Appendix A of Preferred Project and Response to Submissions Report – TPGNSW July 2010.

Summary of Issues Raised by DoP and other Agencies in letter dated 27/11/2009.

ISSUE RAISED:
DEPARTMENT OF PLANNING
DOP Key Issues:
1. Flora and Fauna The *Flora and Fauna Survey* dated April 2008 and the *Habitat Tree Inspection Report* prepared by Lesryk Environmental Consultants dated 25 June 2009 ("the Flora and Fauna Report") provides consideration of ecological issues for the project. The Department, however, has some concerns with the surveying methods and the results of this study which are outlined below. These issues need to be addressed so that a thorough assessment of potential ecological impacts arising from the project may be considered. The submission from DECCW is included in Attachment No 2, which may provide further assistance.
a) Inadequate surveys (i) Power line and fire trails - there have been no targeted surveys undertaken along the proposed power line easement or fire trail area. These targeted flora and fauna surveys are required to be undertaken along these routes.
(ii) Core koala habitat – the site contains feed trees for koalas and it is considered that targeted surveys for koalas given this habitat provision have not been adequately addressed in the Flora and Fauna Report. Targeted surveys for Koalas are required to be undertaken as the area contains *Eucalyptus bosistoana* within the development footprint.
(iii) Ground dwelling fauna – the site is considered to have a high potential for several ground dwelling threatened fauna species. Following a review of the Flora and Fauna Report, the Department considers that the trapping effort and methods undertaken for surveying ground dwelling fauna were not comprehensive enough to determine presence or absence of ground dwelling fauna in the area. The surveys for ground dwelling fauna were only undertaken over a 4 night period. This level of surveying cannot prove the absence of these and other species from the development area. Recent survey work by DECCW in the Lake Wonboyn area revealed the presence of the Southern Brown Bandicoot and Long-nosed Potoroos, both of which are threatened species and were recorded using infra-red cameras. Therefore, it is considered that the development area may provide habitat for these species. Accordingly, further information regarding the presence or absence of ground dwelling fauna on the site is required and if diggings are located within the development footprint or other areas to be impacted, further surveys using infra-red cameras should be undertaken.
(iv) Extent of Surveying – there is no plan/map which illustrates the areas which were surveyed, with the Flora and Fauna Report stating that field investigations were completed within the "potential areas to be disturbed". There is no explanation as to whether such areas include access tracks to the power lines and driveways to proposed future dwellings, effluent disposal areas, the location of the 20 metre zone for the power lines and whether services such as electricity and telecommunications to individual lots has been included in this assessment. The shaded area indicative of proposed building footprints is insufficient. Further surveying to include all the areas listed above must be undertaken, with a map/plan illustrating the extent of surveying is to be provided.

ISSUE RAISED:
b) <u>Hollow bearing trees assessment</u> – the Flora and Fauna Report provides an outline of the amount and location of hollow bearing trees ("HBTs") within the Habitat Tree Inspection Report dated June 2009. However, the size, location and amount of hollow/s within each tree to be impacted have not been provided. This information is required to allow an assessment of the significance of the hollows to be removed. Concern is raised with the removal of the majority of the hollow bearing trees (identified within potential disturbance areas on site) equating to approximately 19 out of a total of 37 identified trees (refer to Figure 1.8 and 2.3 of the EA. Sufficient justification for the removal of the hollow bearing trees should be provided and an estimate of the total number of hollow bearing trees on the site should be calculated (in order to justify any removal of hollows). Consideration should be made to protect or avoid the clearance of hollow bearing trees, where possible. The flora and fauna report indicated that the Yellow-bellied Glider *(Petaurus australis)*, Greater Broad–nosed Bat *(Scoteanax rueppellii)*, Glossy Black–Cockatoo *(Calyptorhynchus lathami)*, Gang–gang Cockatoo *(Callocephalon fimbriatum)*, and Powerful Owl *(Ninox strenua)* were located within the vicinity of the site, however, no stag watching of the hollow bearing trees were undertaken during the survey period. Accordingly, this must be undertaken for all hollow bearing trees to be impacted by the development during the breeding season of the above mentioned species to determine if the hollows to be removed are breeding hollows for these species.
c) <u>Clarification of removal and location of Yellow-bellied Glider trees and Gloss Black Cockatoo Feed Trees</u> - the Flora and Fauna report states that Yellow-bellied Gliders were detected in Site 3 (i.e. proposed Lot 6) which is in the southern part of the development area (refer to Figure 2 of Flora and Fauna Report, April 2008). However, the map attached to the *Habitat inspection Report* (June 2009) indicates that the Yellow-bellied Glider feed trees are located within proposed Lot 2 (i.e. Site 1) which is in the north of the site. The recommendations in Section 9 of the Flora and Fauna Report indicate the Yellow-bellied Glider feed trees are located within Site 3. Clarification of how many feed trees exist, the location of those feed trees within the development area and the proportion of these feed trees which are likely to be impacted by the development are required to determine the impact of this development on these species and their habitats. These trees are to be retained by the project and any mitigation measures provided in the Statement of Commitments. Section 6.2.1(f) (Glossy Black Cockatoo) of the Flora and Fauna Report (Appendix E) states "*given the retention of identified feed trees within the setback areas, the ability* *for this bird to transverse open space areas and the presence of suitable breeding and foraging sites beyond the limits of the development, it is not considered that the local or regional presence of this species would be adversely affected by the scope of works proposed*". Provide confirmation on the location of the feed trees for the Glossy Black Cockatoo. Only the location of the Yellow bellied glider feed tree is indicated in Figure 6 of the Flora and Fauna Report.

