PERRAM & PARTNERS

PLANNING AND ENVIRONMENTAL CONSULTANTS

17 March, 2011

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Director-General
Department of Planning
GPO Box 39
SYDNEY NSW 2001

Our Ref: 119/121L13

Attention: Ms Emma Barnet

Dear Madam

**RE: PROPOSED MUSHROOM FARM AND SUBSTRATE PLANT:
521 THE NORTHERN ROAD, LONDONDERRY; AND
108 MULGRAVE ROAD, MULGRAVE**

Thank you for your letter of 1 March 2011 enclosing copies of submissions received by the Department during the public exhibition of the environmental assessment for the above project.

The attachments to this letter comprise the response to the issues raised. It is noted in the attachments that the proponent's noise specialist intends to meet with DECCW and traffic specialist intends to meet with the RTA in order to discuss possible modifications to the conditions recommended by those agencies.

Attachments to this letter are as follows

1. Response to issues raised by the Department
2 Response to agency submissions
3. Response to public submissions
4. Revised statement of commitments
5. Letter from Kevin Mills & Associates
6. Letter from Barker Ryan Stewart
7. Dangerous Goods Manifest
8. Register of Dangerous Goods
9. Letter from PAE Holmes responding to DECCW comments
10. Letter from Atkins Acoustics
11. Letter from PAE Holmes responding to Hawkesbury Council comments
12., Letter from PAE Holmes responding to Penrith Council comments

After considering the submissions it has been determined that there is no need to modify the project and for this reason a preferred project report has not been prepared.

Should you require any further information, please give me a call.

Yours Faithfully
for Perram & Partners

Terry Perram
Principal

ATTACHMENT 1 ISSUES RAISED BY THE DEPARTMENT

1. Biodiversity

Assess potential impacts of creating an asset protection zone on the western and southern sides of the spent substrate store at the mushroom farm, including a 10 metre defendable space.

Response

Recommendation 11 from the bushfire compliance report, included as Appendix L of the environmental assessment, states as follows:

An asset protection zone to be established for at least 24m to north, east and western aspects, the undergrowth is managed so as to not exceed 5t/ha of bushfire prone vegetation. Note, existing tree stands do not require removal, though branches within 5m of any proposed building should be trimmed so as to not overhang the building and maintained as part of the management of the 24m asset protection zone.

Section 2.6 of Appendix L indicates the asset protection zone (APZ) is to include a 10 metre defendable space, with a recommendation that where the development does not include paving, the first 3 metres be maintained as hardstand.

Kevin Mills and Associates was asked to assess potential impacts of these requirements. A letter from KMA is attachment 5. In summary, woodland occurs to the west and south of the spent substrate store but is not continuous along either boundary. The woodland to the west contains small populations of the threatened shrub *Dillwynia tenuifolia*, some of which is within the proposed APZ. As demonstrated by Kevin Mills on site, the groupings of this plant within the APZ are sufficiently localised that they can be separately fenced where they occur without defeating the purpose of the APZ. One specimen of another threatened species was also observed. KMA recommends that the threatened species be identified by a botanist at the time of construction to facilitate protection.

From a practical perspective the existing stock fence at the western end of the development site would be removed and relocated to the western edge of the APZ giving unimpeded access for fire fighting and maintaining this area. The localised groupings of *Dillwynia tenuifolia* would be enclosed with separate perimeter fences and the remainder of the APZ managed to maintain 5 tonne/ha of fuel load. Trees not affected by construction work would not be removed. The statement of commitments has been amended accordingly.

2. Traffic and Parking

(a) Confirm that the parking spaces for employee vehicles at the mushroom farm will be sufficient for the development, having regard to the Penrith DCP and the RTA *Guide to Traffic Generating Developments*.

Response

Penrith DCP 2010 came into force on 10 December 2010 after the EA had been sent to the printer. As it is the current DCP applying to the mushroom farm Penrith DCP 2010 is quoted below.

C10 TRANSPORT ACCESS AND PARKING

10.5.1. Parking

C. Controls

1. Provision of Parking Spaces

a) For any proposed development, Council will require the provision of on-site car parking to a standard appropriate to the intensity of the proposed development as set out in Table C10.2 below.

b) Within rural zones, the range of possible uses of land is very broad. Therefore, it will be the applicant's responsibility to demonstrate that adequate parking is provided.

Table C10.2 does not provide any guidance for parking associated with mushroom farms or intensive agriculture in general, hence subclause b) highlighted above is the operative requirement.

Further guidance is obtained from section D1 of the DCP. Although mushroom farming is not specifically mentioned, there is reference to horticulture.

D1 RURAL LAND USES

1.4. Agricultural Development

1.4.6. Horticulture

C. Controls

10. Access, Traffic and Parking

a) The frequency and intensity of traffic associated with any horticultural activity should be addressed in terms of the capacity of the road system and the requirements of Chapter C10 'Transport, Access and Parking' of this DCP.

b) Access to the site must be provided from a major or secondary arterial road which is constructed to a standard to take articulated vehicles. Access should only be provided from a local road where it is not practicable to provide access from a main or secondary arterial.

c) The design of the development should incorporate parking and access areas related to the use and vehicles likely to be associated with the development.

The highlighted words in subclause c) above are relevant. Identical wording is used in section 1.4.2 of part D1 of the DCP for parking associated with intensive livestock agriculture.

The RTA's *Guide to Traffic Generating Developments* does not suggest parking requirements for a mushroom farm or intensive agricultural development generally. However, to gain an understanding of the RTA's thinking, section 5.11.1 relating to factories contains the following comment:

> *Parking provision is reduced when:*
> ...
> *employee parking demand is substantially less than the recommended rate.*

Section 6.5.4 of the EA echoed comments in Appendix M of the EA that in the absence of specific guidance in relevant documents, parking requirements should be based on anticipated demand. During preparation of the EA, Elf Mushrooms advised that at the company's existing Vineyard mushroom farm vehicle use averaged about one car per two employees. This is indicated in section 5.5.7 of the EA where it is estimated that approximately 64 small vehicles would visit the site each day.

Elf Mushrooms does not expect that the ratio of small vehicles to employees will change significantly when the operation moves to Londonderry. Hence the parking provision shown on plans in the EA is considered more than adequate for expected demand. This approach to assessing parking requirements is consistent with Penrith DCP and acknowledges actual parking demand, as suggested in the RTA guide.

It is proposed to construct the car park during Stage 1 of the development. There will be ample opportunity during the early stages of operation to observe and verify that the ratio of vehicles to employees remains as predicted. In the unlikely event that additional car parking were to be required in the later stages, there is abundant space on the site for this to be accommodated.

(b) At full capacity the mushroom farm will employ 115 people. Explain why this does not result in peak traffic generation of 115 cars plus heavy vehicles.

Response

A peak generation of 115 cars plus heavy vehicles could only occur if every employee travelled in a separate vehicle. As indicated in the response to (a) above, the ratio of vehicles to employees at the current Vineyard mushroom farm is about one vehicle per two employees and this is not expected to change significantly for the Londonderry operation.

The traffic assessment has been undertaken on this basis.

3. Noise

On the basis of predicted traffic numbers it appears daytime traffic generation (and hence noise) has been underestimated. Please clarify.

Response

The noise assessment evaluates traffic noise based on vehicle numbers in the traffic assessment, referred to in item 2. above. The traffic assessment is considered to reflect likely vehicle numbers.

4. Stormwater

Clarify stormwater quality modelling results for the substrate plant. Stormwater pollution loads should be compared with and without the proposed treatment.

Response

Please refer to the letter from Barker Ryan Stewart (attachment 6), the authors of the stormwater reports in the EA. Tables in the letter show predicted pollution loads post development with controls and without controls together with the percentage reduction to be achieved by the controls. Results are separately tabulated for the two catchments at the substrate plant.

5. On-site Sewage Management

A network operator's licence under the *Water Industry Competition Act, 2006* may be required for the STP.

Response

Clause 19 of the *Water Industry Competition (General) Regulation, 2008* provides that Water Industry Infrastructure specified in Schedule 3 of the regulation is exempt from the requirement for a licence under the Act. Clause 7(b) of Schedule 3 of the regulation provides that a licence is not required for Water Industry Infrastructure that *is not able to be connected to water industry infrastructure operated by a public water utility because it is not practicable or economical to connect the infrastructure.* That exemption relieves the proposed STP at the mushroom farm from the need for a licence.

Sydney Water was contacted during development of the project regarding the possibility of connecting to a sewerage scheme. Sydney Water advised that the proposed Agnes Banks/Londonderry sewerage scheme would end in Londonderry village, about 5 km from the site and in any event would not be designed with capacity to accept sewage from non-residential sources.

6. Consultation

Submissions suggest that some people were not aware of the proposal prior to the public exhibition. Please clarify what consultation was undertaken and when and how any issues raised were addressed.

Response

Consultation was undertaken prior to the end of the exhibition period. Elf Mushrooms consulted the nearest residents at the Londonderry site, explaining the proposal and inviting interested residents to visit the existing farm at Vineyard. Residents did not take up this offer. Elf Mushrooms has advised the following properties were visited on 5th February 2011 or thereabouts:

- the owner (Roy) and the manager (Merv) of the car wrecking yard were spoken to. The manager lives in the closest house to the site, No 1 Thomas Road, located immediately adjacent to the southern boundary (letterbox at The Northern Road is labelled 557A);
- 503a The northern Road – Mark Giddings. This property adjoins part of the northern boundary of the site;
- 503b The Northern Road - Heferen Estate (Dave and Tammie) share the same driveway with 503a;
- 505 The Northern Road – Lillian Noon. The subject property was purchased from this resident;
- 509 The Northern Road –visited twice, on the weekend and during the week, but no-one home; and
- 493 The Northern Road - Mary and her son Joe (husband Rob not present).

It appears DoP has subsequently received only one submission from the properties visited, being from Robert LaHood at 493 The Northern Road who was absent when the project was explained to his wife and son.

Issues raised during the consultation included the length of the traffic merging lane in relation to residents' driveways, dust, odour and visual impact. Plans of the traffic lane were shown, dust and odour controls explained and an offer made to plant trees on residents' properties to further screen the development.

At the Mulgrave site, Elf Farm Supplies contacted:

- the adjoining rural property owner to the north;
- the nearest property to the east (boat sales yard);

The owners were supportive of the development.
An opportunity was taken to casually discuss the project with the nearest owner to the west when both parties were present removing a cow from South Creek.

It is considered the Director-General's requirement with regard to consultation has been adequately addressed. Examination of public submissions does not reveal any significant concern with the official notification process undertaken by DoP that canvassed the wider community. While submissions have objected to the project, none have suggested any modifications that could have been implemented had the same responses been received earlier.

7. Hazards

Please provide a list of all dangerous goods that are stored at the substrate plant and will be stored at the mushroom farm, giving the name and maximum quantity to be stored of each.

Response

Dangerous goods are listed in the *Australian Dangerous Goods Code* (7th edition is current). Chemicals to be stored at the mushroom farm are listed in Table 5.3 in section 5.5.5 of the environmental assessment. Each of the items in the table has been checked against the Dangerous Goods List that appears in Chapter 3.2 of the code. The table below lists the items in Table 5.3 and indicates whether they are classified as dangerous goods, together with the class of dangerous goods and the maximum quantity to be stored.

7.1 Mushroom Farm – Dangerous Goods

Name	Class	Max. Quantity stored
Ammonia	8	1000 litres
Calcium Hypochlorite	5.1	200 kg
Chlorine	2	200 litres
Formaldehyde	8	100 litres
Paraformaldehyde	4.1	50 kg
Phosphoric acid	8	40 litres
Regent	6.1	40 litres
Ficam	6.1	5 kg
Diazinon	6.1	5 litres
Bacrasan	8	30 litres
Spin flo	Not dangerous goods	50 litres

Octave	Not dangerous goods	50 kg
Sanimush	Not dangerous goods	50 litres
Bromakil	Not dangerous goods	25 kg
Storm Secure	Not dangerous goods	20 kg

The following fuel will be stored at the site:

- diesel 30,000 litres
- petrol 3,000 litres

In addition there will be a variety of workshop materials for maintenance including oils, paints, thinners, greases, degreasers etc. A guide to the range of workshop materials likely to be present and quantities can be obtained from the manifest for the substrate plant at Mulgrave.

