NSW GOVERNMENT | Office of Environment & Heritage

Your reference: SSD_6882
Our reference: DOC15/167915
Contact: Miranda Kerr
Ph 6022 0607

Mr Thomas Piovesan
Industry Assessments
Department of Planning & Environment
GPO Box 39
SYDNEY NSW 2001

Dear Mr Piovesan

RE: ProTen Poultry Production Complex, Euroley, Narrandera LGA
Environmental Impact Statement (SSD 6882)

I refer to your email dated 19 May 2015 seeking comment from the Office and Environment and Heritage (OEH) on the Environmental Impact Statement (EIS) for the ProTen Poultry Production Complex (SSD 6882). We have reviewed the information provided against our requirements sent to the Department of Planning and Environment on 30 January 2015, and our assessment of adequacy dated 27 March 2015 as detailed in Attachments B and C respectively.

OEH considers that the EIS does meet the Secretary's requirements, however we recommend that development approval be conditioned to avoid impacts to Aboriginal cultural heritage (ACH) and biodiversity. Detailed comments regarding ACH, biodiversity and flooding are provided in Attachment A.

We commend the proponent for extensive revision of the flooding assessment. There are some flooding impacts on the development site that have not yet been fully considered. Altering the location of Poultry Production Units (PPUs) 1 to 4 and residences 4, 7 and 8 would provide a better outcome with respect to flooding. We understand that the proponent has constrained the proximity of PPUs to a minimum of 1000 metres apart for disease management, which has precluded further alteration to the site layout and resolution of the flooding issues. With respect to flood emergency management, we suggest the inclusion of the following condition if approval is granted:

- *Develop an Emergency and Evacuation Plan that includes consideration of the implications of the flooding assessment, particularly access to Poultry Production Unit 5 during local flood events.*

The biodiversity assessment and offset strategy have also been revised based on our discussions with ProTen and SLR Consulting during a phone conference on 18 March, resulting in alteration of the proposed layout and a considerable reduction in the impact to biodiversity values. The operational footprint, including ancillary infrastructure, however, has not been fully delineated. Native vegetation occurring on the proposal site has been not been adequately mapped in the EIS, so the impact to biodiversity values due to the proposal we believe have been underestimated. While the overall area of impact is likely to be relatively small (approximately five hectares), we consider that the resultant offset requirements identified in the EIS are insufficient to fully address these impacts. A recalculation of the Credit Calculator is recommended to fully identify the offset requirements, including mapping of native vegetation currently not included in the biodiversity assessment.

Following this recalculation, it is still likely that a relatively small number of credits will be generated and it is likely that the proponent will have difficulties in locating an appropriate BioBanking site to retire credits. The impacts may, in the long term, be more appropriately offset using the proposed Offset Fund, which is currently under development by OEH. We would consider an interim measure, such as temporarily fencing adjacent areas of threatened ecological communities, which could be later replaced by the retirement of credits or a payment to the Offset Fund if this was available. We are happy to discuss the inclusion of these measures within the Biodiversity Offset Strategy to ensure that this includes the most appropriate mechanism to offset the impacts of the proposal.

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We recommend that development approval should be contingent on the following conditions:

- *Implement the Biodiversity Offset Strategy as per section 7 of the Biodiversity Assessment Report, and in consultation with OEH.*
- *Areas dominated by Weeping Myall (*Acacia pendula*) in the vicinity of the proposed vehicle track between the eastern boundary of Lot 1 DP 1045064 and PPU 3 should be mapped and avoided during construction.*
- *Revegetation works within 100 metres of threatened ecological communities and remnant native vegetation identified in the BAR or mapped in the 'Central-southern NSW' vegetation dataset (OEH 2011) should be with species that naturally occur within the relevant community. Pasture species, weed seeds from hay bales and non-local native plants should not be introduced into native remnant vegetation.*
- *A minimum 100 metre buffer should be maintained between the construction footprint (including revegetation sites and vehicle access tracks) and the boundary of areas of remnant vegetation and the South West Woodland Nature Reserve.*
- *Develop a construction protocol for identification and management of rescued fauna that includes pre-construction liaison with animal welfare organisations to enable support if required.*

The revised location of Poultry Production Unit (PPU) 5 has not been assessed for potential impact to Aboriginal cultural heritage (ACH) values. We recommend that development approval be subject to the following conditions:

- *A pre-clearance pedestrian archaeological survey should be undertaken for linear alignments. Representatives from relevant Registered Aboriginal Parties are to be included in this assessment.*
- *The new internal road alignment and impact area of PPU5, which was not assessed as part of the original survey, should be subject to a pre clearance archaeological survey. Representatives from relevant Registered Aboriginal Parties should be included in this assessment*
- *The site management plan for operation of the facility should include a section on ACH site management. The section is to describe management actions for the three known sites (EPPC-ST1, EPPC-ST2 and EPPC-H1) that are currently outside the disturbance footprint, according to Appendix J, Section 6.2. Any sites found during pre-clearance assessments of linear infrastructure alignments and PPU 5 should be incorporated into this plan.*
- *Any subsequent alterations to the development footprint that are outside the study areas of the ACH assessment and pre-clearance surveys should be assessed in accordance with the* Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales.

All plans required as a Condition of Approval that relate to flooding, biodiversity or ACH should be developed in consultation with OEH, to ensure that issues identified in this submission are adequately addressed.

If you have any questions regarding this matter please contact Miranda Kerr on 6022 0607 or email miranda.kerr@environment.nsw.gov.au.

Yours sincerely

P.E 26/6/15

PETER EWIN
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Office of Environment & Heritage

Attachment A: Detailed comments for the ProTen Poultry Production Complex Environmental Impact Statement (SSD_6882)
Attachment B: OEH Secretary's Environmental Assessment Requirements (SEARs)
Attachment C: OEH adequacy review for the ProTen Poultry Production Complex (SSD_6882)

ATTACHMENT A Detailed comments for the ProTen Poultry Production Complex Environmental Impact Statement (SSD_6882)

Development Footprint

The complete development footprint has not been provided. The extent of disturbance related to construction of the PPUs, vehicle tracks associated with ancillary infrastructure listed in Section 1.3.2 (page 2) of the Biodiversity Assessment Report (BAR) (Appendix I) and landscaping is not clearly delineated on the maps provided. It does appear that the Aboriginal cultural heritage (ACH) assessment has been undertaken within these additional areas based on boundaries estimated by the consultants undertaking the ACH assessment, which have not been supplied to OEH.

The supplied GIS files do not provide polygon extents for all of the features described in section 5.2 and listed in Table 12 of the BAR (page 29). Driveways to housing are not included on maps provided in the EIS or BAR, and residences, rice hull and dead bird sheds are provided as point features only, without a spatial extent. The access road from the Sturt Highway does not appear to have been included in the total calculation of development footprint area. We have conservatively estimated the extent of disturbance associated with construction of features provided as points using five or 20 metre buffers, and a six metre buffer either side of the access road. The resulting area of disturbance (in hectares) is provided in Table A1.

Table A1 Total area of development footprint (ha) estimated by OEH, including proposed infrastructure provided as point locations.

