



Our reference: DOC15/143450

Chris Ritchie
NSW Department of Planning & Environment
GPO Box 39
SYDNEY NSW 2001
Attention: Emma Barnett

ELECTRONIC MAIL AND STANDARD POST

1 May 2015

Dear Mr Ritchie,

**RE: 09_0145 MOD 1 - ELF Farm Supplies - Proposed Modifications to Mulgrave Substrate Plant
EPA Submission to Public Exhibition**

I refer to the public exhibition of Elf Farm Supplies Proposed Modifications to Mulgrave Substrate Plant 09_0145 Mod 1. Elf Farm Supplies provided Perram and Partners *Environmental Assessment Report 136R2* dated February 2015 ("the Environmental Assessment") in support of the application.

On 3 February 2015 EPA provided an adequacy assessment of the draft EA. During this assessment EPA stated that additional information may be requested during the detailed review of the exhibited Environmental Assessment. EPA has reviewed the Environmental Assessment and found that in a number of instances the information provided is insufficient to allow an adequate assessment to be made of the potential environmental impacts of the proposal. EPA cannot provide recommended conditions of consent. The Environmental Assessment does not provide sufficient clarity regarding potential environmental impact to allow EPA to vary the premises EPL appropriately.

EPA requests that the proponent update the publicly exhibited Environmental Assessment to address the following matters detailed below.

The Proposal

In January 2012 a concept plan and staged development approval was granted for the expansion of Elf Farm Supplies operations at 108 Mulgrave Road, Mulgrave and 521 The Northern Road, Londonderry. The development was proposed to occur in three stages over approximately 10 years and enable the plant to produce up to 3200 tonnes of Phase 1 substrate per week. Prior to 2012 the plant was restricted to 1000 tonnes of Phase 1 substrate per week. The development included two additional Phase 1 tunnels, an extension to the pre-wet building, a second Phase2/3 tunnel building and a second bio-scrubber to be discharged through a 40m stack. The additional bio-scrubber was to service the existing and pre-wet building extension and the existing bioscrubber to treat air from the Phase 1 tunnels and the raw materials storage area.

Approval is now being sought for the following modifications to the staged development at the licensed waste facility at 108 Mulgrave Road, Mulgrave:

Stage 2

- Construction of an odour emission treatment plant instead of a second bioscrubber. The plant comprises six acid scrubbers and a biofilter. Approval is also sought for the construction of an additional biofilter if required;
- Installation of ductwork to convey extracted air from pre wet and Phase 1 activities to the odour emissions treatment plant;
- Decommissioning of the existing bioscrubber and stack.
- Following commissioning of the emissions treatment plant six pre wet tunnels will be commissioned and the existing pre wet building utilised for bale wetting. Commencement of construction of the second Phase 2/3 tunnel building;
- Enclose the raw materials courtyard

Stage 3

- The Phase 1 tunnel extension and remainder of the Phase 2/3 building as approved in 2012
- Construction of an additional four pre wet tunnels and extension of the existing Phase 2/3 building from 22 to 25 tunnels.

A. General comments about the overall project and proposed modifications

The Environmental Assessment does not sufficiently describe the project as modified. EPA requests a modified Environmental Assessment be submitted that includes the approved proposal as modified in one document. For clarity, it would be preferred that the modified Environmental Assessment did not include reference to the associated mushroom farm at Londonderry Road.

B. Noise Impact Assessment

EPA has reviewed the Noise Impact Assessment submitted as Appendix B of the Environmental Assessment. EPA requests clarification of the following matter:

1. Atkins Acoustics 17 February 2015 Report *"Acoustic Review Modified Operations Mushroom Substrate Plant Mulgrave"* concludes:

"Noise modelling undertaken to address design changes for the purpose of adopting best available technology and improving odour control at the Mulgrave Substrate Plan has shown that the predicted noise levels marginally increase from the 2010 noise assessment and exceed the noise assessment criteria outlined in Condition 19 of the DoP Approval (Application No. 08_0255) dated 11 January 2012.

- (a) The acoustic review and noise modelling has demonstrated that the predicted noise level contributions can achieve the project specific noise goals (PSNG) at the reference receiver locations.*
- (b) As part of the design development, plant and equipment selections, building designs and noise attenuation requirements will be reviewed to address the PSNG and any pending noise criteria proposed as part of the Conditions of Consent."*

There appears to be a contradiction in that the Executive Summary of the main Environmental Assessment document states that

"...noise from the altered plant will be...within the limits contained in the current approval and licence.", however; the conclusion of the Acoustic Review at Appendix B includes that "predicted

noise levels marginally increase...and exceed the noise assessment criteria in...the DOP approval...dated 11 January 2012."

Provided this particular matter is clarified EPA can support the modification with no change to the noise limits in EPL 6229.

C. Odour Impact Assessment

The Odour Impact Assessment at Appendix C to the Environmental Assessment does not provide sufficient information to make an adequate assessment of the potential air impacts of the proposal.

The assessment utilises varied odour impact assessment criteria, with 2OU for residential areas to the south west, west, north west and east of the site and 4-7 OU for semi-rural and industrial areas to the east and south east. This is consistent with the approach adopted in the original impact assessment for staged works in 2011. However given the history of odour complaints and with the view of minimising the risk of offensive odour impacts, the EPA believes it is more appropriate to review the impact assessment against the more conservative 2OU criterion with a view to greater assurance that the site will not generate offensive odours.

