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Senders ref: SSD 10479

Mr David Schwebel
Planning and Assessment Group
Department of Planning, Industry and Environment
4 Parramatta Square
12 Darcy Street
Parramatta NSW 2150

Dear Mr Schwebel

Subject: Public exhibition request for comment - 200 Aldington Road (SSD-10479) 200 Aldington Road Industrial Estate (SSD-10479) in the Mamre Road Precinct.

Thank you for your email received on 16 November 2020, requesting comment from the Environment, Energy and Science Group (EES) in the Department of Planning, Industry and Environment (DPIE) in relation to 200 Aldington Road Industrial Estate (SSD-10479) in the Mamre Road Precinct.

EES has reviewed the relevant documentation and provides in Attachment A regarding biodiversity, flooding and waterway health.

Should you have any queries regarding this matter, please contact Marnie Stewart, Senior Project Officer Planning on 9995 6868 or Marnie.stewart@environment.nsw.gov.au.

Yours sincerely

A handwritten signature in black ink that reads 'S. Harrison'.

17/12/20

Susan Harrison
Senior Team Leader Planning
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Biodiversity and Conservation

Attachment A – EES comments on 200 Aldington Road Industrial Estate (SSD-10479), Mamre Road Precinct.

As previously advised, the north eastern corner of the site is zoned E2 Environment Conservation and RE2 Private Recreation. The Mamre Road Precinct Structure Plan identifies this area as open space, environment conservation and indicative riparian buffer. Regarding the environment conservation land, the precinct structure plan states that this is “*land to be protected for its high conservation value and supported with surrounding buffers*”.

The EIS indicates that part of warehouse W6, carparking and a basin impact and encroach into the RE2 zoned land. Within the RE2 zone, warehouse and basin uses are prohibited. The proposed development is therefore inconsistent with the structure plan and zoning regime applying to the site.

Biodiversity

Finalisation of the BAM-C

The BAM-C needs to be finalised and the case submitted so it can be reviewed by EES. Digital shape files for all maps and spatial data also need to be provided.

Candidate species credit species

Several candidate species credit species that were excluded from further assessment need to be assessed in accordance with Step 4 of section 6.4 of the BAM, due to the following reasons.

- *Acacia pubescens* was excluded because “Suitable habitat was not present within the development site” (page 36). However, this species is associated with habitat occurring within the development site i.e. PCT 850 and “Highly disturbed areas with no or limited native vegetation”, including “road verges, ploughed paddocks etc that are generally devoid of native vegetation” (<https://www.environment.nsw.gov.au/threatenedSpeciesApp/profileData.aspx?id=10023&cmaName=Sydney+Basin>).
- *Grevillea juniperina subsp. juniperina* was excluded because “The presence of this species was not identified (conspicuous species) and it was determined that the habitat is substantially disturbed such that this species is unlikely to utilise the development site.” (page 37). However, the BDAR states no targeted surveys were carried out (for example, see page 19) and this species can occupy disturbed sites as “Physical disturbance of the soil appears to result in an increase in seedling recruitment. Has a tendency to colonise mechanically disturbed areas.” (<https://www.environment.nsw.gov.au/threatenedspeciesapp/profile.aspx?id=10367>). Also, the distribution of this species includes “outlier populations at Kemps Creek and Pitt Town” (<https://www.environment.nsw.gov.au/threatenedspeciesapp/profile.aspx?id=10367>).
- The *Marsdenia viridiflora subsp. viridiflora* endangered population was excluded because “Habitat features associated with this species were not present on the development site” (page 38). However, this species is associated with PCT 835 and PCT 850, both of which occur within the development footprint.
- *Meridolum corneovirens* was excluded because “It was determined that the habitat within associated PCT 850 is substantially disturbed such that this species is unlikely to occur within the development site” (page 39). However
 - this species is also associated with PCT 835 (https://www.environment.nsw.gov.au/AtlasApp/UI_Modules/TSM_/ProfileEdit.aspx?pld=10526&pType=SpeciesCode), which occurs within the development site
 - this species “will persist in degraded environments provided that ground cover of logs or rubbish is available”

(<https://www.environment.nsw.gov.au/resources/nature/McorneovirensEia0500.pdf>) and it “can be found under logs and other debris, amongst leaf and bark accumulations around bases of trees and sometimes under grass clumps. Where possible it will burrow into loose soil. It can also be found sheltering under virtually any form of human made ground cover, including rubbish, building materials, old car parts etc.”

