

Contact: Sharon Langman
Quote Reference: T15-078



11 February 2016

Ms Edwina Beveridge
Blantyre Farms Pty Ltd
Murringo Rd
YOUNG NSW 2594

Dear Ms Beveridge

**DEVELOPMENT APPLICATION T15-078
PIGGERY AT LOTS 1 & 2 DP623790 (AND OTHERS)
EULIE ROAD HARDEN**

I refer to the above matter and to information received in response to Council's request for information on 6 January 2016.

Council has now received responses from various State Government agencies and has further reviewed the details submitted, and as a result, requires additional information to be submitted as set out below.

Council's request for information dated 6 January 2016

Council has reviewed the information submitted and is of the opinion that it does not provide sufficient detail to enable a thorough assessment of the application.

- Confirmation has been provided that the schedule of properties on page 2 of the EIS is the extent of the land involved in the application. A review of those parcels indicates Lot 1 DP437355 appears to be located across Cunningham Creek and is not included in the topographic map at Appendix A which is put forward as the extent of the land involved in the application. Please clarify whether Lot 1 DP437355 is included in the application and to what extent it is to be utilised for land application.
- The description of the development and the site plan provided do not fully satisfy the request for a site plan, to scale, that shows all elements of the development on the sites. A revised site plan is required at a more regular scale (not 1:36112), that also shows the elements of the development to scale, noting that additional details requested herein will need to be incorporated into the site plan.
- Please confirm that the plan labelled 'Stock Building' represents the office referred to in the EIS. If that is the case, the plan needs to provide for sanitary and kitchen facilities for staff.
- The floor plan for the building that is to be used as the liquid feed kitchen should also show how the building is to be used (areas for machinery, vehicles etc).
- The elevation plans for the grower and finishing sheds should show the loading ramps shown on the floor plan layouts.
- All revised plans provided must include plan titles and dates of production to ensure the documents being assessed are the most accurate and up-to-date

for the development as they will be referenced in any consent that is issued to provide clarity as to the extent of any approved works.

- Cross sectional plans that show how the buildings will sit on the site, cut and fill levels and the amounts of earth to be moved have not been provided and are required. This also needs to include finished building heights.
- An assessment of the proposal against the statutory planning documents has not been provided as follows:
 - Harden Local Environmental Plan 2011. The site is mapped as being affected by 'Biodiversity Protection' (Clause 6.2 of the LEP), 'Riparian Land and Watercourses' (Clause 6.3 of the LEP), and 'Groundwater Vulnerability' (Clause 6.4 of the LEP). The requirements of these clauses need to be addressed together with any other applicable clauses.
 - State Environmental Planning Policy No 30 – Intensive Agriculture; State Environmental Planning Policy No 33 – Hazardous and Offensive Development Industries; and State Environmental Planning Policy No 55 – Remediation of Land. The request for information from the Office of Environment and Heritage (Environment Protection Authority) detailed below, indicates that insufficient detail has been provided to enable Council, as consent authority, to be satisfied that the matters for assessment under these SEPPs have been addressed.
- A full visual impact assessment should provide visual representation (in the form of a photo montage or the like) of the development that considers Reduced Levels, existing topography and landscape features, the location of sensitive receptors and public vantage points and potential glare impacts. This would enable an assessment of whether measures identified (such as the proposed tree planting) are adequate and appropriately located for the development. Should that assessment show that tree planting is an appropriate amelioration method, details of the species/types, numbers and growth-stage of plants to be planted must be provided (noting that seedlings and tube stock will be longer term methods of providing any visual relief to the development).

Department of Primary Industries (DPI)

The DPI has provided advice to Council (copy attached) that the issues of biosecurity and disease contingency measures and monitoring of odour, dust and noise require documentation.

Office of Environment and Heritage (OEH)

Council has received advice from OEH dated 8 February 2016 in relation to the Aboriginal Archaeological Assessment provided with the application. That advice (copy attached) indicates that the assessment provided is currently inadequate to fully consider the impacts to Aboriginal cultural heritage values from the development. A response to the issues OEH has raised is to be provided to Council for forwarding to OEH.

Environment Protection Authority (EPA)

Council has received advice from the EPA dated 9 January 2016 (copy attached) in relation to the EIS provided with the application. That advice indicates that a broad range of further information is required relating to odour impacts, carcass management, sensitive receivers and separation distances, effluent disposal areas, nutrient removal and modelling, effluent storage and environmental management controls, groundwater, noise and traffic movements. A response to the issues the EPA has raised is to be provided to Council for forwarding to the EPA.

Other matters

Council also requires the following additional details to be provided.

- Traffic

The use of Eulie Road is not considered the safest and most practical access for the development. Eulie Road is strongly undulating, contains multiple grate crossings, has a creek crossing, has poor sight lines and visibility in areas, is likely to require the removal of a substantial number of trees in road widening and improving sight lines and its use by development-related traffic presents a significant negative impact on the amenity of the nearest residence to the development.

