

B10 - KOALA BEACH

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B10 – KOALA BEACH

B10.1 INTRODUCTION

B10.1.1 Aims of this Section

- Provide a "user-friendly" document for those involved in the planning, development and management of Koala Beach.
- Provide a single and integrated set of objectives and criteria to apply to the essential elements of residential and non-residential development.
- Complement Tweed Shire Council's other Sections within its Development Control Plan document and the provisions of the Tweed Local Environmental Plan 2000, in particular Amendment No 56.
- Ensure that the natural features, environmental attributes and identified sensitive habitat areas on the land are not adversely affected by future development and ensure a habitat-friendly residential estate.
- Ensure that development has minimal impact upon water quality and flooding of adjacent lands and waterways.
- Facilitate a cost-effective residential development with a high standard of amenity, convenience, safety and environmental sustainability.
- Provide a high quality of urban design.
- Ensure that the necessary services and community facilities infrastructure are available in an orderly and economic manner.

B10.1.2 Land to which this Section applies

This Section applies to land identified by Tweed Local Environmental Plan (Amendment No. 56), and applies to land within the area defined by the bold line as shown on B10 - Map 1. This area known as Koala Beach is located to the west of Hastings Point Village and northwest of Pottsville in north-eastern New South Wales.

B10.1.3 How does this Section relate to other Sections and Environmental Planning Instruments?

Where an inconsistency arises between this Section and any environmental planning instrument applying to the same land, the provisions of environmental planning instrument prevails. An environmental planning instrument means a State Environmental Planning Policy, a Regional Environmental Plan or a Local Environmental Plan.

Where there is an inconsistency between this Section and any other Sections, the provision of this Section shall prevail.

This Section adopts the provisions of the Tweed Local Environmental Plan 2000, the model provisions contained in the Environmental Planning and Assessment Act 1979 except where amended by the LEP. Other relevant Council documents include:

- | | | |
|------------|---|---|
| Section A1 | - | Residential and Tourist Development Code; |
| Section A2 | - | Site Access and Parking Code; |

Section A3 - Development of Flood Liable Land;

Section A5 - Subdivision Manual;

Landuse Guidelines for Acid Sulphate Soils: Guidelines for Development, Adopted by Council September 1992; and

Various Section 94 Contributions Plan applying to the land.

Clause B10.3.3 refers to a "Koala Management Plan" prepared by the Australia Koala Foundation (AKF) and to be exhibited conjointly with this Section, for adoption with or without amendments by Council.

This Section has been prepared on the basis of a master planning exercise which has incorporated a number of prior planning studies. These studies are summarised in the Environmental Study prepared by Tweed Shire Council which accompanied the rezoning of the Koala Beach site.

The provisions and intent of this Section prevail over the above documents if there is an inconsistency.

A legal agreement has been entered into between the owners of the land and Tweed Shire Council, placing certain obligations on the parties with respect to the transfer of certain lands for open space and habitat protection, processing of rezoning and development proposals, embellishment of open space and acquisition of the access road etc. The principle obligations are as follows:

- 6ha site for State High School to be made available on land zoned Urban Expansion 2(c) and/or on "deferred" area;
- owner to provide a sum of \$500,000 to Council for improvement to the Coast Road between Hastings Point and Bogangar, such contribution to be assessed as "material public benefit" for the purposes of Section 94 Contributions;
- transfer to Council of 4 hectares of land zoned 6(a) Public Open Space for sportsfields and designated areas for Koala Habitat or Koala Tree Planting zoned 7(l), prior to release of Stage 1 residential development;
- owner to embellish sportsfields area including provision of change facilities prior to release of linen plan for 600th residential lot;
- owner to submit Koala Management Plan for 7(l) zoned land and engage consultant to undertake Koala Habitat Study of "deferred" area;
- Council to resume the necessary land from the Crown and Department of School Education for road entry to site from Coast Road with costs borne by developer;
- Development Applications(s) to be lodged for a minimum of 50 lots and construction of residential subdivision commenced within 12 months.

B10.1.4 How to use this Section

All development applications involving the Koala Beach land will be assessed in light of the guidelines and requirements contained in this Section. Council may refuse consent to an application which does not comply with this Section, or may modify the development by way of conditions so that it does comply. Council will also consider this Section in assessing how development satisfies the objectives set out in the Tweed LEP.

Where development does not comply strictly with the provision of this Section, Council may still consider approving the development where the applicant demonstrates that the proposal is consistent with the objectives of this Section and the intention of the particular guideline, and the proposed development will result in an environmentally more satisfactory development.

In preparing an application for development there are a number of specific steps that should be followed:

- Step 1:** Check the zoning of the site under Tweed LEP 2000 to ensure that the proposed development is permissible and to determine what related provisions apply.
- Step 2:** Establish what other Sections of this DCP or Policies apply to the site (Clause B10.1.3).
- Step 3:** Follow the Management and Design issues in this Section and refer to other applicable Sections and Policies to prepare your application. It is these components that Council will use to assess any development proposal.
- Step 4:** Discuss your final application with Council staff then lodge it for determination.

B10.2 MANAGEMENT ISSUES

B10.2.1 General

The following Clauses address the main issues which require preparation or recognition of a management plan or strategy for the site or part of the site in conjunction with the preparation of development applications, this information will be prepared by the developer/applicant. Figures included in this document are indicative only.

The relevant management issues, strategies and plans referred to in this document should be prepared and assessed in an overall context having regard for the inter-relationship between issues.

Council will also have regard for the legal agreement made between RDC Pty Ltd (owner of the land referred to in this Section) and Council, which legal agreement commits the parties and successors in title to certain obligations in respect of the rezoning and development/use/transfer of the land for residential lots and other uses, and inter alia Koala habitat. The provision of this legal agreement are summarised in Clause B10.1.3.