(<https://www.environment.nsw.gov.au/resources/nature/McorneovirensEia0500.pdf>) and

- Appendix B of the BDAR (Table 37) shows plots 1 and 2 (in PCT 835) had 50m of fallen logs and 39% litter cover, respectively.
- *Pimelea spicata* was excluded because “It was determined that the habitat (PCT 850) is substantially disturbed such that this species is unlikely to occur within the development site.” (page 41). However, as with *A. pubescens*, this species is associated with PCT 850 and “Highly disturbed areas with no or limited native vegetation” (<https://www.environment.nsw.gov.au/threatenedspeciesapp/profileData.aspx?id=10632&cmaName=Sydney+Basin>).

Species polygon

The species polygon for the Green and Golden Bell Frog needs to be revised because there is some inconsistent information within the BDAR, and with the *Aldington Road Kemps Creek Riparian Assessment* (Eco Logical Australia, 15 October 2020) (hereafter referred to as the ‘riparian assessment’), which makes it difficult to determine the area of habitat that will be impacted. This is because:

- the BDAR states (page 38) “Habitat features associated with this species were present within the development site (3 dams containing *Typha* spp.)”
- the BDAR also states (page 43) “Habitat features associated with this species consist of any dam containing *Typha* spp”
- the BDAR also notes that the habitat for this species includes (page 94) “Marshes, dams and stream-sides, particularly those containing *Typha* sp. (bullrushes) or *Eleocharis* sp. (spikerushes)”
- the riparian assessment describes five dams with *Typha* (Table 6) i.e. dams 2, 3, 4, 10 and 11, and one dam with *Eleocharis* i.e. dam 6 and
- Table 23 of the BDAR indicates 0.598ha will be directly impacted, while Table 33 shows 0.342ha and Appendix D shows 0.9ha.

Furthermore, it should be noted that EES considers buffers should be applied in accordance with the Commonwealth significant impact guidelines for this species, which states that a 200m buffer must be applied around waterbodies, and that terrestrial corridors require a 100m buffer.

Prescribed impacts

Prescribed biodiversity impacts are discussed on pages 47 and 52 of the BDAR. Section 2.1.2 of the BDAR states that prescribed biodiversity impacts are detailed in Table 19, but only very general information is given; the types of human-made structures and non-native vegetation occurring on the site are not discussed, and a list of candidate species using these habitats is not given. Also, while potential foraging habitat (fruit trees) for Grey-headed Flying-foxes is mentioned in Table 19, other foraging habitat for other species has not been recognised e.g. pastures for different species of microbats and birds. As such, sections 6.7.1.3(b) and 9.2.1.3 of the BAM need to be applied.

In conjunction with this, reconsideration of the types of habitat available for microbats on the site is needed. For example, Table 15 of the BDAR states for *Miniopterus orianae oceanensis* (page 34) “Foraging habitat features associated with this species were identified within the development site” but human-made structures can also provide habitat for this species because “Caves are the

primary roosting habitat, but also use derelict mines, storm-water tunnels, buildings and other man-made structures”

(<https://www.environment.nsw.gov.au/threatenedSpeciesApp/profile.aspx?id=10534>).

Assessment of impacts

It is not clear if all impacts associated with the proposal have been assessed in the BDAR. This is because:

- Figure 16 of the riparian assessment shows the “unmapped wetland” (as shown on Figure 3 of the BDAR) to be part of the construction site, but Figure 3 of the BDAR shows it to be outside of the development footprint
- the riparian assessment states that the actual works within the riparian corridor have not been fully documented, and that a crossing is proposed (see page 27), but neither of these points are referred to in the BDAR and it seems that the location of the crossing has not been shown
- from a comparison of Figure 3 of the BDAR, Figure 16 of the riparian assessment and Appendix A of the riparian assessment, it is not clear if vegetation zones 1 and 4 will be impacted by the bio-retention basin in the north eastern corner of the development site (on proposed Lot D)
- the *SSDA Estate Masterplan* (drawing no. MP04, date 01/10/2020) and the *Fencing Management Plan* (drawing no. MP11, date 01/10/2020) show several retaining walls on Lot D but it is not clear if these will impact the “unmapped wetland” (as shown in Figure 3 of the BDAR) or PCTs 1232 or 835
- it is not clear if the 5m construction buffer (as shown in Figure 3 of the BDAR) is compatible with the construction of the retaining walls and bio-retention basin (as shown on drawing no. 19-609-C1020 of the *200 Aldington Kemps Creek 1000-Series Infrastructure Civil Works Package State Significant Development Application* (at&I, 30-09-20)).