ISSUE RAISED:
d) <u>Clearing of Native Vegetation</u> – the project proposes to remove or modify 6.1 hectares of native vegetation (Section 7.1 of the 'Flora and Fauna Study', Appendix E). The following issues have been identified with this removal which need to be addressed:- (i) Confirm the proportion of the native vegetation on the site which will be retained and provide justifications for the removal of the native vegetation. (ii) Provide a map which depicts the location of clearing and the quantity of particular vegetation types to be removed. Section 3.2 of the EA states *"clearing for the provision of the access roads and electricity services to the lots is requested as part of the application"*. (iii) Provide details of the amount of clearing required for the creation of the roads and suitable offsets or rehabilitation that would be required. Where measures to avoid and mitigate are not possible, then offset strategies should be considered. If an offset strategy is to be considered, then it will need to be protected in perpetuity under conservation management in accordance with the *Draft Principles for the use of Biodiversity Offsets in NSW* <u>http://www.envirionment.nsw.gov.au/biocertification/offsets.htm</u>). This offset strategy must clearly illustrate the vegetation to be removed and that which is proposing to be provided/remediated and/or rehabilitated as an offset.
e) <u>Part 3A Guidelines for Threatened Species Assessment</u> - the Flora and Fauna Report has not addressed the *Draft Guidelines for Threatened Species Assessment under Part 3A of the Environmental Planning and Assessment Act 1979* ("Part 3A Guidelines") as required, and instead addresses Section 5A of the EP&A Act. While it is acknowledged that these guidelines are currently in draft form, all developments are required to use these guidelines. Furthermore, the Flora and Fauna Report does not apply the Assessment of Significance to all species which may be affected by the development, as it has only been applied to those species that were actually detected onsite, not all species which may be impacted by the development both directly and indirectly. The Assessment of Significance guidelines clearly state that all species with habitat that potentially may be impacted by the development need to be considered in the Assessment of Significance. The Part 3A Guidelines also outline the steps in the assessment process (Section 3 of the Guidelines) which include the following:- • Step 1 Preliminary assessment • Step 2. Field Survey and Assessment • Step 3. Evaluation of impacts • Step 4. Avoid, mitigate and then offset • Step 5. Key thresholds The flora and fauna report has not addressed Steps 3–5 of this Assessment Process, in particular there is no offset strategy provided for the unavoidable impacts associated with this development (discussed above). Accordingly, an assessment under the Part 3A Guidelines must be provided for all species with habitat that may be potentially impacted by the development.
f) <u>Ecological constraints</u> – a plan outlining all of the ecological constraints on the site must be provided. This must include, among other things, the location of all Endangered Ecological Communities ("EECs"), hollow bearing trees, feed trees and location of fauna species as outlined in the Flora and Fauna Report. The development footprint shall be overlain over this constraints map and amended, where required.
g) <u>Restrictions to conserve EEC</u> – relevant measures shall be provided in the form of restrictions under the *Conveyancing Act 1919* which require the conservation (in perpetuity) of the EECs as outlined in the Flora and Fauna Report located within the proposed Residual Lot (Lot 7).

ISSUE RAISED:
2. Water Cycle Management The *'Water Cycle Management Study'* ('WCMS') prepared by SEEC Morse McVey dated February 2008, provides an inadequate assessment of the management of the water cycle on the site. The concerns with the WCMS are outlined below and need to be addressed in a revised WCMS or an addendum to the current WCMS.
a) On site effluent disposal - the WCMS provides an inadequate assessment of the suitability of the proposed on-site effluent system for the following reasons: (i) The assessment of the suitability of the proposed on-site sewage management method for each proposed lot has not been undertaken in accordance with the *Bega Valley DCP No.5 (On-Site Sewage Management)*. Provide confirmation via a compliance table that the proposal is in accordance with these plans. (ii) A basic site and soil assessment addressing the minimum criterion as specified by the *Local Government (General) Regulations 2005* and *Council's On-site Sewerage Management Policy* has not been provided. (iii) A detailed assessment has not been undertaken in accordance with the *Environment and Health Protection Guidelines – On site Sewage Management for Single Households* or *Australian Standard 1547 – On site Domestic Wastewater Management.* (iv) The slope of proposed Lot 5 is 20% (as indicated in Appendix 8 of the WCMS). Concern is raised at the appropriateness of this site to adequately utilise an onsite effluent disposal system. Section 5.5 of the WCMS states the proposed EcoMax mounds need to be placed on land not steeper than 6 percent. (v) A scaled plan which clearly indicates potential effluent management areas should be provided. Figure 2.3 (Indicative Development Footprints) of the EA includes 'indicative effluent management envelopes' within the drawing legend. However, the drawing is unclear and the locations of proposed envelopes for effluent management are unclear. (vi) Base figures for the calculations of daily hydraulic load shall be a minimum of 1000L/day per lot. This number does not appear to be used in the Water Balance provided in Appendix 3 of the WCMS. (vii) Details on the maintenance requirements of the onsite effluent disposal systems by future occupants and its enforcement should be discussed. DECCW, the Council and NSW Industry and Investment (I&I) have also raised concerns with the proposed on site effluent system. Please refer agency submissions in Attachment 2.
b) Stormwater - The stormwater analysis provided in the WCMS is insufficient for the following reasons: (i) The stormwater analysis has been prepared in accordance with DCP 36 – Wonboyn Lake. However, this DCP does not apply to the subject site as it is not included as land outlined on Map 1 of the Plan. As such, provide justification on the appropriateness of stormwater quality and quantity objectives applied to the development. (ii) The report does not provide sufficient discussion on existing catchments and overland flow paths on the site. A concept stormwater plan should be provided showing all catchments, indicative overland flow paths and location of proposed stormwater treatment measures. No information is provided on how runoff from the proposed lots will be treated. Site and Catchment Drawing (01- Rev A) (in Appendix B) only depicts catchments flowing into the proposed access roads but does not provide details of the stormwater quantities and qualities on the proposed lots. The concept stormwater plan should correlate to appropriate modelling of stormwater quality and quantity (such as hydrologic calculations and MUSIC modelling). (iii) The water quality modelling provided in Section 6 of the WCMS should be supported by appropriate plans to depict the stormwater treatment train which has been modelled. (iv) Minimal assessment has been undertaken for pre and post development flows from the site. Concern is raised with the reduction in stormwater flows from 3.23ML/year to 0.33ML/year (as outlined in Table 3 of the 'Water Cycle Management Study'). DECCW, Council and I&I have also raised concern with the stormwater quality modelling that has been undertaken. Refer to submissions in Attachment 2.