B10.2.2 Indicative Development Layout

An integrated "master planning" process has been utilised by the landowners to coordinate physical, environmental and development cost constraints and opportunities as these are refined.

This process has resulted in an "Indicative Development Layout", as shown in Figure 5, indicating in principle the location of residential development by type.

Development yield seeks to achieve a gross residential density of 12-20 dwellings per site hectare. Expected yield by dwelling type is:

TYPE	TYPICAL SITE AREA PER DWELLING	% PROPORTION WITHIN ESTATE	ANTICIPATED NUMBER OF DWELLINGS	EXPECTED POPULATION
Detached dwelling lots	550m ² to 1,000m ²	70% - 80%	635 - 685	1,780 - 2,060
Small-lot housing	250m ² - 500m ²	8% - 15%	70 - 135	180 - 340
Medium density	200m ² - 350m ²	10% - 15%	90 - 135	200 - 300
TOTAL		100%	865	2,160 - 2,700

The above table is presented as a guide only, and is subject to review and change to enable response to site, economic and market opportunities and conditions.

B10.2.3 Traffic Management Plan

What is this plan?

The Traffic Management Plan is a document which will establish the road hierarchy for this development and suggest appropriate vehicle design speeds, treatments for entry/exit points, traffic calming and slow points, roundabout treatment, koala crossing point treatments, integration of pedestrian and bikeway routes with motorised vehicle routes. See B10 - Map 2 for the Traffic Management Principles for Koala Beach.

What will it achieve?

The objectives of the Traffic Management Plan are:

To contain vehicle speed within the development to provide for a high level of environmental amenity and safety for pedestrians and koalas, and to facilitate convenience of access for residents.

When will the Traffic Management Plan be required?

The Traffic Management Plan will be provided by the applicant at two (2) levels as follows:

1. An overall Traffic Management Study and Concept to be prepared for the whole development and submitted in conjunction with the first stage subdivision development application. This should reflect the densities and landuses in the Indicative Development Layout (Figure 5), to give the overall traffic context for the estate and will serve as a guide only being subject to review as the development of the site proceeds.
2. For each successive subdivision application a more specific indication to be provided of the matters as relevant listed below.

What will the plan need to contain?

The Traffic Management Plan may contain the following items in schematic form, with detailed design NOT required until submission of engineering drawings following issue of development consent.

- 1) Development of a road hierarchy system;
- 2) Design speed, traffic calming and speed control devices, based on a 40 kph maximum design speed including the main entry road west from the proposed Cudgera Creek bridge, and having regard AUSTROADS guidelines etc with reference to road verge and widths, and longitudinal gradients;
- 3) Entry statements and signage;
- 4) Treatments of Koala crossings, including street lighting;
- 5) Bus routes, bus stops and bike routes, including on-street and off-street bike routes;
- 6) Design criteria for bridging and major culverts, including effect on flood behaviour;
- 7) Restricted access streets;
- 8) Proposed connection to open space and future development on south side of land;
- 9) Details of on street parking; and
- 10) Details of roundabouts.

Sources for design of road system to be referenced (eg: Section A5 – Subdivision Manual, Guide to Traffic Engineering Practice AUSTROADS 1993).

B10.2.4 Koala Management Plan

What is the Koala Management Plan?

The Koala Management Plan is a document to indicate the measures by which the Koala population inhabiting the Koala Beach site will be protected and managed as development proceeds. See B10 - Map 3 Koala and Environmental Management Principles for Koala Beach.

What will it achieve?

The main aim of the Koala Management Plan is to ensure that the development of the estate occurs in recognition of the need to protect individual trees and significant areas of Koala habitat as identified in the (adopted) Koala Management Plan, with a view to ensuring the long-term survival of the species on the site.

The development site has been identified by the Australian Koala Foundation (AKF) as being a significant component of the largest continuous area of Koala habitat within Tweed Shire.

The proposed development site and its immediate surrounds is known to support a socially stable breeding aggregation of Koala.

The Koala Management Plan therefore indicates specifically the safeguards to protect the habitats of the Koala.

The objectives of the plan are as follows:

- To maintain the current demographic structure of stable koala population currently utilising the area of Koala Beach site proposed for development and accommodate their ranging requirements.
- To protect resident Koalas from undue disturbance by development works.

- To reduce or minimise the risk to Koalas of vehicle collision particularly where home ranges of resident animals overlap, or in areas of high use.
- To embellish existing habitats where appropriate by Koala food tree planting for effective long-term management of Koala habitat.
- To establish community understanding, empathy and support amongst prospective home-owners and residents and involvement in future management of sustainable habitats for Koalas and native wildlife.
- To assess the appropriateness of the use of fringe areas outside the Urban Expansion 2(c) Zone for casual or active open space, drainage works, utilities or access.

When is the plan required?

A draft Koala Management Plan in relation to the development site will be exhibited for public comment concurrently with this Section.

Note: Proposals for amelioration of impact on habitat of other species as necessary arising from the Fauna Impact Statement prepared for the proposal are to be identified and included in subdivision and development applications.

What will it contain?