Given the extensive history of community concern regarding odour from the existing facility the EPA considers it imperative that the proponent demonstrate that all feasible measures have been identified and assessed. The proponent must demonstrate the risk of adverse odour impacts has been minimised and provide confidence and assurance that offensive odour will not result from the site. This additional information should include, but need not be limited to:

1. A clear and unambiguous discussion of the works and modifications to existing consent conditions for which approval is being sought;
2. Information about the performance specifications of the second proposed biofilter to the north of the pre wet building;
3. Justification for modelling emissions from the biofilter as point rather than volume sources and at inlet temperature;
4. Modelling of existing operations that includes the stormwater overflow detention dam;
5. Identification of management and mitigation measures for fugitive emission sources;
6. The proponent proposes enclosing external conveyors to contain odour. Current conveyor systems on site still provide the potential for fugitive odour emissions. These should be constructed so as to fully contain all odours. This may require effective air extraction.
7. Additional assessment and modelling that quantitatively demonstrates that all feasible mitigation measures have been identified and compliance with 2OU can be achieved. This comprises a cumulative assessment of all operations against an odour impact assessment criterion of 2 OU, that includes, but is not limited to the following scenarios:
 - a. The proposed emissions treatment system (biofilter) with roof venting of post 36 hours phase 2/3 emissions (the proposed project).

The emissions from the biofilter and Phase 2/3 operations are modelled separately as scenarios 2 and 3 respectively and the exhibited assessment does not consider the idea of cumulative odour impacts from both Phase 1 biofilter and Phase 2/3 operations. The proponent contends that the emissions from these sources are of a sufficiently different

character to remain individually detectable at downwind locations. The EPA notes that this approach will not reflect receptor response in reality, as it is entirely feasible for a receptor to be adversely affected by the increased frequency of odour events due to two odour sources regardless of intensity and/or the synergistic effects of odour emissions of different character.

- b. All emissions (including phase 2/3 building) directed to the emissions treatment system with operation of one biofilter (additional mitigation measures scenario)
- c. All emissions directed to an emissions treatment system with two biofilters (additional mitigation measures scenario)
- d. The implementation of any other cost-effective odour mitigation options (additional mitigation measures scenario).

Note: The scenarios do not appear to have included instances when the doors are opened for various processes. These fugitive emissions should be detailed with sufficient mitigation provided. For example, inward pressure is sufficient to ensure odour does not escape during these times.

- 8. Clear commitment that the project will be designed, built, operated and maintained in a manner that does not cause offensive odour.
- 9. Nomination and commitment to implementation of contingency odour controls and odour management measures, to be implemented in the event of offensive odours resulting from the site operations.
- 10. The report does not sufficiently detail the characteristics of the internal atmosphere being vented to the acid/ammonia scrubbers and biofilter. EPA requires further information regarding:
 - a. Ammonia, heat and vapour concentrations within the enclosed spaces:
 - i. The report refers to variation in atmosphere change/hour eg. between 1 to 5 atmospheres per hour. How many atmosphere turnovers per hour is required to maintain comfortable working conditions within the various buildings? Has this been quantitatively assessed? EPA considers this information important as the internal operating atmosphere must be maintained with all doors closed.
 - ii. How has the character and volume of this inlet atmosphere been used to determine the size and residence time of the acid/ammonia scrubbers and biofilter?
 - iii. No output emissions have been provided for the biofilter, rather the report assumes the emissions will be less than 1000ou and probably around 500ou. EPA requires further demonstration of the relevant parameters and treatment capacity of the system to demonstrate quantitatively the performance and projected emissions.
- 11. Plant is routinely removed from the buildings for servicing. Current site practice can include the removal of sections of wall for this activity. This should be conducted in a manner that does not provide emissions of odours, be it by timing with sheds empty or another mechanism.

D. Existing Approval review

EPA will recommend the existing approval be amended to include the following:

- 1. No increase in throughput until odour control works are validated and approved by EPA
 - a. Figure 6 of main assessment document has half the second 2/3 building being built at the same time as these works. Further, three extra tunnels will be added to the existing phase 2/3 building to increase composting time. The existing approval should be upheld which requires that no further increase to the volume of substrate production shall be approved until EPA has provided written advice that odour mitigation measures effectively control emissions to ensure compliance with the requirements of the POEO Act;
 - b. Schedule 2 production rates conditions amended to include that the Director General consider EPA advice regarding compliance with POEO Act prior to allowing further increase

in production. EPA will not vary the Environment protection licence (no 6229) until satisfied odour is effectively controlled at the premises; and

- c. Schedule 3 condition 3 amended to reflect the removal of odour emission criteria from the EPL. EPA will remove the licenced discharge and monitoring point for stack discharge following commissioning of the biofilter. Any references to this in the existing approval should be amended.

E. Building construction to contain internal emissions

EPA has recently modified the premises environment protection licence to require the sealing of leaks in the existing buildings. These leaks were largely caused by the corrosive action of the composting atmosphere within the sheds. EPA would recommend that all new structures be constructed so as to be unreactive to atmosphere contained within.

Further, the proponent should demonstrate the measures taken to contain process emissions and minimise the fugitive discharge of these emissions.

F. Other considerations

Please note that this response does not cover biodiversity or Aboriginal cultural heritage issues, which are the responsibility of the Office of Environment and Heritage.

The proponent should be made aware that any commitments made in the environmental assessment may be formalised as approval conditions and may also be placed as formal licence conditions.

If you have any queries regarding this matter please contact Mr Damien Rose on (02) 9995 5586.

Yours sincerely



Trevor Wilson
Unit Head Waste Compliance
Environment Protection Authority