies, 9 December 2010, PAE Holmes.

### **Audit Findings**

#### Site Visit – Implementation of Odour Controls

The auditor observed no offensive odour at the boundary of the property when arriving for the site visit. During the site visit on 15 August 2023, the auditor reviewed the existing design features and management practices in place against what was specified in the Odour Management Plan (2023).

The General Manager advised that the biofilter media has been changed. This occurred in two stages with the first stage completed in May 2022.

Sections 4.5 and 4.6 of the Odour Management Plan outline the design features for odour control and process management actions post MOD 1 completion. Refer to Table 16, Table 17 and Table 18 for audit findings regarding implementation of the features and actions.

Table 16 Audit Findings of Current Operational Features to Control and Manage Odour

	Evidence	2023 Finding
Fully enclosed processing areas for all major odour-generating processes and products, maintaining a slight negative pressure	Sighted	Compliant
Undertaking Phase 1 production in tunnels	Sighted	Compliant
Undertaking pre-wetting indoors		
Computer controlled fans to maintain optimum air supply and extraction in tunnels	Sighted fans operation and PLC	Compliant
Instrumentation to monitor compost processing variables	Sighted PLC system	Compliant
Enclosed conveyor transport system for material transfer from Phase 1 to Phase 2 tunnels	Sighted	Compliant
Extraction ductwork to extract air from various operating areas of the plant and deliver it to the emissions treatment plant	Sighted	Compliant
Ammonia scrubbers to remove ammonia from exhaust air from the plant prior to exhausting through the biofilter	Sighted	Compliant
A biofilter to accept air from all buildings, after treatment through the ammonia scrubbers	Sighted	Compliant
Site monitoring network consisting of trigger alarms on operational processes	Sighted PLC system	Compliant
Maintaining storage of critical spares for machinery equipment where possible	Elf Farm Supplies General Manager advised sufficient critical spares available.	Compliant

 Table 17
 Audit Findings of Current Process Management Activities to Minimise Odour

Process Management Actions	Evidence	Finding
Clean up any spillage in front of the ingredients store or elsewhere on a daily basis.	Discussions with Elf personnel advised this completed, no old material sighted during audit.	Compliant
Remove solid material from the collection pit screen regularly	Sighted records	Compliant
Desludge the collection pit (if sludge is present) at regular intervals (at least fortnightly/monthly)	Sighted records	Compliant
Enclosed processing areas for all potentially odour-generating activities	Sighted	Compliant
Keep external doors closed when not in use	Sighted	Compliant
Regular visual integrity checks of enclosures (buildings, conveyors ductwork) to identify potential leaks	Elf personnel conduct weekly walk around of the facility	Compliant
Maintain appropriate temperature and oxygen conditions during composting, consistent with the needs of the process, to minimise odour generation	Sighted PLC system within specifications	Compliant
Air-under system in Pre-Wet shed and in Phase 1 tunnels to improve aeration during composting process	Sighted	Compliant
Automatic control system for fans to maintain optimum air supply and extraction	Sighted PLC system within specifications	Compliant
Enclosed conveyor transport for tunnel loading, dispatch and transfer to Phase 2 tunnels	Sighted	Complaint
Operate the ammonia scrubbers and biofilter in a manner to maximise their efficiency at removing odorous substances and odour causing substances from the air stream	Sighted SLR Odour Emission and Biofilter Control System Audit report, Section 5.2, biofilter efficiency >95%	Compliant
Minimise as far as practicable the duration of any bypassing of the ammonia scrubbers and biofilter for maintenance; and	Biofilter was taken off line for as short of time as possible when changing media	Compliant
Schedule any necessary bypassing of the ammonia scrubber or biofilter to periods when hot substrate is not being turned and when weather conditions will assist dispersion	Not triggered	Not triggered
Monitoring system to detect any faults or operational anomalies and send alarms to the Duty Manager 24/7 and	Sighted PLC system within specifications	Compliant
Potential dam odour is managing by complying with Condition 17B of Schedule 3 of the Project Approval and the water management plan	Aerator sighted during audit	Compliant



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Table 18 MOD1 – Odour Control Measures for Operation of the Ammonia Scrubbers

Process Management Actions	Evidence	Finding
Maintain the scrubber per the manufacturers specifications.	Sighted PLC system	Compliant
(i)Acid Scrubber	Sighted PLC system	Compliant
<ul> <li>Maintaining the pressure difference between he supply air to the scrubbers and the supply air to the biofilter</li> </ul>		
<ul> <li>pH value set point at 4.0-4.5 pH</li> </ul>		
<ul> <li>EC value (conductivity) set point at 200 mS/cm, max 225mS/cm</li> </ul>		
<ul> <li>Monthly inspection of</li> </ul>		
Flow detection sensor and conductivity sensor		
Connection of the sulfuric acid supply line		
(ii)Water make-up system – Monthly Visual Inspection	Sighted inspection report	Compliant
(iii)Mist eliminator / fan of the supply air duct – six monthly visual inspection	Sighted inspection report	Compliant
(iv)Ammonia sulfate pump – Monthly visual inspection	Sighted inspection report	Compliant
(v)Recirculation pumps – Monthly visual inspection	Sighted inspection report	Compliant
(vi)Sulfuric acid pump cabinet - Monthly visual inspection	Sighted inspection report	Compliant
(vii)Sulfuric acid storage tank – Monthly visual inspection	Sighted inspection report	Compliant
(viii)Sulfuric acid filling station – Monthly visual inspection	Sighted inspection report	Compliant
(ix)Ammonium sulfate storage tank – Monthly visual inspection	Sighted inspection report	Compliant
(x)Ammonium sulfate drain station – Monthly visual inspection	Sighted inspection report	Compliant
(xi)Control cabinet – Monthly visual inspection	Sighted inspection report	Compliant