Infrastructure Feature	Buffer distance (m)	Sum Area (ha)
Access easement	6	4.52
Bore	5	0.02
Cool Rooms	20	0.13
Dams	0	5.01
Dams buffer	5	7.60
Residence	20	1.25
Rice Hulls	20	0.13
Sheds and tracks (provided by SLR Consulting)	0	79.61
Total		**98.26**

Table 3.1 (Page 24) lists best practice minimum separation distances from the proposed Poultry Production Units (PPUs) to various features. The recommended separation distance between proposed PPUs and property boundaries is 100 metres, as is the recommended distance to remnant vegetation. Figure 3.8 (Page 46) shows proposed landscaping occurring in a zone around each of the dams, however the extent of disturbance related to planting vegetation screens around PPUs is not delineated on maps showing the area of impact or included in the assessment of biodiversity impacts.

The disturbance associated with construction of PPUs, such as the earthworks for in-fill of natural depressions described on Figure 8 of the Flooding Assessment (Appendix H, page 17), construction of the four dams associated with each PPU and landscaping has not been fully considered. The inclusion of a five metre buffer to approximate soil disturbance during construction of the dams on the western side of PPU 1 extends the development footprint to within around 60 metres of the boundary between the proposal site and South West Woodland Nature Reserve.

Aboriginal cultural heritage (Section 6.8 and Appendix J)

The ACH component of the EIS (Sections 6.8 and Appendix J) has been undertaken in accordance with the *Code of Practice for Archaeological Investigation of Aboriginal Objects in New South Wales* (OEH2010a) and the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (OEH 2010b). OEH has identified that further assessment will be required prior to construction, which can be addressed in conditions of development approval.

Predictive model for site location (Section 4.4, page 13)

Section 4.4 predicts the nature and distribution of evidence associated with Aboriginal human occupation within the ProTen study area. The predictive model is based on the results of the desktop assessment and the assumptions that there are "*few or no sites of Aboriginal heritage expected to occur in the study area*" due to the "*distance from reliable water, high levels of existing disturbance and the absence of distinctive landform features*" (Harrop 2015).

As described in Section 3.3 of the ACH assessment, the proposal site contains ephemeral watercourses, flood-outs and floodplain vegetation dominated by Black Box (*Eucalyptus largiflorens*), which are environmental indicators for periodically reliable water. The presence of paddock trees also indicates low levels of soil disturbance in some areas compared to the previously cleared and cropped parts of the proposal site. The presence of a floodplain environment with relatively low prior soil disturbance should have indicated a relatively high probability of sites being present, rather than the prediction of low probability submitted in Section 4.4. A prediction of high site probability is supported by the subsequently discovery of three sites (including two scar trees) during the field assessment.

Field Assessment (Section 2.4.1, page 8)

A surface survey involving pedestrian and vehicle-based assessments was undertaken for the original disturbance footprint that is described in the draft EIS (received by OEH on 13 March 2015). While the surface survey of proposed PPU locations is thorough, the revised location for PPU 5 has not been assessed and the field assessment for linear infrastructure alignments is inadequate.

Assessment of access roads, internal roads and power infrastructure alignments were largely completed from vehicles. Good ground surface visibility from a vehicle is cited on page 15 (Section 5.1) as the rationale for using this method. However, Plates 1 – 13 show an environment that is likely to require careful observation during on-foot survey. Consequently, we consider that the likelihood of intercepting ACH values other than modified trees during a vehicle survey is low. Plate 13 of hearth site EPPC-H1 illustrates why careful pedestrian survey is preferable to a vehicle mounted assessment.

Subsequent to the ACH field survey the proponent has altered the site layout by moving PPU 5 towards the south to avoid native vegetation (as detailed in Sections 5.1.1 and 5.2, pages 15-17). The new location for PPU 5 covers approximately 20% of the impact footprint for the project and has not been surveyed as part of the current assessment.

Based on consideration of the above, we recommend the following conditions of development consent:

- *A pre-clearance pedestrian archaeological survey should be undertaken for linear alignments. Representatives from relevant Registered Aboriginal Parties are to be included in this assessment.*
- *The new internal road alignment and impact area of PPU5, which was not assessed as part of the original survey, should be subject to a pre clearance archaeological survey. Representatives from relevant Registered Aboriginal Parties should be included in this assessment*
- *Any subsequent alterations to the development footprint that are outside the study areas of the ACH assessment and pre-clearance surveys should be assessed in accordance with the* Due Diligence Code of Practice for the Protection of Aboriginal Objects in New South Wales.

Site registration (Section 5.4, page 20)

We note that the newly identified sites (EPPC-SC1 and 2, and EPPC-H1) are not yet registered in the Aboriginal Heritage Information Management System (AHIMS) database, however this may be due to administrative timeframes within OEH. The proponent must ensure that the sites are registered in AHIMS.

Site management (Section 6.2, page 26)

The three sites recorded during field survey are outside the areas of impact, unless the current site layout is further modified. To avoid additional impacts to ACH, the consultants have proposed in Section 6.2 that all three sites are to be fenced off and site managers made aware of their presence. OEH considers these to be appropriate management strategies.

Based on consideration of the above, we recommend the following condition of development consent:

- *The site management plan for operation of the facility should include a section on ACH site management. The section is to describe management actions for the three known sites (EPPC-ST1, EPPC-ST2 and EPPC-H1) that are currently outside the disturbance footprint, according to Appendix J, Section 6.2. Any sites found during pre-clearance assessments of linear infrastructure alignments and PPU 5 should be incorporated into this plan.*

Flooding (Section 6.5 and Appendix H)

The assessment of flooding provided in the draft EIS has been extensively revised following consultation with OEH and provides an adequate model of the potential impacts due to mainstream and local overland flooding. The revised modelling does show some flood impacts on the development site during the 100 year Annual Recurrence Interval (ARI) and Probable Maximum Flood events that have not been fully considered.

Flood Modelling (Appendix H, Section 4)

Figure 8 (page 18) demonstrates that some of the PPUs are impacted by shallow flows. The flooding assessment provides justification of the existing planned location of the PPUs based on the assumption that construction of raised floor levels (0.3m above ground level) will provide flood immunity in the 100 year ARI event. However, Figure 8 shows the current site conditions without the presence of PPUs. There are likely to be hydraulic impacts that have not been considered if PPUs are constructed in the proposed locations. Section 4.4 of the flooding assessment (page 19), states that hydraulic impact modelling was completed and that the afflux due to the PPUs was "less than 150mm" in the 100 year ARI event. The assessment does not address the potential for inundation of PPU floors due to these results. In a situation where the PPU floor level is 0.3 m above ground level and the "pre-development" flood levels are around 0.3 m, any impediment to this flow (such as presence of a PPU) that would cause an associated afflux could potentially result in inundation of the PPU.

OEH understands that the proposed site layout includes a minimum distance of 1000 metres between PPUs to reduce the risk of disease transmission between units (EIS Section 3.2, page 23). This design constraint appears to be restricting the ability of the proponent to consider the flooding impacts when locating the PPUs and to select more appropriate locations away from natural drainage lines. PPUs 1 and 3 would be less susceptible to potential flooding impacts if located to the east of their proposed location, PPU 4 to the north and PPU 2 to the south. Altering the proposed location of PPU 5 has reduced the threat from flooding to that unit, however the proposed access road . Greater consideration of flooding impacts could also be applied to the location of residences, particularly 4, 7 and 8 (shown on EIS Figure 6.7, page 96), which are proposed in areas prone to flooding.

Emergency and Evacuation Plan

The implications of the flooding assessment should be considered in an Emergency and Evacuation Plan. Access to PPU 5 is likely to be restricted during local overland flooding events.

