

2.2. Soils

The site comprises soils of the Pelican Bay and Diamond Head soil landscape variant which is undulating low hills on coastal headlands on various rock types. Soils in this group are imperfectly drained 50-100cm, and comprise Yellow Podzolics, Soloths, Lithosols and Black Headland Soils. The soils are generally stony with high erodibility, sodicity/dispersibility, low available water holding capacity, low fertility and hard setting surfaces. The soil type does not possess major constraints for urban development.

2.3. Aboriginal/European Cultural Heritage

A comprehensive assessment of the sites Aboriginal and European cultural heritage was undertaken in 2003 by Purfleet-Taree Local Aboriginal Land Council as part of the LES. A copy of the assessment appears as **Appendix A**. The site walk identified six items of Aboriginal archaeological significance on the site, within two locations.

Artefacts recorded were determined to be 'flakes', with one identified as a 'core'. The location of the artefacts was consistent with the seasonal patterning movements of traditional Aboriginal persons.

The assessment identified the lower parts of the site (northern side) adjacent to the wetlands had a moderate potential for aboriginal artefacts. The elevated parts of the site, possessed low cultural heritage values. The proposed development will not disturb the land which is near the edge of the wetland, with all this land being provided to Council as public reserve.

The location of the artefacts is shown on **Figure 3**. The development will not result in any disturbance of soils within at least 25 metres of where the artefacts were located. During construction this area will be fenced off to reduce accidental impact. Should any artefacts be uncovered during construction, work on the site will cease until such time as the discovery has been assessed by the Aboriginal Sites Officer of the Purfleet-Taree LALC and officers from DECC.

In terms of European cultural heritage, no items of cultural significance were identified on the site. A search of the State Heritage Register, State Heritage Inventory and Register of the National Estate indicated no Statutory Listed Heritage Items in the vicinity of the site.

2.4. Flora & Fauna

A comprehensive assessment of the sites flora and fauna values has been prepared by *Orogen Pty Ltd* and is provided as **Appendix B**. This study built on the findings of an earlier assessment prepared for the LES in 2003. The conclusions of the assessment are as follows:

The subject site contains a variety of vegetation communities and habitat resources for both Threatened and Protected flora and fauna species. The majority of the habitat resources occurring within the subject site are proposed to be retained however, these habitats are generally associated with two creek lines and low lying areas which include swamp, wetland, saltmarsh and mangrove communities. The retained vegetation communities and aquatic habitats of the creek line would be protected from indirect impact through appropriate stormwater design.

Vegetation occurring within the proposed development area is limited to scattered remnant trees with a highly modified understorey that is dominated by exotic grass species. It is considered however, that this vegetation may provide foraging resources for a small number of Threatened Species. From the desktop review and habitat assessment, a total of 14 Threatened fauna species listed under the TSC Act 1995 could potentially utilise the habitats within the proposed development area. Despite this, it is unlikely that any species would be dependant upon these habitats alone and the proposed clearing will not cause isolation of habitats in the locality and the foraging resources proposed to be removed are considered negligible.

The Section 5A Assessment concluded that the proposal is unlikely to have a significant effect on 'Threatened species, populations or ecological communities or their habitats within the locality'. The preparation of a Species Impact Statement (SIS) is therefore not required.

It is concluded that the development will have a low impact on existing flora and fauna values of the site.

2.5. Infrastructure Provision

Detailed assessment of the availability of water, sewer and electricity infrastructure was undertaken for the development and is provided as **Appendix C**. Discussions have been held with representatives of various providers to ensure design requirements can be met.

Water

A 150mm water main located in Banyula Drive has the capacity to service the development. A plan of proposed water mains is provided.

Sewer

A concept plan is provided showing the location of sewer mains which will drain into the existing Pump Station No 3. Augmentation of the pump station maybe required to service the latter stages of the subdivision.

Electricity

Country Energy has advised that existing capacity is available to adequately service the development.

2.6. Water Cycle Management

The key objective for the management of stormwater for the development is to minimise potential impacts of stormwater runoff on the existing estuarine receiving waters incorporating SEPP 14 wetlands. A comprehensive assessment for the management of stormwater was undertaken by McGlashen & Crisp and a stormwater management system designed in association with WBM. The report is provided as **Appendix D**.

The assessment examined the management of stormwater over the larger site and modelled the proposed stormwater management system against established design criteria. MUSIC Analysis and pre and post development drainage modelling, water quality testing and hydraulic modelling were undertaken as part of the assessment.

MUSIC modelling of the proposed stormwater treatment system indicates that the system would achieve the load-based stormwater quality objectives adopted for the site (80/45/45% reductions in TSS, TP and TN respectively). The Music modelling results also indicate that the proposed constructed wetlands/basins have appropriate extended detention storages that would minimise potential for frequent breaching of the weir outlet.

The constructed wetland/basins were also simulated in XP-RAFTS for 100 year ARI design storm event conditions. The results of this modelling indicate that the basins would provide sufficient storage and flow control to mitigate increased local catchment peak flow rates for design events up to the local critical duration design event.

The provision of treatment measures in series from site sources to the site outlet affords the best possible protection for receiving waters by providing a system that provides a level of redundancy. It is concluded that the stormwater management strategy as proposed will achieve best practice management of stormwater runoff from the development site.

2.7. Flooding

None of the land zoned 2(a) Residential is located below the predicted ARI 100 year inundation level of 2.3m AHD. Details of flooding are set out on pages 16 - 19 of Concept Stormwater Plan report (Appendix D). The ground level of all proposed allotments will be above 2.3m AHD.

