

14 March 2016

Determination Report

NSW Planning Assessment Commission Determination Report Elf Mushroom Farm & Substrate Plant Modifications (CP 08_0255 and MP 08_0255 Mod 1)

1. INTRODUCTION

Elf Farm Supplies Pty Ltd (the Proponent) has submitted an application to modify its existing Project Approval and Concept Plan for a mushroom farm at Londonderry and substrate plant at Mulgrave.

The proposed modification would primarily involve upgrades to the existing odour management system at the substrate plant, which would allow the development to operate in accordance with the Pollution Reduction Programs (PRPs) imposed by the Environment Protection Authority (EPA) on its Environmental Protection Licence (EPL).

The existing mushroom farm and substrate plant are located north-west of Sydney within the Hawkesbury and Penrith local government areas, respectively. The substrate plant has been in operation since 1981.

2. PROPOSAL

The proposal is principally associated with the replacement of the existing pre-wet processing phase and the enhancement of the odour management system (utilising a bio-filter) at the existing substrate plant.

The proposal would include the following modifications:

- Replacement of the existing method of odour management used, which entailed an open mixing shed during the pre-wet phase, with a tunnel processing system; and
- The installation of an emissions treatment plant comprising six ammonia scrubbers and a bio-filter as a replacement for the existing bio-scrubber, and the approved second bio-scrubber and chimney stack.

The modifications would also require the following ancillary works:

- An extension of both the existing Phase 2/3 building and the approved second Phase 2/3 building by approximately 10 metres to allow a longer residence time of substrate in Phase 2/3 processing; and
- The existing pre-wet shed to be used for bale wetting and stable bedding operations.

3. DELEGATION TO THE COMMISSION

The proposal has been referred to the Commission for determination under the terms of the Ministerial delegation dated 14 September 2011 because political donations were disclosed in a submission received during the exhibition period of the application.

Ms Lynelle Briggs AO, Chair of the Commission, appointed Mr Gordon Kirkby to determine the application.

4. DEPARTMENT'S ASSESSMENT REPORT

The Department's Assessment Report identified odour management as the key issue, however it also addressed a range of other issues that were raised in submissions from the public.

The Department's Assessment Report concluded that the modification would provide for a robust and comprehensive system to manage the development into the future, and recommended approval subject to existing and modified conditions.

5. SUBMISSIONS

The Commission notes that the Department received six public submissions, including four from the general public and two from public authorities. The Commission also received correspondence from three members of the public during the determination process.

In particular, the Commission received a letter from the Environmental Defender's Office on behalf of one of the previous objectors requesting that the Commission hold a public meeting on the proposed modification. A further request for a public meeting was also received from another member of the public. The Commission is not required to hold a public meeting and does not consider it to be necessary for this modification application, which aims to improve environmental performance and does not involve any increase in production.

6. COMMISSION'S CONSIDERATION

On the basis of the information available to the Commission, including the Department's Assessment Report, the Environmental Assessment (EA), the Response to Submissions, submissions to the Department, and correspondence from the public to the Commission, the following matters were considered:

- Odour impacts and the proposed changes to the odour management system; and
- Other issues, including water impacts, noise impacts and potential hazards.

6.1 Odour

The submissions to the Department and the correspondence to the Commission have raised a number of concerns relating to odour impacts from the substrate plant. In particular, concerns were raised about the proposed technology and whether it would be successful in achieving the desired odour outcomes.

Odour Impact Assessment

The EA included an Odour Impact Assessment prepared by The Odour Unit. In response to comments from EPA, the Applicant subsequently provided a revised Odour Impact Assessment in the Response to Submissions, which was also prepared by The Odour Unit.

The revised Odour Impact Assessment includes a quantitative air quality impact assessment in accordance with the EPA's *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales 2005* (the Approved Methods) and the *Technical framework: assessment and management of odour from stationary sources in NSW 2006* (the Technical Framework). The odour

impact modelling in the revised Odour Impact Assessment was compiled on the basis of 4 scenarios modelled at 19 sensitive receivers.

Predicted odour impacts

The Technical Framework provides a range of odour assessment criteria based on population densities, however the EPA requested that the Proponent adopt the more conservative criterion at all receivers in its modelling.

