

PROCEDURE	EQUIPMENT TO BE USED
Site preparation	Excavator, Dump Truck
Bridge installation	Excavator, Crane, Truck, Cement Mixer
Site stabilisation	Excavator, Dump Truck

3.4 RESIDENTIAL ESTATE WORKS

Residential development is the principal objective of the development proposal, as shown in figure 3j. Residential development is proposed to occur following completion of the landfill operations, and will create a low density estate comprising 121 lots administered as tier of a Community Title Scheme that will apply to the whole of land. The estate is expected to generate a population of about 350 persons.

The proposed residential development will nestle between the “Emerald Beach Caravan Park” to the south, and the commenced 74-site caravan park development approved under DA No. 452/82 to the north.

3.4.1 Vehicular Links to the Site

The development site will be linked to both the Pacific Highway (Road No. 1) and Emerald Beach township (Road No. 3) by means of two lane carriageways. The development site will also be linked to the commenced 74-site caravan park development approved under DA No. 452/82.

The road pattern within the estate is characterised by a ring perimeter road that establishes a clear border between the proposed residential land uses and surrounding passive land uses. The internal road pattern provides entrance and exit alternatives.

All roads within the land will become Community Property within the Community Title Scheme, and, together with the Road No. 3 link to Emerald Beach township, will be subject to an inspection and repair routine managed by the Scheme's Community Association (see sec. 3.5.1 below).

3.4.1.1 Link to Pacific Highway

Road No. 1 meets the highway about 180 metres north of the licensed access point described in the Covenant contained in Instrument No. P548537. Road No.1 follows the existing access road that was constructed to commence DA No. 452/82, and its intersection with the highway is the logical commencement point for Road No. 1. This point offers excellent sight distances for all highway intersection scenarios, and, in this respect, is superior to the existing Fiddaman Road intersection with the highway.

As noted elsewhere, a condition of the commenced caravan park development approved under DA No. 452/82 for the adjoining land parcel to the north is the provision of an intersection with the highway "in accordance with Example (4) of NAASRA's Guide to Intersections at Grade". A deceleration and storage lane will be provided for northbound traffic entering the development site, and a deceleration lane will be provided for southbound traffic entering the development site. A left-turn slip lane and merge taper will be provided for southbound traffic exiting the development site. Deceleration, storage and acceleration lanes will generally be constructed in accordance with Part 5 of *AustRoads Guide to Traffic Engineering Practice: Intersections at Grade*.

The northbound right hand turn deceleration lane is proposed to be 170m in length. This will necessitate the extension of the painted median from the service station by up to 300m and the extension of the single lane format for northbound traffic to beyond the Road No. 1 intersection.

The southbound left hand turn deceleration lane is proposed to be 160m in length. It will necessitate the widening of the eastern edge of the highway formation by 3.5m. It is expected that this can be achieved without further widening of the road reserve.

The southbound merge taper will be 100m in length. This is consistent with the length of the acceleration lane designed by the RTA for southbound exit from Fiddaman Road (File No. 10 / 110.1490, 1995). It will necessitate the widening of the eastern edge of the highway formation by 3.5m and modifications to two (2) existing culverts. It is expected that these can be achieved without further widening of the road reserve.

Northbound accelerating traffic will be directed into the northbound overtaking lane by a small painted “seagull” island as shown on figure 3j.

3.4.1.2 Link to Emerald Beach Township

The development site is linked to Fiddamans Creek and Fisherman’s Drive by a Right of Carriageway (R.O.C.) 6.035 metres wide. The R.O.C. is located within Lot 3 in DP 552769 currently occupied by the “Emerald Beach Caravan Park”.

Road No. 3 follows the alignment of the R.O.C. to Fishermans Drive, and also matches, generally, the layout of the “Emerald Beach Caravan Park”.

Use of Road No. 3 would be expected to provide passing trade benefit to the caravan park’s kiosk, and to the township’s shops in Fiddamans Drive beyond.

3.4.2 Pedestrian Links to the Site

3.4.2.1 Links Across the Dunal Reserve

Residential development within the development site is proposed to be linked to the beach and headland areas by means of controlled pedestrian accessways. A

possible design of the accessways has been formulated in accordance with recommendations contained in *Coastal Dune Management: a manual of coastal dune management and rehabilitation techniques* (Soil Conservation Service of NSW, 1990). The applicant is willing to undertake the construction of controlled accessways as designed.

The accessways, together with the dune area generally, will be subject to an inspection and repair routine managed by the Community Title Scheme's Community Association (see sec. 3.5.1 below).