ISSUE RAISED:
c) Flooding – the potential flooding hazard is briefly considered in the report in Appendix H (Section 7) of the EA. This assessment states that "*flooding of the main road has occurred at a frequency of approximately once annually*". Clarification is required on which road is being referred to and the source of this information.
d) Water Supply - there has been insufficient information provided to demonstrate that each proposed lot will have access to a sustainable water supply (for domestic use or for bushfire requirements), such as through the use of rainwater tanks or harvesting from stormwater runoff from roof areas. Demonstrate through the use of appropriate water balance calculations that each new allotment will have access to a sustainable water supply. An outline of the location of rainwater tanks, how they will be provided (i.e. underground, adjacent to the house etc) to ensure this will be contained in the building footprint and whether any vegetation is to be removed is also required. NOW and the RFS have also raised concern with the proposed water supply. Refer to submissions in Attachment 2
3. Impact on Oyster Leases The subject site is located in close proximity (less than 200m) to Priority Oyster Aquaculture Areas (POAAS) pursuant to the *Fisheries Management Act 1994*, located in Wonboyn Lake. Therefore, there is potential for the project to adversely impact on these nearby oyster leases in Wonboyn Lake. *State Environmental Planning Policy No 62 – Sustainable Aquaculture* ("SEPP 62") requires consideration of the potential impact on oyster leases (Clause 15B, 15C & 15D) as well as consideration of the *NSW Oyster Industry Sustainable Aquaculture Strategy*. Accordingly, an assessment should be undertaken in accordance with the provisions of SEPP 62. DECCW, Council and I&I have also raised concern with the potential impacts of the development on nearby oyster leases. Refer to submissions in Attachment 2.
4. Traffic and Access The Traffic and Access Assessment provided in Appendix H (Section 4) of the EA is inadequate and has not been prepared in accordance with Council's *DCP No 2 - Subdivision Standards* ("DCP 2"). The following information is required to be provided:-
(i) Public Road – DCP 2 requires that public road access be provided to subdivisions comprising more than five (5) allotments while a right of carriageway may be provided for subdivisions with less than five (5) allotments. The project currently proposes the extension of the public road to proposed Lot 2, then incorporates a proposed right of carriageway from this point to proposed Lots 3, 4, 5, 6, 7 and existing Lot 11 which equates to six (6) lots. A public road is therefore required to be provided pursuant to the DCP controls. While the Council is satisfied that suitable rights of access can be provided to bitumen sealed standard, given the potential for future subdivisions in the immediate vicinity (in particular at Lot 11 DP 750222), further consideration should be given to the provision of a public road to service this development.
(ii) Passing Bays – further clarification and justification on the provision of the proposed passing bays along Ivor Jones Drive and the proposed internal fire trail is required to be provided (as outlined on Drawing No 0833C sheets 1 – 3 dated 7/6/07 and Drawing No 01 "Site and Catchment Plan" Project No 07000168 dated 2/08).
(iii) Road widths – clarification is required on the proposed road widths for the access road. The report in Appendix H to the EA (Section 4.2) states that the road standards have been included within the designs prepared by SEEC Morse McVey and satisfies the requirements of the *Planning for Bushfire Protection Guidelines* (RFS, 2006). A table of compliance demonstrating compliance with these requirements is required for the project. The Council and the RFS have also raised concerns with these issues and their submissions are contained in Attachment 2 for your information.

ISSUE RAISED:
5. Acid Sulfate Soils An assessment of Acid Sulfate Soils has been briefly considered in the EA (Section 4.5) and the Water Cycle Management Report (Appendix C). The EA incorrectly references mapping from the Australian Soil Resource Information System (Figure 4.2 of EA). This plan is also not of an appropriate scale and does not conclusively indicate that building envelopes will not be affected by ASS.
(i) The NSW Acid Sulfate Soil Planning maps are to be referred to and depicted in the EA at an appropriate scale; and
(ii) Consideration of Clause 82 of *the Bega Valley Local Environmental Plan 2002* – Development on land identified on acid sulfate soils planning maps is required.
6. Agricultural land classification The EA considers that the site is not 'quality agricultural land' (Section 3.9). Information on the agricultural classification has not been provided to ensure the development is located outside of Class 1 or 2 agricultural lands in accordance with the NSW Agricultural Land system. This needs to be addressed.
7. Bushfire The subject site is classified as bushfire prone on the Bega Valley Bushfire Prone Map, prepared pursuant to Section 146 of the EP&A Act. The *Bushfire Risk Assessment* prepared by RW Surveying and Valuations dated May 2008 (Appendix H of the EA) does not adequately address the requirements of *Planning for Bushfire Protection, 2006.* The RFS is not satisfied that the project provides for adequate protection from the exposure to a bushfire, that adequate water is available to each site and whether safe, operational access and egress for emergency services and residents is available. Accordingly, an amended Bushfire Report is required which adequately addresses the following issues to the satisfaction of the RFS:-
(i) Asset Protection Zones ("APZs") – the APZs are to be provided in accordance with the *Planning for Bushfire Protection Guidelines, 2006* and are to be mapped for each proposed lot within the subdivision. While it is acknowledged that the project does not involve dwelling construction, the location of the APZs are required at subdivision stage to ensure they can be provided within the proposed allotments and that any potential clearing required is adequately considered. Furthermore, confirmation is required as to whether the proposed APZs will overlap with the hollow bearing trees (Section 3.5.8 of the Bushfire Risk Assessment in Appendix H) and whether this complies with the requirements of inner and outer protection areas within Asset Protection Zones in accordance with *Planning for Bushfire Protection* (RFS 2006);
(ii) <u>Water supply</u> – the project must provide an adequate water supply for bushfire fighting purposes for each proposed lot as required by *Planning for Bushfire Protection, 2006*; and
(iii) <u>Access</u> – the project must provide safe and operational access for both residents and emergency services personnel in accordance with the requirements of *Planning for Bushfire Protection, 2006.*
8. Subdivision and Restrictions There are some general concerns with the subdivision and restrictions which need to be addressed, which is outlined below.
(i) <u>Residual Lot</u> – conformation is required that the parcels of land located between proposed Lots 2 and 3 and between proposed Lots 4 & 5 are part of the proposed residual lot (i.e. indicated as proposed Lot 7 on the subdivision plan).
(ii) <u>Building Envelopes</u> - The proposed building envelopes as outlined in Drawing No 0833B, Sheet 1 of 2 do not contain dimensions. These dimensions are to be provided on an amended subdivision plan, which should be provided at an appropriate scale (e.g. 1:1000, 1:5000 etc).

ISSUE RAISED:
(iii) Core Riparian Zone – a 40 metre Core Riparian Zone ("CRZ") is required to be provided from the mean high water mark across the lake frontages to the individual lots within the subdivision. This CRZ is to be provided as a Restrictive Covenant under the *Conveyancing Act 1919* and shall prohibit any buildings or land clearing in recognition of the scenic quality of the foreshore, the very high water quality in the estuary and the significance of the existing riparian vegetation.
(iv) Setbacks – the setback to the mean high water mark for buildings is 75 metres and the setback for the effluent management areas is 150 metres as outlined on subdivision plan (Drawing No 0833B Sheet 1 of 2 Rev 15 dated 3 August 2009). The CRZ is to be included within the 75 metre building setback.
(v) Restrictions – the Statement of Commitments should be revised to include all easements and restrictions which are to be incorporated on the title including, but not limited to, rights of carriageways, easements (where required) and restrictions as outlined above.
BEGA VALLEY SHIRE COUNCIL
Wonboyn Lake is a nominated 'priority oyster aquaculture area' as defined by the provisions of State Environmental Plan Planning Policy No.62 – Sustainable Aquaculture. In addition, oyster leases are in close proximity to the subject land. The application as submitted fails to consider the provisions of SEPP 62 and the potential for the proposed subdivision to have an adverse impact on the oyster fishery. No cumulative impact assessment has been undertaken which adequately addresses potential total impact of on-site sewage management systems, land clearing and stormwater run-off on the fishery.
On review, the submitted detail relating to the suitability of on-site sewage management systems lacks sufficient detail to provide Council with certainty over the long term effectiveness of future systems on the individual lots. Specifically; i. no phosphorous leak point for the soil has been established;
ii. Green Cape rainfall data has been used in the Water Cycle Management Study. The data is statistically questionable given the size of the sample period used;
iii. Council adopted DCP 6 – Minimum Setbacks requires a minimum setback of 150 metres from nominated waterways for the installation of on-site sewage management systems. There is conflicting detail which nominates a setback of 75 metres.
iv. The report recommends one on-site sewage management solution that is a specific brand named system that may or may not be available in the future. The report should provide a minimum performance criteria for the design of future on-site sewage management systems as opposed to nominating a brand named system. Should the Department or the proponent wish to discuss the above points, please consult with Council's Senior Environmental Health Officer Mr Jonathon Pyke (6492131).