7.2 Substrate Plant – Dangerous Goods

Attached is the updated *Dangerous Goods Manifest* and *Register of Dangerous Goods* for Elf Farm Supplies' substrate plant at Mulgrave (attachments 7 & 8).

8. Statement of Commitments

Please amend the Statement of Commitments to outline all commitments contained in the EA and subsequently proposed in response to submissions.

Response

Amended Statement of Commitments is attachment 4.

ATTACHMENT 2 RESPONSE TO AGENCY SUBMISSIONS

1. Department of Environment Climate Change and Water

1.1 Odour Sources (substrate plant)

(a) DECCW recommends the odour modelling be revised to include stable bedding as a source of odour

Response

PAE Holmes has addressed this matter in an attached letter (attachment 9).

(b) The proponent should reconsider stable bedding storage on the basis that the Odour Policy requires new or modified activities to incorporate best practicable means to minimise odour.

Response

Having utilised dry stable bedding in substrate production continuously for decades, Elf Farm Supplies does not believe that this material is a significant source of odour. DECCW refers to an odour complaint on 18 January 2011 which DECCW attributes to the stored stable bedding. Elf Farm Supplies recalls the incident and advises that a blocked drain was in fact the source of the odour. The drain was being freed at the time when the DECCW inspector arrived.

Elf Farm Supplies has always accepted all of the stable bedding that it can get because of the valuable nitrogen that this material adds to the substrate mix. However, the available quantity of dry stable bedding has been declining because stables are moving to other bedding materials that are not suitable for use as a raw material in substrate production. This means that the proposed increase in substrate production will not be accompanied by a scaling up of the dry stable bedding stored at the plant. On the contrary, the stable bedding quantity may continue to decline while substrate production increases.

In deference to the request from DECCW, Elf Farm Supplies has proposed that in view of the declining quantity of dry stable bedding, this material should continue to be stored as at present for the short term, but that with construction of the expanded pre-wet shed in Stage 2 of the development, the stable bedding thereafter be stored inside.

1.2 Fugitive Emissions from poultry manure stockpile (substrate plant)

(a) DECCW recommends the odour modelling be revised to include a more conservative estimate of capture efficiency of poultry manure emissions.

Response

PAE Holmes has addressed this matter in attachment 9.

(b) The proponent should reconsider raw materials storage on the basis that the Odour Policy requires new or modified activities to incorporate best practicable means to minimise odour.

Response

Poultry manure is not stockpiled in excess at the substrate plant. It is supplied on an as-needed basis to minimise the need to store this ingredient. When the poultry manure is being added to the pre-wet mix, gypsum is added at the same time which assists with odour control.

The project includes connecting the air space above the poultry manure store to a bioscrubber to extract odours from that location for processing. The duct will be fitted with a variable speed fan so that the quantity of air removed from above the poultry manure can be altered to achieve optimum negative pressure for odour removal. DECCW is of the opinion that this measure may not be effective in preventing or minimising odour from this source.

It is suggested that the proposed improvement should be allowed to demonstrate its effectiveness before any other action is suggested. Possible further steps involving total enclosure of the poultry manure store that would be a hindrance to operations. Such measures could be left as contingency steps to be considered should the eventualities referred to in 1.4 below ever occur.

1.3 Efficiency of Bioscrubbers (substrate plant)

The proponent should provide additional information to demonstrate the recorded efficiency of bioscrubber No 1 will be maintained at higher substrate production.

Response

PAE Holmes has addressed this matter in attachment 9.

1.4 Contingencies in case of land use changes or arrival of sensitive individuals (substrate plant)

The proponent should develop contingency measures for implementation in the event of future odour impacts such as from land use changes or arrival of more sensitive individuals.

Response

PAE Holmes has addressed this matter in attachment 9.

It is considered that land use changes are unlikely to occur in the vicinity of the plant because the South Creek flood plain will require that development restrictions continue to apply.

1.5 Fixed plant should comply with Clean Air Regulation (mushroom farm)

The proponent should demonstrate that all plant and equipment (eg boilers and steam generator) will comply with the *Protection of the Environment Operations (Clean Air) Regulation, 2010*.

Response

Selection of specific items of plant to install in the mushroom farm is part of detailed design that will commence following receipt of approval. Elf Mushrooms would be happy to demonstrate compliance when the items of fixed plant have been sourced. This matter could be made a condition of approval.

1.6 Revise the air quality assessment when the STP is designed (mushroom farm)

Assumptions in the air quality assessment were based on a specific type of STP with no treatment ponds. Odour impact may change should a different type of STP be installed. The air quality assessment should be revised if this occurs.

Response

Selection of the STP to install in the mushroom farm is part of detailed design that will commence following receipt of approval. The requirement to revise the odour assessment should emissions significantly differ from previous assumptions could be included as a condition of consent. This matter is also addressed by PAE Holmes (attachment9).

1.7 Explain meaning of "other material" in the spent substrate store (mushroom farm)

The EA refers to spent substrate being transferred to the store and being added to other material previously laid out in windrows. Please explain the "other material".

Response

The expression "other material" refers to spent substrate already present in the store from previous days' operations. There are no additives involved in the process and nothing will be blended with the spent substrate.

1.8 Aboriginal Cultural Heritage Issues

This section requests a range of further information that DECCW would have liked to see included in the cultural heritage assessment.

Response

The comments from DECCW refer to matters that would have been relevant if raised when the adequacy draft of the environmental assessment was circulated for comment. The cultural heritage assessment is now part of the exhibited EA and as such is an historic document.

There is no suggestion in DECCW's comments that the proposal is unsuitable for approval or that impacts are likely to occur if the project is approved. No matters are included that could reasonably be made conditions of consent. The comments relate to the content of a published report and hence are related more to the process than the outcome.

DECCW's comments have been referred to Biosis Research for information and guidance in preparing future assessments.

1.8 Re-use of wash down water (mushroom farm)

Guidance for water quality standards for water being re-used at the mushroom farm can be obtained from *Interim NSW Guidelines for Management of Private Recycled Water Systems*, (Department of water and Energy 2008)

Response

Noted

1.9 Sewage treatment (mushroom farm)

During design of the STP and effluent disposal system guidance can be obtained from the guidleines refereed to in 1.8 above and *Environmental Guidelines: Use of Effluent by Irrigation* (Dec 2004).

Response

Noted

1.10 Wastewater (substrate plant)

Increased quantities of wastewater are not quantified, but the additional recycled water pit appears adequate for the purpose.

Response

Noted

1.11 Noise

Recommended conditions of approval have been provided for the mushroom farm and substrate plant.

Response

Atkins Acoustics has examined the recommended conditions, suggesting that some of the requirements are not feasible or reasonable. A letter from Atkins Acoustics explaining the position and recommending alternative wording is attached (attachment 10). Atkins Acoustics has briefly discussed the conditions with Larry Clarke in the DECCW and will pursue a meeting with a view to seeking DECCW agreement to the alternative wording. The outcome will be advised to DoP.

2. NSW Office of Water

2.1 Substrate plant water source

Clarification is sought as to whether the additional water for the substrate plant expansion is to be sourced from the existing groundwater bore beyond the licence limit of 20 ML/year.

Response

Water to be drawn from the existing bore will continue to be confined to the limits of the existing licence. Additional water for the plant expansion will be drawn from South Creek, within licence limits and with mains water as a backup.

2.2 Mushroom farm dam needs licence

The Office of Water has determined that increasing the dam capacity to 14.7 ML will require a licence to be obtained.

Response

Noted. The proponents will comply with all statutory requirements.

2.3 Riparian land adjoining the substrate plant

A 50 metre wide riparian corridor should be established adjacent to South Creek and this land should be revegetated with native riparian vegetation endemic to the local area.

Response

The applicants object to this recommendation for the following reasons:

- the project site is defined in section 2.2.1 and Figure 2.3 of the EA to include all of Lot 14 and part of Lot 13 DP 1138749. The frontage to South Creek is clearly shown on Figure 2.3 to be outside the project area;
- the balance of Lot 13 is used for a productive agricultural purpose (grazing). A fenced and revegetated riparian zone would remove approximately 25% of the usable area of the farm and would require maintenance to control weeds and remove flood debris;
- the Tolson family has more than half a century of experience on rural lands in the Hawkesbury area and has witnessed many floods. The current grassed banks of South Creek at the property frontage allow water in the creek to uniformly increase in height and speed during floods and gradually retract back into the channel as the flood recedes. It has been observed in other locations where a waterway frontage is vegetated that the vegetated area collects debris and becomes a blockage in the flow path. A concentrated flow of flood water then channels around behind the vegetated patch returning to the waterway further downstream. This has lead to bank erosion at the point where the concentrated flow re-enters the channel. The applicants do not want to risk the Mulgrave property and downstream land being degraded in this way.

3. Rural Fire Service

3.1 Child care centre (mushroom farm)

From the commencement of building works and thereafter the land around the child care centre to a distance of 25 metres or the property boundary shall be maintained as an inner protection area (refer section 4.1.3 of *Planning for Bushfire Protection 2006* and the RFS document Standards for asset protection zones)

Response

Noted. This refers to commencement of construction of the child care centre which will be the subject of a separate approval. It could be included as a condition to that approval.

3.2 Water and Utilities (mushroom farm)

Water, electricity and gas are to comply with section 4.1.3 of *Planning for Bushfire Protection 2006.*

Response

Noted

3.3 Access (mushroom farm)

Property access roads for community title developments shall comply with section 4.2.7 of *Planning for Bushfire Protection 2006.*

Response

As there is no proposal for community title, this item appears not to be relevant. However access to the property will be designed to provide safe access to and from the public road system for fire fighters and personnel at the mushroom farm.

3.4 Evacuation and Emergency Management (mushroom farm)

Arrangements for emergency and evacuation are to comply with section 4.2.7 of *Planning for Bushfire Protection 2006.*

Response

Noted

3.5 Design and Construction (mushroom farm)

Requirements for design and construction of the child care centre.

Response

Noted. Construction of the child care centre will be the subject of a separate approval. It could be included as a condition to that approval.

4. Hawkesbury City Council

4.1 Council doubts the efficacy of the odour assessment (substrate plant) because:

The matters raised are responded to below. A letter from PAE Holmes (attachment 11) separately addresses the odour issues.

- **Council has received numerous concerns about odour in the area;**

Response: The proponents met with officers of Hawkesbury City Council on 15 March 2011 to discuss Council's submission. Council officers reassured the proponents that any complaint received by Council is directed to DECCW.

Elf Farm Supplies investigates any complaint that is received in accordance with the complaints management procedure in the environmental management plan. The results of all investigations are forwarded to DECCW, which is the regulating agency for the licensed premises. If an odour complaint is received, meteorological data is obtained from the on-site weather station and correlated with data available on-line from the Richmond RAAF base. Where there is a possibility that the plant may have been the source, the matter is investigated and corrective action taken with notification to the complainant.

- **the analysis does not appear to consider a range of days and weather conditions;**

Response: Council has misunderstood aspects of odour modelling. Odour modelling carried out by PAE Holmes used meteorological data that considered the range of weather conditions likely to occur in the area, not just average conditions.

- **was monitoring conducted at surrounding locations;**

Response: Odour strength is measured by the process of olfactometry, explained in the EA. This can only be done when odour samples are of sufficient strength. Samples gathered from surrounding locations would not enable odour strength to be measured.

- **are there any odour minimisation devices such as scrubbers;**

Response: Bioscrubbers are included in the proposal together with other odour minimisation measures such as the air under system, indoor processing, conveyor transport, collecting fugitive emissions from the poultry stockpile.

- **is there any feedback from community consultation regarding potential impacts;**

Response: Feedback has been received from exhibition of the environmental assessment. Immediate neighbours were notified by the proponent.

- **complaints received have not been detailed in the EA including responses;**

Response: As indicated above the results of investigations into any complaints received by the operator are forwarded to DECCW. The EA is not the vehicle for detailing this information.

- **the Statement of Commitments is limited with regard to odour control;**

Response: the revised statement of commitments includes all additional measures proposed to be implemented for odour control. There are many odour control measures already in operation at the plant.

- **Council's previous comments are still relevant.**

Response: Noted

4.2 Council is concerned that production capacity is to be increased when the existing operation is not performing in accordance with requirements.