It is suggested that Bonoak Road can provide better access to the development, with less negative impact. Further, the application does not justify the use of Eulie Road over Bonoak Road. A justification as to the proposed use of Eulie Road is required, addressing the issues raised above and any others appropriate to support the use of Eulie Road.

On a related matter, a revised assessment of the amount of traffic generated by the development is required. Council notes that the traffic data in the EIS only provides for grain feed deliveries and does not appear to deal with deliveries of all possible food sources (such as food wastes or other food sources for phased feeding) and does not account for passenger vehicle movements other than for the construction phases.

Additionally, in relation to the movement of animals between the breeder and grower sites, clarification is required as whether this will occur on Eulie Road or on roads on private land, the number of movements per week that will be required for the operations and details as to the type of vehicle that will transport the pigs from one site to the other. If public roads are to be used for this purpose this should be factored into the revised traffic movements.

- Rainwater and headwater tanks and silos

The EIS mentions the installation of rainwater and headwater tanks and grain silos on each site. A revised site plan (to a scale that can be read) that shows the location of these structures on the relevant land parcel is required. Additionally, plans and details of the tanks and silos are required, including details of how they will link into drainage, stormwater, and feeding systems and how they will be filled and emptied.

- Waste

The EIS indicates there will be no waste other than effluent from the development, with other wastes only being produced during the construction phase. Where other feed sources (such as human food waste) is proposed, details are required of how waste (cartons, packages etc) will be handled, stored and removed from site. Similarly office and production waste needs to be addressed (chemical containers, feed kitchen waste, packaging, etc)

Additionally, a revised site plan (drawn to a scale that can be read) that shows the location of the proposed disposal area for the effluent that will be produced by the staff amenities that must be incorporated into the office facilities is required. Human waste should be kept separate from animal waste and thus the effluent ponds should not be proposed for management of human sewage.

- Drainage and stormwater

A drainage layout should be provided (that is, more than straight lines on a page representing SEPs) showing how liquid waste and stormwater from the buildings (including from the office/amenities shed) is to be managed and diverted to the

nominated effluent ponds and dams, and to be redirected to the office and amenities sheds.

- Composting site

A revised site plan (to a scale that can be read) should be provided that clearly shows the location of proposed composting sites in relation to all other development on the sites and in relation to sensitive receptors.

- Staging

Clarification is required as to the intention to stage the development (eg construct the sheds in stages to allow the operation to gear-up more slowly) or to develop it to full capacity from the commencement of operations.

- Liquid feeding kitchen.

Details (including a revised floor plan as requested above) should be provided that explain the functions and use of the liquid feeding shed in the development and any impacts that arise from its operation (such as noise from machinery, waste generation and disposal, drainage, traffic generation and the like).

- Internal roads and buffers

The EIS refers to internal roads and buffers that are to be provided on the site. The site plan provided does not show where these are to be provided and in addition, variously refers to them as 10, 20 or 25 metres from creeks and gullies and boundaries. The revised site plan (to an appropriate scale, showing those measures to scale) should be provided, along with clarity as to the measurements of those buffers.

Council requests your response to these matters within 60 days of the date of this letter. You are required to provide the revised details to Council and not directly to the nominated agencies. Please note that the stop the clock provisions pursuant to Clause 54 of the *Environmental Planning and Assessment Regulation, 2000 (the Regulation)* are still in place.

Should you require any further information in this regard, please do not hesitate to contact Council's Customer Services, on (02) 6386 0100 during business hours.

Yours sincerely


Sharon Langman
DIRECTOR ENVIRONMENTAL SERVICES



Department of
Primary Industries

OUT16/3287

Harden Shire Council
PO Box 110 Harden
NSW 2587
Via email: council@harden.nsw.gov.au

Development Application Blantyre Piggery

Thank you for the opportunity to comment on the Development Application (DA) for breeder and grower piggery sites at Lots 1 and 2 DP623790 Eulie Rd Harden.

I have reviewed the proposal based on the SEA Requirements, the National Environmental Guidelines for Piggeries (Ed.2, 2010, <http://australianpork.com.au/wp-content/uploads/2013/10/National-Environmental-Guidelines-for-Piggeries.pdf>) and the Environmental Risk Assessment checklist: <http://australianpork.com.au/wp-content/uploads/2013/10/NEGP-Risk-Assessment.pdf>

While most issues have been dealt with comprehensively, the following issues require further information and or action on behalf of the proponents:

- More specific biosecurity management and disease contingency measures should be documented and in place.
- The management plan should include routine monitoring of odour, dust and noise rather than waiting for complaints.
- Final consent should be conditional on the issuing of an appropriate groundwater licence entitlement and allocation that provides adequate water quality and supply.
- Further community consultation may be required.