ISSUE RAISED:
• There are anomalies within the documentation which provides no certainty as to the nature and construction standards of the proposed access arrangements to the land. The proponents will need to review the documentation and provide specific advice as to how access is to be achieved to all lots within the subdivision. For example, Council would raise no objection to the creation of a suitable right of access (as opposed to a public road) provided the access is constructed to a bitumen sealed standard. Currently Council's adopted Development Control Plan No. 2 – Subdivision Standards requires public road access to more than 5 lots with a right of access being incorporated into the design when less than 5 lots remain. This needs to be addressed at this point in time given the fact that the proponent owns adjoining land to the north (Lot 11 DP750222) and is in the process of preparing an application for a 3 lot subdivision. If access is to be provided over the subject land to the adjoining Lot 11, then the creation of a public road over the full length of the access needs to be considered as part of the current application. Construction standards must comply with the requirements of DCP No. 2 as relevant to the circumstances. Should the Department or the proponent wish to discuss the above point, please consult with Council's Engineering Development Co-ordinator Mr Peter Newton (64992347).

Council in its letter to the Department dated 27 July 2006 indicated that the potential to secure public access to the foreshore should be explored as part of any subsequent application. On review, Council will not be pursuing the provision of public access and/or the dedication of foreshore land as public reserve. The issues for Council being access and the remoteness of the site to the Wonboyn Village, lack of continuity with other foreshore reserves and on-going maintenance responsibility.

As an alternative, Council wishes to pursue the creation of a core riparian zone having a width of 40 metres from mean high water mark across the waterway frontages to the individual lots within the subdivision. The erection of buildings and land clearing would be prohibited within the zone in recognition of the scenic quality of the foreshore, the very high water quality in the estuary and the significance of the existing riparian vegetation.

The 40 metre width for the riparian zone is recommended in accordance with the 'Blue Book' (Section 5).

The riparian zone would sit within the 7(b) (Environmental Protection Foreshore Zone) and would be established by a suitably worded restrictive covenant over the title to each of the proposed lots.

In this instance, Council is of the opinion that the establishment of a restrictive covenant would not compromise the objectives of the 7(b) Zone or sterilise the permissible range of land use within the Zone. It is to be noted that the width of the 7(b) Zone is order of 70 metres and the permissible range of land zone is not dissimilar to that in the 1(a) (Rural General Zone) which applies to the balance of the land.

ISSUE RAISED:
The residue lot would have a dwelling entitlement under the provisions of the Bega Valley Local Environmental Plan 2002. A dwelling site has not been nominated on the proposed plan of subdivision. Accordingly, the proponent will need to nominate a suitable site and as a pre-requisite, undertake appropriate investigation addressing on-site sewage management, bush fire risk, servicing, associated land clearing, fauna/flora and archaeological impacts and soil and water management. This will require an amendment to the current application. This level of detail is not peculiar to this application. Council in the past has consistently required this level of information in the assessment and determination of concessional subdivision within the Shire.
RURAL FIRE SERVICE NSW
All development on Bush Fire Prone Land must satisfy the aims and objectives of *Planning for Bush Fire Protection* 2006. The RFS must ensure any proposed development on bush fire prone land provides for the protection of human life (including firefighters) and minimises the impacts on property from the threat of bush fire, while having due regard to development potential, on-site amenity and protection of the environment.
In this instance the Service is not satisfied that the proposed development can provide future dwelling sites that: i. afford occupants adequate protection from exposure to a bush fire;
ii. Adequate water is available to each site; and
iii. ensure that safe operational access and egress for emergency service personnel and residents is available;
In this regard, the RFS is not in a position to provide further comment or any recommendations until it is satisfied that suitable access, water and asset protection zones are provided to the proposed development commensurate with the isolation and overall bush fire risk. If additional information is not received within 100 days the application will be refused on the basis of Requested Information not provided. A formal request for re-assessment would be required after this time.
DEPARTMENT OF ENVIRONMENT, CLIMATE CHANGE AND WATER
1. The EA does not adequately address the potential Water Quality impacts of the project including the management and treatment of sewage generated by the project and stormwater management; (Attachment A)
2. The EA does not provide sufficient detail of sediment and erosion control; (Attachment A)
3. The EA does not adequately address the potential impacts from the development on the sensitive receiving environments including Endangered Ecological Communities (EECs) and Wonboyn Lake. Endangered Ecological Communities which occur in the vicinity of the development include: • Coastal Saltmarsh in the NSW North Coast, Sydney Basin, and South East Corner Bioregions; and • Swamp Oak Floodplain Forest of the NSW North Coast, Sydney Basin, and South East Corner Bioregions. (Attachment A)
4. The EA has not adequately assessed the impact of the project on threatened species and their habitat. (Attachment B)
DECCW does not support the proposal in its current form and recommends that the matters identified be addressed prior to any development consent being considered for the proposal. If you require any further information, please contact Duncan McGregor on 6229 7002.
ATTACHMENT A:

ISSUE RAISED:

Water Quality impacts of the project

The EA proposes that each lot will have its own on-site treatment system for sewage and wastewater. The systems proposed for the site are standard septic tanks for primary storage followed by secondary treatment in Ecomax mounds. No predictions have been made of the quality of treated effluent or the impact of this effluent on the receiving environment. DECCW does not support the proposal to treat sewage onsite due to the close proximity of waterways and Endangered Ecological Communities (EECs) and the potential for significant impact on these ecosystems by increased nutrient loading from effluent treatment located onsite.

The proponent must demonstrate that the treatment of sewage by the proposed method presents the best environmental outcome and fully justify any impacts. Particularly, the proponent must demonstrate that nutrients released by on-site sewage disposal will not migrate off site to impact on waters and EECs.

Additionally, the EA does not predict the impact of the proposal on waters, particularly from effluent disposal. This should be undertaken considering the impact of the proposal on Water Quality Objectives for each stream or water body to be impacted, along with the capacity of any EECs to receive runoff from the development. Water Quality and River Flow Objectives for New South Wales can be viewed at http://www.environment.nsw.gov.au/ieo/index.htm.