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#### **Predicted Odour Levels**

A review of the Odour Impact Assessment (OIA) prepared by The Odour Unit (TOU) was undertaken. The findings of the review are summarised below:

- Odour sampling was undertaken for point sources using the "lung method" (Section 4.1) and using an isolation flux hood (IFH) for area sources. The IFH sampling was carried out according to the method prescribed in the United States Environment Protection Agency (US EPA) technical report 'EPA/600/8-86/008. This method is also defined in Australian Standard AS/NZS4323.4.
- An Odour emission inventory was developed from the sampling and testing program and used in the modelling. Emission sources included in the inventory were:
  - Water Recycle Pit 2,182 ou.m³/s
  - Bale Wetting Area 20,909 ou.m<sup>3</sup>/s
  - Stable Bedding Area 575 ou.m<sup>3</sup>/s
  - Biofilter 20,833 ou.m<sup>3</sup>/s per section (six sections)

The biofilter emission rate was based on 0.045 m/s exit velocity and average odour concentration of 1,000 ou.

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 Phase 2/3 building – Modelled using mean odour concentration testing results (Table 3.3 from OIA – refer to Table 19)

Table 19 Phase 2 Odour Concentration Testing Results (from Table 3.3 in OIA)

Process Stage – Phase 2	Cycle Time (hrs)	Mean Odour Concentration (ou)
Tunnel venting	0-2	2,900
Levelling	2-18	5,090
Warm up pasteurisation	18-26	2,390
Pasteurisation	26-34	2,440
Cool-down (conditioning)	34-42	470
Conditioning #1	42-90	332
Conditioning #2	90-114	91
Cool-down (spawn)	114-148	43

## Measured Odour Levels - Annual Biofilter Testing

SLR completed the annual biofilter testing on

- 24 June 2021
- 29 and 30 June 2022

This involved measuring the biofilter inlet in parallel with the outlet.

The following is an extract from Section 3 of the report which is a summary of the results and comparison against the OIA and previous measurements.

**Table 20** presents a comparison of odour concentrations and emission rates collected as part of this study and compares these against those assumed by the OIA and -collected in 2018, 2020 and 2021. In summary:

- The measured biofilter outlet odour emissions are 78% lower than those assumed by the OIA.
- Peak biofilter outlet odour emissions (based on measured concentrations and maximum flow through the biofilter) are estimated to be 63% lower than those assumed by the OIA.
- The average biofilter outlet odour concentration measured is 183 ou which is 63% lower than the odour concentration assumed by the OIA.
- The biofilter odour removal efficiency is greater than 95%

Table 20 Summary of Biofilter results and Comparison against OIA and Previous Measurements

Year	Average Flow through Biofilter during Sampling (m³/hr)	Average Odour Concentration (wet) (ou)	Total Biofilter MOER (wet) (ou.m³/s)	Biofilter Efficiency	Maximum Flow through Biofilter (m3/hr)	Maximum Estimated Biofilter MOER (wet) (ou.m³/s)	Change Compared to OIA (%)
OIA		500			390,000	54,168	
2018	204,610	165	9,482	> 95%	390,000	18,073	-67%
2020	189,717	150	8,767	> 95%	402,000	18,576	-66%
2021	193,070	82	4,578	>95%	402,000	9,533	-82%
2022	233,506	183	11,752	>95%	402,000	20,231	-63%

## **Odour Complaints Review**

SLR reviewed the odour complaints for the past 7 years. In order to assess the impact of the construction, commissioning and operation of MOD1, the following key dates are critical:

- Construction commenced in August 2016.
- Installation, connecting and testing of services, plant and equipment commenced in February 2018.
- Introduction of product took place in May 2018 to enable testing and commissioning of the odour management system.
- Works were complete for MOD1 on 30 June 2018.
- Operations commenced on 1 July 2018, commissioning and fine tuning of the new plant continued through until end of October 2018.

Table 21 summarises the odour complaints received by Elf Farm Supplies since September 2012.

 Table 21
 Summary of Odour Complaints since September 2012

Complaints	Number	Number of	Number of	Number of	Mushroom Substra	te Process	
Period	of Complai nts	Wind Direction - Confirmed	Wind Direction - Uncertain	No-Location of Complaint Given	Complaints when undertaking Transfer	Complaints when Blending Phase 1	Complaints when Blending PW
Sept-Dec 2012	2	1	1	1	n/a	n/a	n/a
2013	109	43	46	22	22	13	39
2014	68	30	30	9	9	13	17
2015	125	74	32	8	14	44	22
Jan-Sept 2016	35	20	15	-	9	22	8
Sept 2016 – Oct 2017	53	10	21	4	28	12	19
Sept 2017 – Aug 2018	18	0	16	2	0	11	1
Sept 2018 – Aug 2019	1	1	0	0	0	0	0
Sept 2019-Aug 2020	0	0	0	0	0	0	0

Complaints	Number	Number of	Number of	Number of	Mushroom Substrate Process		
Period	of Complai nts	Wind Direction - Confirmed	Wind Direction - Uncertain	No-Location of Complaint Given	Complaints when undertaking Transfer	Complaints when Blending Phase 1	Complaints when Blending PW
Sept 2020- Aug-2021	0	0	0	0	0	0	0
Sept 2021- Aug-2022	0	0	0	0	0	0	0
Totals	411	179	161	46	82	115	106

Source: 2022 AEMR, Elf Farm Supplies (September 2022)

Three alleged odour complaints were received via the EPA on 31 August 2022 at 14:30, 5 September 2022 at 16:30 and 24 September 2023 at 11.19am. The first two complaints were conveyed to Elf on 6 September 2022. The complaints were investigated by Elf and report supplied to the EPA as requested. EPA carried out an inspection of the facility on 14 October 2022.