Based on consideration of the above, we recommend the following conditions of development consent:

- *Develop an Emergency and Evacuation Plan that includes consideration of the implications of the flooding assessment, particularly access to Poultry Production Unit 5 during local flood events.*

Biodiversity

The EIS meets the Secretary's requirements for biodiversity assessment. However, as discussed in our assessment of adequacy dated 27 March 2015 (Attachment C), vegetation mapping provided in the BAR does not include all the native vegetation evident on recent aerial photography (ADS40 imagery) captured in February 2007 and SPOT satellite imagery from 2011. It is evident from the field datasheets that the biodiversity field survey was undertaken prior to the issue of SEARs. Discussion with OEH about site characteristics and appropriate vegetation mapping techniques at a site-based planning focus meeting would have resulted in a more correct offset calculation.

Classification of native vegetation in low condition
(BAR Section 3.5, dot point 3, page 14; and dot point 1, page 16)

The EIS determined that some patches of woodland and open woodland mapped by OEH (2011) did not constitute a native vegetation community because the vegetation was in low condition. Evidence of condition assessment in these areas, such as quadrat or transect data, has not been provided in the BAR. The Framework for Biodiversity Assessment (FBA) requires mapping and assessment of low condition vegetation, so any vegetation on the proposal site that meets the relevant vegetation type benchmarks should have been surveyed and mapped.

The benchmarks for woodlands and open-woodlands dominated by *Eucalyptus largiflorens* (Black Box) or *Callitris glaucophylla* (White Cypress Pine) (page 9) and *Acacia pendula* (Weeping Myall) are provided in Attachment A1.1.

According to the FBA, classification of low condition vegetation requires woody native vegetation on the proposal site to have a percent foliage cover score of less than 25% of the lower overstorey percent foliage cover benchmark value, and where either:

- less than 50% of ground cover vegetation is indigenous species or
- greater than 90% of ground cover vegetation is cleared

Site BB4 in vegetation zone 'MR644_Low' does not meet the definition for low condition vegetation. Sites within the plant community type MR644 require a native overstorey cover of less than 3.25% (25% of 13) to be considered in low condition. Site BB8 in the vegetation zone 'MR518_Low' also does not meet the definition for low condition vegetation. While it has no overstorey cover, the ground cover vegetation present is at least 90% indigenous given that exotic plant cover totals 4% of the site. The total ground cover is greater than 10%. While the calculation of vegetation condition relies an average across sites, these data indicate that there may be a need to revise the boundaries of initial mapped zones based on results of the field survey.

Classification of open woodland (BAR Section 3.5, dot point 2 page 16)

Section 3.5 (BAR, page 14) provides a review of the available vegetation maps, including the 'Central-Southern NSW' vegetation dataset (OEH 2011) that OEH considers to be the most reliable vegetation mapping for the region. While we recognise that there are known limitations to the accuracy of plant community type (PCT) allocation to polygons, the delineation of polygon extent is relatively precise. Our adequacy review of the draft EIS (Attachment C) provides discussion about uncertainty inherent in delineating between isolated paddock trees and a mappable patch of open-woodland.

Vegetation mapping and survey in NSW should follow the Native Vegetation Interim Type Standard ("the Standard") (Sivertsen 2009). The Standard relies on the National Vegetation Information System classification system (ESCAVI 2003) and Walker and Hopkins (1990), commonly known as "the yellow book", for vegetation circumscription, and employs a system based on vegetation structure and dominant floristics.

The first dot point on page 16 uses canopy cover and foliage projective cover (FPC) interchangeably, which is technically incorrect. Crown (or canopy) cover and FPC are different measures for the percentage of plant cover as follows:

- Canopy cover is the percentage of the site within the vertical periphery of crowns, which are treated as opaque.
- Foliage cover is the percentage of site occupied by the vertical projection of foliage and woody branches.
- FPC is the percentage of the site covered by the vertical projection of the foliage only (Walker & Hopkins 1990).

The structure of an open-woodland overstorey is defined as "well separated" trees with a crown cover of 0.25 to 20% (Walker & Hopkins 1990). The equivalent foliage cover is 0.2 – 10% (Table 17 in Hnatiuk, Thackway & Walker 2009).

Regardless of the technical specifications of the various mapping products, we consider trees in the un-mapped areas to be too close together to be regarded as isolated paddock trees, and expect that mapping of vegetation polygons in the study area should include all patches of woodland and open-woodland evident on recent imagery. We presume that the vegetation condition of these areas will be classified as "low" when compared to the relevant vegetation benchmarks.

Identification and mapping of Threatened Ecological Communities (TECs)

In the OEH adequacy assessment (Attachment C) we advised that remnant vegetation consisting of a scattered native overstorey with a depleted or no understorey can be described using the NSW plant community type classification (PCT) (accessible through VIS Classification), and should have been mapped as required by Section 5.1 of the FBA.

We also noted that OEH (2011) mapped a patch of Sandhill Pine Endangered Ecological Community (EEC) in the north-western corner of Lot 41 DP750898 adjoining South West Woodland Nature Reserve. This vegetation is evident on recent aerial imagery but was not included in mapping or floristic sampling undertaken for the biodiversity assessment. Figure 6.12 shows two staff houses proposed for construction in this location however floristic sampling was not undertaken or vegetation mapped to enable identification of the potential impact of the proposed development on the EEC mapped by OEH (2011). Table 9 (page 22) and Appendix D erroneously indicate that Sandhill Pine Woodland does not occur within the study area.

Figure 4b (BAR, page 54) shows a proposed vehicle track between the eastern boundary of Lot 1 DP 1045064 and PPU 3. The current route would impact on a patch of shrubland mapped by OEH (2011) as Weeping Myall Woodland EEC, which has not been considered in the BAR due to elimination of the EEC as described in Section 3.5 (BAR, page 15). We do not consider that the rationale provided in the BAR for excluding the two polygons of Weeping Myall Woodland EEC to be justified. Unlike entities listed on the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), NSW threatened ecological community listings do not employ condition thresholds in their definition. Although the FBA and Property Vegetation Planning processes exclude consideration of very low condition vegetation including TECs during the assessment, vegetation may still represent a TEC as defined by the *Threatened Species Conservation Act 2005* (TSC Act) outside of those assessment procedures.

The correct identification of TECs present on the subject land is important to ensure that construction, operation and site management activities, including species selection for revegetation, are ecologically appropriate and do not constitute harm to threatened entities listed on schedules of the TSC Act.

Based on consideration of the above, we recommend the following condition of development consent:

- *Areas dominated by Weeping Myall (Acacia pendula) in the vicinity of the proposed vehicle track between the eastern boundary of Lot 1 DP 1045064 and PPU 3 should be mapped and avoided during construction.*

Threatened species

The BAR provides sufficient evidence that consideration has been given to the majority of threatened entities specified in Attachment B of our SEARs (Attachment B) as species requiring further consideration, if adequate offsets are secured for EECs as discussed above. Section 4.3.1 (page 22) acknowledges that detection of the vulnerable Mossgiel Daisy (*Brachyscome papillosa*) was unlikely due to the timing of the survey, however we agree with the assessment that the species is unlikely to become extinct in the subregion due to the proposed development.

Please note that Table 9 (page 22) and Appendix D erroneously indicate that Sandhill Pine and Weeping Myall Woodlands do not occur within the study area.

Avoidance and minimising direct impacts on biodiversity values

The revised EIS demonstrates modification of the initial proposed site layout to avoid biodiversity impacts due to the location of PPU 5, and OEH supports this amendment.