3.4.3 Circulation within the Site

Within the development site, circulation will be achieved by means of corridors intended for traffic use as 'collectors', 'access streets', 'access places' and 'pedestrianways'. Figure 3i shows the circulation network.

Roads Nos. 1, 2 and 3 comprise the 'collector' roads for the development site. Road No. 2 is a ring perimeter road. Busbays will be provided at points 3, 4, 5 & 6 shown on figure 3f.

Roads Nos. 4, 8 & 9 are 'access streets' intersecting with the Road No. 2 'collector'. Road Nos. 8 & 9 are the entrances to the commenced caravan park development (DA No. 452/82).

The remaining traffic corridors within the residential precincts are 'access places', viz. Roads Nos. 5, 6 & 7.

Pedestrian corridors between Roads Nos. 5, 6 & 7 and Road No. 2 will facilitate direct pedestrian movement between the residential precincts and the beach.

Since traffic volumes along the collector are expected to exceed 500 vehicles/day, concrete paths 2m wide will be separately provided on one side of the ring road

‘collector’ to ensure pedestrian and cyclist safety (AMCORD 1989, p. 63, 65). Pedestrian thresholds will be provided nearby the busbays to reduce vehicle speeds.

Public transport is expected to be confined to daily and school bus services. Within the development site, public transport circulation is intended to be confined to Roads Nos. 1, 2 and 3 as shown on Figure 3f. All future dwellings within the estate will be located within 300m of the bus route.

Whilst the internal roads will all be Community Property, managed by the Community Association, the *Community Land Management Act* provides for public traffic regulations to apply to all roads within the estate. The Scheme’s Management Statement will reflect that all roads are subject to public traffic regulations.

3.4.4 Stormwater Management

As discussed in sec. 3.1.4.1 above, a stormwater treatment train, consisting of several ‘lot scale’ and ‘sub-catchment scale’ components, has been devised to treat stormwater runoff originating from within the estate before discharge off-site. The treatment train is shown as a schematic diagram in Figure 3e. Post-construction, the Community Title Scheme’s Community Association will routinely inspect and maintain the various components of the stormwater treatment train.

3.4.4.1 ‘Lot Scale’ Components of Stormwater Treatment Train

It is intended that all dwellings erected within the estate be fitted with a 10,000 litre capacity rainwater tank. The water collected in the tanks will be used for toilet flushing, laundry supply and outdoor watering. The tanks will be topped up from the mains supply only when their levels fall below 10% of their capacity, thereby providing 9,000 litres for the storage of roof runoff and a significant benefit in reducing peak stormwater discharges.

Overflows from the tanks will be directed, by pipes, to grass-lined roadside swales within the estate rather than concrete kerbs and gutters.

3.4.4.2 'Sub-Catchment Scale' Components of the Treatment Train

The roadside grass-lined swales described in sec. 3.1.4.2 will be used to collect, treat and transfer stormwater originating from the residential lots to bio-retention systems established at the downstream perimeter of the estate.

The bio-retention systems described in sec. 3.1.4.3 will be used to further treat the stormwater. Discharges from the bio-retention systems will be via slotted pipes laid through underlying filter media, which will drain the discharges into drainage corridor that forms part of the Fiddamans Creek catchment.

3.4.5 Staging of Residential Development Components

Residential development components are expected to be undertaken in 7 stages as shown in Figure 3g and as described below.

Stage 1

- Upgrading of highway intersection (about 400m);
- Upgrading of Road No. 1 from highway (about 360m), including placing fill (about 3000m³) and installing culvert;
- Clearing and placement of landfill (about 4000m³), including installing swales and bio-retention systems;
- Construction of part of Road No. 2 southwards then eastwards to Road No. 3 (about 530m);
- Construction of Road No. 3 to Fishermans Drive (about 340m), including upgrading bridge;
- Creation of up to 32 low density residential lots;

- Commencement of dune area stabilisation and enhancement initiatives (if required).

Stage 2

- Extension of Road No. 2 northwards from Road No. 1 (about 260m), including constructing 2 bus bays;
- Construction of Road No. 8 intersection (about 30m);
- Creation of up to 7 low density residential lots.

Stage 3

- Extension of Road No. 2 northwards from Road No. 3 (about 210m), including constructing 28 visitor carparking spaces and 2 bus bays;
- Construction of 28 visitor carparking spaces;
- Creation of up to 11 low density residential lots.

Stage 4

- Completion of Road No. 2 (about 260m), including constructing 36 visitor carparking spaces;
- Construction of Road No. 9 intersection (about 20m);
- Creation of up to 11 low density residential lots;
- Completion of dune area stabilisation and enhancement initiatives (if required).