EPA advised via email the following on 19 October 2022

As discussed on the day, the EPA note that the main source of odour observed at the premises during the inspection was from the emergency dam water. The EPA understand that this dam was breached during recent flood events and the odours are likely a result of this flood water. This flood water may have been impacted by the nearby sewage treatment plant, and the dam has potentially become anaerobic due to the excessive nutrient load. It is also noted that leachate from the biofilter flows into the dam and is an ongoing operational source of inflow into the dam.

Elf engaged a third party to assist in odour management controls for the Western Dam and by 31 October 2022 they had implemented the recommendations of the third party and installed a surface aerator and applied Biostim powder. The details were emailed to the EPA on 31 October 2022. No further complaints have been received by Elf or the EPA.

The auditor sighted the aerator and was advised that the powder is being used.

A review of the Elf Farm Supplies Complaint Register showed that there have been no odour complaints recorded by the company since the middle of November 2017. The EPA have received complaints and advised Elf during the same period. **Table 22** summarises the number of complaints received by each party.

Table 22 Odour Complaints Since November 2017

Period	No. of Odour Complaints Received Directly by Elf	No. of Odour Complaints Received by the EPA and Elf advised of the Complaint
14 Nov 2017 to 13 Dec 2017	0	1
13 Dec 2017 to 14 Jan 2018	0	0
14 Jan 2018 to 31 Jan 2018	0	0
February 2018	0	2
March 2018	0	1
April 2018	0	1
May 2018	0	4
June 2018	0	0

Period	No. of Odour Complaints Received Directly by Elf	No. of Odour Complaints Received by the EPA and Elf advised of the Complaint
July 2018	0	4*
August 2018	0	2*
September 2018	0	0
October 2018	0	0
November 2018	0	1
December 2018	0	0
1 January 2019 to 31 December 2019	0	0
1 January 2020 to 31 December 2020	0	0
1 January 2021 to 28 February 2021	0	0
28 February 2021 to 31 December 2021	0	0
1 January 2022 to 31 December 2022	0	3
1 January 2023 to 12 March 2023	0	0

## **Odour Impact Assessment Review**

The Odour Impact Assessment undertaken by The Odour Unit modelled three scenarios:

• Scenario 1: Proposed modification interim stage: Raw Materials Area and Recycled Water Handling Upgrade. The source groups modelled included emission from bale wetting area, stable bedding area and water recycled pit only. The raw materials area at this stage is contained, and that is set to zero emissions.

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- Scenario 2 Biofilter system: Modelled emissions from the biofilter system at 1,000 odour unit (ou) mean target concentration performance with containment of all other emission areas and sources. This scenario does not include the initial stages of Phase 2, refer to Scenario 3; and
- Scenario 3 Phase 2 and 3 Upgrade conditions. Includes emission from the later stages of Phase 2 and all of Phase 3 from the roof exhaust vents from the extended and new Phase 2/3 Buildings. It is assumed emissions during the early stages of the Phase 2 process cycle are directed to the Emissions Plant and Biofilter System. The model scenario represents the exhaust emissions of the worst-case 24 hour snapshot, which was determined to be a total of 26,625 ou.m³/s (one hour average) running over a 24 hour period.

The results of the dispersion modelling for the three scenarios were:

- Scenario 1: Odour modelling showed exceedance of the 2 ou odour performance criterion for the urban areas to the south-west, west, northwest and northeast of the Facility. There is also an exceedance of the 4 ou to 7 ou criteria for the semi-rural and industrial areas to the east and south-east.
- Scenario 2: Odour modelling showed compliance with the 2 ou odour performance criterion for most of the urban areas (southwest, west, northwest and northeast) and compliance was achieved with the 4 ou to 7 ou odour performance criteria for the semi-rural and industrial areas to the east and south-east of the facility. It was noted that an urban area to the northwest is within the 2 ou contour. TOU stated the "exceedance shown in part of the urban area to the northwest is not considered to be problematical".
- Scenario 3: Odour modelling showed compliance with the 2 ou for all urban areas and with the 4 ou to 7 ou criteria for the semi-rural and industrial areas.

#### **Conclusions & Recommendations**

Based on the site observations, review of the odour monitoring data, annual biofilter testing, odour complaints, odour impact assessment report and the EPA letters, SLR deems the MOD1 to be achieving the desired objective to minimise odour emissions from the site and achieving the predictions in the Odour Impact Assessment.

The SLR IEA audit team recommends that the biofilter testing be changed to every 18 months or when media is changed instead of annual as the system has been performing for the past 5 years.

# **APPENDIX D**

Consultation with Key Stakeholders



#### DPF

Hi Sandy,

Thank you for your email. Laura has recently changed teams, therefore, I will be the Compliance Officer managing Elf Mushroom Farm and Substrate Plant MP08\_0255.

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From our records, I have identified two separate Warning Letters which were issued to the project between March 2021 and March 2023. I have also identified several incident reports, submitted following the 2022 flooding events. One of the incident reports resulted in a record breach for the delayed notification of the incident (9 days after the incident occurred).

I have attached a copy of the Warning Letters and the record breach correspondence for your information.

I request that you please focus on the project's implementation of noise mitigation measures, such as the acoustic wall, and the project's remediation of the emergency dam.

