

COMMITMENTS RELATING TO ENVIRONMENTAL ASSESSMENT- DOLPHIN POINT (extract from Environmental Assessment of Sept 2007)

Roadways

1. The engineering design of all roads will be in accordance with Shoalhaven Council's *Engineering and Design Specification*, Chapter D2 and in accordance with the Australian Model Code for Residential Development (AMCORD) Guidelines. An appropriately qualified person will provide certification to Shoalhaven Council to demonstrate compliance with these documents. All roads will be completed prior to the release of the linen plan.
2. The width of the collector road identified through Stages 2 and 3 will be designed for a minimum pavement width of 9 metres to accommodate future public transport routes.
3. The local street network for Stages 2 and 3 will cater for the provision of public utility networks including water, sewerage, electricity, telecommunications, street lighting and gas. The provision of utility services will be in accordance with Shoalhaven Council's *Engineering and Design Specification*, Chapters D10 and D11. An appropriately qualified person will provide certification to Shoalhaven Council to demonstrate compliance with this document. All public utility networks will be completed prior to the release of the linen plan.
4. The street component consisting of carriageway widths, verge widths, kerb type, longitudinal gradients and pavement treatments for each local and collector street will be in accordance with Tables 1 and 3 of Shoalhaven Council's Development control Plan No 100. The only variation to this will be in respect of the perimeter road. The width of this road will be 20 metres in order to achieve the appropriate width for the asset protection zone.

An appropriately qualified person will provide certification to Shoalhaven Council to demonstrate compliance with this document. All roads will be completed prior to the release of the linen plan.

5. A landscape plan will be submitted to Shoalhaven Council for Stages 2 and 3 showing: The street reserve and indicative location of the carriageway; location, species and general character of tree planting and hard and soft landscape treatment. All landscaping work will be completed in accordance with Council's requirements. The landscaping works will be completed prior to the release of a linen plan.
6. A footpath including wheelchair/pram ramps at the intersections and crossing points will be constructed on all roads. The footpath will be completed in accordance with Shoalhaven Council's Engineering and

Design Specification Chapter 2. This work will be completed prior to the release of a linen plan for the subdivision.

7. Speed control devices will be placed on longer perimeter roads as required.

Bushfire

8. A section 88B instrument will be prepared by the proponent requiring the residential front yards of those allotments that form part of the asset protection zone to maintain the front yard to asset protection zone standards. This will include:

- Any landscaping or plantings are to be local endemic mesic species or other low flammability species. Any plantings are to be well spread out and are not to form a contiguous pathway to the dwellings.
- Any structures (eg fences, garden sheds, decks, pergolas, carports etc) within the asset protection zone are to be non-combustible as defined by Australian Standard 1530.1 and not deemed combustible pursuant to Clause C1.12 of Volume 1 of the Building Code of Australia.
- Any structures storing combustible materials such as firewood must be sealed to prevent entry of during debris.
- Gutters, roofs and roof gullies are to be kept free of leaves and other debris.
- A minimum ground fuel is to be maintained to include either mown grass, paving, concrete, bare ground or less than 3 tonnes per hectare of fire fuel (ie material of <6mm in diameter).

A copy of the Section 88B Instrument will be provided to Shoalhaven Council prior to the release of a linen plan for the subdivision.

9. The perimeter road for stages 2 and 3 will comply with the road construction standards for public roads as identified in the document entitled Planning for Bushfire Protection Guidelines (NSW Rural Fire Services) 2001.

An appropriately qualified person will provide certification to Shoalhaven Council to demonstrate compliance with this document prior to the release of the linen plan.

10. Fire hydrants are to be installed in Stages 2 and 3 in accordance with Australian Standard AS2419.1-1994 and Section 6.4 of the document entitled Planning for Bushfire Protection Guidelines (NSW Rural Fire Services) 2001.

An appropriately qualified person will provide certification to Shoalhaven Council to demonstrate compliance with this document prior to the release of the linen plan.

11. The Section 88B Instrument will also require that development on the perimeter lots to the north-west within Stage 2 will require a Level 1 construction standard under AS3959. Dwellings on the southern, eastern and western perimeters will require a Level 2 construction standard under AS3959.