Impact Summary (BAR Section 6, page 33)

A spatial representation of the full development footprint was not provided with the EIS so we have estimated the area disturbance due to the proposal (Table A1, page 4). As discussed above, OEH considers the proposal site to support a greater extent of native vegetation than was mapped for the BAR discrepancy between the delineation of native vegetation in the BAR. Therefore, to provide a more complete estimate of impact to native vegetation, we calculated the area of each vegetation type mapped by OEH (2011) on the proposal site that overlapped with the full development footprint. Attachment A1.1 shows that approximately five hectares of native vegetation will potentially be cleared for the proposal. This figure is around seven times greater than the impacts to vegetation zones presented in Table 13 on page 30 of the BAR.

We have not fully implemented the Credit Calculator, however we consider the credit requirements provided in tables 16 and 17 to be an underestimate. While we recognise that the impact is relatively small, and OEH requires proponents to correctly implement the FBA and we recommend that the calculations be revised based on a more complete development footprint and adequate mapping of native vegetation on the site.

Biodiversity Offset Strategy (BOS)
(EIS Section 6.7.5, page 126, and BAR Section 7, page 37)

The BOS provides options for fulfilling offset requirements due to the proposal. An additional offset will be required if construction of ancillary infrastructure identified on page 26 of the EIS requires clearing of native vegetation and with the addition of better vegetation mapping, as per our calculations in Attachment A1.2.

Development consent should be conditional on fulfilment of the Biodiversity Offset Strategy, as provided in the BAR. We are happy to further discuss the options provided in Section 7.2 (page 37), and agree that the BOS should be resolved and implemented within 12 months of development consent. It is likely that a relatively small number of credits will be generated and it is likely that the proponent will have difficulties in locating an appropriate BioBanking site to retire credits. The impacts may, in the long term, be more appropriately offset using the proposed Offset Fund, which is currently under development by OEH. We would consider an interim measure, such as temporarily fencing adjacent areas of threatened ecological communities, which could later be replaced by the retirement of credits or a payment to the Offset Fund if this was available. We are happy to discuss the inclusion of these measures within the Biodiversity Offset Strategy to ensure that this includes the most appropriate mechanism to offset the impacts of the proposal.

Based on consideration of the above, we recommend the following condition of development consent:

- *Implement the Biodiversity Offset Strategy as per section 7 of the Biodiversity Assessment Report, and in consultation with OEH.*

Impact of introduced species

Table 6.1 (EIS, page 67) identifies that weed management will be undertaken as part of the site maintenance program. The EIS does not discuss the potential for revegetation practices to introduce exotic species into remnant native vegetation and related impacts on the South West Woodland Nature Reserve.

Section 3.1.4 omits to identify the potential impact for landscaping and rehabilitation activities to provide a source of exotic species invasion into areas of remnant vegetation. Specifically, Section 3.12 Revegetation (EIS page 44) and Section 3.13 Landscaping (EIS page 45) should include the impact of species selection on TECs and remnant native vegetation identified on the development site. Introduction of pasture species, weed seeds from hay bales and non-local native plants into native remnant vegetation has the potential to reduce vegetation condition.

Based on consideration of the above, we recommend the following conditions of development consent:

- *Revegetation works within 100 metres of threatened ecological communities and remnant native vegetation identified in the BAR or mapped in the 'Central-southern NSW' vegetation dataset (OEH 2011) should be with species that naturally occur within the relevant community. Pasture species, weed seeds from hay bales and non-local native plants should not be introduced into native remnant vegetation.*
- *A minimum 100 metre buffer should be maintained between the construction footprint (including revegetation sites and vehicle access tracks) and the boundary of areas of remnant vegetation and the South West Woodland Nature Reserve.*

Mitigation measures to be implemented before, during and after construction (EIS Table 6.20, page 125)

Table 6.20 could provide more clarity about the management of native fauna impacted during construction, including pre-construction liaison with animal welfare organisations to enable support if native fauna are rescued during works.

Based on consideration of the above, we recommend the following condition of development consent:

- *Develop a construction protocol for identification and management of rescued fauna that includes pre-construction liaison with animal welfare organisations to enable support if required.*

References

ESCAVI (2003) *Australian Vegetation Attribute Manual, National Vegetation Information System V6.* Executive Steering Committee for Australian Vegetation Information (ESCAVI), Commonwealth Department of Environment and Heritage, Canberra. Url: http://www.environment.gov.au/node/18931

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OEH (2011) *Vegetation mapping by 3-D digital aerial photo interpretation: vegetation of central-southern New South Wales.* Technical Report. NSW Office of Environment and Heritage, Queanbeyan (VIS ID 3884).

Sivertsen D (2009) *Native Vegetation Interim Type Standard.* Department of Environment, Climate Change and Water, Sydney. Url: http://www.environment.nsw.gov.au/resources/nativeveg/10060nvinttypestand.pdf

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ATTACHMENT A1.1 **Vegetation benchmarks for plant community types mapped for the ProTen Poultry Production Complex (SLR 2015) in the Murrumbidgee catchment.**

Veg ID	Plant Community Type Name	Native Plant Sp Richness	Native OS over MIN	25% of Native OS Cover MIN*	Native OS Cover MAX	Native MS Cover MIN	Native MS Cover MAX	Native GC Grass MIN	Native GC Grass MAX	Native GC Shrubs MIN	Native GC Shrubs MAX	Native GC Other MIN	Native GC Other MAX	Number Trees With Hollows	TotalLength FallenLogs	CMA Percent Cleared Approved	TEC
MR517	Black Box - Lignum woodland wetland of the inner floodplains in the semi-arid (warm) climate zone (mainly Riverina Bioregion and Murray Darling Depression Bioregion)	11	9	2.25	22	10	26	9	13	10	33	10	36	0	30	80	No
MR518	Black Box grassy open woodland wetland of rarely flooded depressions in south western NSW (mainly Riverina Bioregion and Murray Darling Depression Bioregion)	11	9	2.25	22	10	26	9	13	10	33	10	36	0	30	60	No
MR644	White Cypress Pine open woodland of sand plains, prior streams and dunes mainly of the semi-arid (warm) climate zone	5	13	3.25	23	8	10	10	20	10	60	25	80	2	10	80	Yes
MR649	Yellow Box - White Cypress Pine grassy woodland on deep sandy-loam alluvial soils of the eastern Riverina Bioregion and western NSW South Western Slopes Bioregion	5	13	3.25	23	8	10	10	20	10	60	25	80	2	10	95	Yes
MR639	Weeping Myall open woodland of the Riverina Bioregion and NSW South Western Slopes Bioregion	15	5	1.25	33	8	23	3	10	10	20	0	50	0	27	90	Yes

* calculated field

ATTACHMENT A1.2 **Vegetation mapped by OEH (2011) within the total development footprint estimated by OEH (including proposed infrastructure provided as point locations).**

PCT ID	PCT Name	NSW TSC Act	C'wlth EPBC Act	EPBC Name	Percent Cleared	>70% cleared	Area (ha)	Sub-total Area (ha)
13	Black Box - Lignum woodland wetland of the inner floodplains in the semi-arid (warm) climate zone (mainly Riverina and Murray Darling Depression Bioregions)				80	yes	0.98	
16	Black Box grassy open woodland wetland of rarely flooded depressions in south western NSW (mainly Riverina and Murray Darling Depression Bioregions)				60	no	2.18	
	TOTAL Black Box Woodland							*3.16*
28	White Cypress Pine open woodland of sand plains, prior streams and dunes mainly of the semi-arid (warm) climate zone	Yes - Endangered			60	no	1.54	
75	Yellow Box - White Cypress Pine grassy woodland on deep sandy-loam alluvial soils of the eastern Riverina and western NSW South Western Slopes Bioregions	Yes - Endangered (Updated from VIS-C)			95	yes	0.02	
	Total White Cypress Pine Woodland							*1.56*
26	Weeping Myall open woodland of the Riverina and NSW South-western Slopes Bioregions	Yes - Endangered	Yes - Endangered	Weeping Myall Woodlands	90	yes	0.16	
	Shallow swamp						0.48	
	TOTAL vegetation*						**5.36**	

* Excludes areas mapped as mosaics of PCTs by OEH (2011), including 'Native Grassland Complex' (may include areas of improved pasture), 'Shallow swamp' and 'Planted woody vegetation'.