Stage 5

- Construction of part of Road No. 4 from southern intersection with Road

1. INTRODUCTION

ASPECT *north* Ltd. has been commissioned by Pridel Investments Pty. Ltd. to prepare a Preliminary Assessment to accompany a Major Project Application (MPA) for a proposed 121-lot residential estate at Emerald Beach, Coffs Harbour.

The proponent has opted to seek a **Project Application** approval.

The land is Lot 2 in DP 840016 located at the Pacific Highway, Emerald Beach. The subject land and zoning boundaries are shown in the local context on Figure 1.

The proposed development seeks to create an additional 121 residential allotments ranging in size from about 600m² to about 1500m².

Under the Coffs Harbour Local Environmental Plan (LEP), the subject land is zoned: -

- Residential Protection 2A Low Density;
- Environmental Protection 7A Habitat & Catchment; and
- Environmental Protection 7B Scenic Buffer.

The proposed residential estate (i.e. containing the additional 121 allotments) is wholly contained within the 2A Zone component of the land. The proposal is permitted within this Zone with Council consent.

The purpose of this report is to identify the 'Key Issues' that are associated with the site, and that could arise from the development as proposed. Identification of the 'Key Issues' will facilitate preparation of the Director-General's Environmental

3.4.5.1 Residential Lot Layout

A yield of 121 low density residential lots is achieved across the estate. The yield includes 6 battle-axe lots. The lots range in area between 606m² and 1526m², and contain a minimum width of 18m.

Dwelling envelopes have determined for each proposed lot (see Figure 3l). The envelopes have been configured, located and orientated so that each lot can receive some benefit from mid-winter solar access to indoor and outdoor living areas. In general, the envelopes are setback 6m from road frontages, 1.5m from side boundaries and 5m from rear boundaries. In particular circumstances, variations to the general dwelling envelopes have been applied as follows :-

- for lots with predominantly north/south orientation and northern road frontages, the depth of backyard spaces are enlarged;
- for lots with predominantly east/west orientation, zero setback lines for building envelopes apply to the respective southern boundaries, whilst a setback line of 3 metres for envelopes applies to the respective northern boundaries; and
- for corner lots with double frontage, a building line of 6m applies to the principal frontage and 3m to the other unless the bushfire protection buffer applies.

The heights of dwellings will be restricted to a series of planes that are inclined to the angles of the mid-winter sun. Most building envelopes are of sufficient area (minimum 208m²) to accommodate single storey residences.

The dune area on the east and the retained bushland on the west reduce potential impacts upon the estate from coastal processes and visual sources.

For bushfire protection purposes, each dwelling erected within the estate will be required to comply with the Level 2 construction standard set out in AS3959. This will be enforced by a Restriction created by 88B Instrument and placed on the Certificate of Title to each residential lot. The Community Association for the estate (see sec. 3.5 below) will routinely inspect the exterior of each dwelling for continuing compliance with the construction standard, and will be empowered to recover the costs for any remedial work undertaken by it.

3.4.6 Provision of Utility Services

3.4.6.1 Water Supply

It is intended that residential development within the site be serviced by augmenting the existing 300mm diameter supply main to Emerald Beach township from the commencement of Fiddaman Road.

The residential development is predicted to generate the demand shown in Table 1.3 below.

Table 3: Predicted Water Supply Demands of Estate		
No. of DWELLINGS	EXPECTED DEMAND per Dwelling kL/year	TOTAL DEMAND across Estate kL/year
121	340	41140 (or 41.1ML/year)

The "raised Karangai Dam" could accommodate a 20% (or 1738ML) increase in the 1996 supply population of 50,740 people, which consumed an annual average of 8690ML (CHCC 22-4-97).

Based on this advice, the existing system combined with the anticipated increased capacity of Karangi Dam is expected to have sufficient surplus capacity to accept the additional load of the future residential development without adverse impact.

3.4.6.2 Sewerage

Figure 3g shows the proposed location of two (2) sewer pumping stations and rising mains which would be required to service the residential development and the approved caravan park development (DA No. 452/82).

All wastewater generated by the development will be directed through Proposed Pump Station 1 into the proposed Emerald Beach township catchment via Pump Station No. 4 designed for the 'Northern Areas' Sewerage' scheme.

It is noted that approval is required under s. 17K of the Pollution Control Act 1970 to construct a sewer pumping station .

3.4.6.3 Electricity

Preliminary estimations reveal that power loadings generated by future residential development will be up to 800-900kVA (NorthPower 27-3-97). Incoming supply would originate from existing supply located at the westernmost corner of the development site, and enter the site via the trunk collector road (i.e. Road No. 1 - see fig. 3i). The existing distribution system is capable of supporting the additional load of future residential development based on existing loading patterns.