The department also requests you conduct the Independent Environmental Audit (IEA) in accordance with Schedule 5, Condition 3A (Mod 1), with the Independent Audit Post Approval Requirements (IAPAR's) and with the feedback provided following the 2021 IEA report, with correspondence submitted 28 September 2021 (attached). For your information, the IAPAR's can be found here: <a href="https://www.planning.nsw.gov.au/sites/default/files/2023-02/independent-audit-par-202005.pdf">https://www.planning.nsw.gov.au/sites/default/files/2023-02/independent-audit-par-202005.pdf</a>

Please feel free to give me a call to discuss the matter using the details below.

Kind regards, Astrid Christensen Compliance Officer

### **FPA**

Good afternoon Sandy,

Thank you for your email dated 8 August 2023 inviting comment from the Environment Protection Authority (EPA) in regard to Elf Farm Supplies - Independent Environmental Audit - 2021 to 2023.

The EPA encourages the undertaking of independent audits as a useful tool for industry to ensure it is meeting its environmental objectives and environment protection licences requirements.

The EPA does not provide specific input to independent audits and I thank you for your request.

Kind Regards, Evan

**Evan Guyatt** Operations Assistant

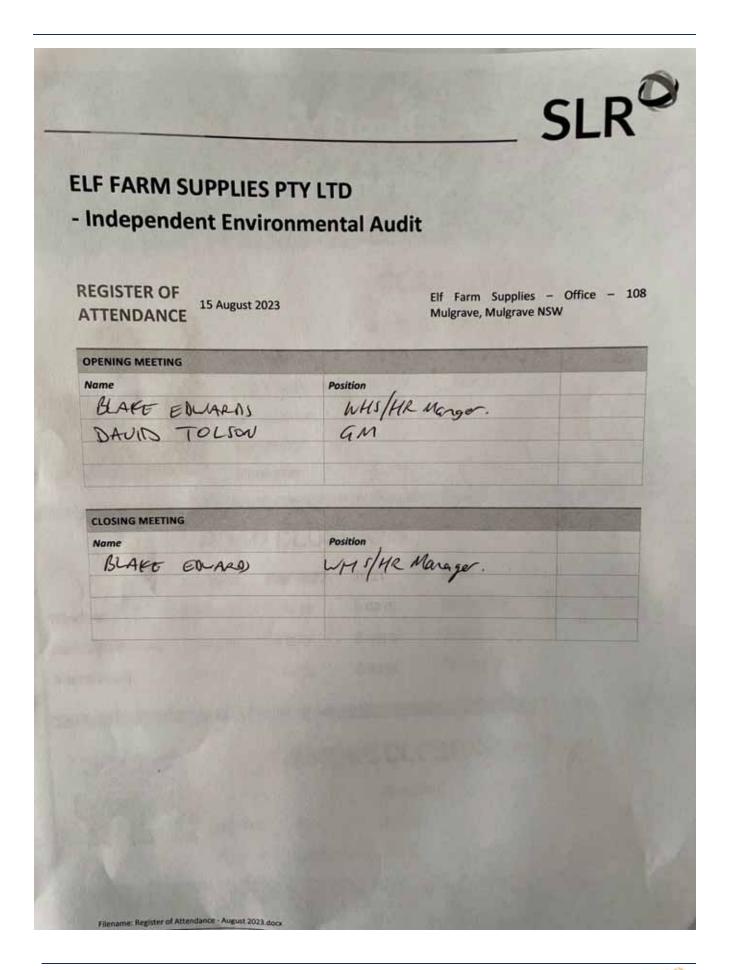
Regulatory Operations – Metropolitan West NSW Environment Protection Authority D 02 9995 6220



# **APPENDIX E**

Attendance Registers





# **APPENDIX F**

Independent Auditor Form



SLR Ref No: 610.18	204-R03_v1.0
Sep	otember 2023

Independent Audit Report De	Independent Audit Report Declaration Form			
Project Name	Elf Farm Supplies Pty Ltd			
Consent Number	MP 08_0255 (MOD 1)			
Description of Project	Elf produces mushroom compost (substrate) at the site and recently commenced construction of a new odour management system on the site as per MOD 1.			
Project Address	108 Mulgrave Road, Mulgrave New South Wales			
Proponent	As above			
Title of Audit	Independent Environmental Audit			
Date	20 September 2023			

I declare that I undertaken the Independent Audit and prepared the contents of the attached Independent Audit Report and to the best of my knowledge:

- The audit has been undertaken in accordance with the relevant approval condition(s) and the *Independent Audit Post Compliance Requirements (Department 2019)*;
- The findings of the audit are reported truthfully, accurately and completely;
- I have exercised due diligence and professional judgement in conducting the audit;
- I have acted professionally, objectively and in an unbiased manner;
- I am not related to any proponent, owner or operator of the project neither as employer, business partner, employee, or by sharing a common employer, having a contractual arrangement outside the audit, or by relationship as spouse, partner, sibling, parent or child.
- I do not have any pecuniary interest in the audited project, including where there is a reasonable likelihood or expectation of
  financial gain or loss to me or spouse, partner, sibling, parent or child;
- neither I nor my employer have provided consultancy services for the audited project that were subject to this audit except as
  otherwise declared to the Department prior to the audit; and
- I have not accepted, not intend to accept any inducement, commission, gift or any other benefit (apart from payment for auditing services) from any proponent, owner or operator of the development, their employees or any interested parties. I have not knowingly allowed, not intend to allow my colleagues to do so.

#### Note:

- a) Under Section 10.6 of the *Environmental Planning and Assessment Act 1979* a person must not include false or misleading information (or provide information for inclusion in) in a report of monitoring data or an audit report produced to the Minister in connection with an audit if the person knows that the information is false or misleading in a material respect. The proponent of an approved project must not fail to include information in (or provide information for inclusion in) a report of monitoring data or an audit report produced to the Minister in connection with an audit if the person knows that the information is materially relevant to the monitoring or audit. The maximum penalty is, in the case of a corporation, \$1 million and for an individual, \$250,000; and
- b) The Crimes Act 1900 contains other offences relating to false and misleading information; section 307B (giving false or misleading information maximum penalty 2 years imprisonment or 200 penalty units, or both).