Please contact me on 0427812508 or lilian.parker@dpi.nsw.gov.au if you wish to discuss these matters further.

Yours faithfully

Lilian Parker
Resource Management Officer
Department of Primary Industries
28 January 2016

NSW Department of Primary Industries, Agricultural Land Use Planning Unit
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Office of
Environment
& Heritage

DOC16/52351

The General Manager
Harden Shire Council
PO Box 110,
HARDEN NSW 2587
via email: council@harden.nsw.gov.au

Dear Mr Kershaw,

RE: Public Exhibition of Blantyre Farms Development Proposal

The Office of Environment and Heritage (OEH) has reviewed the Blantyre Farms Development Proposal that was on public exhibition from 18th December 2015 to 5th February 2016.

OEH provided input into the Environmental Assessment Requirements (EARs 959) for this development, on 14 August 2015, in line with OEH's statutory responsibilities for Aboriginal cultural heritage matters.

After reviewing the proposal and associated documents, OEH considers that the Aboriginal Archaeological Assessment, dated December 2015 and prepared by OzArk Environmental Heritage and Management Pty Ltd, is currently inadequate to fully consider the impacts to Aboriginal cultural heritage values as a number of requirements raised have not been addressed. These include:

- The Aboriginal Archaeological Assessment does not meet the requirements of the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW* (2010).
- Consultation with the Aboriginal community was not completed satisfactorily.

Further details about these matters are provided in Attachment A.


As such, OEH requires that consultation with the Aboriginal community be undertaken in line with the OEH requirements. We also suggest that the Aboriginal Archaeological Assessment report be revised following re-survey of the development at a time when surface visibility is suitable. Our advice therefore, is that Council should not determine this development until these issues have been resolved.

Council and the proponent are reminded that under the *National Parks and Wildlife Act 1974* all Aboriginal objects and Aboriginal places are protected regardless of the level of disturbance. If any Aboriginal objects are found as a result of the development, an Aboriginal Heritage Impact Permit (AHIP) will be required before impacts to Aboriginal objects can occur.

Given the issues raised in Attachment A in relation to Aboriginal cultural heritage matters and the recent representations Council has received from Young Local Aboriginal Land Council, OEH is happy to meet with you to provide further assistance in the assessment of this proposal.

If you would like to discuss our response, please contact Sarah Robertson on (02) 6229 7088 or by email at sarah.robertson@environment.nsw.gov.au.

Yours sincerely

 08/02/16
ALLISON TREWEEK
Senior Team Leader Planning - South East
Regional Operations Group – South

Attachment A – Detailed comments on the Aboriginal Archaeological Assessment for the Blantyre Farms Development Proposal

OEH has reviewed the *Aboriginal Archaeological Assessment: Blantyre Sow Pig Farm, Eulie Road, Harden*, prepared by OzArk Environmental Heritage and Management Pty Ltd and dated December 2015, and provides the following comments.

OEH Environmental Assessment Requirements – EARs 959

Aboriginal Consultation is inadequate

OEH advises that adequate consultation with the Aboriginal community must be undertaken to ensure all cultural values are identified within the proposed development area and any potential impacts considered and managed accordingly.

As Aboriginal objects were present within the boundaries of the proposed development, and potential existed for further objects to be present, OEH recommended that consultation with the Aboriginal community be undertaken as specified in clause 80C of the *National Parks and Wildlife Regulation 2009*. Section 2.3 on consultation on page 7 of the *Aboriginal Archaeological Assessment (2015)* however, indicates that only Young Local Aboriginal Land Council (LALC) were contacted in relation to the proposed project.

OEH was also not contacted for a list of registered stakeholders, and no evidence has been supplied to indicate that any other agencies have been contacted to obtain a list of interested parties. OEH advises that this does not comply with the process of consultation as specified in clause 80C, and therefore does not satisfy recommendation 3 that we provided as part of the EARs.

Additionally, Young LALC did not attend the field inspection due to a disagreement regarding rates of employment. Financial issues should not have precluded consultation regarding cultural values of the area, which need not have occurred in the field.

Because the requirements of consultation have not been met, the *Aboriginal Archaeological Assessment* has also not satisfied recommendations 2 and 4 provided as part of the EARs. These requirements relate to the identification and description of cultural heritage values, the potential impact on those values by the proposed development and the views of Aboriginal people.

Unanticipated Finds Protocol is inadequate

Appendix 3 of the *Aboriginal Archaeological Assessment (2015)* provides an Unanticipated Finds Protocol. This is not a satisfactory substitution for recommendation 8 of the EARs; to provide a Statement of Commitment addressing the following issues:

- In the event that human skeletal remains are discovered the NSW Police must be contacted as a matter of priority;
- An explanation of how the protocol will be adhered to for the life of the development works.

OEH request clarification as to whether contractors and staff will be inducted so that they recognise Aboriginal objects if they are uncovered?