As such, all impacts of the proposed development must be made clear in the BDAR and assessed in accordance with Stage 2 of the BAM.

Avoiding and minimising impacts

The ways in which the proposal has been located and designed to minimise and avoid impacts to biodiversity values are outlined in Tables 18 and 20 of the BDAR. However:

- Table 18 states “The impact of the proposal on native vegetation has been reduced by locating the sediment dam in a way that minimises impact to PCT 835” but no mention has been made of other impacts within the riparian corridor, including clearing of a portion of PCT 1232, which forms part of an endangered ecological community and
- Table 20 states “The dam in the northern-most section of the site had moderate levels of aquatic habitat and was representative of a wetland environment. This dam will be retained after development, and the surrounding vegetation managed to maintain habitat values.” But no mention is made of infilling dam 10, which also occurs within the riparian corridor and provides habitat for the GGBF (as inferred by the riparian assessment, which notes that *Typha orientalis* was observed on the edges of the dam).

As such, in accordance with section 8 of the BAM, more information is needed to document and justify the location and design of the project.

Mitigation measures

The proposed mitigation measures are outlined in Table 27 of the BDAR (starting on page 53). However, more information is needed because the following are not addressed or explained in this table:

- the 5m construction buffer identified in Figures 3 and 9 of the BDAR is not mentioned in this table and its purpose has not been explained
- the processes for staged clearing, pre-clearance surveys and clearance surveys have not been explained; section 9.3.1.2(a) of the BAM states that proposed techniques must be documented
- only PCT 835 has been included in the Vegetation Management Plan (VMP) but the unnamed local wetland (referred to in section 1.3.5 of the BDAR), PCT 1232, the bio-retention basin and any remaining exotic/cleared areas in this area, should also be included
- processes for the removal of habitat associated with prescribed impacts have not been addressed, including de-watering dams and searching human-made structures for fauna, before they are demolished.

Furthermore, clarity is needed on:

- what is meant by “Client” for the responsibility of preparing the VMP (page 56) and
- the location of the 5m construction buffer (the BDAR and riparian assessment show it in different locations).

Prescribed impacts on habitat for species credit species

The Biodiversity Assessment Method Operational Manual Stage 2 (DPIE 2019) discusses direct and prescribed impacts on species credit species. It is recommended that the approach described in Box 3 (page 20) of this manual is considered for GGBF and Southern Myotis.

Flooding

Key Recommendation

EES recommends that the proponent revisit the flood assessment. The consultant needs to use a properly verified flood model and properly document pre- and post-development flood behaviour and any impacts.

Analysis

The northern part of the site drains east to Ropes Creek, a minor area at the north-eastern boundary is impacted by Ropes Creek mainstream flooding. The southern part of the site drains west to Kemps Creek.

For base case flood conditions, the report refers to multiple models instead of utilising or adopting South Creek’s latest base case flood data. These models are outlined in Section 1.4.1, EES has not overseen the models prepared for planning proposals i.e. GHD 2008/2016/2019 models and Lyall 2020 model.

For developed conditions, Appendix Q part 1 indicates that developed conditions flood behaviour for the 2y ARI, 5% AEP, 1% AEP flood and PMF events are presented in Figures 5 - 7, 11-14, 17-20 and 23-26 respectively, the development impacts are presented in figures 9, 15 and 21. However, all these figures depict existing base case conditions (rural site), not the developed conditions that include the master plan.

Detailed recommendations

Therefore, EES recommends the consultants undertake the following tasks:

1. Adopt the base case model of Advisian 2020, prepared for INSW South Creek Sector Review Stage 2. This model has been overseen by an Agency Working Group in consultation with Penrith and Liverpool Councils. Alternatively, the consultants are to verify their base case model with the Advisian 2020 model.
2. Prepare a simple version of the report to provide the following information:
 - existing flood behaviour under the adopted base case
 - developed conditions
 - changes in flood behaviour due to development and
 - any management measures required to mitigate these impacts.