Signature	South harm
Name of Lead / Principal Auditor	Sandy Lonergan
Address	120 High Street North Sydney
Email Address	slonergan@slrconsulting.com
Date	September 2023

# **APPENDIX G**

Auditors CV and Approval Letter



# Department of Planning and Environment



Blake Edwards – Compliance Manager Elf Farm Supplies ACN 131 333 830 108 Mulgrave Road Mulgrave NSW 2756

22 March 2023

BY EMAIL ONLY: blake@elffarm.com.au

Dear Mr Edwards

# Auditor Endorsement Request – Elf Mushroom Substrate Plant (MP08\_0255) Independent Environmental Audit 2023

I refer to your request (MP08\_0255-PA-25) for the Secretary's endorsement of suitably qualified, experienced and independent persons to prepare the 2023 Independent Environmental Audit (**IEA**) for the Elf Mushroom Substrate Plant (MP08\_0255), as modified (**approval**).

The Department of Planning and Environment (**department**) has reviewed the nominations and information you have provided and has endorsed the following audit team from SLR Consulting Australia Pty Ltd:

- Ms Sandy Lonergan as lead auditor;
- Mr Varun Marwaha as odour technical specialist; and
- Mr Michael Brecko as odour technical specialist.

The IEA must be prepared, undertaken and finalised in accordance with Condition 3A of the approval. Failure to meet these requirements will require revision and resubmission.

The Department reserves the right to request an alternate auditor or audit team for future audits.

Notwithstanding the agreement for the above listed audit team for this Project, each respective project approval or consent requires a request for the agreement to the auditor or audit team be submitted to the Department, for consideration of the Secretary. Each request is reviewed and depending on the complexity of future projects, the suitability of a proposed auditor or audit team will be considered.

If you wish to discuss the matter further, please contact Laura Papoulias on 02 8289 6879, or email <a href="mailto:compliance@planning.nsw.gov.au">compliance@planning.nsw.gov.au</a>.

Yours sincerely

### Julia Pope - Team Leader Compliance/Metro

#### As nominee of the Planning Secretary

SANDY LONERGAN

TECHNICAL DIRECTOR



# **OUALIFICATIONS**

BAppSC	1993	Bachelor of Applied Science – Environmental Assessment and Management (University of Newcastle)
Dip PM		Diploma in Project Management
		Qualified Lead Auditor for Management Systems Team Audits
		Qualified Lead Auditor for Quality Audits (ISO9001)
		Qualified Lead Auditor of Occupational Health and Safety Management Systems
		Qualified Lead Auditor for Environmental Management Systems (ISO14001)
		Certificate of Wastewater Treatment, Meadowbank TAFE (1994)

Acoustics & Vibration, Asia-Pacific

# **EXPERTISE**

- Project management
- Environmental compliance audits
- Development and auditing of environmental management systems to ISO/IEC14001
- Quality, health and safety and ISO17025 auditing
- System development and management to ISO/IEC17025, ISO/IEC9001 and ISO18001
- Due diligence audits
- Environmental management plans
- Environmental monitoring programs

Sandy has worked as an environmental consultant since graduating from the University of Newcastle.

Her experience provides her with the flexibility to analyse non-technical and technical issues in a logical and systematic manner, to distinguish key issues, identify options and put forward appropriate solutions. She has developed into a diligent and effective Project Manager.

Between 2006 and 2011 she was the Operational and Environmental Manager of an emissions testing company. Her primary responsibility was to run the company (project manage), which included but not limited to planning (quoting – price, time, resources), contract management, scheduling, ensuring client requirements were met, communicating with internal and external stakeholders, customer feedback (complaint management).

Her role included developing in-house systems to improve the efficiency of the business whilst at the same time as reducing risk to the business. Sandy also developed, implemented and maintained the company's NATA accreditation to ISO/IEC17025 for the company.

Sandy has experience over 25 years experience in project managing a range of projects across a variety of industries. She has experience across a range of industries, including but not limited to road, rail, coal seam gas, coal, petroleum (refineries), meat industry, food manufacturers and glass manufacturing.

Sandy is a qualified quality, health & safety, environmental auditor to the relevant international standards. She has been previously engaged by NCSI to conduct EMS certification audits on their behalf.

Sandy has over 20 years' experience in conducting environmental audits ranging from compliance to due diligence.

Since joining SLR she was the Project Director of all Air Quality projects and more recently transferred into the Acoustic team to be the Project Manager on key Transport for NSW projects.

Due to her expertise in management systems and auditing skills she was SLR Quality and NATA manager for 8 years, which included conducting and managing the company's internal and external audits in relation to ISO9001 & ISO/IEC17025.