The ecosystems, in particular the Coastal salt marsh, which occur on and in the vicinity of the development site, are considered to be highly sensitive ecosystems which can be impacted by changes both in water quality and quantity. It is unclear whether the methods of stormwater treatment proposed for this development are appropriate for a receiving environment which is highly sensitive (see *Offsite Impacts* below). There should be no change in the hydrological regime of overland flow from the development and no change in the amount and quality of water which is being released into the receiving environment.

Sediment and Erosion Control

The proponent should note that DECCW does not support the use of causeways for construction phase or permanent access to the subdivision where other options exist, due to the potential for pollution of waters by vehicles and potential blockage of culverts by litter. Any proposed crossing should be fully justified in the context of impacts on water quality and EECs, as described above under 'Water Quality impacts of the project'. All access roads and tracks should be designed and built in accordance with the guidelines, particularly Volume 2C *Unsealed Roads* and Volume 2D *Main Roads* available from http://www.environment.nsw.gov.au/stormwater/publications.htm.

DECCW does not support the installation of in-stream treatment measures, except where these measures are specifically designed to restore the stream to a more natural (i.e. pre-settlement) state in accordance with the guidelines (Landcom 2004) and best practice.

Offsite Impacts

The EA has not demonstrated that pollutant loadings resulting from the proposed final form of the subdivision will be sufficiently low to protect waters and EECs. Modelling of pollutant loadings appears to have been undertaken; however DECCW considers the approach taken to be inadequate for prediction of impacts.

MUSIC modelling of the site was undertaken with a number of assumptions including from Brisbane City Council (2003) relating to effective impervious areas. No attempt to justify these assumptions appears to have been made. Any assumptions made in the modelling must be fully justified, as suggested by Brisbane City Council (2003 p. 10 – *Practitioners Notes*).

The proponent must demonstrate that pollutant loadings in discharged stormwater are sufficiently low for discharge into creek waters and Merimbula Lake, and that these loadings will not impact on EECs.

The EA does not provide adequate reasoning for not providing a 100m buffer to Wonboyn Lake to protect water quality leaving the site. A riparian buffer of at least 100m from the edge of Wonboyn Lake must be provided and should be managed to protect the water quality and biodiversity of the area, in accordance with the EARs issued by DNR on 25 July 2006.

Sediment and erosion control should be designed with a focus on treating water before it enters a drainage feature, rather than after. Any structures to be placed within the riparian buffer or a drainage feature should be designed to mimic the pre-settlement condition of the feature, in accordance with the guidelines contained in Landcom (2004).

ATTACHMENT B:

ISSUE RAISED:
<u>Threatened Species Impacts</u> DECCW are unable to identify all issues with developments at the adequacy stage due to the limited time frames, and note that the issues identified during this adequacy assessment have not been rectified in the Environmental Assessment. DECCW have conducted a thorough review of the information provided in *Appendix E2: Flora and fauna survey, Picnic Point Subdivision Lake Wonboyn* ("F&F report") and consider there are several outstanding issues which are required to be addressed. These include: • Inadequate surveys along the power line, fire trail and development areas; • Hollow bearing tree assessment; • Loss of feed trees for the yellow bellied glider; • Addressing Part 3A Threatened Species guidelines; • Inappropriate location of powerline and firetrail.
Inadequate surveys along the power line easement, fire-trial and development areas. Because of the age of the application, previous advice was provided by the Department of Natural Resources (DNR). This department no longer exists and its functions have been absorbed within DECCW. DNR previously requested additional habitat and feed tree surveys within areas of potential disturbance, however no targeted surveys appear to have been undertaken along the proposed power line easement or fire trail area. Targeted flora and fauna surveys are required to be undertaken along these routes. DECCW consider this area to have a high potential for several ground dwelling threatened fauna species as well as providing feed trees for Koalas. Targeted surveys for Koalas are required to be undertaken as the area contains *Eucalyptus bosistoana* within the development footprint. DECCW can advise of the most appropriate methods for targeting Koalas in the area. DECCW note the core Koala habitat has not been adequately addressed in the F&F report. DECCW are concerned the trapping effort and methods undertaken for ground dwelling fauna are not comprehensive enough to determine presence or absence of ground dwelling fauna in the area. The F&F report does not indicate the presence of diggings, but does indicate a common bandicoot was identified onsite. Recent work undertaken by DECCW in the Lake Wonboyn area has determine the presence of Southern Brown Bandicoot and Long-nosed Potoroos, both of which are threatened species, and DECCW consider the development area may provide habitat for these species. These animals have been detected using infra-red cameras which is the DECCW preferred method of detecting these species. DECCW therefore require further information regarding the presence or absence of diggings onsite. If diggings were located within the development footprint or other areas to be impacted further surveys using infra-red cameras should be undertaken.
Hollow bearing tree Assessment DNR requested additional habitat tree inspections within potential areas to be disturbed. *Appendix E1: Habitat Inspection Report* indicates the amount and location of the hollow bearing trees which will be impacted by the development. However this report does not provide information on the size, location or amount of hollows within each tree that will be impacted. The report also provides very little information on the size of the hollow resource located on the property. DECCW requires information on the amount, sizes and types of hollows located within the study area to determine the significance of the hollows to be removed. The flora and fauna report indicates that the Yellow-bellied Glider (*Petaurus australis*), Greater Broad-nosed Bat (*Scoteanax rueppellii*), Glossy Black-Cockatoo (*Calyptorhynchus lathami*), Gang-gang Cockatoo (*Callocephalon fimbriatum*), and Powerful Owl (*Ninox strenua*) were located within the vicinity of the site, however no stag watching of the hollow bearing trees were undertaken during the survey period. DECCW therefore recommends all hollow bearing trees to be impacted by the development be stag watched during the breeding season of the above mentioned species to determine if the hollows to be removed are breeding hollows for these species.
Loss of feed trees for Yellow Bellied Gliders The flora and fauna report states that Yellow-bellied Gliders were detected in and around site 3 which is in the southern part of the development area. However, the map attached to *Appendix E1: Habitat inspection Report* indicates that the Yellow-bellied Glider feed trees are located within a development area in site 1 which is in the North of the site. Clarification of how many feed trees exist, the location of those feed trees within the development area and what proportion of feed trees will be impacted by the development is required to determine the impact of this development on Yellow-bellied Gliders and their habitats.