3.5 POST-CONSTRUCTION ESTATE MANAGEMENT

3.5.1 Community Title Scheme

The post-construction management of the whole of the land will be controlled within a two-tiered Community Title Scheme created under the *Community Land Development Act 1989*. The development will create, at the top 'Community Plan' tier, Community Property and a Development Lot, as shown on Figure 3k, which will function under the management of the Community Association.

The development will create, at the bottom 'Neighbourhood Plan' tier, 121 low density residential lots by conventional subdivision of the 'Community Plan' Development Lot, as shown on Figure 3l.

3.5.1.1 Community Association

The proprietors of each lot created in the 'Neighbourhood Plan' will be levied, according to unit entitlement allocations, routinely by the Community Association to facilitate the functioning of the Association and the management of the Community Property. The provisions (s. 20) of the *Community Land Management Act 1989* empower the Association to collect such levies. It is intended that each residential lot in the 'Neighbourhood Plan' be allocated a unit entitlement of one (1).

The Community Association will be regulated by a Management Statement to manage the Community Property, and, in addition, to ensure that: -

- the Fishermans Drive link (Road No. 4) including the Fiddamans Creek bridge is maintained in good repair; and
- the dune area is routinely managed so that pedestrian accesses and barrier fencing are kept in good repair, so that the dune profile remains stable, and so that the natural integrity of dune vegetation remains established.

The Association will be required by the Management Statement to maintain a documentation trail that demonstrates each management routine or action has been satisfactorily performed.

3.5.1.1.1 Community Property

The Community Association will manage the following Community Property components according to Plans of Management: -

Table 4: Community Property Management Components

COMMUNITY PROPERTY COMPONENT	MANAGEMENT REQUIRED	POLICING MECHANISM
Road, Carparking & Pathway pavements	Routine inspection and repair as required	Plan of Management (PoM) to be prepared at engineering design phase which sets out nature & frequency of inspection tasks, and to be linked to Management Statement
Utility Services	Routine inspection of electricity, street lighting, telephone, sewer & water services and repair as required	
Road & Pathway landscaping	Routine lawn & tree maintenance, bushfire hazard reduction	PoM to be linked to Management Statement
Stormwater Treatment Train	Routine inspection of, removal of debris from, and repair to: - rainwater tanks within each lot; drainage swales & pipe structures; and bio-retention system	PoM to be prepared at engineering design phase which sets out nature & frequency of inspection tasks, and to be linked to Management Statement
Culvert	Routine inspection, debris removal and repair as required	PoM to be prepared at engineering design phase which sets out nature & frequency of inspection tasks, and to be linked to Management Statement
Conservation Area	Routine inspection of site and barrier fencing, debris removal and repair as required	PoM to be prepared by Ecologist, and to be linked to Mgt. Statement
Bushland and Drainage Corridor	Progressive rehabilitation of natural vegetation, progressive removal of exotic species, routine inspection, debris removal and repair as required	PoM to be prepared by Ecologist, and to be linked to Management Statement

No. 2 (about 140m);

- Construction of Road No. 5 (about 120m);
- Construction of pathway linking Road No. 5 to road No. 2 (about 80m);
- Creation of up to 24 low density residential lots.

Stage 6

- Extension of Road No. 4 (about 120m);
- Construction of Road No. 6 (about 90m);
- Construction of pathway linking Road No. 6 to Road No. 2 (about 80m);
- Creation of up to 19 low density residential lots.

Stage 7

- Completion of Road No. 4 (about 150m);
- Construction of Road No. 7 (about 50m);
- Construction of pathway linking Road No. 7 to Road No. 2 (about 80m);
- Creation of up to 17 low density residential lots.

The approved caravan park development (DA No. 452/82) is expected to be timed for completion following Stage 2 works.

4. PLANNING CONTROLS

Pursuant to the Environmental Planning & Assessment Act, 1979, various planning related instruments apply to the development proposal. This section reviews the range of instruments that are applicable, and whether the proposal is permitted by or consistent with the controls established by those instruments.

4.1 RELEVANT SEPP's

4.1.1 SEPP No. 11 Traffic Generating Developments

4.1.1.1 Cl. 7(1)

The proposal is a Schedule 2 development.

4.1.1.2 Cl. 7(4)

The consent authority is required to forward a copy of the application for the development proposal to the Traffic Authority.

It is noted that the commenced caravan park development (DA No 452/82) has already been the subject of referral to the Traffic Authority in 1982 which culminated in the licensing of a highway access point to service the subject land (Covenant in Instrument No. P548537).