2.8. Traffic, Vehicle Access and Road Design

An assessment of the impact of traffic on the local road system was undertaken and appears as **Appendix E**. Peak hour traffic flows of 85 movements are not considered significant and will not reduce the existing level of service on localised intersections, on Old Bar Road or on the Pacific Highway/Old bar Road Interchange.

Vehicle access to the development is via Banyula Drive and Medowie Road. The Masterplan for Precinct 2B provides for Banyula Drive to be extended west and form a Boulevard link back to Old Bar Road. The proposed development of 98 lots does not have a direct impact on the State Road network or RTA infrastructure. The proposed road network is consistent with the adopted Old Bar/Wallabi Point Development Strategy and the completed Masterplan for Precinct 2B. A traffic study undertaken by Maunsell Aecom for Greater Taree Council (6 January 2006) for Precinct 2B concluded Banyula Drive would carry a future peak loading of less than 200 vehicles per hour and annual daily traffic flows of 2500 vehicles.

The proposed road design is consistent with the provisions of DCP no. 57 - Old Bar Precinct 2B in relation to providing a hierarchy of streets and an interconnecting road network within the precinct. In order to provide low speed residential environments and streetscape interest, the road pavement of roads # 4 and #5 is narrowed to become a 'shareway'. A detailed of how these shareways will appear is provided as **Figure 7**, with a scaled diagram appearing in the *Booklet of Plans (Plan 9)*. The design of the shareways are in accordance with Taree Council's engineering design for shareways.

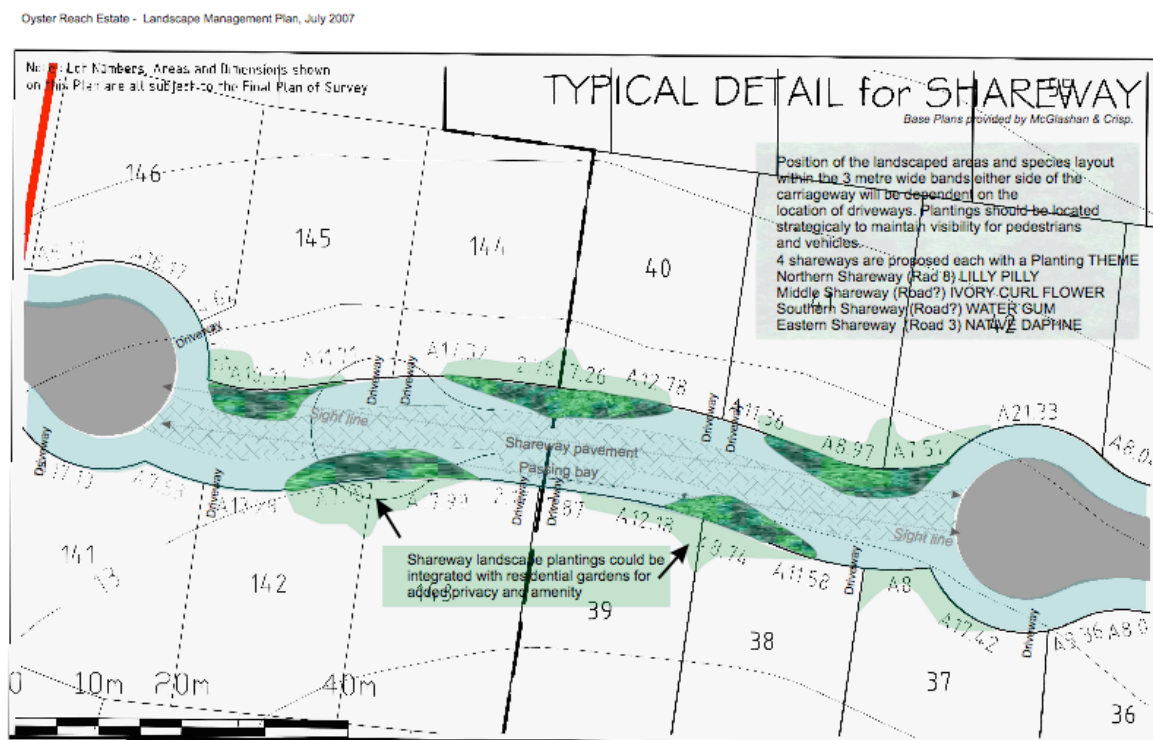


Figure 1 Shareway landscape concept plan

The existing road network is considered adequate to accommodate the additional traffic generated by the development and no upgrade or road improvement works are considered necessary.

2.9. Bushfire Hazard Assessment

A bushfire hazard assessment report was prepared for the total development in accordance with the provisions of Planning for Bush Fire Protection 2006. The report appears as **Appendix F**.

The report concludes that the design layout comfortably satisfies the requirements of the guidelines with none of the proposed lots required to satisfy higher than Level 1 construction standard AS 3959-1999. The location of the asset protection zone is shown on a plan which is included in the booklet of plans. Until such time as development of the remainder of the site is undertaken, ie. land west of the proposed 98 lot subdivision, an Asset Protection Zone of 20 metres in width, will be maintained around the boundary of all allotments. A temporary fire trail located within this APZ will be constructed so as to provide a secondary means of evacuation. This trail connects the temporary turning circles to Banyula Drive. Details are provided on the subdivision plans.

2.10. Contaminated land

The majority of the site has been used for cattle grazing by the current landowner since the 1960's. No dip sites are located on or in close proximity to the site.

The issue of site contamination was considered during the exhaustive LES and LEP process and nothing in the investigation (as per SEPP No. 55) at that time indicated the land was likely to contain contaminated material. Further investigation is considered to be unwarranted.