It should be noted that the study area should extend downstream to the confluence of Ropes Creek with South Creek to ensure no impacts of any proposed detention basins on the downstream areas. These impacts occur when the timing of tributary flows coincide with the main South Creek flow as a result of attenuating tributaries flows under developed conditions.

Waterway health

In its submission on the SEARs for this SSD (dated 21 July 2020), EES recommended a number of water and soil environment assessment requirements which included a requirement in relation to the OEH/EPA *Risk-based Framework for Considering Waterway Health Outcomes in Strategic Land-use Planning Decisions* <http://www.environment.nsw.gov.au/research-andpublications/publications-search/risk-based-framework-for-considering-waterwayhealth-outcomes-in-strategic-land-use-planning>.

In accordance with *Risk-based Framework for Considering Waterway Health Outcomes in Strategic Land-use Planning Decisions*, EES has developed the NSW Government water quality and flow related objectives (Tables 1 and 2 below) for the Wianamatta-South Creek catchment to achieve the vision for Western Sydney Parkland City. The water quality and flow related objectives were provided to key stakeholders at a workshop on 19 October 2020 and have been included in the Draft Aerotropolis Precinct Plan currently on exhibition. EES has also worked with DPIE PDPS in developing the draft Mamre Road Precinct DCP that is currently on exhibition and it is expected that the interim objectives in Section 2.6 in exhibited draft Mamre Road Precinct DCP will be superseded by tables 1 and 2 below as follows:

- Page 26, Section 2.6 Integrated Water Cycle Management: Following description of flow components the new Table 1 (below) will be added and referred to. Also, 'and baseflow requirements' in the last/following sentence will be deleted.

Table 1 Ambient stream flows and requirements of waterways and water dependent ecosystems in the Mamre Rd Precinct

Flow Related Objectives		
	1-2 Order Streams	3 rd Order Streams or greater
Median Daily Flow Volume (L/ha)	71.8 ± 22.0	1095.0 ± 157.3
Mean Daily Flow Volume (L/ha)	2351.1 ± 604.6	5542.2 ± 320.9
High Spell (L/ha) ≥ 90 th Percentile Daily Flow Volume	2048.4 ± 739.2	10091.7 ± 769.7

High Spell - Frequency (number/y)	6.9 ± 0.4	19.2 ± 1.0
High Spell - Average Duration (days/y)	6.1 ± 0.4	2.2 ± 0.2
Freshes (L/ha) ≥ 75 th and ≤ 90 th Percentile Daily Flow Volume	327.1 to 2048.4	2642.9 to 10091.7
Freshes - Frequency (number/y)	4.0 ± 0.9	24.6 ± 0.7
Freshes - Average Duration (days/y)	38.2 ± 5.8	2.5 ± 0.1
Cease to Flow (proportion of time/y)	0.34 ± 0.04	0.03 ± 0.007
Cease to Flow – Duration (days/y)	36.8 ± 6	6 ± 1.1

- Page 30, Section 2.6.2 Stormwater Quality: Table 6 will be replaced with the new Table 2 below.

Table 2 Ambient water quality of waterways and waterbodies in the Mamre Rd Precinct

Water Quality Objectives	
*Total Nitrogen (TN, mg/L)	1.72
Dissolved Inorganic Nitrogen (DIN, mg/L)	0.74
Ammonia (NH ₃ -N, mg/L)	0.08
Oxidised Nitrogen (NO _x , mg/L)	0.66
*Total Phosphorus (TP, mg/L)	0.14
Dissolved Inorganic Phosphorus (DIP, mg/L)	0.04
Turbidity (NTU)	50
Total Suspended Solids (TSS, mg/L)	37
Conductivity (µS/cm)	1103
pH	6.20 - 7.60
Dissolved Oxygen (DO, %SAT)	43 - 75
Dissolved Oxygen (DO, mg/L)	8

* when showing compliance towards TN and TP through industry models, the DIN and DIP performance criteria should be instead to recognise that stormwater discharges of nutrients are mostly in dissolved form

EES acknowledges that the objectives were developed after the SEARs were issued but they were developed using the ***Risk-based Framework for Considering Waterway Health Outcomes in Strategic Land-use Planning Decisions*** which is referenced in the SEARs.

(End of Submission)