The Commission notes that under the current operating conditions, there is the potential for off-site odour impacts well in excess of the more conservative criterion. In contrast, only minor exceedances of the criterion are predicted to occur if the works associated with the proposed modification are constructed. The Commission also notes that both the Department and EPA have confirmed that these exceedances are unlikely to be detectable.

Overall, it is predicted that the implementation of the proposed modifications would result in the reduction of up to 90% of odour emissions from the facility when operating at full capacity. The Commission is satisfied that even with the application of the more conservative criterion in the Technical Framework, only negligible to minor exceedances are likely to occur. This would be a significant improvement on the current situation at sensitive receivers in the vicinity of the development.

Proposed technology

The proposed modification includes the introduction of tunnels as a component of the pre-wet processing phase, which is designed to enable more effective odour management and treatment of air discharges, as opposed to the previous approach using windows within a large shed structure.

The Department has noted that similar systems have had recent success in other developments in the Western Sydney area, including SITA's Advanced Water Treatment Facility at Kemps Creek and Global Renewables UR-3R waste facility at Eastern Creek. The Commission is satisfied that the proposed technology is likely to have a positive effect on odour management at the facility.

Recommended conditions

The Commission recognises that ongoing compliance with the odour criteria would rely on the continued adoption of best practice in the management and operation of the substrate plant.

In that regard, the Commission notes that Department has accepted EPA's recommendation to require, prior to commencement of construction, the Proponent to engage an independent odour expert to demonstrate that the substrate plant has capacity to meet the performance criteria predicted in the Odour Impact Assessment. The independent odour expert would be required to undertake odour audits within six weeks of commissioning of the odour emissions plant and after six months of operation of the plant. The Proponent would also be required to implement any additional management or mitigation measures identified in the audit process and submit a verification report to the Secretary to this effect.

The Commission also notes the Department's other recommendations for additional conditions of approval to ensure appropriate management of the facility, including a revised Odour Management Plan, an annual review of the environmental performance of the facility and a biennial independent environmental audit. In addition, the Department has recommended a condition of approval requiring completion of the works within two years from the date of approval, and the implementation of a comprehensive Community Consultation Strategy to inform the community of the progress of the construction works.

The Commission is satisfied that the Department's recommended additional conditions of approval would establish a robust and comprehensive framework to ensure appropriate management and mitigation of odour impacts.

6.2 Other Issues

Water impacts

The stormwater system for the substrate plant provides for roof water runoff from various structures on the site to South Creek or farm dams. Surface water from non-operational areas of the site is collected in retention basins and also diverted to farm dams.

The Commission notes that the Department has included a recommended condition approval requiring a revised Stormwater Management Plan to reflect the modified works and also to ensure the release of water from the western dam is only during times of emergency. Consequently, the Commission is satisfied that the potential impacts to water would be adequately managed.

The Commission also notes that the site is located within the South Creek floodplain. The substrate plant is currently operating on land that is filled to provide a working platform above the one in 100 year flood level.

The Department has recommended a condition that requires no works to be permitted to the landscaped embankment on the western boundary of the site as part of this approval. The Commission supports the Departments inclusion of this condition and is satisfied that it would adequately manage flood impacts.

Noise Impacts

The Commission observes that the existing substrate plant and the equipment associated with the proposed modification include fans and pumps, which can result in noise emissions.

The proposed modification includes changes to the method of production from an open mixing shed to enclosed processing within tunnels, which may result in a slight increase in noise emissions. Notwithstanding, the Commission is satisfied that the noise emissions would continue to comply with the project specific noise levels.

Hazards

The Commission notes that the processing of mushroom substrate includes the use of sulphuric acid to maintain the correct pH to retain the ammonia in solution. This material would be stored within tanks for use in the ammonia scrubbers. The Commission is satisfied that continued best practice would enable the safe storage and handling of this material.

5 COMMISSION'S DETERMINATION

The Commission has carefully considered all the information available to it including the Department's Assessment Report, the Environmental Assessment, the Response to Submissions, submissions to the Department of Planning and Environment, and correspondence from members of the public to the Commission.

The Commission notes that the proposed modifications to the existing substrate plant are in response to the EPA's Pollution Reduction Program which seeks to enhance the odour management system and thereby further mitigate impacts on the surrounding area.

The Commission supports the Department's recommendation that the application be approved, subject to the recommended conditions.

A handwritten signature in blue ink, reading "Gordon Kirkby". The signature is written in a cursive, flowing style.

Gordon Kirkby
Commission Member (Chair)