- The process that will be followed for continuing consultation with Aboriginal stakeholders has not been outlined.

OEH request clarification as to how will these stakeholders be identified?

Consideration of impacts to Aboriginal objects is inadequate

In addition to the comments regarding the EARs, we also have concerns relating to recommendation 1 of *Aboriginal Archaeological Assessment* (2015:iii) which states that "no Aboriginal sites or objects are recorded within the Study Area and no landforms are assessed as having archaeological potential, therefore no further archaeological assessment is required". We disagree with this recommendation for the following reasons:

- High amounts of vegetation prevented ground surface visibility across the majority of the Study Area (*Aboriginal Archaeological Assessment* 2015:iii). For this reason, we argue that it cannot be stated with any degree of certainty that no Aboriginal sites or objects are present within the study area. Furthermore, Packard and Hughes, who recorded the original Aboriginal sites adjacent to the study area commented (our emphasis 1983:4) "in considering the results of this survey it was presumed that the low surface visibility precluded the detection and recording of an unknown number of sites", which is in direct opposition to the assessment of the impact of visibility on site identification by OzArk. Packard and Hughes (1983:5) also observed that the isolated finds were mostly in paddocks that had been ploughed in the past, indicating that ploughing is not a significant deterrent to site identification in this region.
- Ploughing may affect the visibility of sites, but artefacts are only displaced horizontally or vertically, they do not disappear. Furthermore, artefacts that may be ploughed beneath the surface in one ploughing event may subsequently be revealed with further ploughing.
- Insufficient information has been presented to be able to determine whether the various landforms within the study area have been adequately surveyed.

The *Aboriginal Archaeological Assessment* does not meet the requirements of the *Code of Practice for Archaeological Investigation of Aboriginal Objects in NSW 2010* (the Code)

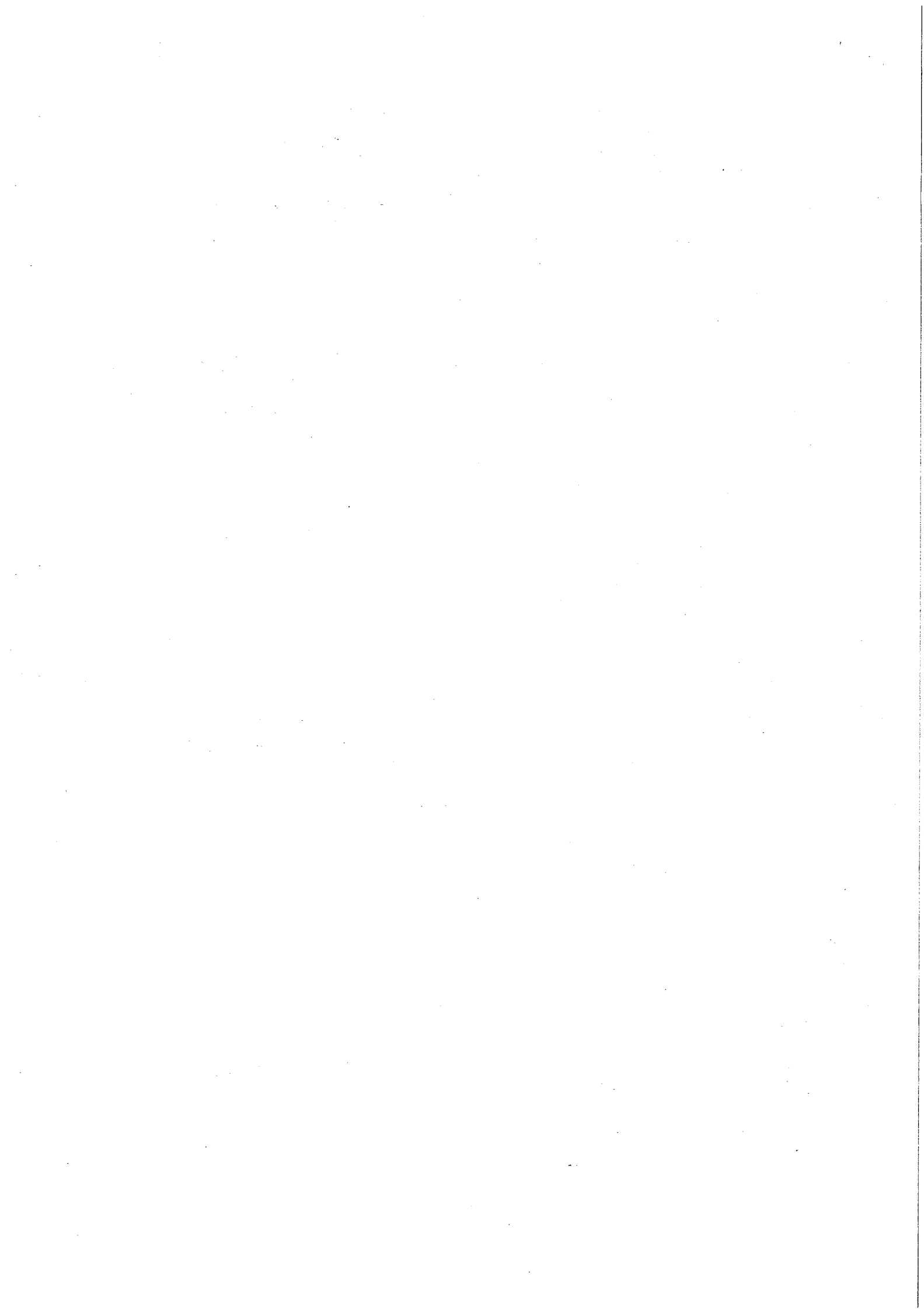
- 1) As per requirement 2 of the Code, the review of landscape context (section 3) must identify the primary modes of geomorphic activity in the subject area (e.g. aggraded, aggraded or eroded, or eroded) in order to determine whether subsurface deposit may be present. Any forms of erosion within the subject area must be identified and described.
- 2) A variety of landforms have been described for the study area in section 3.1. The landforms must be mapped, and the survey units marked in relation to the landforms so that survey adequacy can be evaluated. Page 10 of the 2015 report refers to relevant landforms having archaeological potential. The report must clarify what a relevant landform is.
- 3) Requirement 4a of the Code states that the landscape units in which artefacts were previously recorded must be integrated into the predictive model for the current study in order to facilitate an understanding of the archaeological potential of various landscape units. This information has been presented in table 4-2 but must be integrated into the predictive model.
- 4) The predictive model (2015:17) identified that ceremonial sites had a low likelihood of being present. We disagree with this statement because Young LALC have not been adequately consulted. Harden Shire Council have been contacted by Young LALC because a ceremonial ground is present within the study area. As discussed previously, a broader and more comprehensive process of consultation must be undertaken in order to adequately canvass