PROJECTS	
	Environmental Audits
Development Consent of Allied Mills (2022)	Independent Environmental Audit of Allied Pinnacle facility at Picton for NSW Department of Planning and Environment
Development Consent of Allied Mills (2022)	Independent Environmental Audit of Allied Pinnacle facility at Kingsgrove for NSW Department of Planning and Environment
Development Consent of Allied Mills (2020)	Independent Environmental Audit of Allied Pinnacle facility at Picton for NSW Department of Planning and Environment
Development Consent of Allied Mills (2019)	Independent Environmental Audit of Allied Pinnacle facility at Kingsgrove for NSW Department of Planning and Environment
Mayfield Concept Plan Concept Approval	Independent Environmental Audit for Port of Newcastle
Elf Farm Supplies Project Approval (2021)	Two yearly Independent Environmental Audit for NSW Department of Planning and Environment
Mayfield No. 4 Berth Development Consent	Independent Environmental Audit for Port of Newcastle for NSW Department of Planning and Environment
Development Consent of Allied Mills (2017)	Independent Environmental Audit of Allied Mills facility at Picton for NSW Department of Planning and Environment
Elf Farm Supplies Project Approval	Independent Environmental Audit for NSW Department of Planning and Environment
Fairview and Arcadia Valley Project Areas of Coal Seam Gas	Third Party Compliance Environmental Audit for Santos
Coal Seam Gas Project Development	Environment Protection and biodiversity Conservation Act (EPBC) Audit for Santos for Commonwealth Government
Fairview Project Area	Third Party Compliance Environmental Audit for Santos
Fairview and Arcadia Project Areas	Third Party Compliance Environmental Audit for Santos
Shoalhaven Starches	Annual Environmental Compliance Audits for Department of Planning
NSCI	ISO/IEC 14001 Certification audits on behalf of NSCI including Rockdale Beef, Baiada Poultry, Tetra Pak, Panasonic, BlueScope Steel
	HSE Audits
LNG Development Project in PNG	Internal HSE Gap Audit against client specifications for ERIAS



	Project Management
Warringah Freeway Upgrade – Noise Treatment Program - Transport for NSW	Project Manager for Transport for NSW for SLR Consulting – budget for the project is approximately \$7,000,000
Brenic Constructions – Freight Noise Abatement Program	Project Manager for Brenic Constructions Freight Noise Abatement Program which SLR conducts site visits and prepares Scope of Work reports – budget for this project is approximately \$100,000
Sydney Metro – Noise Abatement Program	Project Manager for Sydney Metro for SLR Consulting – budget for the project is approximately \$200,000
M6 Stage 1 – Noise Treatment Program – Transport for NSW	Project Manager for Transport for NSW for SLR Consulting – budget for the project is approximately \$250,000
WestConnex – Noise Treatment Program – Transport for NSW	Project Manager for Transport for NSW for SLR Consulting – budget for the project is approximately \$300,000
Freight Noise Abatement Program (FNAP) (2017 – 2018)	Project Manager for Transport for NSW for SLR Consulting – budget for 2017 \$750,000-\$1,000,000
At Property Treatment Program (FY 2017)	Project Manager for Sydney Metro for Transport for NSW – budget \$500,000
Department of Defence Asbestos Management and Dust Monitoring Program	Project Manager for Department of Defence – 12 months – budget \$200,000
Background Ambient Air Monitoring Study, Coal Seam Gas Field, Qld	Project Manager for Santos – 12 months – budget \$250,000
Fairview and Arcadia Valley Project Areas of Coal Seam Gas – Third Party Audit	Project Manager for Santos – budget - \$130,000
MEMBERSHIPS	
Professional membership	Environment Institute of Australia





# **QUALIFICATIONS**

BEng 2006 Cert IV 2020

## **EXPERTISE**

- Project Management
- Air Quality Impact Assessments (AQIA)
- Air Quality Management Plans (AQMP)
- Air Quality Audits
- Technical Peer Reviews
- Emissions Estimation
- Dispersion Modelling
- Field Odour Surveys
- Ambient Air Quality Monitoring
- Odour Sampling and Analysis in accordance Australia Standard (AS) 4323.3

# **VARUN MARWAHA**

**PRINCIPAL** 

Air Quality, Asia-Pacific

Bachelor of Engineering - Chemical, University of Sydney Certificate IV in Government Investigations (NSW EPA)

Varun is a Principal Air Quality Consultant working within the Air Quality team with over 15 years of air quality and process engineering experience.

Varun is experienced in air quality and odour impact assessments, emission inventories (including National Pollutant Inventory), air quality dispersion modelling (including Ausplume, CALPUFF and CAL3QHCR), air quality monitoring (including odour), meteorological monitoring, meteorological modelling (The Air Pollution Model [TAPM] & CALMET), greenhouse gas assessments (inc NGER) and overall project management.

Varun has extensive experience in emission inventory development and management using various modelling tools and software. This includes estimation of emissions from various sources including waste management facilities (inc landfills and MRFs), agricultural operations, industrial operations, power generation plants, roads and shipping.

Varun is experienced in designing and undertaking field our surveys to provide empirical data on odour impacts from existing sources such as poultry farms, composting operations, landfills and soil remediation projects.

He has exceptional communication skills and is experienced in presenting the results of air quality assessments and studies to both technical and non-technical audiences. Varun is a a Certified Air Quality Professional (CAQP) and a Certified Practicing Project Manager (CPPM).

#### **PROJECTS**

ACT NoWaste
Landfill, Materials
Recycling Facility and
Green Waste processing
Facility
2017-ongoing

Riverstone East Precinct, NSW, Australia (2020 – Ongoing)

#### **Odour Impact Assessments**

This long term (4+ years) project involves ongoing odour monitoring at the landfill active face, and community odour surveys over 3 days. The report is prepared in response to ACT EPA's request to conduct regular monitoring and the effectiveness of ongoing mitigation measures such as use of different landfill cell covers including soil types and non-permeable tarpaulin.

The Project also involves real time monitoring of odorous gases at the three sites and use of telemetry to report any spikes and corelation with any community complaints.

Project Manager and Air Quality Consultant for the Riverstone East Precinct air quality assessment. The work has included peer review of air quality assessments previously prepared for the precinct and pet food manufacturing facilities located within the precinct, gap identification and provision of advice to the NSW DPIE in relation to the recommended path forward for comprehensively quantifying and assessing impacts from identified sources on the future residents of the precinct.