Response

The statement that the existing operation is not performing in accordance with conditions of consent is not supported by any evidence. Odour modelling consistently confirms that the plant complies with requirements

5. Penrith City Council

5.1 Ongoing Management

The project approval and its conditions will be administered by the Department of Planning. As the site does not require licensing, Council will be the regulating authority. Communication will be required between Council and DoP to avoid duplication.

Response

Noted. This is a matter for Council and the DoP.

5.2 Visual Impact

The land is designated in the LEP to have scenic and landscape values. The project should include:

- **preferably, high quality building materials and articulation with no reflective surfaces;**
- **the mound should be managed so that landscaping is managed and replaced when necessary;**
- **the slope of the mound should allow landscape plantings to become established and reduce the risk of erosion; and**
- **any fencing visible from a public place should be rural style. Security fencing should be behind the mound.**

Response

The Council's recommendations will be incorporated in the design as far as practicable.

5.3 Remnant Vegetation

Fencing to protect the vegetation at the rear of the property is encouraged and the stand of Castlereagh Swamp Woodland toward the front of the property should be conserved. This will be assessed when the child care centre application comes forward.

Response

Fencing already exists to delineate the area at the rear. This will be relocated about 20 metres for bushfire management. The remnant vegetation will be conserved subject to requirements for bushfire protection.

5.4 Access and Traffic

The proposed intersection treatment is considered acceptable. Penrith Council is the Roads Authority responsible for approval anything in the road reserve. The proponent should:

- **provide appropriate bicycle parking;**
- **include internal signposting for vehicles and pedestrians to minimise vehicle/pedestrian conflict;**
- **provide disabled parking compliant with appropriate Australian standards;**
- **design the driveway for the largest possible vehicle and to Australian Standards;**
- **submit a roads Act application to Council; and**
- **follow Council specifications for all works and storage on the road reserve.**

Response

Noted

5.5 Development Controls

Penrith DCP 2010 came into effect on 10 December 2010. This document and its requirements were not included in EA documentation.

Response

The EA was completed and in the hands of the printer when DCP 2010 came into effect. The EA considered DCP 2006 that was in force at the time of preparation. Furthermore, the letter from DoP dated 14 September 2010 commenting upon the adequacy draft of the EA, specified that Penrith DCP 2006 was the relevant DCP to be addressed for the Londonderry site (see under "General Comments" in Attachment 1 to that letter).

5.6 Sainty & Associates Water Recycling System Report

Council considers the Sainty report limited and requires a response to the following:

- **How was the figure of 30,000 litres per day of wash down water derived?**
- **The water quality data used in Table 1 does not indicate who tested the water and the methods used;**
- **Council is not convinced that treated water will be suitable for toilet flushing and cooling towers;**
- **The system relies on regular maintenance and monitoring. A management plan has not been provided.**

Response

The figure of 30,000 litres per day was based on water usage for wash down at Elf Mushrooms' existing Vineyard mushroom farm. At full operation, the quantity of water to be allocated for wash down at Londonderry will be 30,000 litres per day. Therefore this is the maximum quantity of waste water that can be generated.

Elf Mushrooms supplied water quality data to Sainty & Associates from testing carried out at the Vineyard mushroom farm in August 2009 on the dates indicated in Table 1. The testing was conducted by AJM Environmental Services.

The water recycling system is designed to remove particulate matter, organic compounds and nutrients. Council has not indicated what aspect of treated wash down water it considers could be unsuitable for toilet flushing, where the treated water goes to the sewer, or for cooling towers, where the treated water is evaporated.

5.7 On-Site Effluent Management Report

The on-site sewage management system will require an operational approval from Council under section 68 of the *Local Government Act 1993* prior to commissioning. Council has certain requirements to be met before such approval is issued.

Response

The proponent will apply for any approval required under the *Local Government Act, 1993*, consistent with a project approval issued under Part 3A of the EP&A Act.

5.8 Preliminary and Detailed Site Contamination Assessment

The site contamination assessment report uses AS 4482.1-2005 as the basis for sampling. Council is unclear how this relates to the NSW EPA's sampling design guidelines.

Response

This matter was raised as a comment in the adequacy draft of the EA and responded to at that time. Please refer to item 40 in the attachment table to email from Perram & Partners to Emma Barnet of the Department dated 18 November 2010 where it is stated "*Please refer to the attached letter from Compaction and Soil Testing Services. The soil investigation was carried out in accordance with the Australian standard, which is a more recent publication than the EPA guideline and contains all relevant sample design information from the EPA guideline, plus additional information. The outcome would not have been altered by using only the EPA guideline.*"

The letter from the soil consultant was also attached to the email of 18/11/10. The author of the Penrith Council comment may not be familiar with the Australian Standard.

5.9 Noise Assessment

Council believes it cannot be assumed that there will be one car per two employees and that the noise assessment (traffic noise component) should be re-calculated on the basis of one car per employee.

The RBL for the daytime period for M1 in Table 3 on page 14 of the Atkins Acoustics report seems high.

Response

Elf Mushrooms has estimated the likely staff vehicle numbers at the proposed Londonderry mushroom farm based on the observed behaviour of staff at the existing Vineyard mushroom farm.

Atkins Acoustics has commented on the second paragraph regarding the RBL for monitoring location M1. The RBL is determined in accordance with the *NSW Industrial Noise Policy* which specifies that the RBL is the median of the assessment background levels. The quoted RBL of 44 dB(A) is the median of the daytime background levels presented in Table 3 of the report. A copy of the letter from Atkins Acoustics is attached.

5.10 Air Quality Assessment

Council officers would like the following suggested conditions included:

- **Air emissions from the development (including) odour are not to be detected beyond the property boundary.**
- **A suitably qualified consultant is to undertake an odour and air emissions assessment of the development every 6 months. The assessment is to be undertaken in accordance with the relevant legislation, standards and guidelines and must provide a report outlining the outcomes of the assessment. If the assessment identified any emissions or odours which exceed the levels and criteria provided in the Air Quality Assessment prepared by PAE Holmes dated 17 June 2010 then recommendations are to be provided, in that report, to ensure the development complies with the relevant criteria and does not have any adverse environmental impacts on the surrounding area.**
  The report is to be provided to the Department of Planning and Penrith City Council within thirty (30) days of completion for consideration
- **In the event the excessive odour or air emissions are caused due to temporary plant and equipment failure, then the operator must notify all surrounding residents within 24 hours of the situation and when the plant and equipment will be repaired. Failing plant and equipment is to be repaired as soon as possible.**

Response

This matter was referred to PAE Holmes which has addressed the matters in a letter (attachment 12). In summary, the air quality assessment was undertaken in accordance with DECCW guidelines and showed that the most stringent odour criterion of 2 odour units did not extend beyond the property boundary.

It is reasonable to revisit the odour assessment at the completion of the development and with any subsequent modification that could affect air emissions. Repeated six monthly assessment is not warranted if the facility has been shown to comply and does not change in any way.

Notification of surrounding residents in the event of plant malfunction that could have repercussions for odour emissions could be included in the environmental management plan.

5.11 Report Structure

Penrith Council found difficulty understanding which of the two project sites was being discussed at any location in the report.

Response

The report was restructured after this comment was received in response to the adequacy draft. It is not clear what else could have been done other than the extreme of separating the sites completely into two separate documents, which carried the risk that they would be considered as two separable projects. The relevant chapters of the report dealing with project description and assessment of environmental impact were placed consecutively for each site and clearly labelled. The effort required from the reader to understand which site was being referred to at any point was not great. It is noted that this comment was not made in any other submission.

6. Sydney Regional Development Advisory Committee (RTA)

The SRDAC raised the following matters:

- **the proposed entry/egress to the Londonderry site is to be constructed as a "Type CHR" Rural Intersection in accordance with Austroads and RTA standards**

Response
The traffic assessment prepared by Halcrow recommended that a "Type AU" intersection would be sufficient and provided evidence for this recommendation. It is perplexing that the SRDAC has required that the design be upgraded to "Type CHR" because no reasoning or explanation has been included in the submission.

Halcrow has advised that it was unusual for the proponent not to be advised in advance of the SRDAC meeting and be given an opportunity to be present to explain the proposal. It is desired to pursue the SDRAC recommendation to ascertain why the "Type CHR" has been recommended and at what stage of the development the SDRAC believes the need for this more elaborate intersection is triggered. This would be essential information in formulating a condition of consent.

Halcrow has been attempting to make contact with the relevant RTA contact officer to pursue a meeting to discuss the recommended condition. The outcome will be advised to DoP.

- **the applicant will need to obtain appropriate permits for work on the public road and meet associated requirements. All vehicles are to enter and leave in a forward direction**

Response

Noted

- **any new buildings or structures at the Londonderry site must be erected clear of the land reserved for road widening along The Northern Road frontage**

Response

Noted

- **at Mulgrave, new buildings or structures must be erected clear of the road reserve. There is no objection to the drainage line under Hawkesbury valley Way to the reed bed/wetland provided the inlet and outlet for the connection are clear of the road reserve. The reed bed/wetland is not to be extended into the road reserve.**

Response

Noted

- **three advisory conditions were recommended relating to vehicle manoeuvring and car parking.**

Response

Noted.

ATTACHMENT 3 RESPONSE TO PUBLIC SUBMISSIONS

Part A Submissions relating to the Mushroom Farm (8 submissions)

DoP No 1 Michael and Joanne Broadhead
DoP No 3 Mario and Renee Borg
DoP No 4 Grant and Chantelle Mackenzie
DoP No 5 Darrin Masini
DoP No 6 W & M Holder
DoP No 7 Shirley Marega
DoP No 11 Jon Austin
DoP No 12 Robert LaHood

These submissions are considered collectively because the same issues were frequently raised.

Issues:

- odour
- decrease in property value
- traffic volume, noise and safety, particularly accessing private driveways
- compost will be at high temperature creating a fire threat
- water quality
- dust
- airborne bacteria will be a health threat
- already a mushroom farm 5 km away, another under construction
- already a mushroom spawning facility in The Northern Road
- understood the area to be rural residential zoning; this is not consistent
- poor impression for motorists travelling to Penrith because of odour
- employment may not be local, other farms bring workers in buses
- the development will affect Council charges and interest rates

Response

All eight submissions opposed the mushroom farm. No modifications were suggested. In many cases issues were mentioned as a single word in a list or with a short sentence without further explanation. The issues are responded to as follows:

- Odour, traffic, noise, dust, water quality, fire hazard and zoning are considered in the EA.
- Mushroom farming uses natural agricultural materials and is carried out in clean conditions to avoid external pathogens affecting production. Mushroom growing is not known as a source of airborne bacteria or any other public health concern.
- The existence of other mushroom facilities in the general locality, at some distance from the site, is not a relevant consideration as there is no identifiable cumulative impact
- When the farm is hiring workers, local people will be welcome to apply
- There is no evidence that the proposed development will adversely affect property values or influence interest rates or Council charges.

One submission indicated the author's property was 100 metres from the site, while another indicated about 300 metres. All other submissions were received from residents living further

away and well outside the visual catchment of the site and where noise is unlikely to be an issue.

Clearly the most commonly felt concern of the objectors was the introduction of an intensive agricultural activity to this locality. Notwithstanding the rural zoning, residents perceive the area to be more residential than rural, although many indicated awareness of other mushroom farms in the area. The EA demonstrated in section 2.1.2 that there are already a number of non-residential uses in the vicinity of the site.

Part B Submissions Relating to the Substrate Plant (4 submissions)

DoP No 2 Bill Sneddon

Mr Sneddon indicates he lives 2 km west of the site and has been a long term objector to the facility. The following matters were raised:

- **Odour – the area is developing with increasing population density. Many people experience odour but do not complain. Increased odour levels are unacceptable.**

Response

The odour assessment in the EA considers the impact of odour emissions following atmospheric dispersion, consistent with DECCW-approved procedures. Elf Farm Supplies investigates every odour complaint received at the plant and forwards the results to DECCW. Population is unlikely to increase in the vicinity of the site because the land is part of the South Creek flood plain.