The Koala Management Plan may contain or refer to the following:

- identify generally Koala primary browse trees (Tallowwood, Forest Red Gum, Swamp Mahogany, Small-fruited Grey Gum), Koala home range trees and single use trees in areas of major koala activity within the site, so that these are preferably located within the primary movement corridors and open space (public or private) in the design of subdivisions; specific identification and status of such browse/home range/single use tree to be included in Development Application for that part of site;
- all specimens of primary browse trees and other trees utilised by Koalas to be incorporated into the final subdivision design so as not to pose a threat now or in the future to construction and/or maintenance of dwellings on site or minimise impact on Koalas;
- establish validation procedures for all earthworks involving tree removal from areas known to be utilised by Koalas;
- manner in which trees to be designated and protected by specific covenants on the land title or other legally binding restrictions or management obligations, including recommendations to render trees manageable, and requirements to replace such trees by advanced trees of same type in the event of their loss;
- the management and status of land where Koala browse trees and habitat corridors have been identified is to be indicated and preferably included as private open space or public open space;
- the type of backyard and road fencing to facilitate Koala movement and/or protection;
- restrictions or prohibition on domestic dogs kept or brought onto the Koala Beach site in order to ensure protection of Koalas in view of documented danger of dogs to Koalas;

- proposals for access roads to the site to be signposted to that effect;
- road network design to indicate mechanisms for minimising Koala/motor vehicle collision and encounters, with roading to avoid transversing areas where home ranges of two or more Koalas overlap or other areas of major activity;
- a maximum of vehicle design of 40km/h to apply throughout the Koala Beach Estate including the main entry road west of the proposed bridge over Cudgera Creek, with details of Koala road crossing opportunities, including grade separation where feasible, proposed lighting, speed inhibitors, awareness signs, etc provided;
- appropriate design of swimming pools within the estate and fencing to minimise risk of drowning to Koalas;
- kerbside planting for landscape purposes to incorporate koala food trees;
- community management and awareness to be promoted in proposed management committee for the open space, environmental and residential areas of the site, with communications to intending land purchasers and prospective residents by way of information brochures and interpretative signage with habitat enhancement being the theme of the estate.

B10.2.5 Open Space Management Plan

What is the Open Space Management Plan?

The Open Space Management Plan is a document which will provide the outline for an appropriate network of passive and active open space to serve the needs of the future residents of the estate. See B10 - Map 4 Open Space Strategy for Koala Beach.

What will it achieve?

The objective of the Open Space Management Plan is:

- To provide a safe and pleasant open space network to meet the diverse needs of future residents, in terms of neighbourhood parks, play spaces, green belts, bushland experience and natural area parks, kick about and picnic areas, and sports fields, appropriately located and accessed for appropriate usage.
- To ensure that public open space is useable, adequately distributed and located, and able to be satisfactorily maintained by Council.

When is the Open Space Plan of Management required?

The Open Space Plan of Management is required for all subdivision applications involving creation of lots on broad-acre or filled sites.

What will the plan need to contain?

The plan will have regard for the Open Space Strategy shown in Figure 4 for the whole of the estate.

It should refer generally to proposed embellishments standards, location, gradients, means of access, linkages, etc to open space, and relationship to dwelling yield. Design details for embellishment are not required by Council until submission of engineering plans in accordance with Part 12 of the Local Government Act following development consent.

The open space management plan will recognise the commitments and obligations of the legal agreement in relation to dedication and embellishment of 4 hectares of active open space.

The plan will need to recognise the following open space hierarchy principles:

- Total public open space provision at a rate of 2.83 ha per 1,000 population. Based on an expected ultimate population of 2,500 persons the required provision of public open space is 7 hectares.
- Casual or passive open space is to make up 40% of such open space, equivalent to 2.8 hectares.

This should generally aim to include:

- A. One neighbourhood park of approximately one hectare to serve the whole estate, and predominantly aimed at catering for the 8-14 year age group, to be within safe walking distance (15 mins) or bike riding distance to all houses 600-1000 metres straight line distance, to be located generally in the location shown on the map.
- B. Small play parks typically 2,000 to 5,000 square metres in area, to be located 250 metres direct line from every house, and 400 metres maximum walking distance to serve a catchment of 150-200 lots, and to be well drained, accessible, and visible from roads or houses, parks may be located in accessible locations on the fringes of the main 7(l) zone and within the open space Koala corridors.

All casual open space is to be suitable embellished, drained, landscaped, provided with lighting, play equipment, pathways, etc, to the Council's satisfaction prior to release of linen plan.

- Structured or active open space to make up 60% of such open space, equivalent to 4.2 hectares, in the form of the sportsfield area nominated in the legal agreement at the southern end of the site, such area to be filled, drained, topsoiled, grassed and irrigated to reasonable standards with provision of amenities, car park, and access prior to the release of the linen plan involving the 600th block at the cost of the developer (ref: legal agreement).
- Each stage of residential subdivision is to be self-contained in terms of provision of passive open space, where practicable.

The Open Space Management Plan should demonstrate that the development and use of areas for active and passive open space will not adversely impact on any significant habitat value for native fauna particularly the Koala.

B10.2.6 Water Quality, Stormwater and Erosion Management Plan

What is the Water Quality, Stormwater and Erosion Control Management Plan?

This Section is to provide a basic network of stormwater, water pollution and runoff control facilities to ensure that the risk of soil erosion, sedimentation and loss of water quality is minimised and human safety is not jeopardised, as urban development of the site proceeds.

What will it achieve?

The objective of this Section is to ensure that during and following implementation of the Koala Beach development, there is a satisfactory integrated system of stormwater and water quality control which is safe, economic to maintain, and environmentally acceptable.

When will the plan be required?

A Soil and Water Management Plan will be required for each development application for subdivision or building development which involves earthworks as required by Clause 52 of the Tweed Local Environmental Plan 2000.

B10.2.7 Bushfire Management Plan*What is the Bushfire Management Plan?*

The Bushfire Management Plan is to specify development and landuse guideline and maintenance requirements for development adjoining or abutting areas identified as having a risk of medium or high bushfire hazard due to the nature of vegetation and topography. It will not be required for development or subdivision which does not involve or adjoin areas of medium or high bushfire hazard.

What will it achieve?

The aim of the Bushfire Management Plan is to provide guidelines to mitigate against the risk of bushfire causing damage to property and injury to persons, and also associated damage to habitats.