cultural values for the study area to ensure that they are not impacted by the proposal.

- 5) OEH would also argue that, due to the lack of systematic archaeological investigation over the area, including a general lack of sub-surface archaeological investigation in the region, the archaeological background of the Harden area may be considered as poorly understood including an understanding of the distribution of Aboriginal 'objects' over the region and the Aboriginal use of the region.
- 6) Section 5.5 (2015:19) states that the subject area adjacent to previously recorded site 50-6-0009 was surveyed and it was determined that the site did not extend into the study area. Visibility in this area must be reported so that it can be evaluated whether or not it was possible to accurately determine whether site 50-6-0009 was present or not.
- 7) Poor to moderate ground surface visibility and disturbance from ploughing were cited for the study area and yet it was determined that there was low potential for undetected isolated finds or small artefact scatters to be present within the study area (2015:20). The logic of this reasoning contradicts the assessment by Packard and Hughes in the adjacent lot in 1983 where sites were found despite similar levels of ploughing and disturbance from cropping and farming. While the assessment of significance may not be substantially altered by further archaeological assessment, re-surveying the area when the paddocks have been harvested would substantially improve visibility and therefore site identification. While isolated artefacts may not be of high archaeological significance they nonetheless constitute Aboriginal objects under the *NPW Act* (1979) and must not be impacted.
- 8) The EIS page 21: "Parts of Eulie road will need to be upgraded. This will include widening of 3 stock grids along Eulie Road. (These grids are marked on the map below), sealing the road for 150m to the west & 100m to the east of the Carnbrae house and better surfacing on Eulie road for approximately 1km on either side of the Maniac Creek crossing." We are concerned that these areas have not been surveyed. They must either be surveyed, or adequate justification must be provided in writing of why they were not surveyed.

References

- Packard, P. and Hughes, P. (1983) *Stage 2 of an archaeological survey of the Murrumburrah to Yass electricity transmission line*. A report to National Parks and Wildlife Service of NSW, Sydney.





Our reference: DOC15/519263-12; EF15/154
Contact: Sharon Peters (62297002)

The General Manager
Harden Shire Council
PO Box 110
HARDEN NSW 2587

Attention: Sharon Langman

9 February 2016

Dear Ms Langman

**RE: Development Application No.2015-78 – Proposed Piggery - Eulie Road Harden
Request for further Information**

I refer to the Development Application No. 2015-78, and accompanying supporting Environmental Impact Statement (EIS) that is currently on exhibition for the proposed piggery located at Eulie Road, Harden ('the proposal') and received by the Environment Protection Authority (EPA) on 17 December 2015. I also refer to our letter dated 24 December 2015 which requested further information be provided by the proponent in relation to the proposal.