- **EA – the EA describes the proposed capacity increase as doubling, when tripling would be more accurate.**

Response

An electronic search of the EA could not locate a comment that the plant capacity was to be doubled. The document clearly states that the existing limit of 1,000 tonnes of phase 1 substrate per week would be increased to 3,200 tonnes in Stage 3 of the development

- **Complaints – people have complaints fatigue and have ceased complaining because of nil satisfaction from previous complaints**

Response

There is no evidence that this has occurred. Later in the submission Mr Sneddon volunteers that since the bioscrubber was commissioned "odours at my residence have decreased greatly".

- **Fugitive odours – these are always observed on roads surrounding the site on still days or downwind on windy days. All odour sources should be vented to the bio-scrubbers, including spawn run tunnels.**

Response

Mr Sneddon offers no evidence that any odour he may believe he is detecting on roads has come from the substrate plant or is a result of fugitive emissions at the plant. The suggestion that the Phase 2 and 3 tunnel building be vented to a bioscrubber is not warranted or practicable as there have been no odour issues associated with Phase 2 and 3 processing.

- **Dispersion modelling – the modelling does not consider local thermal up and down drafts confirmed by "thermalling Ibis" and "odour dumping" that occurs kilometres from the site. The model also ignores cold southerly wind effects producing a lower level of dispersion than predicted and resulting in 2 to 4 odour units in Windsor shopping centre. Finally, the model does not consider turbulent mixing that occurs over the ridge at South Windsor where the objector lives, where turbulent "burbling" can be visualised in the trees accompanied by 1 to 4 odour units of foul air from the plant.**

Response

PAE Holmes has carried be out an odour assessment using the appropriate scientific approach endorsed by DECCW.

- **acoustic channelling across the South Creek valley results in residents in Harris Street Windsor being able to hear quiet conversations at the substrate plant some 500 metres away. Inversion layers also have an effect.**

Response

If residents 500 metres away can hear quiet conversations at the substrate plant, then the plant could not be accused of generating excessive noise. The noise assessment undertaken by Atkins Acoustics has followed established practice.

- **residents have seen foul smelling site water irrigated onto the property and into South Creek, both by overland flow and submersed pipe outlets. How will these offences be prevented.**

Response

The farmland adjoining the substrate plant is irrigated using dam water, which most of the time is rainwater. After heavy rain the dam will contain surface water from the plant, but only after the first flush has been captured and retained by the west water recycle pit. This water is later irrigated on the pastures. There is no discharge of process water from the plant to South Creek and no "submersed pipe outlet".

- **no mention is made for of water licensing for water taken from South Creek**

Response

Water for the operation is obtained from a licensed point of extraction from South Creek, a licensed borehole and from mains supply. Water pumped from South Creek and from the borehole will remain within licence limits for both sources.

- **odour sources at the site need to be connected to the bioscrubbers and held under negative pressure to reduce fugitive emissions.**

Response

The EA indicates that the poultry manure storage area will be connected to a bioscrubber as part of the development. It is now also proposed that when the pre-wet shed extension is complete stable bedding will be moved from outdoor storage to a location inside the shed where it will be under negative pressure and vented to a bioscrubber.

DoP No 8 Neville Diamond

Mr Diamond has set out his submission in the form of a draft statutory declaration. It is not proposed to repeat the 29 paragraphs in the submission. The thrust of Mr Diamond's submission appears to be that the plant cannot meet its odour requirements because of fugitive emissions that escape whenever doors are opened.

Response

Operating with open doors is not considered to create significant fugitive emissions because of continually maintained negative pressure within the relevant buildings: pre-wet shed and Phase 1 tunnel building. It is true that when a front end loader leaves one of these buildings through an open doorway it is likely to drag a small quantity of air with it, but this would be a very minor quantity and of no significant consequence.

The proposed development includes further improvements to the process that would relieve Mr Diamond's belief that doorways are the source of significant fugitive emissions. Firstly, pre-wet material is to be transferred from the pre-wet shed to the Phase 1 tunnel building by enclosed conveyor. This will eliminate the movement of this material by front end loader passing through open doors. Secondly, the enlarged pre-wet building will be connected directly to a second bioscrubber with dedicated variable speed exhaust fans for better control of negative pressure in this work area. The exhaust air will be collected from the full length of the building improving flow and negative pressure distribution.

Mr Diamond has not recognised that if the proposal were not to be approved, the benefit from these improvements would be lost.

DoP No 9 Deborah Gersbach

The current operation causes significant odour in the area. Increasing production will only make this worse.

Response

The odour assessment from PAE Holmes predicts odour levels in the vicinity of the author's residence, located in Mulgrave Road, approximately 500 to 600 metres south east of the site. Table 9.1 shows 99th percentile 1-hour average predicted odour concentrations. For residences 18 and 19 the predictions are 1 odour unit at present, increasing to 2 odour units during stage 1 and dropping back to 1 odour unit for Stages 2 and 3 when improved odour

controls are commissioned. Hence at this location the predicted odour concentration does not exceed the most stringent 2 odour criterion recommended by DECCW.

DoP No 10 Anonymity Requested

The name and address on this submission is obscured in accordance with the author's wishes, but the author indicates that he/she lives approximately one kilometre south of the substrate plant.

- **The Hawkesbury has been nominated for future residential development and a plant of this nature is not appropriate for the future of the Hawkesbury, because of odour and phosphorus emissions.**

Response

The substrate plant is located within the flood plain of South Creek where residential development is prohibited.

- **Phosphorus dust is emitted from the existing stack which accumulates in the author's pool and tanks and is a health risk for the children**

Response

The stack at the substrate plant does not emit any significant quantity of phosphorus or any other particulate. Mushroom substrate in preparation is an extremely moist material with little opportunity for dust generation. The air passing into the stack has been through the bioscrubber where it has passed through curtains of water, with further removal of any stray particulate matter. Phosphorus is not used in substrate production however it is a component of fertiliser and may be in use on rural properties in the vicinity of the author's pool.

- **The area has frequent light winds for almost 60% of the time with strong winds only 14% of the time. The plume from the stack therefore can only be diluted for 14% of the time.**

Response

The odour modelling carried out by PAE Holmes has used a meteorological data set derived from the weather station at Elf Farm Supplies, Richmond Air Base and Sydney airport (refer to Table 5.1 of Appendix P. The data has been processed into a complex three dimensional array of hourly wind strengths and directions before the dispersion model was run. The technique used is consistent with the requirements of DECCW.

- **The author has lived in the area for six years and is not aware of an odour management system hotline number. The plant has been contacted by looking the number up in the phone book with the outcome that the plant denied they were the cause of the odour.**

Response

It is not possible to comment upon a specific odour complaint if the author gives no details, although it appears from the submission that the matter was investigated and a response given.

- **Elf Farm Supplies was unsuccessful at obtaining approval for substrate plants at Blaxlands Ridge and Marulan**

Response

This comment does not tell the full story in relation to the Blaxlands Ridge application. At Hawkesbury Council's request the Minister agreed to one of the Commissioners of Inquiry chairing an independent public inquiry into the Blaxlands Ridge proposal. The inquiry recommended that the project be approved, but the Council ignored the finding and declined to approve the development application.

ATTACHMENT 4 REVISED STATEMENT OF COMMITMENTS

1. Mushroom Farm - Construction

Outcome	Commitment		Timing
Environmental management	1.1	Prepare and subsequently implement an environmental management plan for construction, consistent with this environmental assessment and conditions of approval.	Prior to issue of construction certificate
	1.2	Identify and clearly mark vegetation to be retained.	Prior to construction
	1.3	Instruct all construction personnel of the requirements for environmental management on the site.	Prior to and during construction
Minimise soil erosion and sediment deposition	1.4	Implement erosion and sediment controls consistent with the erosion and sediment control plan and keep in place with adequate maintenance until work is complete or they are no longer required.	Prior to commencement of earthworks and thereafter as long as necessary
	1.5	Progressively rehabilitate areas disturbed during construction with grass or landscaping as designed	During construction
Control nuisance dust	1.6	Implement dust mitigation measures as follows: • restrict vehicles to a defined route within the site; • limit vehicle speeds on unsealed surfaces; • maintain haul routes for fill trucks in a damp state; • apply temporary stabilisation to any exposed surface that is unlikely to be further disturbed for a period of one month or longer; and • rehabilitate finished surfaces as soon as possible to limit wind-generated dust.	During construction
Minimise construction noise	1.7	Implement construction noise mitigation measures as follows. • Construct the northern acoustic mound as early as practicable in the construction program; • adopt construction practices recommended by DECCW for best management and best available technology economically achievable; • select construction plant and equipment having regard to controlling noise emissions, including reversing alarm noise; • reduce operating speeds of equipment where practical and switch off idle plant when not in active use; • arrange vehicular access to work areas to allow for forward vehicle travel, minimising reversing or manoeuvring wherever possible; • provide site induction and personnel/ contractor training in correct use of plant and equipment to minimise noise;	During construction

Outcome	Commitment		Timing
		• develop and implement a program to inspect and maintain mobile plant to ensure noise performance criteria are met; • comply with the standard construction hours of working; • establish a noise complaints procedure with contact phone number and logging and response protocols; and • review the use of mobile plant reversing alarms including altering work practices and/or replacing with less intrusive devices where practicable.	
Manage construction traffic	1.8	Prepare in consultation with the RTA and implement a traffic management plan for construction, including signs warning traffic on The Northern Road of the heavy vehicle entry.	Prior to commencement of construction work.
	1.9	Construct the intersection of the site access road and The Northern Road to Type AU in accordance with the RTA *Road Design Guide*	Prior to issue of occupation certificate
Minimise visual impact	1.10	Implement the following measures to reduce visual impact: • select external building finishes and colours to reduce glare and minimise visual obtrusiveness. • construct and landscape the mound along The Northern Road frontage and the northern site boundary as soon as possible after site activities commence; • plant a mixture of semi-advanced trees, shrubs and groundcover on the mound to achieve early coverage and height enhancement; • maintain and nurture the landscaping on the mound with appropriate mulching, frequent watering at first and frequent inspections to correct any wind or animal damage and to replace failed plantings; • plant additional trees in the south eastern corner of the site to further restrict diagonal views from northbound vehicles on The Northern Road; • plant additional trees in the southern section of the site to further restrict views from the adjoining residence to the south towards the development area; • during each stage of the development, when the frame of the main building or building extension has been erected, undertake a visual assessment from The Northern Road and with the agreement of owners, from adjoining properties. Where it is practicable to reduce visual impact: • plant additional screening vegetation in strategic locations on the property, such as in the southern area, to further reduce visibility	During construction and prior to issue of occupation certificate

Outcome	Commitment		Timing
		from The Northern Road and the residence to the south; • offer to residents on properties to the north to plant screening vegetation on their properties at locations agreed with them and if the offer is accepted, undertake the plantings for the residents to maintain; • during construction, minimise the area of physical disturbance to the land at any one time and revegetate any disturbed areas visible from beyond the site that are not required as hardstand.	
Protect cultural heritage	1.11	Implement the following protocols as required: • should any Aboriginal object be identified during construction, work should cease and notification given to DECCW, a qualified archaeologist and Aboriginal representatives of the Deerubbin LALC; • should skeletal remains be discovered, cease work at the location and report the find to the police. If the remains prove to be of Aboriginal origin advise DECCW, a qualified archaeologist and Aboriginal representatives of the Deerubbin LALC.	During construction
Protect flora and fauna	1.12	Implement flora and fauna protection measures as follows: • avoid removing remnant trees wherever possible; • install temporary fencing to protect woodland remnants when undertaking construction work in the immediate vicinity that does not require disturbance of the woodland; • collect stormwater from the development in dams rather than directing it into woodland areas; • plant local native species from the Castlereagh Woodlands along The Northern Road frontage and elsewhere for landscaping to enhance the remnant of this community. A suitable species list has been provided. • manage the rural property during construction to maintain pasture and suppress weeds; • separately fence the groupings of threatened species located in the asset protection zone west of the spent substrate store and avoid disturbance to the fenced areas.	Prior to and during construction