Office of Environment & Heritage

NSW GOVERNMENT

Your reference SSD 6882
Our reference: DOC15/9555
Contact: Miranda Kerr
Ph. 02 6022 0607

Mr Thomas Piovesan
Industry and Key Sites
Department of Planning and Environment
GPO Box 39
SYDNEY NSW 2001

Dear Mr Piovesan

RE: SEARs for proposed Euroley Poultry Production Complex (SSD 6882)

I refer to your email dated 12 January 2015 seeking input into the Department of Planning and Environment Secretary's Environmental Assessment Requirements (SEARs) for the preparation of an Environmental Impact Statement (EIS) for the proposed Euroley Poultry Production Complex (SSD 6882).

OEH has reviewed the available supporting documentation and provides SEARs for the proposed development in Attachments A and B and guidance material in Attachment C (please note that both Attachments A and B include biodiversity matters that will need to be addressed). The assessment must include all ancillary infrastructure and new vehicle tracks, access from the Sturt Highway and the proposed new road easement.

OEH recommends the EIS needs to appropriately address the following:

1. Biodiversity and offsetting
2. Aboriginal cultural heritage
3. Water and soils
4. Cumulative impact

Please note that the NSW Biodiversity Offsets Policy for Major Projects www.environment.nsw.gov.au/resources/biodiversity/140672biopolicy.pdf is now being implemented. The policy provides a standard method for assessing impacts of major projects on biodiversity and determining offsetting arrangements. The policy is underpinned by the Framework for Biodiversity Assessment (FBA) www.environment.nsw.gov.au/resources/biodiversity/140675fba.pdf which contains the assessment methodology that is adopted by the policy to quantify and describe the impact assessment requirements and offset guidance that applies to Major Projects. The FBA must be used by a proponent to assess all biodiversity values on the development site.

OEH notes that Figure 2 in the briefing paper omits to show that Lot 41 DP 750898 abuts the 'Banandra' portions of South West Woodland Nature Reserve and Murrumbidgee Valley National Park. These reserves are managed by the National Parks and Wildlife Service (NPWS) Mid West Area based in Griffith (see Attachment B Point 15).

Relevant regional vegetation mapping includes the 'Central-Southern NSW' dataset[1]. Vegetation mapping and NPWS estate boundaries suitable for use in geographic information systems can be downloaded from OEH Spatial Data Online http://mapdata.environment.nsw.gov.au/geonetwork/srv/en/main.home.

[1] OEH (2011) *Vegetation mapping by 3-D digital aerial photo interpretation: vegetation of central-southern New South Wales.* Technical Report. NSW Office of Environment and Heritage, Queanbeyan (VIS ID 3884).

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If you have any questions regarding this matter please contact Miranda Kerr on (02) 6022 0607 or at miranda.kerr@environment.nsw.gov.au.

Yours sincerely

29/1/15

GRAEME ENDERS
Senior Manager South West
Regional Operations
Office of Environment and Heritage

ATTACHMENT A - Environmental Assessment Requirements
ATTACHMENT B - Project specific Environmental Assessment Requirements
ATTACHMENT C - Guidance Material

cc: Robin Mares, Area Manager, Mid West Area, NPWS

Attachment A – Standard Environmental Assessment Requirements

Biodiversity
1. Biodiversity impacts related to the proposed Euroley Poultry Production Complex are to be assessed and documented in accordance with the Framework for Biodiversity Assessment, unless otherwise agreed by OEH, by a person accredited in accordance with s142B(1)(c) of the *Threatened Species Conservation Act 1995.*
Aboriginal cultural heritage
2. The EIS must identify and describe the Aboriginal cultural heritage values that exist across the whole area that will be affected by the proposed Euroley Poultry Production Complex and document these in the EIS. This may include the need for surface survey and test excavation. The identification of cultural heritage values should be guided by the *Guide to investigating, assessing and reporting on Aboriginal Cultural Heritage in NSW* (DECCW, 2011) and consultation with OEH regional officers.
3. Where Aboriginal cultural heritage values are identified, consultation with Aboriginal people must be undertaken and documented in accordance with the *Aboriginal cultural heritage consultation requirements for proponents 2010* (DECCW). The significance of cultural heritage values for Aboriginal people who have a cultural association with the land must be documented in the EIS.
4. Impacts on Aboriginal cultural heritage values are to be assessed and documented in the EIS. The EIS must demonstrate attempts to avoid impact upon cultural heritage values and identify any conservation outcomes. Where impacts are unavoidable, the EIS must outline measures proposed to mitigate impacts. Any objects recorded as part of the assessment must be documented and notified to OEH.
Water and soils
5. The EIS must map the following features relevant to water and soils including: a. Acid sulfate soils (Class 1, 2, 3 or 4 on the Acid Sulfate Soil Planning Map). b. Rivers, streams, wetlands, estuaries (as described in Appendix 2 of the Framework for Biodiversity Assessment). c. Groundwater. d. Groundwater dependent ecosystems. e. Proposed intake and discharge locations.
6. The EIS must describe background conditions for any water resource likely to be affected by the proposed Euroley Poultry Production Complex, including: a. Existing surface and groundwater. b. Hydrology, including volume, frequency and quality of discharges at proposed intake and discharge locations. c. Water Quality Objectives (as endorsed by the NSW Government www.environment.nsw.gov.au/ieo/index.htm) including groundwater as appropriate that represent the community's uses and values for the receiving waters. d. Indicators and trigger values/criteria for the environmental values identified at (c) in accordance with the ANZECC (2000) Guidelines for Fresh and Marine Water Quality and/or