As advised in our letter dated 24 December 2015, and noting the Premier's Memorandum in relation to the directive that all State Government agencies, including the EPA close down during the Christmas period from Monday 21 December 2015 to Friday 1 January 2016, the EPA was only able to complete a preliminary review of the information and advised that it would provide a more detailed list of additional information it requires after completing a fuller assessment of the proposal. Notwithstanding the above, EPA acknowledges that information received from the proponent following a response to our initial review and request for further information appears to be adequate.

Following a detailed review of the EIS, EPA has however identified that further information is needed from the proponent to allow for an adequate level of assessment to be undertaken in relation to determining the full environmental impacts of the proposal. In this regard the EPA has identified that further information is required in relation to the assessment of impacts for noise, odour and soils before a determination in relation to the issuing of General Terms of Approval can be made. As such, the additional information that EPA requires from the proponent is detailed in Attachment A to this letter.

In light of the above issues EPA requests that the proponent provide the requested information to allow for adequate assessment of the proposal and its impacts. We understand that Harden Shire Council also requires additional information and the deemed refusal clock is currently stopped and will remain so until such time as all additional information is provided. Should you wish to discuss the matter further please contact myself or Sharon Peters of this office on 6229 7002.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Stefan Press'.

STEFAN PRESS
A/Unit Head – South East Region
Environment Protection Authority

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ATTACHMENT A

The information provided in the EIS is insufficient for the EPA to properly assess the impacts of the proposal. The EIS should contain baseline information on aspects which have the potential to be affected by the proposal including the nature of the soils, and the soil's type, depth and hydrology to establish the capability of the land to utilise the effluent; meteorological characteristics which may influence odour, noise, dust or water impacts; slope of the land and general topography, baseline data on water quality; the proposed monitoring program and measures to mitigate or manage impacts.

For the EPA to further consider and assess the environmental impacts of the proposal additional information is required and detailed below.

Odour Assessment

EPA notes the proponent has chosen to undertake a Level 1 Odour Assessment for the proposal using the *National Environmental Guidelines for Piggeries (Australian Pork Limited, 2010)* rather than the EPA guidelines for the *Assessment and management of odour from stationary sources in NSW (DECC, 2006)* as suggested by EPA in providing its requirements for the proposal.

In general, a Level 1 Assessment is sufficient to broadly identify whether a site is suitable for the intended use(s) or if further assessment of odour impact is necessary. If the level of odour impacts is likely to exceed the assessment criteria, consideration should be given to selecting another site, or modifying the proposal to reduce offsite odour impacts.

The assessment of odour impacts should incorporate the entire operation including the piggery, waste storage areas, waste utilisation areas and other major sources of odour (i.e. liquid food processing and composting of dead animals).

EPA notes the proposed development has a number of potentially odorous emission sources, however, the proponent has only identified and accounted for the breeder and grower facilities in the Level 1 Odour Assessment provided in the EIS. In order for the odour impact to be predicted adequately and the likely acceptability of odour impacts, all potential odour sources (including composting of dead animals and liquid food preparation) and all nearby receptors potentially affected by the odour emissions (both current and future) must be considered. The impact of generated odours is influenced by the climate and topography of the land.

The National Environmental Guidelines for Piggeries, Australian Pork, 2010 ("the piggery guidelines") states on page 17, the movement and dispersion of odour from the piggery depends on the topography in the vicinity of the property. Under stable conditions, concentrated odour tends to gravitate down hills, more severely affecting receptors downslope from the source. Odours can also travel significant distances with very little dispersion if the development is in a confined valley. These factors warrant serious consideration when selecting the site for a piggery complex.

Separation distances to all relevant receptors must be assessed, and where other significant odour sources are located in proximity to the proposed piggery, the cumulative odour impact may need to be considered. The EIS identifies feeding will comprise liquid food and identifies onsite composting of animal carcasses, however these activities have not been identified or quantified in terms of additional potential odour sources. EPA requires the proponent to provide further justification in this regard.

The Level 1 Odour Assessment provided in the EIS suggests that there is sufficient separation distance between the proposal and the nearest sensitive receiver (Cairnbrae residence) which is located approximately 1.6 kilometres away. It is however unclear how the measurement of distance from the proposal to the residences surrounding the proposal have been calculated, both in terms of how the distance was measured (i.e. using the measurement tool from Google Maps or other GIS system, scale off topographic map, etc.) and the exact location of the points between which each measurement was made (i.e. edge of neighbouring boundary/ residence/ nearest pig shed, etc.). EPA therefore requires the proponent to provide further details as to how the separation distances detailed in the EIS were calculated.

Further, EPA notes that only one effluent pond at each of the proposed breeder and grower sites will be covered and that the remainder of the effluent treatment system comprising the recycled water dam and sediment evaporation ponds (SEPS) will be open to the atmosphere and so remain a potential odour source. With regard to this, EPA requires the proponent to provide detailed justification in relation to the selection of the S1 factor (effluent treatment) variable = **0.50** in the level 1 odour assessment that was conducted and why the other selectable variables in Table A.2 of the piggery guidelines were not considered representative of the proposed effluent treatment system at each of the piggery sites. It is important to note that the selection of the other available S1 factor (effluent treatment) variables in Table A.2 of the piggery guidelines will result in increases to the minimum separation distance as currently calculated in the EIS.