A copy of the Section 88B Instrument will be provided to Shoalhaven Council prior to the release of a linen plan for the subdivision.

Water Quality Control Measures

12. Two water quality control ponds will be provided on the site in accordance with Figure 3 in the report prepared by Patterson Britton and Partners. The primary function of these water quality control ponds is to act as a stormwater quality treatment measure.

The proponent will complete this work prior to the release of the linen plan.

An appropriately qualified person will provide certification to Shoalhaven Council to demonstrate compliance with the report provided by Patterson Britton and Partners prior to the release of the linen plan.

13. The existing dam will be one of the water quality control ponds. Remediation work to the dam will include:

- Planting suitable vegetation, including macrophytes;
- Providing edge treatment to minimise mosquito habitat; and
- Construction of a suitable outlet/spillway.

An appropriately qualified person will provide certification to Shoalhaven Council to demonstrate compliance with the Patterson Britton and Partners report prior to the release of the linen plan.

14. The second water quality control pond will be constructed downstream of the existing dam. This will have a surface area of approximately 5000m² and include the following;

- Extensive planting including macrophytes;
- Suitable edge treatment to minimise mosquito habitat;
- Constructed outlet; and
- An average minimum depth of 1 metre.

An appropriately qualified person will provide certification to Shoalhaven Council to demonstrate compliance with the Patterson Britton and Partners report prior to the release of the linen plan.

15. Gross pollutant traps will be installed in accordance with Figure 3 in the Patterson Britton & Partners report.

An appropriately qualified person will provide certification to Shoalhaven Council to demonstrate compliance with the Patterson Britton and Partners report prior to the release of the linen plan.

16. An assessment of the existing dam and the second water quality control pond will be carried out during subdivision earthworks. The assessment will include water and sediment quality prior to off site discharge of retained water and/or removal of onsite use of sediments from the dams.

An appropriately qualified person prior to the subdivision earthworks being completed will complete this assessment. Details of the findings will be submitted to Shoalhaven Council within 72 hours of the assessment being undertaken. Details of any required remediation measures will also be submitted to the Council and this work will be completed immediately.

17. A Section 88B instrument will be prepared requiring each dwelling to provide a 4000L rainwater tank that will capture the stormwater collected from the roof of future dwellings. The rainwater tank design will be as follows:

- A minimum 4m³ volume rainwater tank designed to collect the majority of roof runoff and store it for irrigation, clothes washing and toilet flushing purposes would be installed for each of the dwellings on the site;
- The tanks are to incorporate a first flush device, inspection/cleanout hatch and cleanout valve;
- The tanks are to incorporate an outlet tap for connection to an irrigation system driven by the tank head (if possible);
- All tank overflow should be directed to the formal piped stormwater drainage system to prevent nuisance flooding;
- All rainwater tanks should be installed and maintained so as to prevent cross connection with the portable water supply;
- A topping up device (from the potable water supply) shall be provided to supplement roof runoff during periods of little rainfall or high water use;
- A backflow prevention device shall be installed;
- All rainwater services shall be clearly labelled “non portable water” with appropriate hazard identification;
- Pipe work used for rainwater services shall be coloured purple in accordance with AS1345. All valves and apertures shall be clearly and permanently labelled with safety signs to comply with AS1319.

A copy of the Section 88B Instrument will be provided to Shoalhaven Council prior to the release of a linen plan for the subdivision.

18. Maintenance of the gross pollutant traps will be undertaken by the landowner of the Stage 5 land.

19. The following maintenance program for the site's water quality control measures will consist of the following:

- Periodic (6 month) inspection and removal of any gross pollutants and coarse sediment that is deposited in the water quality control pond and replacement of vegetation as necessary;
- Periodic (3 month) and episodic (post storm greater than 1 year ARI) inspection and removal of trapped pollutants from all GPT's; and

An appropriately qualified person verifying that this maintenance program has occurred will provide certification to Shoalhaven Council on an ongoing basis.

Sediment Control

20. Prior to any works commencing on the site the proponent will implement the erosion and sediment controls as identified in Figures 6 and 7 of the report by Patterson Britton and Partners. The erosion and sediment control measures will be constructed in accordance with the recommendations in Sections 4.7 and 4.8 of the above report.