4.1.1.3 Cl. 7(5)

The consent authority is required to await the representation of the Traffic Authority, unless 21 days has elapsed.

4.1.1.4 Cl. 7(6)

The consent authority is required to forward a copy of its determination of the development application to the Traffic Authority.

4.1.2 SEPP No. 14 Coastal Wetlands

4.1.2.1 Cl. 4(1)

This policy applies to SEPP 14 Wetland No. 318 which is located within the land adjoining the northern boundary of the development site.

4.1.2.2 Cl. 7(1)

Amongst other things, the policy prohibits the draining of the wetland, except with the consent of Coffs Harbour City Council and the concurrence of the Director of Planning. The proposal does not involve draining Wetland No. 318.

4.1.3 SEPP No. 44 Koala Habitat Protection

The subject land has been identified by the LEP as containing 'Secondary Koala Habitat'. However, previous ecological investigations have reported that less than 15% of the total number of trees across the site is Schedule 2 species, and that no resident population of koalas occurs on the site. Consequently, SEPP 44 does not apply to the site.

4.1.4 SEPP No. 71 Coastal Protection

4.1.4.1 Cl. 4(1)

The subject land is located within the “coastal zone”.

4.1.4.2 Cl. 7

The matters for consideration set out in cl. 8 of SEPP 71 are to be taken into account by the consent authority in determining this application.

4.1.4.3 Cl. 8 Assessment

(a) The proposal can be justified on the basis of the SEPP 71 objectives, as follows:

-

- (i) **The development proposal ensures that the natural, cultural, recreational and economic attributes of the New South Wales coast are protected and managed.**

Natural Attributes

The proposal will protect and manage the natural attributes of the NSW coast by: -

- retaining more than 53.5% of the subject land (i.e. 16.7ha) as an untouched bushland and drainage corridor;
- sensitively developing the residue 46.5% so that pre-development drainage and water quality conditions are matched upstream and downstream of the subject land;
- presenting a management strategy to protect the dune and headland areas from exotic weed infestations and uncontrolled pedestrian

incursions.

Nonetheless, the 46.5% residue of the site may contain species of significance listed under the TSC Act 1995. The extent of impact by the proposal, and the effectiveness of ameliorating measures, is being presently assessed in a Species Impact Statement.

Cultural Attributes

The proposal will protect and manage the cultural attributes of the NSW coast by: -

- presenting a management strategy to protect cultural artefacts of high significance located on Diggers Point from disturbance by unconfined pedestrian incursions; and
- implementing independent surveillance of groundcover removal across the site so that no concealed items of high cultural significance are disturbed.

Recreational Attributes

The proposal will protect and manage the recreational attributes of the NSW coast by: -

- implementing a dune management strategy which facilitates controlled shoreline usage for various recreational activities.

Economic Attributes

The development proposal will protect and manage the economic attributes of the NSW coast by: -

- generating income and employment opportunities during the construction phase of the development.

- (ii) **The development ensures that existing public access to and along coastal foreshores is protected and improved in a manner compatible with the natural attributes of the coastal foreshore.**

The development proposal will protect and improve existing public access to and along coastal foreshores by: -

- constructing a road along the entire interface of the subject site with the beach dune area to facilitate public access to the foreshore; and
- implementing a dune management strategy which facilitates controlled public access across the dune area to the foreshore.

- (iii) **The development has identified and will realise new opportunities for public access to and along coastal foreshores in a manner compatible with the natural attributes of the coastal foreshore.**

The development proposal will realise new opportunities for public access to and along coastal foreshores by: -

- constructing a road along the entire interface of the subject site with the beach dune area to facilitate public access to the foreshore; and
- implementing a dune management strategy which facilitates controlled public access across the dune area to the foreshore.

- (iv) **The development ensures that Aboriginal cultural heritage, and Aboriginal places, values, customs, beliefs and traditional knowledge are protected and preserved.**

The development proposal will protect and preserve Aboriginal cultural heritage and Aboriginal places, values, customs, beliefs and traditional knowledge by: -

- implementing a management strategy to protect the cultural artefacts of high significance located on Diggers Point from disturbance by unconfined pedestrian incursions; and
- implementing independent surveillance of groundcover removal across the site so that no concealed items of high cultural significance are disturbed.

- (v) **The development ensures that the visual amenity of the coast is protected.**

The development proposal will not compromise the visual amenity of the coast because: -

- the site is situated where ample background and foreground relief is provided by existing vegetation, the coastline and the ocean; and
- the site does not have skyline prominence.

- (vi) **The development ensures that beach environments and beach amenity are protected and preserved.**

The development proposal will protect and preserve beach environments and beach amenity by: -

- implementing a dune management strategy which concentrates pedestrian traffic to clearly defined and stabilised routes and thereby minimises disturbance to the dune environment and facilitates beach usage.