EPA is also aware that a development application proposing a new dwelling house nearby to the proposal has also been received by Harden Shire Council. EPA understands that this proposed dwelling is located less than the current separation distance between the Cairnbrae residence and the proposed piggery and is less than the as currently calculated minimum separation distance in the EIS, notwithstanding the above made comments in relation to this calculation.

The potential influence that temperature inversions may have in terms of odour impacts from the proposal has also not been fully addressed in the EIS. While EPA understands that there appears to be limited meteorological data for temperature inversions available for the proposal site, it is important that the proponent seeks and provides further information that better clarifies what odour impacts may be expected under temperature inversion conditions. This could, for example, include seeking expert guidance and advice from a reputable and experienced person(s) qualified in undertaking air quality impact assessments.

As such, EPA requires the proponent to provide further details and justification in relation to the above and to the variables selected in carrying out the Level 1 Odour Assessment. This will ensure a robust level of assessment can be undertaken in relation to the proposal. Without this information the EPA is not able to determine the appropriateness of the odour impact of the proposed development.

Carcass Management

The EIS proposes the composting of pig carcasses, however, does not provide sufficient detail in relation to the following:

- Typical annual mortality rates expected within the herd;
- Location of the composting site and justification for the site selection;
- Details as to how composting will be undertaken and details of any management controls, including odour minimisation and the capture and control of leachate that will be implemented; and
- Justification as to why it should or should not be considered as a potential odour source.

The proponent must provide additional information addressing the above issues.

Sensitive Receivers and Separation Distances

EPA has identified that not all sensitive receivers have been identified in the EIS. Whilst the separation distances to nearest sensitive receivers may extend beyond the property boundary, adverse impacts should be managed to the confines of the property boundary of the proposed development. An assessment of sensitive receivers should consider existing and proposed dwellings as well as potential residential opportunities.

Separation distances should also not be viewed as a primary means of ameliorating impacts, rather as a back-up to ensure the amenity of existing land uses can be maintained. The EPA does not accept impact reduction by separation distances for air or water pollution. The role of site separation as an impact mitigation measure should simply reinforce the impact mitigation measures provided by other means.

Accordingly, EPA further requests the proponent provide a detailed map(s) to an appropriate scale that clearly identifies the location of the proposal including effluent ponds and application areas, potential carcass composting sites, drainage lines, waterways, roads and all sensitive receivers potentially impacted by the proposal.

Effluent Disposal Area

The EIS refers to the establishment of land irrigation areas for the application of liquid effluent and the proposed reuse of solid manure onsite. An assessment of the information submitted by the proponent indicates that an area of 1800 hectares (Ha) is available for the disposal of effluent (both liquid and solids from the SEPS) from the proposal. It is however unclear whether or not the 1800 Ha detailed in the EIS as being available for effluent disposal excludes farmland lost for houses, existing farm infrastructure, the footprint to be occupied by the piggery proposal, non-arable land including farm roads, dams, creeks, rock outcropping and necessary buffer distances to prevent the pollution of waters as a result of effluent application.

As such, the proponent should clearly define the intended effluent disposal area that is to be utilised as part of the proposal. In defining the effluent disposal area, the applicant must detail the actual areas of land that are available for the disposal of effluent, taking into account the required buffers from boundaries, farm dams and watercourses. It is important to note that the actual areas of land that are available for effluent disposal should only be used for the hydraulic and nutrient modelling calculations – please see further comments in the next below section.

Application rates should be determined from the nutrient or hydraulic factor that is most limiting. The proponent must demonstrate the effluent reuse meets the objectives of EPA's guidelines '*Use of Effluent by Irrigation*' (DEC, 2004) and will not result in adverse impacts to the soil, surface and groundwater quality – see further comments below.

The EPA notes the proposed strategy for managing excess liquid effluent waste is through land application to the entire 1800 Ha of the Eulie property using a travelling irrigator. However, the EIS does not provide sufficient detail in relation to how this will occur. The EIS does not identify how the effluent will be transferred from the pond to the irrigation areas, nor does it discuss what management controls will be utilised to prevent runoff or surface pooling of liquid effluent.

A soil investigation survey based on a representative sampling regime is required to identify the range and distribution of soil types on the property. This soil investigation survey needs to include soil chemistry analysis, including nutrients as well as a physical analysis to determine the suitability and required size of the reuse areas, and to provide a benchmark for assessing future monitoring results. It will also help identify the types of erosion controls and management needed during construction and operation.

The proponent must also ensure that the disposal of all effluent through land application is carried out in an environmentally sustainable manner. The proponent is also required to demonstrate they have legal ownership or management capacity and control of all land proposed for effluent disposal, consistent with the legal entity that will hold any EPL for the proposal.