The bushfire hazard is greatest in the dry eucalypt dominated areas, but the risk of fire may apply to the site generally dependent upon the accumulation of ground fuel.

How will it be affected?

The implementation of a bushfire management plan will be dependent upon:

- establishment of adequate bushfire radiation zones around buildings and properties;
- requirements to reduce the nature and extent of ground fuel loads in high bushfire risk areas;
- removal of undergrowth from woodland areas and planting of fire-retardant (less fire-susceptible) species where consistent with maintenance and/or enhancement of habitat values;
- slashing of perimeter and open space grasslands to create fire breaks;
- consultation with the Tweed Council Bushfire Control Officer in terms of implementation and determining of fire risk;
- applicants should nominate a system of fire break areas and buffer zones with managed trials, road reserves and setback requirements to provide effective fire breaks, for instance to the eucalypt woodland areas and to the wetland woodland areas which may be prone to fire risk in dry periods;
- provide for emergency access routes in the event of fire and efficient access by fire fighting vehicles;
- removal of tree canopies adjacent to houses, subject to habitat values not being compromised;

- in general ground litter should be maintained at or below 0.5kg per square metre; and
- in cases where buildings are close to bushfire risk areas, the design of buildings and material of construction, and protection of openings should reflect minimum fire risk.

B10.2.8 Staging Strategy

What is the Staging Strategy?

This strategy is a guide to expected lot and dwelling yield in various stages with approximate boundaries of envisaged stages, to enable the programming for staging of water sewerage and other utilities infrastructure, and provision of open space and community facilities.

What will it achieve?

The aim of the staging strategy is to ensure orderly and economic development of the land, particularly provision of essential infrastructure.

Stage 1 development will require as a consent condition the construction of the proposed access road from the Coast Road, following transfer of the land to Council, prior to the release of any linen plan of subdivision.

Prior to the consideration and determination of the Stage 2 development application for residential allotments, an appropriate site of approximately 6ha for a proposed State High School is to be identified in consultation with the Department of School Education.

Open space, community facilities and road contributions and requirements will be described in a Section 94 Contributions Plan.

The staging strategy indicates the indicative location of integrated small-lot housing, medium density and detached housing.

The legal agreement between RDC Pty Ltd and Tweed Shire Council sets out obligations concerning the timing of provision of embellished active open space (4 hectares) at the southern end of the site prior to the release of a linen plan involving the 600th lot.

Where staged construction and release of subdivision development is proposed, the following options are available:

- a) lodge an application for the whole development and nominate the lots involved in each stage. This allows Councils to consent to the whole development and formulate conditions appropriate to each stage; or
- b) lodge an application for Stage 1 only together with a conceptual layout for all remaining stages. Separate applications are then required for each subsequent stage.

With regard to options (b) it should be noted that each subsequent application for the next stage must comply with the subdivision requirements applicable at the time of determination.

The staging strategy is not fixed, but will remain indicative and flexible.

B10.2.9 Flood Liable Land Development Plan

What is the Flood Liable Land Development Plan?

This Plan is a document which identifies specifically the likely impact of development and reshaping of flood liable land on flood behaviour, and the hydraulic and hydrologic systems on land in the vicinity.

What will it achieve?

The Environmental Study of the Koala Beach site (Planning Workshop 1993) identified the need for additional hydraulic and hydrologic assessment prior to the filling of extensive areas of flood liable land on the western part of the site particularly, and prior to the widening of Christies Creek to form a proposed lake. The Flood Liable Land Development Plan will therefore quantify more specifically the flood impact of development to permit development of the relevant parts of the flood plain.

When is the plan required?

The Flood Liable Land Development Plan will be required to be prepared and submitted in conjunction with any application which involves significant filling of the flood basin particularly on the western and southern sides of the site.

What will it contain?

The Flood Liable Land Development Plan will contain an additional flood study (hydraulic and hydrologic assessment) of the flood plain in relation to the proposed development and its likely impacts. The study and the management will be prepared in accordance with the NSW Government Flood Plain Development Manual, having particular regard for Appendix G "Flood Study Methodology" and utilising recent data obtained through the digitised terrain mapping of the site.

The study and the plan will identify loss of flood storage, define the 1% AEP flood level, the impact on the salinity in the creek and consequent impacts on habitat as a result of development, sources of fill, and the extent to which storm and tidal influence aggravate flooding. In this regard, additional measurement of the catchment and analysis/calibration of the flood basin is obviously required. The plan should outline the means by which any potential impact on flood behaviour will be mitigated or contained.

Any proposed lake or significant water body is likely to be "designated development" as defined in Schedule 3 of the Environmental Planning and Assessment regulations.

B10.2.10 Services and Utilities Strategy

What is the Services and Utilities Strategy?

The Services and Utilities Strategy is a document and plan which indicates the principal means and staging of providing essential utilities and services such as reticulated water and sewer to the site.

What will it achieve?

The aim of the services and utilities strategy is to ensure that the provision of essential utilities and services including water, sewerage, Telecom, electricity, etc are provided cost effectively and in accordance with Council's overall strategy for upgrading such services related to the proposed stages of the housing development.

When is the strategy required?

The schematic strategy for provision of these services should be provided with the first application, and indicate in principle the proposed provision of such services related to stages. With each individual subdivision or development application, a more specific indication of services utilities facilities will be required, noting that detailed design will not be required until submission of a Part 12 subdivision application following issue of development consent.

What will it contain?

The Services and Utilities Strategy will include details of the principal reservoirs, pumping stations, rising mains, easements etc to service the anticipated development, establish the timing of provision in relation to the staging, and whether the facilities are temporary or permanent.

In regards to any temporary assets such as a water service reservoir, the applicant is to satisfy Council on all issues related to design, maintenance, rectification of failure, disposal and site rehabilitation, liability, insurance, timing, relationship to demand for water, etc.