(vii) The development ensures that native coastal vegetation is protected and preserved.

The development proposal will protect and preserve native coastal vegetation by: -

- retaining more than 53.5% of the subject land (i.e. 16.7ha) as an untouched bushland and drainage corridor;
- sensitively developing the residue 46.5% so that pre-development drainage and water quality conditions are matched upstream and downstream of the subject land;
- presenting a management strategy to protect the dune and headland areas from exotic weed infestations and uncontrolled pedestrian incursions that may disturb the stability of emerging native coastal vegetation species.

Nonetheless, the 46.5% residue of the site may contain species of significance listed under the TSC Act 1995. The extent of impact by the

proposal, and the effectiveness of ameliorating measures, is being presently assessed in a Species Impact Statement.

(viii) The development ensures that the marine environment of New South Wales is protected and preserved.

The development will not generate effects large enough to offset the pronounced buffering capacity of the open sea and the vigour of its rhythmic and turbulent circulation pattern.

(ix) The development ensures that rock platforms are protected and preserved.

No rock platforms are proposed to be disturbed as part of this development.

(x) The development ensures that the coastal zone is managed in accordance with the principles of ecologically sustainable development (within the meaning of section 6(2) of the Protection of the Environment Administration Act 1991).

The land is zoned 2A Residential Low Density, and the proposal is consistent with the zoning that applies under statutory planning controls. The principles of ecologically sustainable development have been paramount in the formulation of various key aspects of the proposal; viz.

- retention of 53.5% of the subject land (i.e. 16.7ha) as bushland along the existing drainage corridor;

- stormwater management;
- building envelopes; and
- dune management strategy.

(xi) The development ensures that the type, bulk, scale and size of development is appropriate for the location and protects and improves the natural scenic quality of the surrounding area.

The proposed development will create a low density residential estate, which is an extension of a similar pattern of development established within the Emerald Beach township. As regards scenic quality, the subject land does not have skyline prominence, and is situated where, from external elevated vantage points, ample background and foreground relief is provided by existing vegetation, the coastline and the ocean.

(xii) The development has been formulated using a strategic approach.

The proposed development is consistent with the current zoning and surrounding land use. Furthermore, a strategic approach in formulating the proposal is evident in: -

- applying setback buffers to dwelling sites from identified bushfire hazards;
- ensuring that the locality's uniquely significant ecological and cultural features are safeguarded;
- minimising disruption to the site's undisturbed features by matching

design elements to the site's existing improvements or disturbed areas (e.g. upgrading the site's existing access road, confining the residential estate to the eastern portion of the land);

- providing alternatives to vehicular traffic, including firefighting traffic, entering and exiting the residential estate (i.e. Pacific Highway or Emerald Beach township), and more broadly, entering and exiting Emerald Beach township;
- providing for public transport usage of the site;
- including access to the commenced 74-site caravan park development approved under DA No. 452/82 in the estate's circulation pattern;
- including managed pedestrian access to the Emerald Beach shoreline in the estate's circulation pattern;
- ensuring access availability to existing shopping opportunities in Emerald Beach township and the Emerald Beach Caravan Park, and future opportunities that will be presented by the commenced 74-site caravan park development approved under DA No. 452/82;
- providing flood-free residential lots without significantly impacting on the drainage characteristics of both upstream and downstream properties;
- deriving stormwater management initiatives which ensure that the pre-development drainage characteristics of the site are improved, or at least matched.

(b) In terms of the remaining cl. 8 matters of consideration, the proposal is assessed as follows: -

- (i) the proposal's dune management strategy offers improved and controlled accessways across the dune area to enhance existing shoreline usage by pedestrians, thereby satisfying subclauses 8(b) & 8(c);
- (ii) the proposal is consistent with the current zoning, will create a low density residential estate that is an extension of a similar pattern of development established within the Emerald Beach township, and will be linked to Emerald Beach township, thereby satisfying subclause 8(d). The proposal also provides the township with a second link/escape route to the Pacific Highway;
- (iii) the proposal will be a low set, low density development nestled behind and below retained vegetation and a dune environment. From elevated vantage points, the development will appear nestled within ample background and foreground relief provided by vegetation, the coastline and the ocean. The proposal thereby satisfies subclauses 8(e) & 8(f);
- (iv) the proposal will: -
 - retaining more than 53.5% of the subject land (i.e. 16.7ha) as an untouched bushland and drainage corridor;
 - sensitively developing the residue 46.5% so that pre-development drainage and water quality conditions are matched upstream and downstream of the subject land;
 - include a management strategy to protect the dune and headland areas from exotic weed infestations and uncontrolled pedestrian incursions that may disturb the stability of emerging native vegetation species, which is consistent with subclauses 8(g) & 8(j). Nonetheless, the 46.5% residue of the site may contain species of significance listed under the TSC Act 1995. The extent of impact by the proposal, and the effectiveness of ameliorating measures, is being presently assessed in a