An appropriately qualified person will provide certification to Shoalhaven Council to demonstrate compliance with the Patterson Britton and Partners report prior to any further works occurring on the site.

21. The sediment and erosion control devices will be maintained in the following manner;

- Sediment and erosion control devices would be regularly maintained and accumulated sediment removed before 50% of the capacity is used. Accumulated sediment would be re-used or disposed of in an acceptable manner off-site.
- Sediment fences would be checked regularly for rips, excessive build up of sediment behind the fence, and breaches by construction activities. Damage to the fences would be repaired immediately on detection.
- Surface water flows would be diverted around the designated site access to prevent sediment trapped within the access being re-suspended and transported offsite. Sediment that bypasses the stabilised site access, and is deposited on the nearby public streets would be cleaned up promptly by means other than washing into the drainage system.

- Sediment and erosion control devices would be maintained until the disturbed areas have been adequately reinstated or new vegetation is sufficiently established.

An appropriately qualified person will provide certification to Shoalhaven Council to demonstrate compliance with the maintenance of the sediment control measures prior to the release of the linen plan.

Drainage Management

22. The stormwater drainage concept plan for the site will be in accordance with Figure 3 and the details provided in the water management strategy report prepared by Patterson Britton and Partners Pty Limited.

An appropriately qualified person will provide certification to Shoalhaven Council to demonstrate compliance with the Patterson Britton and Partners report prior to the release of the linen plan.

23. The design and construction of the major and minor storm drainage systems will be in accordance with Shoalhaven Council's *Engineering and Design Specification*, Chapter D5. This work will be completed in accordance with the report prepared by Patterson Britton and Partners.

An appropriately qualified person will provide certification to Shoalhaven Council to demonstrate compliance with the Patterson Britton and Partners report prior to the release of the linen plan.

Services

24. Underground electricity supply and telephone service will be provided to Stages 2 and 3. The provision of these services will be in accordance with the requirements of the relevant authorities.

Certification will be provided by an appropriately qualified person demonstrating compliance with the relevant authorities requirements to Shoalhaven Council prior to the release of the linen plan.

Aboriginal Sites or Objects

25. If any previously unrecorded Aboriginal sites or objects are detected during the course of the development which are not covered by the existing Section 90 Consent, work will cease immediately and findings will be reported to the Department of Environment Conservation and Climate Change (NSW) and advice sought as to the appropriate course of action.

26. An Aboriginal Heritage Management Plan will be prepared, submitted to DoP for endorsement and implemented by the proponent.

General

27. A subdivision certificate will be prepared and submitted to Shoalhaven Council in respect of the proposed development. As part of the subdivision certificate, a linen plan will be prepared as well as any Section 88B Instruments.
28. Any future development of stage 5 will be contained within the areas identified as development parcels in the Urban Design Review prepared by Urbis JHD. Approval to these projects in no way endorses the findings of Urbis as regards future development parcels.

Vegetation and Habitat Management

29. The extent of Swamp sclerophyll forest and Coastal saltmarsh to be retained and offset will be marked in the field by an appropriately qualified person and the vegetation boundaries surveyed by a registered surveyor.

Certification will be provided to Shoalhaven Council by an appropriately qualified person demonstrating that this has occurred prior to the release of a linen plan.

30. The management of retained and offset Swamp sclerophyll forest and Coastal saltmarsh will be secured via positive covenants placed on the titles of the affected land requiring implementation of the approved vegetation management plan by the affected landowners.

Details of the positive covenants will be included in the linen plan.

31. An appropriate perimeter fence will be constructed around areas of retained and offset Swamp sclerophyll forest. The perimeter fencing will be constructed in consultation with an appropriately qualified flora expert and will be established prior to any earthworks occurring within stages 2, 3 and 5.
32. Riparian vegetation will be re-established on either side of the creek in the west (southern part of Stage 3) wherever possible, to maximise the width of the riparian corridor.
33. A vegetation management plan will be prepared by a suitably qualified person for the retained and offset Swamp sclerophyll forest and Coastal saltmarsh and for re-established riparian vegetation. The vegetation management plan will address a number of matters including, but not limited to, protection and maintenance of the Swamp sclerophyll forest and Coastal saltmarsh, weed control, vegetation enhancement, control of access, monitoring and fire management.