2. *Mushroom Farm - Operation*

Outcome		Commitment	Timing
Environmental management	2.1	Prepare and subsequently implement an environmental management plan for operation consistent with this EA and conditions of approval.	Prior to issue of occupation certificate for each stage
Minimise operational noise	2.2	Operate the farm in a manner to maintain noise levels at nearby sensitive receptors within DECCW criteria.	During operation
	2.3	Implement operational noise mitigation measures as follows: • undertake detailed design of buildings and structures to meet specified noise attenuation criteria as indicated in Table 10 of the mushroom farm noise assessment report; • select mechanical plant and equipment to meet sound power levels and/or acoustic performance indicated in Table 10 of the noise assessment report (see below); • construct a noise mound along the northern boundary with finished level at least 2.5 metres above the floor level of the main building; • construct a noise mound along the eastern boundary with finished level at least 2.5 metres above existing ground level; • modify moving floor substrate trucks to incorporate acoustic enclosures for trailer motors and residential grade mufflers to achieve a minimum 3 dB(A) noise reduction and result in a sound power level in the order of Lw100 dB(A); • maintain truck airbrake release discharge noise levels to Lw115 dB(A) or less; • require trucks to operate on the access roads at speeds not exceeding 20 kph; • fit "quacker" reversing alarms to mobile plant where practicable; and • incorporate the noise management protocols within the environmental management plan for the site.	During operation

Outcome		Commitment	Timing
Avoid offensive odour	2.4	Implement odour controls as follows: • keep spent substrate retained on the site for refining under cover to prevent further wetting during rainfall; • turn and blend spent substrate from time to time to assist aeration; • remove collected solids from pit filters each week using a telescopic loader; and • manage and maintain the wash down water recycling system to prevent odour generation. • include in the environmental management plan a procedure for recording and responding to any complaints that may be received pertaining to operation of the facility	During operation
Effectively manage operational water	2.5	Manage the operation to prevent discharge of process water from the site and to maximise use of collected and recycled water.	During operation
	2.6	Adequately maintain the sewage treatment plant to ensure satisfactory operation.	During operation
	2.7	Adequately maintain the wash down water recycling system to ensure satisfactory operation.	During operation
Protect flora and fauna	2.8	Continue to suppress weeds on the development site and protect remaining trees.	During operation
Bushfire Protection	2.9	Implement the following measures to minimise bushfire risk: • establish and maintain a defendable space of 10 metres to the west, north and south of each building. The defendable space is to be a clear area with unimpeded access for fire fighting; • on sides of the spent substrate store where there is no concrete apron, include a three-metre hardstand area as part of the defendable space; • provide a static water supply (water tank, not dependent upon electricity for pumping) to supplement the reticulated supply; • use non-combustible external cladding to the main building; • provide ember protection to the spent substrate store in the form of drencher sprays to keep the contents damp during a bushfire event; • design the structures to have concrete floors, steel roof cladding, non-combustible flashing at roof intersections with no gaps and non-combustible gutters and downpipes; • fit steel mesh screens to all windows and personnel doors on the northern and western elevations; • maintain an asset protection zone for 24 metres to the north, east and western aspects	During operation

Outcome		Commitment	Timing
		of the buildings with shrub layer managed so as not to exceed five tonnes per hectare. Existing trees do not require removal, but branches should not come within five metres; • provide a reticulated water supply compliant with relevant standards capable of providing emergency supply for fire fighting; • provide a rubber fire hose of minimum diameter 18 millimetres capable of reaching all elevations of all buildings; • maintain vehicle access to the site in compliance with the standard and fire brigade access to the northern and western asset protection zones; • develop and adopt an emergency bushfire plan.	
Monitor performance	3.0	Continue to monitor operations as specified in the environment management plan	During operation

3. Substrate Plant - Construction

Outcome		Commitment	Timing
Environmental management	3.1	Prepare and subsequently implement an environmental management plan for construction, or modify the existing EMP, consistent with this EA and conditions of approval.	Prior to issue of construction certificate
	3.2	Instruct all construction personnel of the requirements for environmental management on the site.	Prior to and during construction
Minimise soil erosion and sediment deposition	3.3	Implement erosion and sediment controls consistent with the erosion and sediment control plan and keep in place with adequate maintenance until work is complete or they are no longer required.	Prior to commencement of earthworks and thereafter as long as necessary
	3.4	Progressively rehabilitate areas disturbed during construction with landscaping or hardstand as designed	During construction
Control nuisance dust	3.5	Implement the following dust mitigation measures: • limit vehicle speeds on unsealed surfaces; • maintain unsealed haul routes for fill trucks in a damp state; and • rehabilitate finished surfaces as soon as possible either with landscaping or hardstand, according to intended use.	During construction
Minimise construction	3.6	Implement construction noise mitigation measures as follws:	During construction

Outcome		Commitment	Timing
noise		• avoid operating the bulldozer and compactor simultaneously during filling operations; • when concrete pours are taking place, locate concrete trucks and pumps in a manner that will maximise screening to residential properties to the south and west; • construct the southern boundary wall adjacent to the eastern bale wetting area as early as practicable in the construction program; • adopt construction practices recommended by DECCW for best management and best available technology economically achievable; • select construction plant and equipment having regard to controlling noise emissions, including reversing alarm noise; • where practicable schedule the noisiest activities to occur during parts of the day when ambient noise levels are higher; • undertake audits at receiver locations to monitor noise from site construction; • establish a noise complaints procedure with contact phone number and logging and response protocols; • undertake construction activities in accordance with AS 2436:1981, *Guide to Noise Control on Construction, Maintenance and Demolition Sites*, with all equipment demonstrating compliance with the noise levels recommended in the standard.	
Manage construction traffic	3.7	Maintain the intersection of the site access road and Mulgrave Road in a safe condition suitable for heavy construction traffic including vehicles delivering fill.	During construction
Minimise visual impact	3.8	Implement measures to reduce visual impact of the development as follows: • commence screen planting around the periphery of the extended platform area as early as possible during the project; • during construction, minimise the area of physical disturbance to the land at any one time and revegetate any disturbed areas visible from beyond the site that are not required as hardstand; • mulch fill batters as soon as possible after completion and maintain them to achieve total vegetation cover; • continue to maintain previous landscaping and screen planting on the site to maximise screening of the plant; • incorporate building materials of the same	During construction

Outcome		Commitment	Timing
		colour and texture as used in the existing plant, which minimise glare and visual obtrusiveness.	
Protect cultural heritage	3.9	Implement the following protocols as required: • should any Aboriginal object be identified during construction, work should cease and notification given to DECCW, a qualified archaeologist and Aboriginal representatives of the Deerubbin LALC; • should skeletal remains be discovered, cease work at the location and report the find to the police. If the remains prove to be of Aboriginal origin advise DECCW, a qualified archaeologist and Aboriginal representatives of the Deerubbin LALC.	During construction
Protect flora and fauna	3.10	Suppress weeds on the construction site and protect existing landscape planting that is to be retained.	During construction

4. Substrate Plant - Operation

Outcome		Commitment	Timing
Environmental management	4.1	Prepare and subsequently implement an environmental management plan for operation, or modify the existing EMP, consistent with this EA and conditions of approval.	Prior to issue of occupation certificate for each stage
Production limit	4.2	Maintain average weekly production of Phase 1 substrate within upper limits as follows: • Stage 1 1600 tonnes • Stage 2 2400 tonnes • Stage 3 3,200 tonnes	During operation
Minimise operational noise	4.3	Operate the plant in a manner to maintain noise levels at nearby sensitive receptors within DECCW criteria.	During operation
	4.4	Implement the following noise mitigation measures: • undertake detailed design of buildings and structures to meet requirements specified in section 7.4 of the substrate plant noise assessment report, as follows: – Building walls for the bale storage and pre-wet sheds shall consist of concrete to a height of 2 metres above FFL followed by galvanised steel frame and galvanised wall/roof sheeting nominally 0.6 mm BMT and a minimum of Rw22; – Internal walls and roof of tunnels within phase 2/3 building constructed of concrete blockwork and/or hebel panels/blocks;	During operation

Outcome		Commitment	Timing
		– Building wall cladding (Phase 2/3 building) consisting of insulated colorbond sandwich panels consistent with existing Phase 2/3 building proving a nominal installed noise reduction in the order of 23 dB(A) (Rw28 or greater). – Building roof cladding consisting of sheet metal (min 0.42 BMT) over fibreglass building blanket and medium duty thermofoil or similar and insulated colorbond sandwich panel (ceiling) consistent with existing Phase 2/3 tunnel building providing a nominal installed noise reduction in the order of 28 dB(A) (Rw34 or greater). – Final details of building designs subject to review prior to final specification • select mechanical plant and equipment to meet sound power levels and/or acoustic performance in Table 10 of the acoustic assessment report for the substrate plant (see below); • require trucks to operate on the access roads at speeds not exceeding 20 kph; • fit "quacker" reversing alarms to mobile plant where practicable; and • incorporate noise management protocols within the environmental management plan for the site.	
Avoid offensive odour	4.5	Operate the plant in a manner to maintain odour emissions within the limit specified in the DECCW licence.	During operation
	4.6	Continue to implement existing odour controls at the plant: • under-cover storage for raw materials to keep them dry; • enclosed processing areas for all potentially odour-generating activities; • air-under system in the pre-wet building and in all Phase 1 tunnels to improve aeration of composting material; • automatic control system for fans to maintain optimum air supply and extraction; • an enclosed vehicle passageway to enable indoor transfer of partly processed material from the pre-wet building to Phase 1 tunnels; • enclosed conveyor transport for tunnel loading, dispatch loading and transfer to Phase 2/3 tunnels; • a bioscrubber to remove odorous compounds from exhaust air prior to release to the atmosphere;	During operation

Outcome		Commitment	Timing
		• a chimney to discharge exhaust air 40 metres above ground to aid dispersion; and • a monitoring system to detect any faults or operational anomalies and immediately send an alarm to the Duty Manager at any time of day.	
	4.7	Implement the following additional odour control measures: • add a second bioscrubber dedicated for the pre-wet processing area to reduce load on the existing bioscrubber and allow better control of negative pressure in the pre-wet building, reducing the likelihood of fugitive emissions; • provide an enclosed conveyor from the pre-wet building to the Phase 1 tunnel building replacing the vehicle passageway to speed up the material transfer process and reduce the potential for fugitive emissions from this operation; • extract air from the raw materials storage shed, reducing the potential for fugitive emissions from poultry manure.	
Effectively manage operational water	4.8	Manage the operation to prevent discharge of process water from the site and to maximise use of collected and recycled water.	During operation
Minimise visual impact	4.9	Continue to manage the landscaped areas to ensure the vegetation screen remains effective.	During operation
Protect flora and fauna	4.10	Continue to suppress weeds on the development site and protect remaining trees.	During construction
Monitor and report performance	4.11	Continue to monitor operations and report results as specified in the environment management plan	During operation

Table 10 of the mushroom farm noise assessment report

Table 10: Plant/Equipment Sound Power Levels L_{Aeq} re: 10^{-12} Watts

Plant Description	Sound Power Level								
	dB(A)	63	125	250	500	1k	2k	4k	8k
Truck (moving)	101	98	102	101	97	94	94	91	80
Truck (idle)	91	88	92	91	87	84	84	81	70
Refrigerated Truck (SB310 refrig. unit)	93	90	94	93	89	86	86	83	72
JCB Telescopic Handler	105	109	99	99	100	101	99	95	93
Nufab Compost Turner	93	93	94	93	90	88	84	80	75
Head Filling Activities (truck engine, filling machine & peat loading)	103	113	107	95	100	94	96	92	85
Cooling Towers x2 (each) (AquaCool MSS 187LS3)	99	91	87	88	90	95	93	87	84
Compressors x 5 (total) (PowerPax TT400)	93	82	82	85	85	89	86	79	83
Steam Generator (ST302l)	99	89	89	94	94	96	93	87	82
Humidification Boiler (Saacke SR1000/PAG10A)	90	104	101	94	85	79	76	72	64
Plant Room (space averaged) [1]	95	84	84	87	87	91	88	81	85
North Air Intake [2]	85	74	74	77	77	81	78	71	75
Roof Air Discharge [2]	85	74	74	77	77	81	78	71	75
AHU Ridge Vents [3]	63	66	62	60	61	59	51	46	40

Note: 1 All fixed plant in purpose designed plant room resulting in space averaged SPL of 95dB(A)
2 Noise attenuation incorporated into plant room to result in source noise level of Lw85dB(A) for intake / discharge
3 AHU would be installed wholly within roof space. Source noise level based on Lw57 at discharge for AHU connected via ducted vents comprising a total of 74 vents, adjusted for 18 ridge top source points. AHU are ducted and could incorporate insulated ducting if required prior to discharge to meet specified limits.