ISSUE RAISED:
Addressing Draft Part 3A Guidelines for Threatened Species Assessment The flora and fauna report has not addressed the *Draft Guidelines for Threatened Species Assessment under Part 3A of the; Environmental Planning and Assessment Act 1979*, stating that as these guidelines were draft they did not have to be applied. All developments are required to use these guidelines even though they are in draft form. The flora and fauna report instead uses the Assessment of Significance under s. 5a of the *Environmental Planning and Assessment Act 1979*. However the F&F report does not apply the Assessment of Significance to all species which may be affected by the development. The Assessment of Significance has only been applied to those species that were actually detected onsite, not all species which may be impacted by the development both directly and indirectly. The Assessment of Significance guidelines clearly state that all species with habitat that potentially may be impacted by the development need to be considered in the Assessment of Significance. As the surveys for ground dwelling fauna were only undertaken over 4 nights this level of surveying cannot prove the absence of these and other species from the development area.
As this is a Part 3A development the flora and fauna report should have addressed the following issues: ***Draft Part 3A Guidelines for Threatened Species Assessment*** The guiding principles for Threatened Species assessment, at section 1.2, indicate that proponents should ensure developments: • Maintain or improve biodiversity values (i.e. there is not net impact on threatened species or native vegetation); • Conserve biological diversity and promote ecologically sustainable development; • Protect areas of high conservation value (including areas of critical habitat); • Prevent the extinction of threatened species; • Protect the long term viability of local populations of threatened species, populations and ecological community; • Protect aspects of the environment that are matters of national significance. The flora and fauna report has not addressed any of the above mentioned guiding principles, especially the first principle of Maintain or Improve biodiversity values, and protecting areas of High conservation value.
The flora and fauna report has not addressed any of the above mentioned guiding principles, especially the first principle of Maintain or Improve biodiversity values, and protecting areas of High conservation value.
The flora and fauna report has not addressed Steps 3-5 of the Assessment Process. DECCW considers that Steps 4 and 5 are required to be addressed for this development. Step 4 indicates developments are required to Avoid, Mitigate or Offset the impacts of the development. Step 4 has not been addressed in the F&F report and no offset strategy has been provided for the un-avoidable impacts associated with this development.
DECCW recommend an offset which is protected in perpetuity under conservation management should be provided for this development. The offset should be calculated in accordance with *Draft Principles for the use of Biodiversity Offsets in NSW* which can be found at http://www.environment.nsw.gov.au/biocertification/offsets.htm. The proponent or their consultant may wish to use the Biobanking Calculator to assist them in calculating the amount of offset required for this development

ISSUE RAISED:

Inappropriate location of power-line and fire-trail

DECCW do not support the construction of the power line through high quality intact native vegetation which provides habitat for a large number of threatened and non threatened fauna and flora species, especially as it appears that other options are available to the proponent.

DECCW note that the flora and fauna report did not assess the impacts associated with the construction of access tracks into the power line route. The report does not discuss the issue or impacts associated with the construction of access tracks in difficult terrain. DECCW therefore consider further survey and assessment should be undertaken to adequately assess the impacts of the entire development including the access tracks.

It appears from the flora and fauna report that no survey work for either flora or fauna was conducted for the power-line or the fire-trail. Further survey work as mentioned previously should be undertaken on both the fire-trail and the power-line route.

The transmission line route and associate access tracks and fire trail will fragment this area of intact native vegetation creating avenues for feral animal and weed infestations, and will limit the movement of some species in the landscape. These impacts have not been adequately addressed in the report.

DECCW – OFFICE OF WATER

Attachment A provides NOW's comments on the proposal which are in relation to:

- the protection / enhancement of a 100 m wide riparian setback around Wonboyn Lake
- the protection and enhancement of watercourses and riparian land
- the source / availability of a sustainable water supply for the proposal. The availability of a sustainable water supply should be demonstrated prior to consent being determined.

The NOW's recommended Conditions of Approval are provided at Attachment B.

Contact Details:

Should you have any queries in respect to this matter, please contact me on (02) 9895 7651.

ATTACHMENT A:

Protection of the watercourses and riparian land

Section 4.6.1 of the EA (page 63) indicates that the proposal provides a riparian setback of 75 metres from Wonboyn Lake. Reference is made to the former Department of Natural Resources (DNR) submission to the DOP on the key issues and assessment requirements for inclusion in the Environmental Assessment (dated 25 July 2006). The DNR submission recommended the establishment of a core riparian zone setback of at least 100 metres from the top of the bank or high water mark of Wonboyn Lake.

The NSW Office of Water (NOW) supports the former DNR recommendation for the establishment of a core riparian zone setback of at least 100 metres from the top of the bank or high water mark of Wonboyn Lake. The NOW notes this recommendation is also consistent with Director General's Environmental Assessment Requirements which include that the EA must demonstrate provision of an effective riparian zone excluding development (setback 100 m from top of bank or high water mark of lake).

The NOW recommends the proposal is amended to be consistent with the former DNR's riparian setback recommendation for Wonboyn Lake and the Director General's Environmental Assessment Requirements.

Figure 1.6 of the EA shows three intermittent watercourses are located on the site. The Flora and Fauna survey report indicates that the ephemeral drainage lines occur beyond the limits of the areas proposed for subdivision and development. The three intermittent watercourses have been categorised as Category 1 watercourses (a 50 m wide riparian zone along both sides of the watercourse).

Section 5.2.2 of the Water Cycle Management Study refers to the watercourse crossings and indicates the ROW crossings will use shallow causeways sized according to the expected flow (page 14). Any watercourse crossing should be designed and constructed in accordance with ***the DWE Guidelines for Controlled Activities Watercourse Crossings (February 2008)***

ISSUE RAISED:
The NOW recommends the proposal incorporate the following riparian outcomes: (a) the width of the CRZ around Wonboyn lake is to be measured from top of bank or high water mark in accordance with the DNR recommendation of minimum 100 m
(b) The riparian zone is to remain, or become vegetated, with fully structured native vegetation (trees, shrubs and groundcover species).
(c) Any Asset Protection Zone (APZ) requirement, or any part of the APZ, must not be located within the riparian zone.
(d) All uses associated with the development (with the exception of environmental protection works and crossings) should be located outside the riparian zones.
(e) Any disturbance of watercourses associated with the proposal must be rehabilitated to emulate a naturalised system for aquatic, riparian and terrestrial environments.
(f) Any disturbance of the riparian zones should be rehabilitated with fully structured local native riparian vegetation (trees, shrubs and groundcover species) and at a density that would occur naturally.
Surface Water and Groundwater The NOW is responsible for administering the Water Act 1912, which manages and regulates the use of surface water and groundwater resources. The EA does not provide adequate details to assess water licensing requirements under the Water Act 1912. As a base requirement the NOW requires the location and capacity of any new proposed dam structures. The applicant needs to be advised that a surface water embargo exists for all streams located in the South Coast area of operations for surface water diversions for commercial activity. There are exemption categories in the embargo and a copy of the 2007 South Coast embargo notice is attached which outlines the exemption clauses. A groundwater embargo also exists for subsurface water licences. There are exemption categories in the embargo and a copy of the 2008 embargo notice is attached which outlines the exemption clauses.
Water Supply The source/availability of a sustainable water supply for this proposal is an issue of high importance and it needs to be dealt with prior to consent being determined. The EA needs to demonstrate that an adequate sustainable supply will be available for each proposed lot. Section 3.11.2 of the EA indicates that there is no reticulated sewage or water available on site and Section 3.11.5 notes each lot will establish its own collection system for water supply.