The proposed connection of the estate to Council's water supply and sewerage conveyance system adjacent to the Coast Road is to be provided in accordance with the Water Supply Authorities Act 1987 contributions.

B10.3 ENVIRONMENTAL DESIGN ELEMENTS***B10.3.1 General***

The purpose of these Clauses is to define the specific elements of lot, building and development design to ensure a future residential estate of good livability and environmental compatibility within its surroundings.

The overall design philosophy is to effect a residential estate development of a high standard of design, reflecting the opportunity to carefully integrate site planning of lots, buildings and access with site features, maximise environmental values and ensure a habitat-friendly housing estate.

B10.3.2 Densities and Types of Development**OBJECTIVES**

1. To provide a range of housing types for a wide choice in housing, including traditional detached dwellings, medium density town houses and small lot houses.
2. To ensure densities of housing and site conditions are appropriate to housing types in terms of amenity, appearance and development cost.

PERFORMANCE CRITERIA**PERFORMANCE MEASURES**

C1	Housing types to meet range of demand within local housing market.	M1	Overall housing development types to reflect the Indicative Development Layout shown in table in Clause B10.3.2
C2	Medium density housing to be located closer to future bus routes, school and	M2	Small lot Integrated Housing to avoid areas with slopes exceeding 10%.

PERFORMANCE CRITERIA

neighbourhood shop.

PERFORMANCE MEASURES

M3 Release of lots to incorporate range of housing types within each stage where practicable.

B10.3.3 Lot Size and Orientation**OBJECTIVES**

1. To provide a range of allotment sizes to meet the needs, affordability and preferences of different household types.
2. To orientate lots so that buildings make the best use of the site's characteristics and maximise privacy and amenity.
3. To ensure each dwelling site has an appropriate aspect, useable private open space, and protection from overshadowing and overlooking.

PERFORMANCE CRITERIA

C1 Lot sizes to meet the projected requirements of people with different housing needs.

C2 Lot size to accommodate dwelling and ancillary buildings, car accommodation and appropriate private open space.

C3 Lot design to facilitate Council's objectives to ensure that the living areas of dwellings are private open space and oriented where possible to the north.

PERFORMANCE MEASURES

M1 Lots with an area greater than 450 square metres capable of containing a rectangle suitable for buildings purposes measuring 10 metres by 15 metres, to be shown on plan.

M2 Lots less than 450 square metres in area forming part of an approved Integrated Housing Development, (see Clause A5.6.2 of Section A5 - Subdivision Manual).

B10.3.4 Building, Siting and Design**OBJECTIVES**

1. To site buildings to meet projected user requirements for private and daylight.
2. To ensure that the scale, height and length of a building and walls relative to side and rear boundaries to be of appropriate residential character.
3. To preserve the important landscape features of the site.
4. to protect the amenity of the site and surrounding area.
5. To minimise excavation for development on steep sites.
6. To recognise climate constraints in building design.

PERFORMANCE CRITERIA

- C1 Habitable rooms to be capable of receiving adequate daylight.
- C2 Protection from westerly sun in summer and heavy rain to be incorporated in building design.
- C3 Building walls to be sited to minimise loss of amenity to adjacent dwellings and land.
- C4 Roof forms to maintain consistent theme and avoid undue visual impact or lead to loss of views.
- C5 Building materials to be sympathetic to local landscape and natural surrounds.
- C6 Height bulk and scale of buildings to minimise loss of views.

PERFORMANCE MEASURES

- M1 Make provision in respect to access to natural light and sunshine, to avoid the potential for significant overshadowing.
- M2 Optimal orientation for dwelling area windows, shade in summer and sun exposure in winter, should be 20 degrees east and west of north (Australian Housing and Research Council 1982).
- M3 Windows located not less than a horizontal distance of 1 metre from any building of an adjoining lot they face.
- M4 Buildings should be orientated with the main indoor and outdoor living spaces and major windows areas facing towards the north.
- M5 West facing walls should generally have small windows. Alternative, windows should be fitted with appropriate shade structures, and/or landscape screens.
- M6 External walls to incorporate climate control devices such as overhanging eaves, pergolas, wide verandahs.
- M7 Maximum extent of walls to side boundary to be 20 metres (inclusive of garage or carport).
- M8 Low to average pitched roofs preferred, with roof plane on steeper sites to be parallel to slope for part of buildings.
- M9 Bright and light colours should be avoided, with use of non-reflective natural, earth-tone colours.
- M10 Buildings to be stepped to follow slope of land.
- M11 Height and scale of building on ridge lines visible from the Coast Road to be minimised and softened by tree planting.

B10.3.5 Dual Occupancy Development**OBJECTIVES**

1. To recognise the need for dual occupancy development whilst ensuring that such development, if uncontrolled, does not jeopardise the estate's amenity, traffic system, and utility services within a "master-planned" estate.

PERFORMANCE CRITERIA

- C1 Restrict dual occupancy to pre-designated sites.
- C2 Recognise such restriction to protect amenity, and avoid overloading local road system and utilities, by seeking amendment to exempt site from provisions of SEPP No 25.

PERFORMANCE MEASURES

- M1 Pre-designate in subdivision applications all dual occupancy sites, to a maximum of 20% of lots.
- M2 Dual occupancy lots to be sited in development application for subdivision, with building envelope for detached or attached dual occupancy as appropriate to site planning.

B10.3.6 Landscape and Environmental Protection**OBJECTIVES**

1. To ensure that the natural landscape values of the site are recognised in future development.
2. To avoid undue adverse impact on areas of habitat or environmental significance within or adjacent to the site.