The vegetation management plan will be submitted to Shoalhaven Council prior to any works occurring on the site.

34. The water cycle management and water quality treatment systems for the proposal will be designed such that they maintain the existing hydrologic regime in the areas of the Swamp sclerophyll forest and Coastal saltmarsh and protect these communities from adverse water quality impacts.
35. A vehicle proof fence designed and constructed in consultation with the Department of Environment and Conservation (DEC) will be constructed along the western and southern boundaries of stages 2 and 3 where they adjoin lands managed by the DEC. This fencing will be established prior to the release of the linen plan.
36. Trees will be retained within the proposal wherever possible.
37. All trees and vegetation to be retained will be appropriately protected from compaction of root systems, damage to trunks, and the build-up of soil around tree bases, by appropriate work practices during the construction phase of the proposal. The appropriate protection measures are to be in accordance with the recommendations of an appropriately qualified arborist or similar. These protection measures are to be implemented prior to earthworks occurring on the site.
38. All vegetation to be retained will be protected from unauthorised access during the construction phase of the proposal. An induction program for workers will be developed and implemented to inform them of the limitations of the construction site. Temporary fencing will be installed along the edges of vegetation to be retained and workers will be instructed to avoid encroaching into such vegetation.
39. Trees with hollows to be felled during the construction phase, will be felled in accordance with the following procedures:
 - A fauna specialist appropriately licensed under the NSW *National Parks and Wildlife Act, 1974*, for the purpose of rescuing displaced animals, will supervise felling.
 - The fauna specialist will be suitably attired with protective clothing and have suitable equipment to undertake the work.
 - An appropriately skilled local wildlife carer must be notified at least 24 hours prior to the tree felling, that animals may be captured and that these animals may need care.
 - Any non-hollow-bearing trees around those with tree hollows to be felled will be removed first. At least one day will be left between clearing of the non-hollow-bearing trees and the hollow-bearing trees to allow fauna time to vacate the trees.
 - Prior to the felling of the identified and marked hollow-bearing trees, the trees will be shaken or nudged by tree-felling equipment to encourage any fauna to vacate the trees.

- If no animal emerges from the hollows after shaking or nudging, then the tree will be felled and lowered to the ground if possible.
- If an animal emerges from a hollow following shaking or nudging of the tree, then at least 30 minutes will be allowed for the animal to leave the tree. If the animal comes to the ground, or when it is on the lower trunk, attempts will be made to capture the animal using a net. Captured animals will be immediately transferred to a suitably sized cotton bag and checked for obvious injury during the transfer process.
- Captured animals will be placed in individual bags unless they are a family group to which separation would risk the survival of the young.
- Once the tree has been felled, a search will be made of the branches around the tree for any fleeing fauna and hollows should be inspected with a torch for the presence of any animals. Attempts will be made to capture any fleeing fauna with a net, and animals inside hollows should be extracted by hand. Captured animals will be immediately transferred to a suitably sized cotton bag and checked for obvious injury during the transfer process.
- Injured, shocked or immature captured animals will be placed in a cotton bag secured at the top. Bags will be wrapped in appropriate insulating material such as blankets and placed in a quiet, warm and preferably dark place until the wildlife carer can collect them. Details on the location of the capture and proposed release areas will be provided to the wildlife carer.
- Uninjured animals will be released in appropriate habitat as soon as practicable (at night for nocturnal species).

Landscaping

40. Exotic perennial grasses will not be sown in any areas that abut native vegetation to be retained or re-established within the proposal or native vegetation on adjoining lands. If grasses are to be used in these areas, for landscaping or soil stabilisation purposes, then indigenous native species or non-invasive exotic species will be used.
41. Native plants as detailed in the flora and fauna assessment completed by Bushfire and Environmental Services will be included in any landscaping for the proposal.
42. Black She-oak *Allocasuarina littoralis* sourced from local nurseries will be preferentially used in landscaping for the proposal.
43. No known environmental weeds, noxious weeds or known invasive plants species will be planted with the site in association with the proposal.