ISSUE RAISED:
Connection to reticulated town water and sewerage provides a more secure (quality and quantity), reliable and manageable water supply and reduces the stress on local surface and ground water resources. If this is not an option (it is noted in Section 4.4 that the site is not able to be joined to a reticulated sewer), it needs to be demonstrated that each new lot will have a sustainable water supply. The EA indicates that rainwater tanks are to be provided for all lots to provide water for future dwellings and for bushfire fighting purposes. The NOW notes that RW Surveying has recommended each lot be supplied a minimum 90 000 litres of water storage with a minimum 10 000 litres dedicated for fire fighting purposes to comply with bushfire requirements. The NOW understands that the 90,000 litres is a Bega Council guideline and depending on usage, it would supply between 3 – 6 months water supply. It is important that DOP when undertaking its assessment of this subdivision proposal only endorse the subdivision if a feasible, sustainable water supply system is available. Further details should be sought from the applicant to illustrate that each proposed lot has access to a sustainable water supply.
<u>Harvestable Rights – water supply options</u> Water supply options for the site include the use of harvestable right dams under the Harvestable Rights. The NOW's Farm Dams Assessment Guide provides details on Harvestable Rights and the calculation of the Maximum Harvestable Right Dam capacity (MHRDC). Dams capturing up to the harvestable right capacity are not required to be licensed. Harvestable Right dams can be located on hillsides, gullies and minor watercourses that do not have permanently flowing waters and which are first and second order watercourses in accordance with the Strahler system of stream ordering. The Strahler system of stream ordering of watercourses is based on 1:25 000 scale topographic maps. Please refer to: **<u>http://www.water.nsw.gov.au</u>** The Harvestable Right gives landholders the right to capture and use for any purpose 10 % of the average annual runoff from their property. The Harvestable Right has been defined in terms of an equivalent dam capacity called the Maximum Harvestable Right Dam Capacity (MHRDC). The MHRDC is determined by the area of the property (in hectares) and a site-specific run-off factor. The NOW has calculated a rainfall runoff factor for Wonboyn Lake at 0.09. Given the property size of approximately 131.1 ha as outlined in Section 1.1 of the EA, the maximum harvestable right dam capacity for the subject site is 11.8 ML. The subdivision of the site into 7 lots would result in relatively small lots (ranging between 2.83 ha to 4.58 ha with the Residual lot 7 having an area of 107.8 ha) and a small maximum harvestable right dam capacity per lot. Construction costs, evaporative/seepage losses, viable catchment areas etc are factors likely to make dams of this size impractical. Individual lots less than 10 hectares would have a harvestable right too small to provide a practical, albeit non potable water supply.

ISSUE RAISED:
The MHRDC includes the capacity of any existing dams on the property that do not have a current surface water licence. The location and estimated capacity of every dam must be shown. Any capacity of the total of all the dams on the property greater than the MHRDC may require a licence. There are exemptions for dams related to the Harvestable Right. These include: • Dams to control or prevent soil erosion; • Dams to contain effluent and sediment; • Flood detention basins; • Dams built for environmental reasons (eg aesthetics, nutrient control, wildlife etc); and • Dams which don't harvest runoff (eg. turkeys nest dams, ring tanks). These exemptions are only applicable to the end use of the dam, even if the initial use is one of the above. Water detained on site for any purpose other than water quality protection is subject to harvestable rights restrictions.
The NOW requests details on: • any existing surface water and groundwater licences under the Water Act 1912 on the subject property • the purpose of the existing licences • the existing dam/s (date of construction, location, purpose, size and capacity, the legal status/approval for existing structure/s) • any proposal to change the purpose of existing structure/s. • if any remedial work is required to maintain the integrity of the existing structure/s. • the purpose, location and design specifications for any proposed structure/s. • Size and storage capacity of the structure/s. • Calculation of the Maximum Harvestable Right Dam Capacity (MHRDC). • if the structure/s is affected by flood flows. • any proposal for shared use, rights and entitlement of the structure/s. • if the proposed development has the potential to bisect the structure/s • volumes of water to be used with each new allotment. Storages receiving only (piped) roof-runoff or treated effluent are not licensable. Also, storages designed and sized solely for environmental purposes (no extraction) are exempt from licensing. Any dams not currently licensed that harvest ground surface runoff for consumption are subject to harvestable right considerations and may be licensable. The function, capacity and location of all dams must be provided in order to determine licensability. For water licensing queries please contact: Mr Wayne Ryan on phone 02 4429 4442.

ISSUE RAISED:
Basic Landholder Rights The NOW is concerned that the proposed subdivision could result in the creation of new Basic Landholder Rights (BLRs). The *Water Management Act 2000* identifies BLRs for access to water whereby landholders over an aquifer, or with river or lake frontage, can access water for domestic (household) purposes or to water stock, without the need for a water licence (although a license will still be required for bore construction or possibly to construct a dam). Any proliferation and concentration of dwelling houses in a relatively small geographical area that potentially could take a domestic water supply from a water source will increase the demand and use of water resources, effect other users of the resource including the environment and contribute to declining river health (for eg decline in aquatic habitat, geomorphic stability, water quality and riparian areas etc) unless properly managed. The proposal must not result in the creation of new BLRs over any vulnerable aquifers.

ATTACHMENT B:
DECCW (Office of Water) – Recommended Conditions of Approval **1.** Riparian zones consisting of local native plant species shall be established and maintained in and adjacent to Wonboyn Lake and the watercourses that are located on the site, for their entirety within the site.
2. The extent of the riparian zones is to be measured horizontally landward from top of bank or the mean high water mark, and is to be of a minimum width of: a. **100 m** along the foreshore of Wonboyn Lake, b. **50 m** either side of the intermittent watercourses
3. All works and disturbance areas associated with the proposal (with the exception of any crossing and environmental protection work) must be located outside the riparian zones and must not compromise the riparian zones in any way.
4. A **VMP** for site rehabilitation is to be prepared that demonstrates protection of any remnant local native riparian vegetation at the site and the restoration of any riparian zones to a state that is reasonably representative of the natural ecotone of the protected waters system, to achieve sound naturalised watercourse and long term riparian area stabilisation and management by the enhancement/emulation of the native vegetation communities of the subject area.
5. Seed and propagule sources are to be from local botanical provenance (regarded as from as close as possible and from the same general habitat (same soil type, distance from watercourse, exposure etc)
6. The riparian zones must be maintained for a period of at least five (5) years after final planting or where other revegetation methods are used, five years after plants are at least of tubestock size and are at the densities required by these conditions and with species richness as described in the VMP, and five (5) years minimum for those areas required for access and maintenance relating to any WP.
7. The riparian zones must be monitored over a period of 5 years commencing after final planting and will include weed control monitoring and the establishment of locally indigenous riparian vegetation (comprising both natural regeneration and/or planting).
8. A permanent physical barrier, (such as bollards, logs, a fence, pathway, road etc), to prevent inadvertent damage to riparian zones is to be placed at the landward extent of the riparian zones.
9. Any watercourse crossing is to be designed and constructed in accordance with ***the DWE Guidelines for Controlled Activities Watercourse Crossings (February 2008)***.