local objectives, criteria or targets endorsed by the NSW Government.
7. The EIS must assess the impacts of the proposed Euroley Poultry Production Complex on water quality, including: a. The nature and degree of impact on receiving waters for both surface and groundwater, demonstrating how the proposed Euroley Poultry Production Complex protects the Water Quality Objectives where they are currently being achieved, and contributes towards achievement of the Water Quality Objectives over time where they are currently not being achieved. This should include an assessment of the mitigating effects of proposed stormwater and wastewater management during and after construction. b. Identification of proposed monitoring of water quality.
8. The EIS must assess the impact of the proposed Euroley Poultry Production Complex on hydrology, including: a. Water balance including quantity, quality and source. b. Effects to downstream rivers, wetlands, estuaries, marine waters and floodplain areas. c. Effects to downstream water-dependent fauna and flora including groundwater dependent ecosystems. d. Impacts to natural processes and functions within rivers, wetlands, estuaries and floodplains that affect river system and landscape health such as nutrient flow, aquatic connectivity and access to habitat for spawning and refuge (eg river benches). e. Changes to environmental water availability, both regulated/licensed and unregulated/rules-based sources of such water. f. Mitigating effects of proposed stormwater and wastewater management during and after construction on hydrological attributes such as volumes, flow rates, management methods and re-use options. g. Identification of proposed monitoring of hydrological attributes.
Flooding
9. The EIS must map the following features relevant to flooding as described in the Floodplain Development Manual 2005 (NSW Government 2005) including: a. Flood prone land b. Flood planning area, the area below the flood planning level. c. Hydraulic categorisation (floodways and flood storage areas).
10. The EIS must describe flood assessment and modelling undertaken in determining the design flood levels for events, including a minimum of the 1 in 10 year, 1 in 100 year flood levels and the probable maximum flood, or an equivalent extreme event.
11. The EIS must model the effect of the proposed Euroley Poultry Production Complex (including fill) on the flood behaviour under the following scenarios: a. Current flood behaviour for a range of design events as identified in 8) above. The 1 in 200 and 1 in 500 year flood events as proxies for assessing sensitivity to an increase in rainfall intensity of flood producing rainfall events due to climate change.

12. Modelling in the EIS must consider and document:
    a. The impact on existing flood behaviour for a full range of flood events including up to the probable maximum flood.
    b. Impacts of the proposed Euroley Poultry Production Complex on flood behaviour resulting in detrimental changes in potential flood affection of other developments or land. This may include redirection of flow, flow velocities, flood levels, hazards and hydraulic categories.
    c. Relevant provisions of the NSW Floodplain Development Manual 2005.

13. The EIS must assess the impacts on the proposed Euroley Poultry Production Complex on flood behaviour, including:
    a. Whether there will be detrimental increases in the potential flood affectation of other properties, assets and infrastructure.
    b. Consistency with Council floodplain risk management plans.
    c. Compatibility with the flood hazard of the land.
    d. Compatibility with the hydraulic functions of flow conveyance in floodways and storage in flood storage areas of the land.
    e. Whether there will be adverse effect to beneficial inundation of the floodplain environment, on, adjacent to or downstream of the site.
    f. Whether there will be direct or indirect increase in erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses.
    g. Any impacts the proposed Euroley Poultry Production Complex may have upon existing community emergency management arrangements for flooding. These matters are to be discussed with the SES and Council.
    h. Whether the proposal incorporates specific measures to manage risk to life from flood. These matters are to be discussed with the SES and Council.
    i. Emergency management, evacuation and access, and contingency measures for the proposed Euroley Poultry Production Complex considering the full range or flood risk (based upon the probable maximum flood or an equivalent extreme flood event). These matters are to be discussed with and have the support of Council and the SES.
    j. Any impacts the proposed Euroley Poultry Production Complex may have on the social and economic costs to the community as consequence of flooding.

Attachment B – Project specific Environmental Assessment Requirements

Biodiversity
14. Impacts on the following species, populations and ecological communities will require further consideration and provision of the information specified in s9.2 of the Framework for Biodiversity Assessment: • Sand-Hill Spider Orchid (*Caladenia arenaria*) • Bindweed (*Convolvulus tedmoorei*) • Small Scurf-pea (*Cullen parvum*) • Oaklands Diuris (*Diuris* sp. (Oaklands, D.L. Jones 5380)) • Austral Pillwort (*Pilularia novae-hollandiae*) • Lanky Buttons (*Leptorhynchos orientalis*) • Regent Honeyeater (*Anthochaera phrygia*) • Glossy Black-Cockatoo (*Calyptorhynchus lathami*), Riverina population • *Allocasuarina luehmannii* Woodland Endangered Ecological Community • Sandhill Pine Woodland Endangered Ecological Community • Inland Grey Box Woodland Endangered Ecological Community • Myall Woodland Endangered Ecological Community
15. The EIS must identify: a. Matters to be considered outlined in the *Guidelines for developments adjoining land and water managed by DECCW* (DECCW 2010) and include: i. The nature of the impacts, including direct and indirect impacts. ii. The extent of the direct and indirect impacts. iii. The duration of the direct and indirect impacts. iv. The objectives of the reservation of the land. b. Measures proposed to prevent, control, abate, minimise and manage the direct and indirect impacts including an evaluation of the effectiveness and reliability of the proposed measures. c. Residual impacts.

Attachment C – Guidance material

Title	Web address
Relevant Legislation	
Commonwealth Environment Protection and Biodiversity Conservation Act 1999	www.austlii.edu.au/au/legis/cth/consol_act/epabca1999588/
Environmental Planning and Assessment Act 1979	www.legislation.nsw.gov.au/maintop/view/inforce/act+203+1979+cd+0+N
Fisheries Management Act 1994	www.legislation.nsw.gov.au/maintop/view/inforce/act+38+1994+cd+0+N
Marine Parks Act 1997	www.legislation.nsw.gov.au/maintop/view/inforce/act+64+1997+cd+0+N
National Parks and Wildlife Act 1974	www.legislation.nsw.gov.au/maintop/view/inforce/act+80+1974+cd+0+N
Protection of the Environment Operations Act 1997	www.legislation.nsw.gov.au/maintop/view/inforce/act+156+1997+cd+0+N
Threatened Species Conservation Act 1995	www.legislation.nsw.gov.au/maintop/view/inforce/act+101+1995+cd+0+N
Water Management Act 2000	www.legislation.nsw.gov.au/maintop/view/inforce/act+92+2000+cd+0+N
Wilderness Act 1987	www.legislation.nsw.gov.au/viewtop/inforce/act+196+1987+FIRST+0+N
Biodiversity	
NSW Biodiversity Offsets Policy for Major Projects (OEH, 2013)	www.environment.nsw.gov.au/resources/biodiversity/140672biopolicy.pdf
Framework for Biodiversity Assessment (OEH, 2013)	www.environment.nsw.gov.au/resources/biodiversity/140675fba.pdf
OEH Threatened Species Website	www.environment.nsw.gov.au/threatenedspecies/
NSW BioNet (Atlas of NSW Wildlife)	www.bionet.nsw.gov.au/
Fisheries NSW policies and guidelines	www.dpi.nsw.gov.au/fisheries/habitat/publications/policies,-guidelines-and-manuals/fish-habitat-conservation
List of national parks	www.environment.nsw.gov.au/NationalParks/parksearchatoz.aspx
Guidelines for developments adjoining land and water managed by the Department of Environment, Climate Change and Water (DECCW, 2010)	www.environment.nsw.gov.au/resources/protectedareas/080290devadjoindecc.pdf
OEH Spatial Data Online Access	http://mapdata.environment.nsw.gov.au/geonetwork/srv/en/main.home
Heritage	
The Burra Charter (The Australia ICOMOS charter for places of cultural significance)	http://australia.icomos.org/wp-content/uploads/The-Burra-Charter-2013-Adopted-31.10.2013.pdf