Proposed Residential Development, Tahmoor, NSW, Australia (2017)	Varun performed Ambient Odour Field Assessments (odour surveys) for a proposed residential development in western Sydney to inform an air quality impact assessment for the site. The surveys were performed to assess the likely impact zone associated with odours from an existing turkey farm and small animal abattoir in the area. Work included the completion of multiple surveys at various times of the day and under different meteorological conditions, and the preparation of a technical report summarising the findings, including maps showing the results of each survey.
Proposed Extension to Sewage Treatment Plant (STP), Kempsey, NSW, Australia	The aim of the project was to quantify and assess the odour impacts due to the proposed extension to the existing sewage treatment plant facility. The project included desktop research for odour emissions data from existing similar sewage treatment plants and optimising (using dispersion modelling) the location of new sewage treatment plant including the process equipment.
Proposed Grilled Chicken Shop, NSW, Australia	Assessment of odour impacts from the proposed grilled chicken shop based on the odour emissions from similar existing facilities.
Proposed Waste Water Treatment Plant (WWTP), QLD, Australia	Assessment of odour impacts due to proposed WWTP in order to service a proposed development for 1,500 EP based on odour emissions from similar existing facilities.
Proposed Extension to Sewage Treatment Plant (STP), NSW, Australia	Assessment of odour impacts due to proposed extension to the existing STP based on odour monitoring program conducted on site.
	Opportunities and Constraints
Opportunities and Constraints Assessment, Proposed North Ryde Station Precinct Project, NSW	Commissioned to undertake air quality assessments (for construction and operational phases) in support of a rezoning application for the North Ryde Station Precinct.  Operational - A dispersion modelling study was undertaken to determine the potential constraints for development associated with the operation of a nearby waste transfer station, a neighbouring crematorium, and road traffic exhaust emissions from the existing local road network and as a consequence of the operation of the Project.  Construction – A risk-based assessment was undertaken to assess the potential for air quality impacts on nearby sensitive land uses (including residences, commercial and industrial land uses) due to site preparatory works for the Project.
MEMBERSHIPS	
NSW/ACT Branch Committee Member	Clean Air Society of Australia and New Zealand (CASANZ)
ACCREDITATION	
Certified	Certified Air Quality Professional (CAQP), CASANZ
Certified	Certified Practicing Project Manager (CPPM), UNE



## **ASIA PACIFIC OFFICES**

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# **QUALIFICATIONS**

**BEng** 

2003

## MICHAEL BRECKO

Western Sydney, NSW, Australia

**ASSOCIATE** 

Air Quality/Acoustic and Vibration, Asia-Pacific

# **EXPERTISE**

- Project and Client Management.
- Detailed Knowledge of Legislative Requirements for Air Emission Testing.
- Odour Monitoring and Odour Surveys
- Operating and Managing NATA accredited odour lab.
- Operating and Managing NATA Accredited Gravimetric Lab.
- Vast Range of Ambient, Stack and Workplace Air Quality Monitoring and Assessment.
- Preparing State and National Regulatory Reports.
- Delivering High Quality NATA Internal Audits and Training Reports.

Michael is a Senior Consultant in the Air Quality team and has 15 years' experience in Environmental Consulting and Emission Monitoring. Michael is currently assisting the Acoustic Team in delivering the Noise Insulation Program for the Warringah Freeway Upgrade.

Bachelor of Engineering (Environmental) Honours Class II Division II, University of

Michael has extensive experience in working in many industries including but not limited to petroleum (refineries), power and gas facilities, glass manufacturing, waste management facilities, paint manufacturers and food processing manufacturers.

Michael has developed a specialism in air quality monitoring and analysis of emissions to atmosphere – stack and ambient, workplace occupational health contaminants, odour – point sources, area sources and ambient sources, and environmental audits and reporting.

His main responsibilities include designing, servicing and maintaining, reporting and managing environmental monitoring projects, laboratory and equipment management, project and client management, provide adequate internal and client training, as well as hold approved field and laboratory NATA signatory prerequisites for a range of environmental monitoring and analysis activities.

Michael operated and managed a NATA accredited gravimetric and odour laboratory for nine years.

## **PROJECTS**

Odour Emission Monitoring (incl. sampling, analysis, engineering calculations and reporting)

Regional Funds Management, Griffith, NSW Australia Conduct suitable site specific odour measurements from a poultry facility to demonstrate legislative compliance and report results to supplement air quality models for proposed expansion.

The Ranch, Griffith, NSW Australia

Conduct suitable site specific odour measurements from a poultry facility to demonstrate legislative compliance and report results to supplement air quality models for proposed expansion.

Sanitarium, Berkley Vale, NSW, Australia

POEO compliance monitoring and reporting of food manufacturing facility for particulates, odours and acid suite to supplement clients proposed throughput increase and the impact at sensitive receptors.