Table 10 of the Substrate plant Noise assessment report

Table 10: External Plant/Equipment Sound Power Levels L_{Aeq} re: 10^{-12} Watts

Plant Description	Sound Power Level								
	dB(A)	63	125	250	500	1k	2k	4k	8k
Super Chill Condensers EWK-D680 (x6)	83	79	81	81	78	75	73	76	72
Compressor Room (external door) x2	80	79	75	77	76	76	70	69	63
Bioscrubber 2 Fans – each (x2)	107	-	106	104	107	100	98	92	-
Conveyor Drive – New Phase 3 (E-W)	80	72	74	72	77	76	72	63	55
Conveyor Belt – New Phase 3 (E-W)	70*	75	75	70	70	63	59	52	43
Conveyor Drive – New Phase 3 (N-S)	80	72	74	72	77	76	72	63	55
Conveyor Belt – New Phase 3 (N-S)	70*	75	75	70	70	63	59	52	43
Conveyor Drive – Pre Wet	80	72	74	72	77	76	72	63	55
Conveyor Belt – Pre Wet	70*	75	75	70	70	63	59	52	43
FEL – Volvo L90E	102	115	104	100	98	99	92	92	87
FEL – Volvo L150E	105	120	104	103	102	99	97	95	91
FEL – Komatsu WA320	104	114	102	100	102	99	96	93	86
Traymaster Blender	110	109	110	109	108	104	102	99	96
Pre-Wet Shed (average in shed)	85	84	85	84	83	79	77	74	71
Truck (moving)	101	98	102	101	97	94	94	91	80
Loading Activities (Phase 2/3 average in loading hall)	86	81	84	85	85	81	78	73	65
Loading Activities (Phase 2/3 external facade)	63	66	68	63	61	60	49	43	37

* sound power level per metre of conveyor

Attachment 5

KMA

KEVIN MILLS & ASSOCIATES
ECOLOGICAL AND ENVIRONMENTAL CONSULTANTS
ABN 346 816 238 93

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Mobile: 0429 848 094

12 Hyam Place
Jamberoo NSW 2533

Mr Terry Perram
Perram and Partners
12 Clanwilliam Street
EASTWOOD NSW 2122

14 March 2011

Dear Sir

Proposed Tolson Mushroom Farm, Penrith

Further to the response from the Department of Planning dated 1 March 2011, we are pleased to provide the following response to issue number 1.

The Department requires an assessment of the asset protection zone (APZ) on the western and southern sides of the building in the far western part of the site. They note that there is woodland vegetation to the western and southern boundaries of the site, immediately adjacent to the proposed building.

We understand that the bushfire compliance report requires a 24 metre APZ around the building; this includes a 10 metre defendable space, part of which is a three metre wide hardstand area to be maintained along the western and southern sides of the rear building. The bushfire report also notes that existing trees do not require removal but that any branches within five metres of the building should be trimmed.

As this land was not within the original study area, we re-visited the site on 14 March 2011 to investigate the issues. Our observations were that:

- Woodland occurs to the south and west of the above building, but it is not continuous along either boundary.
- The woodland contains populations of the threatened plant *Dillwynia tenuifolia*; these populations occur in particular locations to the west and southwest of the building site, and to a lesser extent to the northwest, but not to the south.
- One specimen of the threatened plant *Persoonia nutans* was also observed in a treed area.
- Very large populations of *Dillwynia tenuifolia* occur to the north of the site, on the adjoining land.

The development does not require any incursion into the areas of woodland, as indicated on the various plans of the proposal. The three metre wide hardstand area is the area that would be compacted during building construction and is not within the woodland areas. The APZ requirements, as we understand them, mean that fuel load should be less than five tonnes/hectare and fire fighting appliances and personnel require unimpeded access to the land in case of fire. As noted above, no trees are required to be removed to facilitate this access.

Given the presence of populations of threatened plants in the vicinity of the building, it is recommended that the populations be identified by a botanist and appropriate locations for fencing to protect them be identified. It was noted on site that populations were sufficiently localised that such fencing should be able to be installed without undue hindrance to fire fighting activities within the 10 metre defendable space closest to the building.

Please contact me if we can be of further assistance.

Yours sincerely

KEVIN MILLS & ASSOCIATES
Dr Kevin Mills
Managing Director

Attachment 6

Barker Ryan Stewart

Our Ref: 20070166

7 March 2011

The Manager
NSW Planning
GPO Box 39
SYDNEY NSW 2001

Attn: Mr Chris Ritchie

Dear Sir,

RE: Elf Mushroom farm and Substrate Plant (MP 08_0255)
Issue of Submissions

I refer to your correspondence dated 1st March, 2010 and respond to the request for clarification of the water quality results of the MUSIC models set up to compare the post development case with no controls to that of the post development case with controls and follow with Tables 1 and 2 below.

Table 1 North Eastern Catchment Water Quality Results & Comparison

		Post Development No Controls	Post Development With Controls	% Reduction
Flow	**(ML/yr)**	15.0	11.2	25.3
Total Suspended Solids	**(kg/yr)**	2340	301	87.0
Total Phosphorus	**(kg/yr)**	5.04	1.37	72.8
Total Nitrogen	**(kg/yr)**	32.3	17.6	45.5
Gross Pollutants	**(kg/yr)**	308	0	100

Table 2 Western Catchment Water Quality Results & Comparison

		Post Development No Controls	Post Development With Controls	% Reduction
Flow	**(ML/yr)**	25.8	18.9	26.7
Total Suspended Solids	**(kg/yr)**	2760	827	70.0
Total Phosphorus	**(kg/yr)**	6.87	2.15	68.7
Total Nitrogen	**(kg/yr)**	56.2	26	53.7
Gross Pollutants	**(kg/yr)**	584	184	68.5

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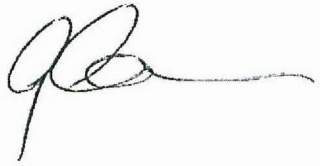
The tables show the results from the two catchments detailed in our Stormwater Management Report dated 23 November, 2010 and indicate that in both cases the reduction in Phosphorous is at least 65 percent, while the reduction in nitrogen is at least 45 percent due to the stormwater pollution controls proposed for the site.

Should you require any additional information concerning the modelling or require the model to be forwarded for review please don't hesitate to contact the undersigned.

Yours faithfully



Glenn Jameson Design Manager
Barker Ryan Stewart Pty Ltd

Attachment 7

Dangerous Goods Manifest	Elf Farm Supplies Pty Ltd Document Management System *EFS.OHS.029* Issue Date: *09.03.2011*

1. GENERAL INFORMATION

Owner Rob Tolson

Address of Property 108 Mulgrave Road
Mulgrave
NSW 2756

Site Plan Number

Date of Preparation

2. EMERGENCY CONTACTS

NAME	POSITION	TELEPHONE	MOBILE
Rob Tolson	Managing Director	4577 5000	
Neil Cockerell	Business Manager	4577 5000	0418 459 448
Francois Brazeau	Phase 1 Manager	4577 5000	0458 451 871
Will Litjens	Phase 2 Manager	4577 5000	0413 312 283

3. SUMMARY INFORMATION OF DANGEROUS GOODS

CLASS	PACKING GROUP	MAXIMUM QUANTITY
2, 2.1	N//A	30 L
3	II	50 L
3	III	330 L
4.1.— .. -- -	III	50 kg
6.1	III	15 L
8	II	241 L
8	III	750 L
9	II	25 L
C1	N/A	30,000 L
C2	N/A	2,000 L

4. BULK STORAGE

TANK SITE	CONTENTS	CLASS	TANK TYPE	CAPACITY
Generator	Diesel	C1	Underground	12,000 L
Prewet shed	Diesel	C1	Underground	16,000 L

5. PACKAGE STORAGE LOCATIONS

STORAGE LOCATION	CLASS	PACKING GROUP	AVERAGE QUANTITY	MAXIMUM QUANTITY
WORKSHOP	2,2.1	N/A	20 L	30 L
	3	II	40 l	50 L
	3	III	300 L	330 L
	6.1	III	1.5 L	2 L
	8	II	1 L	2 L
	8	III	8 L	10 L
	C2	N/A	1500 L	2000 L
LABORATORY	3	II	0.5 L	1 L
	3	III	1 L	2 L
	8	III	5 L	7.5 L
CHILLER	8	III	300 L	380 L
	9	II	25 L	25 L
CONTAINER	4.1	III	10 L	15 L
	6.1	III	55 L	75 L
	8	III	560 L	560 L
SSAN COMPOUND	5.1	N/A	10,000 kg	10,000 kg

6. DANGEROUS GOODS LOADED ON TRUCKS

Loaded vehicles are not kept at this site.

Elf Farm Supplies – Register of Dangerous Goods

Elf Farm Supplies Pty Ltd
Document Management System
EFS.OHS.029
Issue Date: 09.03.2011

Index No.	Product	Storage Location	D G Class.	Max Quantity Held	Placard Quantity	Manifest Quantity
1	DWF	Workshop	3	2 x 20L	1,000kg or L	10,000kg or L
2	CIA 2K Leaded Paint	Workshop	3	1 x 5L	1,000kg or L	10,000kg or L
3	CIA 2K Topcoat Hardener Standard	Workshop	3	1 x 2.5L	250kg or L	2500kg or L
4	CIA 2K 2 Pack Primer Grey	Workshop	3	1 x 4L	1,000kg or L	10,000kg or L
5	CIA 2K Primer Hardener	Workshop	3	1 x 2.5L	250kg or L	2500kg or L
6	Regal 313 Quick Dry Enamel	Workshop	3	1 x 4L	250kg or L	2500kg or L
7	Regal Enamel Hardener	Workshop	3	1 x 500mL	250kg or L	2500kg or L
8	Regal Wheel Silver	Workshop	3	1 x 4L	250kg or L	2500kg or L
9	Thinner No. 17	Workshop	3	60L	1,000kg or L	10,000kg or L
10	Jotacote 605 Comp A	Workshop	3	2.2L	1,000kg or L	10,000kg or L
11	Jotacote 910 MIO Comp A	Workshop	3	4L	1,000kg or L	10,000kg or L
12	Jotacote 910 MIO Comp B	Workshop	3	1L	1,000kg or L	10,000kg or L
13	Jotamastic 87 Comp B	Workshop	8	2.7L	1,000kg or L	10,000kg or L

Attachment 8

Elf Farm Supplies – Register of Dangerous Goods

Elf Farm Supplies Pty Ltd
Document Management System
EFS.FRM.015
Issue Date: 09.03.2011

Index No.	Product	Storage Location	D G Class.	Max Quantity Held	Placard Quantity	Manifest Quantity
14	Spray & Mark Fl Yellow	Workshop	2.1	3 x 50g	500L	5000L
15	Line marking Yellow Lead Free	Workshop	2.1	1kg	500L	5000L
16	Flawcheck Step 2 Penetrant	Workshop	2.1	1 x 350gm	500L	5000L
17	Flawcheck Step 3 Remover	Workshop	2.1	1 x 350gm	500L	5000L
18	Flawcheck Step 4 Developer	Workshop	2.1	1 x 350gm	500L	5000L
19	Cold Galvanizing Aerosol	Workshop	2	4L	500L	5000L
20	Quick Dry Spray paint	Workshop	2.1	30 x 375g	500kg	5000kg
21	Enamel Ad	Workshop	3	500ml	1,000 L	10,000 L
22	Kill rust Metal Primer	Workshop	3	1L	1,000 L	10,000 L
23	Touch Up Paint	Workshop	2.1	1 x 325gm	500kg	5000kg
24	390 Enamel	Workshop	3	4L	250 L	2500 L
25	Hammercoat	Workshop	3	4L	250 L	2500 L
26	Fish Oil	Workshop	3	40L	1,000 L	10,000 L

Elf Farm Supplies – Register of Dangerous Goods

Elf Farm Supplies Pty Ltd
Document Management System
EFS.FRM.015
Issue Date: 09.03.2011