Title	Web address
Statements of Heritage Impact 2002 (HO & DUAP)	www.environment.nsw.gov.au/resources/heritagebranch/heritage/hmstatementsofhi.pdf
NSW Heritage Manual (DUAP) (scroll through alphabetical list to 'N')	www.environment.nsw.gov.au/Heritage/publications/index.htm#M-O
Aboriginal Cultural Heritage	
Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW, 2010)	www.environment.nsw.gov.au/resources/cultureheritage/commconsultation/09781ACHconsultreq.pdf
Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW, 2010)	www.environment.nsw.gov.au/resources/cultureheritage/10783FinalArchCoP.pdf
Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (OEH 2011)	www.environment.nsw.gov.au/resources/cultureheritage/20110263ACHguide.pdf
Aboriginal Site Recording Form	www.environment.nsw.gov.au/resources/parks/SiteCardMainV1_1.pdf
Aboriginal Site Impact Recording Form	www.environment.nsw.gov.au/resources/cultureheritage/120558asirf.pdf
Aboriginal Heritage Information Management System (AHIMS) Registrar	www.environment.nsw.gov.au/contact/AHIMSRegistrar.htm
Care Agreement Application form	www.environment.nsw.gov.au/resources/cultureheritage/20110914TransferObject.pdf
Water and Soils	
Acid sulphate soils	
Acid Sulfate Soils Planning Maps via 'The NSW Natural Resource Atlas'	www.nratlas.nsw.gov.au/
Acid Sulfate Soils Manual (Stone et al. 1998)	Manual available for purchase from: www.landcom.com.au/whats-new/the-blue-book.aspx Chapters 1 and 2 are on DPI's Guidelines Register at: Chapter 1 Acid Sulfate Soils Planning Guidelines: www.planning.nsw.gov.au/rdaguidelines/documents/NSW%20Acid%20Sulfate%20Soils%20Planning%20Guidelines.pdf Chapter 2 Acid Sulfate Soils Assessment Guidelines: www.planning.nsw.gov.au/rdaguidelines/documents/NSW%20Acid%20Sulfate%20Soils%20Assessment%20Guidelines.pdf
Acid Sulfate Soils Laboratory Methods Guidelines (Ahern et al. 2004)	www.advancedenvironmentalmanagement.com/Reports/Savannah/Appendix%2015.pdf This replaces Chapter 4 of the Acid Sulfate Soils Manual above.
Flooding	
Floodplain development manual	http://www.environment.nsw.gov.au/floodplains/manual.htm
NSW Climate Impact Profile	NSW Climate Impact Profile
Climate Change Impacts and Risk Management	Climate Change Impacts and Risk Management: A Guide for Business and Government, AGIC Guidelines for Climate Change Adaptation

Title	Web address
Water	
Water Quality Objectives	www.environment.nsw.gov.au/ieo/index.htm
ANZECC (2000) Guidelines for Fresh and Marine Water Quality	www.environment.gov.au/water/publications/quality/australian-and-new-zealand-guidelines-fresh-marine-water-quality-volume-1
Applying Goals for Ambient Water Quality Guidance for Operations Officers – Mixing Zones	http://deccnet/water/resources/AWQGuidance7.pdf
Approved Methods for the Sampling and Analysis of Water Pollutant in NSW (2004)	www.environment.nsw.gov.au/resources/legislation/approvedmethods-water.pdf

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Your reference: SSD_6882
Our reference: DOC15/84380
Contact: Miranda Kerr
Ph 6022 0607

Thomas Piovesan
Industry Assessments
Department of Planning & Environment
GPO Box 39
SYDNEY NSW 2001

Dear Mr Piovesan

RE: ProTen Poultry Production Complex, Euroley, Narrandera LGA
Draft EIS Adequacy Review (SSD 6882)

I refer to your request dated 13 March 2015 seeking comment from the Office and Environment and Heritage (OEH) on the adequacy of the draft Environmental Impact Statement (EIS) for the ProTen Poultry Production Complex.

We have reviewed the information provided against our requirements sent to the Department of Planning and Environment on 30 January 2015. Please note that this adequacy assessment is not a detailed review of the project, and therefore additional information regarding issues within OEH's responsibilities may be requested at a later stage, including during public exhibition.

OEH considers that the environmental impact assessment **does not** meet the Secretary's requirements, as detailed in Attachment A. In summary, the following components require further investigation:

- Delineation of the operational footprint, including ancillary infrastructure.
- Mapping of native vegetation extent and plant community types on the development site including threatened ecological communities, with reference to the 'Central-southern NSW' vegetation dataset.
- Demonstration of avoiding and minimising impacts to biodiversity.
- Revision of the Biodiversity Offset Strategy after further consideration of measures to avoid biodiversity impacts.
- Development of a site specific hydraulic model to enable the proponent to properly assess the flooding impacts on the development site - available data and associated discussion in the EIS do not positively exclude the risks due to flooding both from riverine and overland flooding sources.

A number of issues relating to the biodiversity assessment and offset strategy were discussed with ProTen and SLR Consulting during a phone conference on 18 March. These issues may have been addressed with an on-site visit for agencies including OEH. However we are not aware of a Planning Focus Meeting being held for this proposal.

The Offset Strategy currently does not identify an offset area for the impacts identified in the draft EIS and OEH recognises that there is a lack of BioBanking credits available in the vicinity of this proposal. OEH is prepared to work with the proponents and Department of Planning and Environment during the approval process to identify the most appropriate approach to implementing an offset. This may include Conditions of Approval that give flexibility in implementing the in-perpetuity mechanism for any required offset. However, we do not believe that the current EIS is adequate to identify the final offset requirements, and would like to see this addressed before public exhibition.

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The EIS meets legislative requirements for Aboriginal cultural heritage. OEH commend the proponent for implementing avoidance of sites, which demonstrates environmentally responsible practices within this component of the EIS. We note that the newly identified sites (EPPC-SC1 and 2, and EPPC-H1) are not yet registered in the Aboriginal Heritage Information Management System (AHIMS) database, however this may be due to administrative timeframes within OEH.

If you have any questions regarding this matter please contact Miranda Kerr on 02 6022 0607 or email miranda.kerr@environment.nsw.gov.au.

Yours sincerely

P.E 27/3/15

PETER EWIN
Senior Team Leader Planning
South West Region
Regional Operations Group
Office of Environment & Heritage

Attachment A: OEH adequacy review for the ProTen Poultry Production Complex (SSD_6882)

ATTACHMENT A

OEH adequacy review

Euroley Poultry Production Complex (SSD 6882)

Acronyms

BAR	Biodiversity Assessment Report
BBAM	BioBanking Assessment Methodology
EEC	Endangered Ecological Community
EIS	Environmental Impact Statement
FBA	Framework for Biodiversity Assessment
OEH	NSW Office of Environment and Heritage
P&I	Planning and Infrastructure
PCT	NSW Plant Community Type
PPU	Poultry Production Unit

The adequacy review for biodiversity was undertaken by comparing the BAR against minimum information requirements described in the FBA (Appendix 7, page 98–105).

1 Operational footprint

The complete operational footprint has not been provided. The location and extent of ancillary infrastructure listed in Section 1.3.2 (page 2) of the BAR are not clearly delineated on the maps provided.

Recommendations

1.1 Appropriately scaled maps are provided that show precise location and extent of all associated infrastructure listed in Section 1.3.2, including services, ancillary works and access road alignment and site entrance.

2 Digital datasets

Digital datasets for all maps in the BAR and spatial data generated during the assessment have not been provided to OEH, as required in Section 3.2.1.4 of the FBA.

Recommendations

2.1 Digital datasets (eg ESRI shapefiles) are provided for all spatial elements of the BAR, including the complete development footprint, survey sites, new threatened species locations, credit calculations and vegetation mapping.