Nutrient Removal and Modelling

The EIS proposes using 1800 hectares of 'Eulie' for effluent disposal. Further information is required on the proposed effluent and manure application locations. This must include an assessment of the suitability of these areas for reuse in accordance with the *NSW EPA Environmental Guidelines use of Effluent for Irrigation*. Clarification is also required to ensure that any proposed offsite effluent disposal complies with NSW legislation, such as those provided by EPA through the NSW Resource Recovery Exemptions and Orders.

EPA notes that the proponent has provided nutrient uptake modelling for both the liquid and solid effluent streams proposed to be generated at the premises based on the growing of various crops. EPA also notes that the applicant has provided predicted nutrient composition (nitrogen, phosphorus & potassium) figures for the solid effluent stream proposed to be generated.

The EIS does not adequately demonstrate what the background soil nutrient levels are as a result of past and current agriculture uses on the Eulie property including cropping activities. The information provided in the EIS appears to indicate that the background soil nutrient levels are assumed to be zero. EPA notes that

the nutrient uptake modelling provided does not take into account any existing levels of nutrients in the soils of the effluent disposal area. Given the history of farming operations at the premises, it is important that background levels of nutrients be taken into account in the nutrient modelling.

EPA further notes that disposal of the liquid effluent stream at the premises will provide further levels of nitrogen and phosphorus being applied to the disposal area. This will potentially further increase the level of accumulation of nitrogen and phosphorus in the soils of the disposal area. The Proponent must demonstrate that effluent reuse will not result in an accumulation of nitrogen and phosphorus in the soils of the disposal area and result in a potentially detrimental impact.

Accordingly, in order to address the above concerns, the proponent is required to submit revised nutrient removal modelling figures that account for the fate of nutrients from both liquid and solid forms of effluent that are proposed to be generated at the premises. Existing soil conditions and nutrient levels need to be accounted for in the modelling, with the start point in the modelling adjusted accordingly to reflect the actual situation of the disposal area at the premises. The modelling should also include hydraulic and salt balances. Yield output of crop types currently grown on Eulie should also be used in the nutrient modelling in order to provide a more site relevant assessment. The nutrient modelling must also be based upon the land area available and suitable for effluent disposal as per the above raised comments.

It is essential that the modelling demonstrate that the effluent generated by the proposal can be disposed of in a sustainable manner. As such EPA recommends that applicant address the requirements of EPA's "*Environmental Guidelines – Use of Effluent by Irrigation*". The proponent must demonstrate the reuse of effluent will be sustainable.

Effluent Storage and Environmental Management Controls

The proponent is required to provide additional information to justify the adequacy and suitability of the wet weather storages at the premises, taking into consideration any seasonal variations in effluent generation, crop irrigation rates and rainfall. The proponent should provide a description of management techniques to control or mitigate potential short and long term impacts to soil and water resources.

EPA notes the EIS has quoted the Waterbal model and PigBal model as being used to determine the sizing of effluent storages, however the proponent must demonstrate that how the outputs from these models meet the wet weather storage requirements contained in the EPA's "*Environmental Guidelines – Use of Effluent by Irrigation*".

Groundwater

Specific details in relation to groundwater monitoring have not been included in the EIS. EPA requests the proponent provide the proposed monitoring regime for groundwater bores as detailed in a soil analysis report prepared by Stephen Young of the Soil Conservation Service dated 3 November 2015 (Annexure L of the EIS). This should include depth to groundwater, uses of the groundwater and its current water quality (where data is available).

Further, the proponent should provide details of a suitable soil and groundwater monitoring regime for all areas of land required for the disposal of effluent generated by the proposal.

Noise Assessment

EPA notes a noise impact assessment in accordance with EPA's Industrial Noise Policy (INP) was not undertaken by the proponent. The EIS has assumed minimal noise impact from the generators and the housing of pigs but has not provided detailed justification for this nor accounted for potential noise that may be generated from other plant and equipment associated with the proposal, such as farm equipment and machinery, the processing of liquid food, etc.

Accordingly the proponent must provide a noise impact assessment in accordance with the INP that identifies all sensitive receivers and the predicted noise levels expected from the proposal. This is necessary for EPA to be able to conduct a detailed assessment of the potential noise impacts from the proposal.

Traffic Movements and Assessment of Noise

EPA requests the proponent provide further justification to support the identified vehicle movements associated with the proposal. EPA has concerns the noise assessment associated with traffic movements has not considered vehicle movements associated with the supply of liquid food waste for supplementary feeding and the necessary offsite disposal of the packaging that the food waste was originally contained in. Further justification should be provided to support the claim that no additional truck movements will be associated with grain production in relation to the proposal.

The EPA requests the proponent review and revise the traffic noise impact assessment in accordance with the NSW Road Noise Policy.