Species Impact Statement;

- (v) the rhythmic and turbulent circulation pattern of the nearby open sea provides fish and marine vegetation with a pronounced and full buffer from the proposal, thereby satisfying subclause 8(i);
- (vi) assessment has concluded that no inundation of the site as a result of coastal processes and hazards is expected within a planning period of 100 years. The proposal thereby satisfies subclause 8(k);
- (vii) the dune area presents a substantial physical barrier between the development site and the foreshore. Consequently, the proposal presents no potential for conflict between land-based and water-based coastal activities, and thereby satisfies subclause 8(l);
- (viii) The development proposal will protect and preserve Aboriginal cultural heritage and Aboriginal places, values, customs, beliefs and traditional knowledge by: -
 - implementing a management strategy to protect the cultural artefacts of high significance located on Diggers Point from disturbance by unconfined pedestrian incursions; and
 - implementing independent surveillance of groundcover removal across the site so that no concealed items of high cultural significance are disturbed.

The proposal thereby satisfies subclauses 8(m) & 8(o);

- (ix) the proposal is unlikely to generate adverse impact on the existing water quality of the SEPP 14 Wetland No. 318, Fiddamans Creek or the Solitary Islands Marine Park, thereby satisfying subclause 8(n). Nevertheless: -
 - the characteristics of the water table within SEPP 14 Wetland No. 318 be monitored throughout the construction phase; and

- the development will be required to satisfy the Environmental Protection Authority's performance criteria for site discharges and stormwater management;
- (x) no draft Local Environmental Plan applies to the site, and consequently no requirement exists for subclause 8(p);
- (xi) in terms of the subclause 8(q)(i) cumulative impact consideration, the proposal will yield an average density of 1 dwelling per 2577m² across the subject land, which is well below the environmental capacity of 1 dwelling per 400m² and 500m² predetermined for land zoned 2A Residential Low Density by the Coffs Harbour LEP 2000 and the 'Low Density' DCP. Furthermore, the proposed development can be designed to at least match or improve pre-development conditions as regards: -
 - bushfire management for the locality;
 - management of highly significant cultural artefacts;
 - stormwater quality;
 - flood impact;
 - management of the beach dune area;
 - access alternatives for residents of the estate, as well as township residents; and
 - generating employment opportunities for the region.

Each lot created by the development can be supplied with water, sewerage, electricity and communication utility services, and can access either the Pacific Highway directly or Emerald Beach township. Consequently, the proposed development is not expected to generate significant negative

cumulative impacts on the environment, and, importantly, is expected to provide some positive impacts.

- (xii) in terms of the subclause 8(q) (ii) water & energy usage consideration, each lot created by the development has been designed to maximise opportunities for water and energy usage efficiencies.

Water Usage

The requirement that 10kL rainwater tanks be installed with each dwelling erected as part of the stormwater treatment train for the estate provides an alternative source of water for toilet flushing, laundry supply and outdoor watering.

Energy Usage

Dwelling envelopes have been derived horizontally and vertically for each lot to ensure sufficient dwelling separation and mid-winter solar access to living and private open space areas.

4.1.4.4 Cl. 9

The proposal, involving subdivision of land within a residential zone into more than 25 lots, is Schedule 2 development.

4.1.4.5 Cl. 10

The proposal, being Schedule 2 development, is State significant development where the Minister for Infrastructure and Planning is the consent authority.

4.1.4.6 Cl. 14 Public Access

The proposal will interact with the coastal foreshore environment in providing a public road, including formal carparking areas, along the interface of the subject site with the beach dune area as part of the estate's principal circulation route. Furthermore, the residential estate layout provides both legible and permeable pedestrian access to the dune area. The beach beyond the dune is presently subject to regular pedestrian use, and a number of uncontrolled accesses are located across and along the dune area and the Diggers Point headland. The proposal's dune management strategy offers improved and controlled accessways across the dune area to protect the dune environment and enhance existing shoreline usage.

Consequently, it is considered that the development proposal is not impeding or diminishing but, rather, enhancing land-based right of access of the public to or along the coastal foreshore.

4.1.4.7 Cl. 16 Stormwater

The proposal involves installing a stormwater treatment train that includes 'lot scale' and 'sub-catchment scale' components. Assessment has disclosed that the treatment train will at least match or improve on pre-development conditions, and, therefore, will discharge only treated stormwater towards the coastal environment.