ISSUE RAISED:
10. Erosion and sediment control measures are to be implemented prior to any works commencing at the site and must be maintained for as long as necessary after the completion of works, to prevent sediment and dirty water entering the watercourse. These control measures are to follow relevant management practices as outlined in the Landcom manual *"Managing Urban Stormwater: Soils and Construction – Volume 1" (4^{th} Ed., 2004) - the "Blue Book".*
11. Any requirements for bushfire asset protection zones, including fire trails, are not to compromise in any way the extent, form or function of the riparian zones. Fuel reduced areas are to be located outside of riparian zones. **END OF CONDITIONS OF APPROVAL**
INDUSTRY & INVESTMENT
I&I NSW is responsible for ensuring that fish stocks are conserved and that there is "no net loss" of key fish habitats upon which they depend. To achieve this, the Department ensures that developments comply with the requirements of the *Fisheries Management Act 1994* (namely the aquatic habitat protection and threatened species conservation provisions in Parts 7 and 7A of the Act respectively) and the associated *Policy and Guidelines for Aquatic Habitat Management and Fish Conservation (1999).* In addition the Department is responsible for the promotion of a viable and environmentally sustainable aquaculture industry and ensuring the sustainable management of commercial and recreational fishing within NSW. The NSW Oyster Industry Sustainable Aquaculture Strategy (OISAS) and enabling amendments to SEPP 62 - Sustainable Aquaculture were gazetted in December 2006. The strategy covers all oyster growing areas in NSW including Wonboyn Lake. It maps and describes Priority Oyster Aquaculture Areas (POAAs) and details the agreed water quality needs of the oyster industry. OISAS can be accessed at: http://www.dpi.nsw.gov.au/fisheries/aquaculture/publications/oysters/industry/nsw-oyster-industry-sustainable-aquaculture-strategy
1. The site is located adjacent to Wonboyn Lake. As such, the potential off site impact of the development upon aquatic habitats, fish communities, and the oyster aquaculture and recreational fishing industries within Wonboyn Lake via the mechanism of water quality decline both during construction phase and subsequently, deserves particular attention.
2. The conclusions in Appendix C Water Cycle Management Study state that the development will have "a beneficial effect provided that the proposed Water Cycle Management Plan is implemented. Without these specific measures, the development **could potentially have a negative impact upon water quality in the local watercourses**".

ISSUE RAISED:
3. The MUSIC modelling results (page 25 of Appendix C) suggest very significant **reductions** in Total Suspended Solids (67%) and Total Nitrogen (74%) due to implementation of the Water Cycle Management Plan (WCMP) in comparison with the base case - ie the modelling predicts a **beneficial** effect. I&I NSW find it very difficult to understand how such substantial reductions in pollutants could in fact be achieved given (a) that the site in its current condition is almost completely vegetated and (b) is almost completely undisturbed and (c) significant clearing for a new access road, new driveways, new Fire Trail and new building envelopes will be undertaken and (d) the soils are classed as "significantly dispersive" (Appendix D). Perhaps the modelling is comparing "development with the WCMP" versus "development without the WCMP" rather than "no development" versus "development with WCMP". In addition, the MUSIC modelling appears to have only been applied to an "average" rainfall year. No data is provided for drier or wetter than average conditions.
4. There is a large number of Priority Oyster Aquaculture Areas (POAAs) located in Wonboyn Lake and less than 200 metres from the proposed subdivision. The most critical issue relevant to the local oyster industry is the on-site treatment and disposal of sewage from the proposed subdivision. The removal or inactivation of human pathogenic viruses and bacteria is highly important to protect the sanitary water quality of the adjacent oyster growing areas. Given the potential cumulative impact of additional disposal systems in the area, the on-site sewage treatment systems need to incorporate UV disinfection and chlorination.
I&I NSW recommends that DoP seek clarification from the proponents as to how such significant water quality improvements are predicted to occur. If fully satisfied that a truly Neutral or Beneficial Effect can be achieved (compared to the "no development" scenario), and the proposal can therefore be approved, DoP should include the following measures as Conditions of Consent to guarantee no significant adverse impact upon aquatic habitats, oyster aquaculture or recreational fishing:
1. Require the proposed 75 metre wide foreshore buffer adjacent to Wonboyn Lake to be clearly marked on the ground and protected from future clearing and development by imposing covenants or similar constraints on the title of the land.
2. Protect the foreshore from development for jetties, boat ramps, pontoons, boat sheds etc by zoning or imposing covenants on the title of the land.
3. Require disinfection and chlorination of effluent prior to disposal.
4. Require the proposed set back of all on-site effluent irrigation areas (Ecomax raised soil mounds) to be at least 150 metres from Wonboyn Lake.
5. Require periodic, independent auditing of compliance with the proposed water sensitive urban design (WSUD) management measures recommended for the site in Appendix C – Water Cycle Management Study by SECC Morse McVey P/L (dated February 2008).

ISSUE RAISED:
6. Require periodic, independent auditing of compliance with the proposed construction erosion and sediment controls recommended for the site (including water quality monitoring for suspended solids) in Appendix D – Primary Erosion and Sediment Control Plan by SECC Morse McVey P/L (dated February 2008).
7. Require periodic, independent auditing of compliance with the proposed internal road drainage measures recommended for the site in Appendix B – Drawings 07000168 No.00-08 by SEEC Morse McVey P/L (dated February 2008) and Section 5.2 of Appendix C – Water Cycle Management Study by SECC Morse McVey P/L (dated February 2008).
8. Require the implementation of erosion control measures along the existing service track within the power line easement to address existing erosion.
The proponent should also be made aware that the oyster aquaculture leases directly adjacent to the proposed development have existing use rights and will not be removed or altered as a result of subsequent residential development or to enable installation of boat ramps, jetties, boat sheds or the like. Should you have any general queries please contact Dr Trevor Daly on (02) 4478 9103 or 0408 487083. If you have any questions regarding aquaculture please contact Katie Sachs (Policy Officer Aquaculture) on (02) 4916 3913. I&I NSW advises that there are no issues related to agriculture, mineral resources or State Forests.