Index No.	Product	Storage Location	D G Class.	Max Quantity Held	Placard Quantity	Manifest Quantity
27	Enamel Thinner	Workshop	3	4L	250 L	2500 L
28	Polyfilla Expanding Foam	Workshop	2.1	17kg	500 kg	5000 kg
29	Kwik Grip	Workshop	3	0.5L	1,000 L	10,000 L
30	Plumb Weld PVC Priming Fluid	Workshop	3	1L	250 L	2500 L
31	Plumb Weld PVC Pipe Cement	Workshop	3	500mL	250 L	2500 L
32	Expanding Foam	Workshop	2.1	17kg	500 kg	5000 kg
33	Argon	Workshop	2.2	$36m^3$		
34	Acetylene	Workshop	2.1	$41m^3$	$60m^3$	
35	Oxygen	Workshop	2.2	$26m^3$		
36	LP Gas	Workshop	2.1	9kg	500 kg	5000 kg
37	Molytec Spraysafe Silicone	Workshop	2	1 x 350g	500 kg	5000 kg
38	Silva Cote	Workshop	2	1 x 350gm	500 kg	5000 kg
39	Chemtec CT12	Workshop	8	1L	250 L	2500 L

Elf Farm Supplies – Register of Dangerous Goods

Elf Farm Supplies Pty Ltd
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EFS.FRM.015
Issue Date: 09.03.2011

Index No.	Product	Storage Location	D G Class.	Max Quantity Held	Placard Quantity	Manifest Quantity
40	S Weld Passivator Gel	Workshop	8	2.5kg	1,000kg	10,000kg
41	S Weld Clean	Workshop	8	2.5kg	1,000kg	10,000kg
42	Mineral Turpentine	Workshop	3	1L	1,000 L	10,000 L
43	Ramset Ultrafix	Workshop	3	500gm	1,000kg	10,000kg
44	Chemset 101 Injection	Workshop	3	10 x 750ml	1,000 L	10,000 L
45	Fresh Force Me Degreaser	Workshop	3	25L	1,000 L	10,000 L
46	Wurth Rost Off Ice	Workshop	2.1	5L	500L	5000L
47	Fuller Max Bond	Workshop	3	2 x 300ml	1,000 L	10,000 L
48	Tip Top Cement SC 2000	Workshop	6.1	1L	1,000 L	10,000 L
49	Comweld Bronze Tinning Flux	Workshop	6.1 (b)	250gm	1,000kg	10,000kg
50	Battery Terminal Protector	Workshop	2.1	300gm	500 kg	5000 kg
51	Tetra 7	Workshop	2.1	3 x 450gm	500 kg	5000 kg
52	Tetra 12	Workshop	3	14 x 450gm	1,000kg	10,000kg or L

Elf Farm Supplies – Register of Dangerous Goods

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EFS.FRM.015
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Index No.	Product	Storage Location	D G Class.	Max Quantity Held	Placard Quantity	Manifest Quantity
53	Barrierprime EX 428 PackA	Workshop	3	4L	250 L	2500 L
54	Polythane AU 625 Pack A	Workshop	3	1L	1,000 L	10,000 L
55	Polythane AU 625 Hardener	Workshop	3	1L	1,000 L	10,000 L
56	Paraglaze Reducer	Workshop	3	1L	1,000 L	10,000 L
57	Epotec Reducer	Workshop	3	1L	1,000 L	10,000 L
58	Supa Squirt Aerosol	Workshop	2.1	400gm	500L	5000L
59	Supa squirt Bulk	Workshop	3	20L	1,000 L	10,000 L
60	N C-123 Extra	Workshop	2	300gm	500 kg	5000 kg
61	Formalin	Container	8	10 x 20L	1,000 L	10,000 L
62	Paraformaldehyde	Container	4.1	50kg	1,000 kg	10,000kg
63	Bracasan	Container	6, 8	30L	1,000 L	10,000 L

Elf Farm Supplies – Register of Dangerous Goods

Elf Farm Supplies Pty Ltd
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EFS.FRM.015
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Index No.	Product	Storage Location	D G Class.	Max Quantity Held	Placard Quantity	Manifest Quantity
64	Liquid Pool Chlorine	Container	8	18 x 20L	250kg	2500 L
65	Diazinon	Container	6.1	20L	1,000 L	10,000 L
66	Ficam	Container	6.1	1.5kg	1,000 kg	10,000kg
67	Sulphuric Acid 98%	Laboratory	8	5L	1,000 L	10,000 L
68	Sodium Hydroxide Solution	Laboratory	8	40L	1,000 L	10,000 L
69	Methyl Red Solution	Laboratory	3	0.5L	1,000 L	10,000 L
70	H533 Treatment	Chiller	8	3 x 20L	1,000 L	10,000 L
71	B62 Biotreat	Chiller	8	5 x 20L	1,000 L	10,000 L
72	B73 Biotreat	Chiller	9	5 X 5L	1,000 L	10,000 L
73	R65 Inhibitor	Chiller	8	4 X 20L	1,000 L	10,000 L
74	Formusol 400	Chiller	8	3 x 20L	1,000 L	10,000 L

Elf Farm Supplies – Register of Dangerous Goods

Elf Farm Supplies Pty Ltd
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Index No.	Product	Storage Location	D G Class.	Max Quantity Held	Placard Quantity	Manifest Quantity
75	Diesel Fuel	Underground beside Generator	C1	10,000L	10,000L	100,000L
76	Diesel Fuel	Underground Phase 1	C1	16,000L	10,000L	100,000L
77	Diesel Fuel	Above Ground beside Weighbridge	C1	20,000L	10,000L	100,000L
78	Various Lubricating Oils	Workshop	C2	14 x 205L		
79	Various Lubricating Oils	Workshop	C2	20 x 20L		
80	Anhydrous Ammonium Nitrate	SSAN Compound	5.1	10,000 kg	1,000 kg	10,000 kg
81	Hydrochloric Acid 33%	Phase 1 Chemical lockup	8	60L	1000L	10000L

Attachment 9

15 March 2011

Terry Perram
Perram & Partners
12 Clanwilliam Street
Eastwood NSW 2122
Via Email: tperram@bigpond.net.au

Dear Terry

Re: Elf Mushroom Farm and Substrate Plant – DECCW Submission

The DECCW has identified several issues as part of the Air Quality Impact Assessment (AQIA) for the proposed Elf Mushroom Farm and Substrate Plant expansion. Each of these issues has been addressed below.

Substrate Plant

"DECCW recommends the modelling is revised to include the stable bedding as a source of odour at the site. Further, DECCW recommends the proponent reconsidered the stable bedding storage area in the context of the Odour Policy requiring modified activities to incorporate all best practicable means to prevent or minimise odour."

Elf Farm Supplies have stored and used dry stable bedding material in the same location on-site since 2004 and during this time has not indicated being a significant source of odour. The amount of dry stable bedding material collected has remained relatively constant due to its availability from stable operators.

More recently, some batches of dry stable bedding material have proven unsuitable for the substrate generation due to the stable operators using alternative bedding materials such as sawdust and wood shavings. As a result the use of dry stable bedding material at the site is declining and may continue to decline if suitable material becomes less available.

The dry stable bedding material is likely to have a low propensity to generate odour and in comparison to the total odour emissions from the site would be minor. The Proponent has indicated that during Stage 2 and 3 of the proposed expansion, the dry stable bedding material would be stored in the Pre-wet shed extension building to prevent any possible fugitive odour impacts from this source.

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BRISBANE

GOLD COAST

TOOWOOMBA

Queensland Environment Pty Ltd
Trading as PAEHolmes
ABN: 66 127 101 642

"DECCW recommends a more conservative estimate of capture efficiency of chicken manure stockpile odour emissions is included in the modelling. Further, DECCW recommends the proponent reconsiders the raw material storage area in the context of the Odour Policy requiring modified activities to incorporate all best practicable means to prevent or minimise odour."

The calculated odour emissions from the chicken manure stockpile for Stage 2 and Stage 3 dispersion modelling are low in the context of the total odour emissions exhausted from the bio-scrubber stacks in these stages. Further, the odour emission estimation used in the dispersion model was conservative as the estimated stockpile area was $40m^2$.

The dispersion modelling considered that all fugitive emissions from chicken manure stockpile during these Stages 2 and 3 would be captured and passed through the bio-scrubber before exhausting to the atmosphere, although it is not proposed to fully enclose the material storage area.

To minimise fugitive emissions, the proposed air duct system over the stockpile would be fitted with a variable speed fan to enhance the capture efficiency of the system as required and it is likely that most of the emission would be captured.

It is understood that if this source is found to be contributing to additional adverse odour impacts during future proposed operations, that the proponent would install an additional door/wall to fully enclose the storage area.

"DECCW recommends the proponent is requested to provide additional information demonstrating the existing efficiency of bio-scrubber No. 1 will be maintained with increase in production of Phase 1 substrate."

The design of the bio-scrubber requires continuous odour emissions to maintain its efficiency. The increase in production of Phase 1 substrate is likely to improve the efficiency as the additional odour will be closer to a steady state within the bio-scrubber. The review of the bio-scrubber efficiency in the AQIA indicates improved efficiency with higher odour concentrations passing through.

The Proponent has indicated the ability to reassess the internal design of the bio-scrubber to enhance the efficiency should it be required.

"DECCW considers it is prudent that the proponent develops, as part of the proposed expansion, contingency measures should odour impacts arise in the future."

The substrate facility actively manages its composting process using advanced technologies to ensure excessive odour is not generated in the process. They are continually improving the composting processes used and ensure that a good standard of materials are used to aid in the reduction of odour generated.

The odour complaint management system at the facility includes a review of the activities occurring on-site and the meteorological conditions at the time of the complaint. This allows the facility to identify which processes may contribute to unwanted odour complaints and how they can be managed to prevent any future events occurring.

The surrounding land-use of the substrate facility is unlikely to change as the majority of the area surrounding the site is a flood plain. It is noted that odorous emissions are generated from the other existing land-use surrounding the facility including small farming operations as well as an industrial site adjacent to the facility. The DECCW odour criterion used to assess the predicted impacts has taken into account the sensitivity to odour for different individuals.

Mushroom Farm

"DECCW recommends the proponent is requested to revise the AQIA based on the final design of the on-site sewerage treatment plant."

At the time of modelling the potential odour emission from the on-site sewage treatment plant the Proponent had not yet decided upon a final detailed design. It is understood that the purpose of the on-site sewage treatment plant would be to treat the sewage generated from the on-site toilet facilities used by the 150 people employed at the site.

A conservative approach was taken to model the potential emissions from this source by assuming the sewage treatment facility would be of similar design to a sewage recycling facility that treats raw sewage from the trunk mains. This facility is an enclosed system that does not require exposed treatment ponds for the process. Odour measurement data for this facility was obtained and used in the dispersion modelling and no adverse odour impacts were predicted.

A revision of the recycling facility would be recommended if the final design of the facility differs significantly from the modelled facility.

"DECCW recommends the proponent is requested to detail the other material that will be used to produce top dressing for lawns."

The 'other material' refers to spent substrate from previous spent substrate batches. No additional material other than spent substrate would be added.

If you require any further information regarding the work completed for the proposed Elf Mushroom Farm and Substrate Plant expansion, please do not hesitate to contact me.

Yours sincerely

Philip Henschke
Environmental Scientist
PAEHolmes

Attachment 10

41.6411.L2.Rev01:CFCD5

ATKINS ACOUSTICS

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

Perram & Partners
12 Clanwilliam Street
EASTWOOD NSW 2122

Attention: Terry Perram

10 March 2011

REVIEW OF CONDITIONS
LONDONDERRY MUSHROOM FARM &
MULGRAVE SUBSTRATE PLANT

The *DECCW* has provided recommended noise limits and compliance monitoring procedures to the *Department of Planning (DoP)* as outlined in correspondence dated 17 February 2011 (*Reference: DOC11/8667*) for the proposed Mushroom Farm at Londonderry, and the Substrate Plant at Mulgrave. *Attachment 4* of *DECCW* correspondence presents the *'Recommended Noise Limits'*.

This letter provides a review of the proposed *Recommended Noise Limits* in order to assist in developing practical means of assessing and monitoring compliance for the proposed developments. In addition, clarification is provided for an additional query raised by *Penrith Council*.

DECCW: RECOMMENDED NOISE LIMITS

Mushroom Growing Farm, Londonderry

The *DECCW* has recommended operational noise limits in *Item 1* that are consistent with predicted operational $L_{Aeq,15min}$ noise levels contained in the Atkins Acoustics noise assessment. Where the predicted levels are less than 35dB(A), the *DECCW* has recommended a noise limit of 35dB(A).