3 Vegetation mapping

The FBA requires identification of landscape features at the development site, including native vegetation and EECs, as a key component of the assessment. In our letter of 29 January 2015 accompanying OEH's SEARs, we mentioned the 'Central-Southern NSW' vegetation dataset (OEH 2011). This dataset maps the NSW plant community types (PCTs) based on relatively recent, high resolution (ADS40) aerial imagery and is recognised as the most reliable vegetation mapping for the region. It includes vegetation patches of one hectare or greater (except for special features such as wetlands that can be a minimum of 0.25 ha) and delineates vegetation with a canopy cover of 5% or more. This dataset adequately provides the level of detail required to assess native vegetation in the FBA (Sections 5.1.1.1 and 5.2.1.1, page 10).

The mapping used as a starting point for determining native vegetation extent in the BAR (Section 2.3, page 8) is a modelled product generated at a scale of 1:250 000. It was intended for identifying areas to target investment funding at a catchment level (Barrett 2011), so is less adequate than the OEH 2011 mapping for assessing impacts on biodiversity in the study area.

As a result of using a CMA-scale dataset, the vegetation map provided in figure 6.12 does not include all the native vegetation evident on recent aerial photography (ADS40 imagery) captured in February 2007 and SPOT satellite imagery from 2011. The BAR does not provide a rationale for the choice of baseline vegetation mapping, and incomplete mapping of native vegetation patches in the study area has implications for the range of BioBanking assessment results.

There can be uncertainty when delineating between isolated paddock trees and a mappable patch of open-woodland. The BAR identifies vegetation on the site as woodlands and open-woodlands dominated by *Eucalyptus largiflorens* (Black Box) and *Callitris glaucophylla* (White Cypress Pine) (page 9). The structure of an open-woodland overstorey is "well separated" trees with a crown cover of 0.25 to 20% (Walker & Hopkins 1990). We consider that trees in the un-mapped areas are too close together to be regarded as isolated paddock trees, and expect that mapping of vegetation polygons in the study area should include all patches of woodland and open-woodland evident on recent imagery.

Remnant vegetation consisting of a scattered native overstorey with a depleted or no understorey can be described using the NSW plant community type classification (accessible through VIS Classification), and mapped as required by Section 5.1 of the FBA.

OEH (2011) mapped a patch of Sandhill Pine EEC on the north-western property boundary of the study area, adjoining South West Woodland Nature Reserve. Figure 6.12 shows two staff houses proposed for construction in this location, however floristic sampling was not undertaken and the vegetation is not shown on figure 6.12. The BAR should identify the potential impact of the proposed development on the mapped EEC, and provide a rationale for why the OEH vegetation mapping has not been included. Two polygons of Weeping Myall Woodland EEC mapped by OEH (2011) have also not been addressed in the BAR.

Recommendations

3.1 The BAR includes justification for why vegetation with a canopy cover over 5% has not been mapped and classified to a PCT.

3.2 The BAR provides justification for lack of floristic sampling and mapping of open-woodland that is evident on aerial imagery in the north-western corner of Lot 41 DP750898 and mapped as Sandhill Pine Woodland EEC by OEH (2011).

3.3 The BAR provides justification for not considering Weeping Myall Woodland EEC mapped by the 'Central-Southern NSW' dataset (OEH 2011).

4 Demonstrating avoidance and minimising direct impacts on biodiversity values

Section 5.1.1 (page 24) of the BAR describes measures undertaken to avoid impacts to biodiversity during site selection and layout design. Efforts to avoid and minimise impact on biodiversity values in accordance with Section 6.3 of the FBA have not been adequately demonstrated, and the site layout does not appear to have altered as a result of the biodiversity assessment. We consider that moving the southern-most PPU into cleared land near the southern boundary would avoid some of the identified direct impacts.

Recommendations

4.1 The BAR demonstrates appropriate avoidance measures, including changing the location of the southern-most PPU.

5 Impact summary

Recommendations

5.1 A map of areas not requiring assessment is included in Section 6.1 of the BAR, in accordance with Section 9.5 of the FBA

6 Biodiversity Offset Strategy

A teleconference was held between OEH, SLR consulting and ProTen representatives to discuss options for the Biodiversity Offset Strategy. As a result, the Biodiversity Offset Strategy will be reviewed to incorporate added avoidance measures that potentially reduce the offset requirement.

An additional offset will be required if construction of ancillary infrastructure identified on page 26 of the EIS (refer to issue 1) requires clearing of native vegetation.

Recommendations

6.1 The Biodiversity Offset Strategy is revised based on discussions between OEH, ProTen and SLR Consulting on Wednesday 18 March 2015.

7 Flood modelling

The OEH SEARs require the EIS to include a map of features relevant to flooding, as described in the Floodplain Development Manual 2005.

Figure 6.5 of the EIS (page 86) shows that the site is at or below the level of the adjacent Murrumbidgee River and Yanco Creek floodplains and located in a depression. Considering this information, it is recommended that a hydraulic model is needed to determine the level of flood risk up to the level of the Probable Maximum Flood (PMF). Sources of flooding including both mainstream flooding from the Murrumbidgee River and Yanco Creek are to be considered along with local overland flooding from the local catchments draining to the site.

Assessment of the topography and overland flows on pages 85 to 89 of the EIS is insufficient to discount the risks of flooding from adjacent sources. The existence of long "topographical escalations" does not provide conclusive evidence that the site is flood free. Flooding risk is assessed using a hydraulic model linking the major flood sources and the site.

Flood modelling is necessary for adequately addressing Items 9 to 13 in Attachment A of the OEH SEARs. The following requirements cannot be determined without specific hydraulic modelling:

- Design flood levels at the development site (Item 10).
- Modelling of the effect of the proposed Euroley Poultry Production Complex (including fill) on the flood behaviour under scenarios listed in Item 11
- Assessment of whether evacuation routes into and out of the development site are impassable during times of flood for the development of emergency management plans (Item 13).
- Assessment of "compatibility the with the flood hazard of the land" (Item 13), particularly with respect to the location of infrastructure on the development site. Some infrastructure maybe inappropriately positioned in higher flood risk areas, which should be avoided. *Eucalyptus largiflorens* (Black Box) is mapped in parts of the development site, which indicates that regular inundation of that area occurs from local overland flows or riverine flooding.

Extension of the existing 2D Hydraulic Model (developed by Lyall's and Associates for Narrandera Shire Council) into the development site could be achieved using available ground elevation data and/or ground survey information. This will allow the flood mapping of the entire development site to be developed up to the PMF level as required in Item 9.

Recommendations

7.1 A hydraulic model is developed to determine the level of flood risk up to the level of the Probable Maximum Flood (PMF). Sources of flooding including both mainstream flooding from the Murrumbidgee River and Yanco Creek are to be considered along with local overland flooding from the local catchments draining to the site.

References

Barrett T (2011) *Work module 2 – Terrestrial Biodiversity: Compilation of a mosaic vegetation map and modelling investment priority for the Murrumbidgee CMA.* Final technical report. Office of Environment and Heritage, Armidale.

OEH (2011) *Vegetation mapping by 3-D digital aerial photo interpretation: vegetation of central-southern New South Wales.* Technical Report. NSW Office of Environment and Heritage, Queanbeyan (VIS ID 3884).

Walker J & Hopkins MS (1990), 'Vegetation' pp 58–77 in RC McDonald, RF Isbell, JR Speight, J Walker & MS Hopkins (eds.), *Australian soil and land survey – field handbook*, 2nd edition, Inkata Press, Melbourne.