PERFORMANCE CRITERIA

- C1 Protect all Koala habitats and identified habitats of other significant or endangered species on the site as indicated in the Fauna Impact Statement and Koala Management Plan.
- C2 Enhance habitat and environmental value of site particular adjacent to 7(l) zones.
- C3 Reflect the matters indicated in Figure 3 - Koala and Environmental Management Principles.

PERFORMANCE MEASURES

- M1 Implement habitat protection measures recommended in Fauna Impact Statement, and Koala Management Plan, including measures to protect primary Koala browse trees, home range trees and where possible, other trees utilised by koalas in high activity areas by restrictions-as-to-user, buffer areas for earthworks, koala crossing areas and corridors, swimming pool and fence design criteria, etc.
- M2 Restrict or prohibit domestic dogs and cats from site.
- M3 Design speed and speed control devices to produce maximum 40kph speed environment.
- M4 Ensure appropriate edge treatment for development adjacent to all 7(l) zoned areas and habitat corridor,

PERFORMANCE CRITERIA**PERFORMANCE MEASURES**

including fire trail access and bush fire hazard buffer strip and walkways.

M5 Submission of a Landscape Concept Plan for the whole estate with the first subdivision application and specific Landscape Concept Plans for each proposed subdivision, medium density or other appropriate development, such concept plan to include streetscape concept and habitat enhancement plantings to be included as appropriate for private open space, public open space, embellishment, or road reserve.

M6 Development, including buildings, pools, earthworks, fencing and driveways, to be sited and designed so as to maximise long term protection and management of primary Koala browse and home range trees, with identification of all such trees and their status in each Development.

M7 All fencing to be designed and erected in accordance with the fencing standard recommended in the Koala Management Plan, to permit adequate ground clearance and facilitate Koala movement.

B10.3.7 Street Design and Speed Control**OBJECTIVES**

1. To provide acceptable levels of access, safety and convenience for all street users in residential areas, while ensuring acceptable levels of amenity, and protection from the impact of traffic.
2. To provide a network of streets with clear physical distinctions between each type of street, based on function, legibility, convenience, traffic volumes, traffic speeds, public safety and amenity.
3. To establish a street and koala network which maintains safe linkages between activity nodes.
4. To provide for bus routes which are both accessible and efficient to operate.

PERFORMANCE CRITERIA**PERFORMANCE MEASURES**

C1 The road design and speed control measures to be in accordance with the provisions of Section A5 -

M1 The street layout should positively exclude through traffic.

PERFORMANCE CRITERIA

Subdivision Manual.

- C2 The road network to be in accordance with the Koala Management Plan.
- C3 Provision to be made for planning of future road link to development site to south (Lot 4, DP 803030).

PERFORMANCE MEASURES

- M2 Maximum design speed for all roads within estate to be 40 kph, including the entry road west of the proposed bridge over Cudgera Creek Road.
- M3 Maximum traffic volume of 3000 vehicles per day on any street with direct residential access, unless specific traffic calming measures provided.
- M4 Turning area for either single-movement or three-point turn to be provided at the end of every cul-de-sac.
- M5 Koala road crossing details and major intersection treatments to be in accordance with the Koala and Habitat Management Plan, including awareness signage and lighting.
- M6 Design of intersections to major roads in accordance with RTA and/or NAASRA (Austroads) standards.
- M7 Potential bus route to be located within 400 metres of 80% of allotments.
- M8 Long straight sections of road must include traffic control measures, to reduce traffic speed.
- M9 Appropriate signage being installed for Koala awareness throughout estate.
- M10 Provision for dedication of road reserve to connect to Lot 4 DP 803030 for future local road/bikeway link.

B10.3.8 Pedestrians and Cyclists**OBJECTIVES**

1. To provide a safe and convenient network for pedestrians and cyclists, incorporating all weather paths and access to points of attraction within and adjoining the development.

PERFORMANCE CRITERIA

- C1 A network of pedestrian ways and cycle ways to be based on:
- projected travel demand;
 - opportunity to link open space networks, community facilities and public services; and
 - environment, location, safety and weathers factors.
- C2 Trunk bikeway/walkway to be provided in location shown in Figure 2 Traffic Management Principles.

PERFORMANCE MEASURES

- M1 Pedestrian/cyclist pathways shall be provided and designed in accordance with Guide to Traffic Engineering Practice AUSTRROADS 1993 Part 14, Bicycles.
- M2 Paths shall use the most direct and environmentally acceptable route between residential area and community facilities, shopping centres, open spaces and schools, etc.
- M3 Cycle storage facilities shall be provided at shopping and community centres, schools and appropriate open space/recreation areas.

B10.3.9 Streetscape and Visual Amenity**OBJECTIVES**

1. To provide attractive and safe streetscapes which reflect the precinct characteristics, are sensitive to the landscape and environmental conditions of the locality, reinforce the functions of the street and enhance the visual amenity of development.

PERFORMANCE CRITERIA

- C1 Development to provide an attractive streetscape setting with opportunities for landscaping and varying building setbacks.

PERFORMANCE MEASURES

- M1 The Landscape Concept Plan referred to in M5 of Clause B10.4.6 (Landscape and Environmental Protection) is to include a schematic Streetscape Concept which identifies the proposed streetscape character and includes proposed building lines

PERFORMANCE CRITERIA

- C2 Garage and carport locations to be arranged so that they do not dominate the streetscape.
- C3 Landscaping to:
- complement the function of the street;
 - reinforce desired traffic speed and behaviour;
 - incorporate existing significant vegetation wherever possible particularly those providing food and shelter for the Koala population; and
 - be sensitive to site attributes such as streetscape character, land capability, microclimate, views and vistas.
 - reflect need for street landscaping to avoid prejudicing safety for pedestrians and vehicles, and minimise future maintenance of street landscaping.
- C4 Any building line setback from the street boundary, and any walls between the building line and street boundary to have minimal impact on existing or other future dwellings.