Horney & Associates, Bourke, NSW, Australia	Conduct suitable site specific odour measurements from a goat facility and report results to supplement air quality models for proposed abattoir.
Elf Farm Supplies, NSW Australia	Conduct suitable site specific and boundary odour field surveys from a mushroom composting facility to demonstrate regulatory licence compliance and to supplement modification to operations for proposed expansion.
SUEZ, Kemps Creek, Eastern Creek and Rockdale Facilities, NSW, Australia	Conduct suitable source odour measurements and boundary field surveys from a waste facility to assess impact on receptors for proposed expansion.
Real Foods, St Peters and Erskine Park, NSW, Australia	Conduct suitable field odour surveys for a meat packing facility to assess compliance at sensitive receptors as well as conduct particulate and odour samples from point sources to supplement an air quality impact assessment for proposed new site.
West Connex, St Peters, NSW, Australia	Conduct suitable field odour surveys to assess impact on sensitive receptors during excavation works at the West Connex project site.
Child Care Facility, Leppington, NSW, Australia	Conduct suitable odour field surveys for proposed childcare facilities to assess air quality impact from neighbouring facilities.
ProTen, Henderson WA, Australia	Conduct annual site specific odour measurements from a poultry facility to demonstrate regulatory licence compliance.
GD Pork, WA, Australia	Implement odour mitigation measures into odour management plan for WA Piggery.
Advanced Pet Care, Kwinana, WA, Australia	Conduct suitable field odour measurements of a pet food facility to assist client in identifying odour sources to supplement design strategies to mitigate emissions on neighbouring facilities.
	Ambient Emission Monitoring (incl. sampling, analysis, engineering calculations and reporting
RMS, Sydney Harbour Bridge, NSW, Australia	Bi weekly ambient dust monitoring at 3 monitoring locations and regulated areas lead monitoring during lead paint blasting at the Sydney Harbour Bridge. Dust and lead monitoring to address impact of falling dust on workers within a work area at the North Pylon on Sydney Harbour Bridge.
Centennial Coal, NSW, Australia	Conduct 12 months compliance monitoring and reporting for TSP, PM <sub>10</sub> and PM <sub>2.5</sub> , including continuous monitoring in accordance with regulatory licence requirements and meteorological monitoring at Centennial's Cooranbong, Lidsdale, Charbon, Newstan, Neubeck, Angus Place, Mandalong and Clarence sites.
U&D Mining Industry Australia, Broughton ,QLD Australia	Conduct 6 months compliance monitoring and reporting for continuous PM <sub>10</sub> and dust deposition at 2 monitoring locations in accordance with legislative requirements to supplement air quality models to assess impact on receptors for proposed mining expansion.
Santos, Roma and Fairview, QLD Australia	Conduct 6 months background monitoring and reporting for continuous NOx, CO and



	meteorological parameters at 2 monitoring locations in accordance with legislative requirements to supplement air quality models to assess impact on receptors for proposed mining expansion.
VHM Exploration, Goschen, VIC, Australia	Conduct 12 months of background monitoring at 4 monitoring locations including continuous monitoring in accordance with legislative requirements for $PM_{10}$ and $PM_{2.5}$ , Metals, Silica and dust deposition to supplement air quality models to assess impact on receptors for proposed mining activities.
Atlas Iron Limited, Wodgina, WA, Australia	Conduct a short term (1 month) compliance monitoring and reporting for continuous $PM_{10}$ and dust deposition at 1 monitoring locations in accordance with legislative requirements to supplement air quality models to assess impact on receptors for proposed mining expansion.
Aurecon, RAAF Base, Darwin, NT, Australia	Conduct a series of short term (3 month) monitoring and reporting events for continuous $PM_{10}$ and dust deposition at 3 monitoring locations in accordance with legislative requirements to pro-actively manage on-site stockpile dust concerns.
Vista Gold, Mt Todd Mine, NT, Australia	Conduct 12 months of pre-baseline dust deposition monitoring and reporting at 10 monitoring locations in accordance with legislative requirements to supplement air quality models to assess impact on receptors for proposed mining expansion.
BMD Constructions, Tiger Brenan Drive, Darwin, NT, Australia	Conduct a series of short term (3 month) monitoring and reporting events for dust deposition at 6 monitoring locations in accordance with legislative requirements to pro-actively manage construction earthworks dust concerns.
	Workplace Emission Monitoring (incl. sampling, analysis, engineering calculations and reporting
RMS, Bradfield Tunnel, NSW, Australia	Dust and lead monitoring during cleaning and removal works on Bradfield Tunnel.
RMS, Sydney Harbour Bridge, NSW, Australia	Fresh air monitoring of supply lines for workers during lead paint blasting cleaning and removal works on Sydney Harbour Bridge.
Boral Plasterboard, NSW Australia	Conduct CO monitoring to assess impact on workers from forklift exhausts operations within the workplace environment.
Magic Poly, Wetherill Park, NSW, Australia	Conduct workplace monitoring and audit of spray booth facility for particulates, odours and volatile organic compounds.
Australian Refined Alloys, NSW, Australia	Quarterly workplace and Ambient dust - particulate & lead compliance monitoring, lead recovery facility.
DIC Australia , NSW, Australia	Workplace particulate and VOC compliance monitoring from paint manufacturing facility.



Stack Emission Monitoring (incl. sampling, analysis, engineering calculations and reporting)
Quarterly compliance emission testing of oil & gas facility for combustion gases, particulates and hydrogen sulphide.
Quarterly, six monthly and annual diesel generator compliance emissions monitoring for combustion gases and particulates at Sydney Exhibition Centre Glebe Island.
Annual compliance emission testing of petrochemical facility for combustion gases, sulphur compounds, chlorine, hazardous substances and particulates.
Annual compliance emission monitoring of gas engines for combustion gases and volatile organic compounds.
Diesel engine POEO and Euro 3 standards emission compliance monitoring for combustion gases and particulates.
Gas engine POEO compliance emission monitoring.
Locomotive diesel engine POEO compliance monitoring for combustion gases, particulates and volatile organic compounds.
Marine diesel engine IMO compliance monitoring for combustion gases and volatile organic compounds.
Legislative Environmental Reporting (incl. engineering calculations and reporting)
Annual NPI and LBL Annual Return reporting, food processing facility.
Annual LBL Annual Return reporting, paint manufacturing facility.
Annual NGER reporting, lead recovery facility.