In terms of assessing sleep disturbance, the *DECCW* has recommended a noise limit of L_{Amax} 48dB(A). The proposed limit for assessing sleep disturbance has not been developed for the fringe operating hours (5.00 to 7.00am), as it has for operational ($L_{Aeq,15min}$) noise. Furthermore the *DECCW* has adopted a descriptor of L_{Amax}, rather than $L_{A1,1min}$ as presented in the noise assessment report. Accordingly, it is recommended that the *DECCW* noise limits be amended to reflect the noise assessment and operational nature of the site, hence the $L_{A1,1min}$ sleep disturbance goals should be amended as follows:

Location R1:	5-7am	$L_{A1,1min}$ 54dB(A) (L_{A90} 39 +15dB(A))
	10pm-5am	$L_{A1,1min}$ 48dB(A) (L_{A90} 33 +15dB(A))
Location R2 & R3:	5-7am	$L_{A1,1min}$ 57dB(A) (L_{A90} 42 +15dB(A))
	10pm-5am	$L_{A1,1min}$ 48dB(A) (L_{A90} 33 +15dB(A))
Location R4:	5-7am	$L_{A1,1min}$ 50dB(A) (L_{A90} 35 +15dB(A))
	10pm-5am	$L_{A1,1min}$ 48dB(A) (L_{A90} 33 +15dB(A))

Item 3 of *DECCW Recommended Noise Limits* states that the noise limits must be complied with under all meteorological conditions, except where wind speed are greater than 3m/s at 10 metres above ground level. This is inconsistent with the procedures of the *Industrial Noise Policy* and the noise assessment prepared for the proposal. The noise limits should apply under the meteorological conditions referenced in the noise assessment report (*Reference: 40.6411.R2:CFCD4 Rev07*), as these are the conditions that have been demonstrated to occur for 30% or more of the time.

Items 4 – 7 refer to procedures for determining compliance. The *DECCW* recommend that determination of compliance must be undertaken by attended noise monitoring within 30m of the referenced residential receiver dwelling (or where the dwelling is located within 30m of the property boundary, at the boundary) and within 50m of the boundary of a National Park or Nature Reserve. The *DECCW* goes further to state that the attended monitoring must be conducted within 3 months of commencement of commercial mushroom production, and be undertaken during day, evening and night hours at each reference location for the following time periods:

1.5hr during the day;

30 minutes during the evening; and

1 hour at night.

There are a number of concerns with respect to the requirement to conduct attended noise monitoring on private property, and the duration required for measurement during each assessment period. Logistically, access to private properties for the purpose of measurement can be problematic, and alternative measurement locations and/or compliance methods should be proposed.

In terms of the duration of attended measurements recommended by the *DECCW*, we believe that the requirements are unworkable with respect to:

- completing the measurements in the required time periods;
- providing a representative sample of measurement for site operations;
- ability to compare measured levels of same site operations at the 4 measurement locations; and,
- does not take into account the operational scenarios for fringe (5-7am) operations.

Therefore we would recommend consideration of an alternative noise compliance monitoring program to determine compliance with the noise limits (acknowledging that the sleep disturbance limits require review to reflect fringe 5-7am operations).

Where access to the reference residential properties identified in *Item 1* is not available, alternative measurement locations would be utilised at the boundary of the subject site to the north, south and west. Measured levels would be adjusted to account for any additional noise attenuation due to shielding, ground absorption and/or distance in order to determine noise contributions and compliance for the reference receiver locations.

In addition to the attended reference receiver (or alternate boundary locations), we recommend that nearfield audit measurements be conducted of plant and equipment to assist in determining noise contributions to the reference receiver locations, and refine the noise model if required to assist in determining compliance.

The noise contributions from the Mushroom Farm operations should be evaluated and assessed against the noise limits (*Item 1*) provided by *DECCW* with the appropriate amendments made for assessing sleep disturbance during morning fringe period of 5-7am. Compliance may be determined by:

- Direct measurement of the consent criteria - LAeq(15minute);
- Operator estimated LAeq(15minute) contribution;
- Operator estimated LA1(1minute) contribution;
- By calculation from near field measurements;
- From post analysis of audio recordings;
- By measurement at a representative location;
- Predictions from the compliance noise model; or
- A combination of any or all the methods shown.

With respect to duration of attended noise monitoring at each of the four (4) reference locations, we propose the following:

15 minutes during the morning fringe period (5-7am);
30 minutes during the day;
15 minutes during the evening; and
15 minutes at night.

We believe that this will effectively represent the operational scenarios that have been modelled, and how the site will be managed. It will also assist in providing assessment of the similar activities for determination of compliance for all reference receivers.

Substrate Plant, Mulgrave

With respect to the substrate plant, the *DECCW* propose to retain the existing noise limits as outlined in *Environmental Protection Licence (EPL) 6229*. The licence specifies operational noise goals of $L_{Aeq,15min}$ 44dB(A), 44dB(A) and 39dB(A) for day evening and night, respectively. These noise limits are not consistent with the recommended goals presented in the noise assessment report (*Reference: 40.6411.R1:CFCD4 Rev03*), or the predicted noise levels. We note that *Section L6.3* of the licence states that *'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 licence does not specify receiver locations for which compliance must be demonstrated, and simply states at the most effected residence. We propose that compliance noise monitoring be conducted at two (2) locations that represent the existing residences:

Location 1	southern end of Mulgrave Road representing 2 Railway Road and 126 Mulgrave Road
Location 2	Chisholm Place

EPL 6229 set out that the noise limits must be complied with under all meteorological conditions. However, this is inconsistent with the procedures of the *Industrial Noise Policy* and the noise assessment prepared for the proposal. The noise limits should apply under the meteorological conditions referenced in the noise assessment report (*Reference: 40.6411.R1:CFCD4 Rev03*), as these are conditions that have been demonstrated to occur for 30% or more of the time.

Similarly to the *DECCW* recommendations for duration of noise monitoring for the Mushroom Farm, we believe that the duration of monitoring specified for the Substrate Plant is impractical and will not provide comparable results for the referenced receivers to determine compliance.

With respect to duration of attended noise monitoring at each reference location, we propose the following:

30 minutes during the day;

15 minutes during the evening; and

15 minutes at night.

PENRITH COUNCIL

Penrith Council has queried the background noise monitoring results, specifically *"The RBL set for the daytime period for M1 in Table 3 on page 14 seems to be slightly high considering that no daytime figures in the area (as outlined in the table were above 44dB(a), but on three days they were below 44dB(A)".*

A review of the noise monitoring results in *Table 3* of the noise assessment (*Reference: 40.6411.R2:CFCD4 Rev07*) confirmed the range of noise levels over the 7 day measurement period. In accordance with procedures of the *NSW, Industrial Noise Policy* (*Section 3.1*), the RBL is the median of the assessment background levels for each of the relevant time periods. The median is also known as the 'middle' value in a number of measured values ranked in ascending or descending order, hence, for measurement location M1 the median is 44dB(A).

We trust the information in this letter is satisfactory. Please do not hesitate to contact our office if further information or clarification is required.

Yours sincerely,
ATKINS ACOUSTICS & ASSOCIATES PTY LTD.

Carl Fokkema

Attachment 11

10 March 2011

Terry Perram
Perram & Partners
12 Clanwilliam Street
Eastwood NSW 2122
Via Email: tperram@bigpond.net.au

Dear Terry

Re: Proposed substrate plant extension, Mulgrave

Hawkesbury Council has identified several issues as part of the Air Quality Assessment for the proposed Elf Farm Supplies Substrate Plant expansion. Please find that the issues specifically related to this work have been addressed below.

A range of days / different weather conditions / were not considered. A review of the odour report studies showed dominate wind directions, however it isn't clear whether inversion layers were considered in great detail. Inversion layers are responsible for holding odours that would normally disperse ready to hang around and low to the ground.

The Air Quality Assessment for the proposed mushroom farm and substrate plant extension utilised an advanced dispersion model (CALMET/CALPUFF) to predict the potential odour impacts as part of the proposed developments. CALMET, which is the meteorological pre-processor for the dispersion model CALPUFF, calculates a fine resolution three-dimensional meteorological data based upon observed ground and upper level meteorological data as well as prognostic data. The dispersion model included a full year of hourly meteorological data which took into account the local meteorology and inversion layer conditions in the area.

Were any points in the surrounding area used in the monitoring process? Especially at the existing plant?

Meteorological and odour monitoring data were collected from the existing substrate facility at Mulgrave and operating mushroom farm at Vineyard. Odour sampling data was obtained from the source of the emissions to determine the strength of the odour. This information was then used as input to the dispersion model. Sampling at a distance to the source generally does not permit an accurate measure of the strength of the odour. Ambient odour levels which are below the level of detectability of odour measurement techniques may still be detectable to the human nose.

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Ambient levels can also be highly variable and depend on the prevailing meteorological conditions at the time of sampling. The most accurate and reliable method is to measure odour at the source if this is practicable.

Are there any proposed odour minimization devices to be installed on any plant / equipment likely to emit odour such as scrubber / deodorizers which can be installed on any existing or proposed stacks?

The existing exhaust stack at the substrate facility was built for the purpose of exhausting bio-scrubber emissions of the Phase 1 substrate material and is currently operating. As part of the proposed expansion to the facility an additional bio-scrubber and exhaust stack will be constructed and operated to manage odour emissions generated during the Pre-wet phase. It is also proposed to have additional fugitive odour sources on-site captured and exhausted through the bio-scrubber to further reduce any potential for odour impacts.

If you require any further information regarding the work completed for the proposed Elf Farm Supplies Substrate Plant expansion, please do not hesitate to contact me.

Yours sincerely

Philip Henschke
Environmental Scientist
PAEHolmes

Attachment 12

10 March 2011

Terry Perram
Perram & Partners
12 Clanwilliam Street
Eastwood NSW 2122
Via Email: tperram@bigpond.net.au

Dear Terry

Re: Proposed Major Project: Tolson Mushroom Farm

521 The Northern Road Londonderry

Penrith City Council has identified key issues as part of the Air Quality Assessment for the proposed Tolson Mushroom Farm. Please find that each of the relevant issues have been addressed below.

Air emissions from the development (including) odour are not to be detected beyond the property boundary.

The Air Quality Assessment for the proposed mushroom farm was undertaken in accordance with the NSW Department of Environment, Climate Change and Water (NSW DECCW) "*Approved methods for the modelling and assessment of air pollutants in NSW*" and the NSW DECCW document "*Technical Framework: Assessment and management of odours from stationary sources in NSW*". The assessment showed that the most stringent DECCW odour criteria, of 2 odour units, would not extend beyond the site boundary or into any residential areas, suggesting that adverse odour impacts would not be observed.

A suitably qualified consultant is to undertake an odour and air emissions assessment of the development every 6 months. The assessment is to be undertaken in accordance with the relevant legislation, standards and guidelines and must provide a report outlining the outcomes of the assessment. If the assessment identified any emissions or odours which exceed the levels and criteria provided in the Air Quality Assessment prepared by PAEHolmes dated 17 June 2010 then recommendations are to be provided, in that report, to ensure the development complies with the relevant criteria and does not have any adverse environmental impacts on the surrounding area.

The Air Quality Assessment completed by PAEHolmes indicates that the likelihood for any adverse air quality impacts is minimal from the proposed development. The approach taken in the air quality assessment was conservative and likely to overestimate the potential impacts.

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It would be reasonable to assume that at the completion of the proposed development and with any additionally proposed modification to the facility with respect to air emissions that the assessment be revisited to ensure it complies with the relevant criteria.

In the event the excessive odour or air emissions are caused due to temporary plant and equipment failure, then the operator must notify all surrounding residents within 24 hours of the situation and when the plant and equipment will be repaired. Failing plant and equipment is to be repaired as soon as possible.

It is understood that this condition would be reasonable for the operator to agree with, as this would prevent any unwanted odour complaints being lodged against the facility and in turn would lead to better community understanding and support for the proposed development.

If you require any further information regarding the work completed for the proposed Tolson Mushroom Farm, please do not hesitate to contact me.

Yours sincerely

Philip Henschke
Environmental Scientist
PAEHolmes