4.1.4.8 Cl. 18

The development application for the proposal, which involves subdivision of land within a residential zone into more than 25 lots, cannot be determined until the Minister for Infrastructure and Planning has either adopted or waived the need for master plan.

4.1.4.9 CI's. 19 - 22 Master Plan for Proposal

In determining the development application, the Minister for Infrastructure and Planning, as the consent authority, must consider the provisions of the adopted master plan. The Minister is being requested separately to adopt the proposal's Masterplan as the site's Development Control Plan. The Clause 20 heads of consideration have been discussed in that separate request.

4.2 RELEVANT REP's

4.2.1 North Coast REP 1988

The following matters apply to the proposal: -

4.2.1.1 Cl. 2B

In determining the development application, the Minister for Infrastructure and Planning, as the consent authority, must account for the relevant aims and objectives of the REP.

4.2.1.2 Cl. 15 Wetlands or Fishery Habitats

The development proposal is to be downstream of SEPP 14 Wetland No. 318 and upstream of Fiddamans Creek, and the following relevant matters in terms preserving FISHERY HABITATS will be addressed: -

- (i) the quality and quantity of water flows to the wetland and creek;
- (ii) loss of habitat likely to be caused by the carrying out of the development;
- (iii) adequacy of public access to existing public foreshore reserve areas;

- (iv) likelihood of pollution of wetland and creek and the adequacy of mitigation measures;
- (v) the adequacy of soil erosion mitigation measures; and
- (vi) the design of measures to conserve native vegetation surrounding the wetland and the creek, although it is not proposed to remove native vegetation surrounding the wetland or any fishery habitat area.

4.2.1.3 Cl. 30 Coastal Development

The proposal can be justified on the basis of the Coastal Planning objectives, as follows: -

- (a) The development will create no significant impact on the visual quality of the coastal environment.**

The proposal may affect visual access for dwellings located along Dammerel Crescent and within the Emerald Beach Caravan Park. However, the impacts created are not considered significant.

To Dammerel Crescent residents, the development will appear nestled within ample background relief provided by vegetation, the coastline and the ocean. Unlike the dwellings located along Dammerel Crescent, future estate development will not be prominently located along the skyline.

To caravan park residents, visual access across the subject site is incidental because of the internalised layout of dwelling sites within the caravan park.

The development proposal is consistent with the aim to protect the visual amenity of the coastal environment in that: -

- it is situated where ample background and foreground relief is provided by existing vegetation, the coastline and the ocean; and
- it does not have skyline prominence.

(b) The development can provide for the appropriate recreational use of beaches.

The beach is subject to regular pedestrian use, and a number of uncontrolled accesses are located across and along the dune area and the Diggers point headland. The proposal's dune management strategy offers improved and controlled accessways across the dune area to enhance existing shoreline usage.

The proposal is consistent with the aim to provide appropriate recreational use of beaches in that: -

- a road will be constructed along the entire interface of the subject site with the beach dune area as a new opportunity to facilitate public access to the foreshore; and
- opportunities are presented to implement a dune management strategy which facilitates controlled public access across the dune area to the foreshore.

(c) The development can ensure that the water quality of the coastal environment is protected.

The development is unlikely to generate adverse impact on the existing water quality of the SEPP 14 Wetland No. 318, Fiddamans Creek or the Solitary Islands Marine Park. Nevertheless: -

- the characteristics of the water table within SEPP 14 Wetland No. 318 be monitored throughout the construction phase; and
- the proposal must satisfy the Environmental Protection Authority's performance criteria for site discharges and stormwater management.

In maintaining the wetland's water table levels, and achieving the EPA's water quality criteria, the proposal is consistent with the aim to protect the water quality of the coastal environment.

(d) The development can ensure that risks to people and property resulting from coastal processes are minimised.

The proposal is consistent with the aim to minimise risks to people and property resulting from coastal processes in that the residential estate will be located beyond a conservatively derived 100-year hazard line.

(e) The development can ensure that changes to coastal processes resulting from development are minimised.

The land is separated from the beach environment by a dune system that is located wholly within a Crown Reserve. The proposed residential estate nestles behind the dune system. The dune system is presently subject to uncontrolled incursions by pedestrians accessing the beach environment. The proposal's dune management strategy offers improved and controlled accessways across the dune area to enhance existing shoreline usage without altering the existing dune profile. Consequently, the proposal presents no significant alteration to the existing dune system or the coastal processes which maintain the system, and is consistent with the aim to minimise changes to coastal processes resulting from development.