PERFORMANCE MEASURES

- and street landscaping.
- M2 Low set hedges, earth mounding and other soft landscaping elements are appropriate along street frontages to enhance streetscape appearance.
- M3 In selected areas wider than normal road reservations will be permitted in order to establish:
- attractive and varied planting/landscaping such as group, clustered or grove planting (ie: as distinct from isolated single trees in a row alongside the road);
 - preservation of existing trees and tree screens particularly those providing food and shelter for the Koala population; and
 - accommodate and screen off-street parking.
- M4 Design of street plantings to ensure minimum risk of danger to pedestrians or vehicles by reason of inappropriate location and choice of shrubs and trees.
- M5 Location and choice of species to avoid service lines and facilitate long-term ease of maintenance.

B10.3.10 Non-Residential Development**OBJECTIVES**

1. To facilitate appropriate provision of community facilities and other non-residential development to service the needs of this housing estate.

PERFORMANCE CRITERIA

- C1 Provide for state high school site, neighbourhood shops and centre site and also appropriate uses such as child-care centres, medical practitioner and home occupations in accordance with the Tweed LEP.

PERFORMANCE MEASURES

- M1 State high school site to be located in an appropriate site of approximately 6ha, as agreed with the NSW Department of School Education and siting guidelines for school used by the Department, such site to be determined prior to submission of the Stage 2 subdivision application.
- M2 Proposed neighbourhood shops and centre to be located in the area shown on the "Indicative Development Layout", with location of vehicle entry\exit to avoid proximity to a roundabout.
- M3 Range of uses within neighbourhood centre to be restricted to convenience shops and services servicing the day-to-day needs to the surrounding area, such as fruit shop, milk bar, general store, hairdressing salon, cafe, video outlet, child care centre and the like.
- M4 Any child-care centre to be located and designed in accordance with Tweed Shire Council Child-care Centre Policy.

B10.3.11 Hazard and Nuisance Mitigation**OBJECTIVE**

1. To recognise the potential for hazards and nuisances such as bushfire, flooding, certain agricultural practices and acid sulphate soils to adversely impact upon the amenity of residents and cause risk to persons, property and/or the environment.

PERFORMANCE CRITERIA

- C1 Provide adequate buffers between residential and other development and land uses.

PERFORMANCE MEASURES

- M1 Minimum 50m buffer between Koala Beach property and any adjoining property with sugar cane.

PERFORMANCE CRITERIA

C2 Avoid development or adopt appropriate management practices for certain types of development such as flood prone land, acid sulphate soils, steep slopes.

PERFORMANCE MEASURES

M2 Refer to Clause B10.3.5 in respect of Acid Sulphate Soil hazard mitigation and measures.

M3 Refer to Clause B10.3.6 for Bushfire Hazard mitigation and measure.

M4 Refer to Clause B10.3.8 for Flooding Hazard measures.

B10.4 DEVELOPMENT APPLICATION REQUIREMENTS

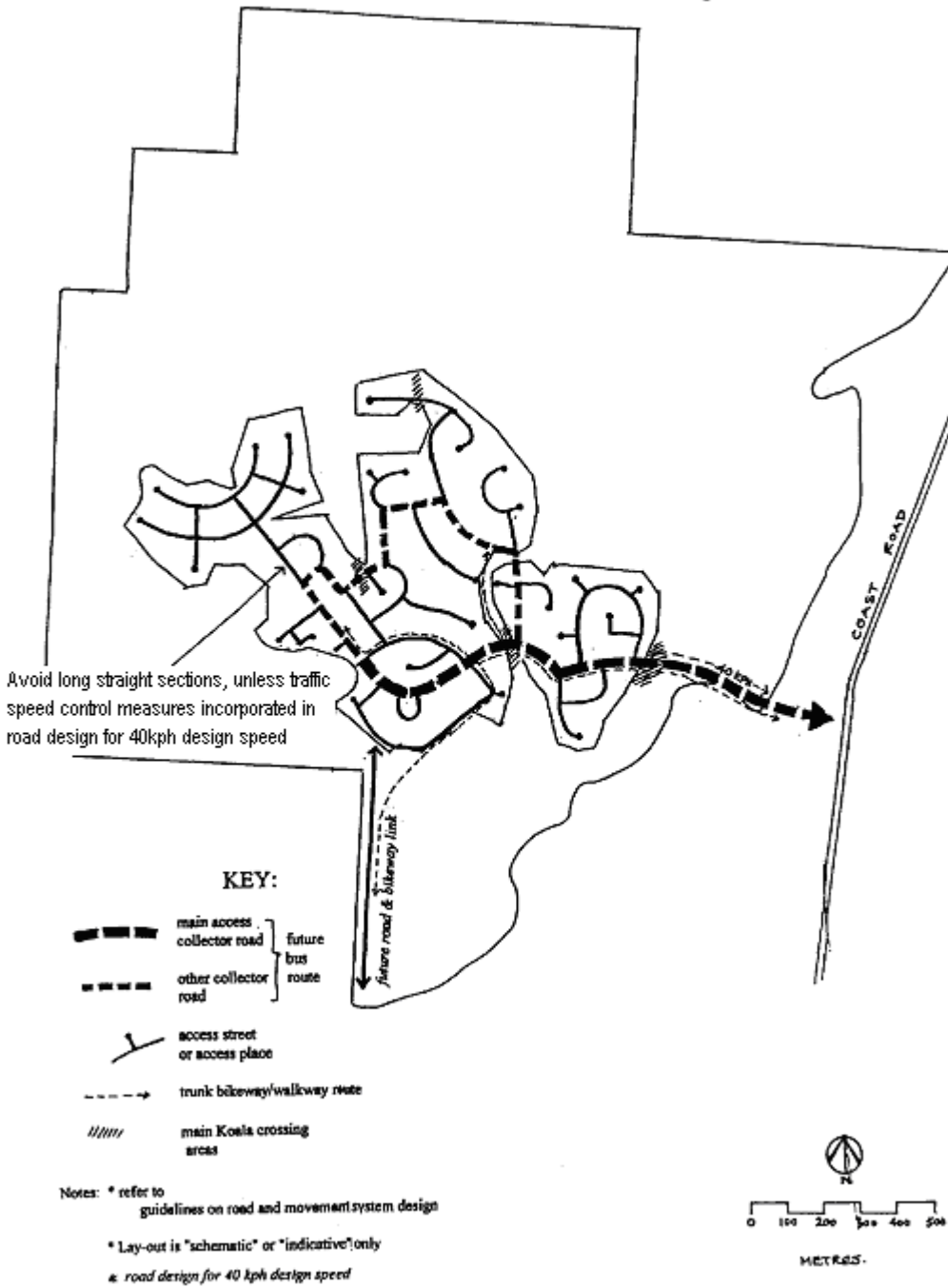
The following checklist summaries requirements for provision of management plans or strategies to accompany various types of applications:

	1st Residential Subdivision Application	Subsequent Subdivision Applications	Integrated Housing Development	Medium Density
Overall Traffic Management Study or Concept				
Traffic Management Plan				
Koala Management Plan		*	*	*
Open Space Management Plan				
Water Quality Stormwater and Erosion Control Management Plan				
Bushfire Management Plan				
Staging Strategy				
Flood Liable Land Development Plan				
Services and Utilities Strategy				
Landscape Concept Plan				

* Subsequent applications to include reviews or update of Koala Management Plan relative to the site.

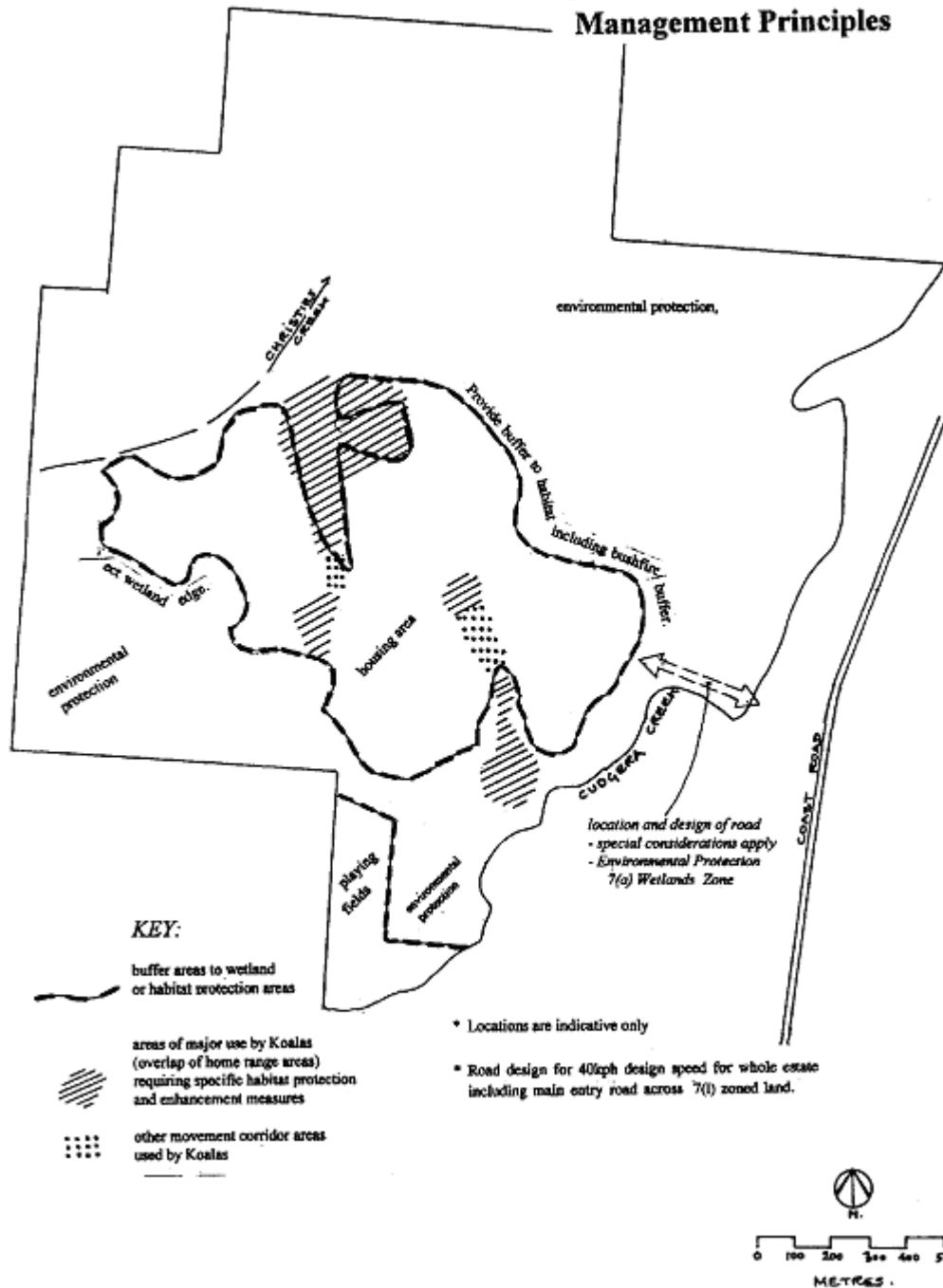
B10 - Map 2

Traffic Management Principles



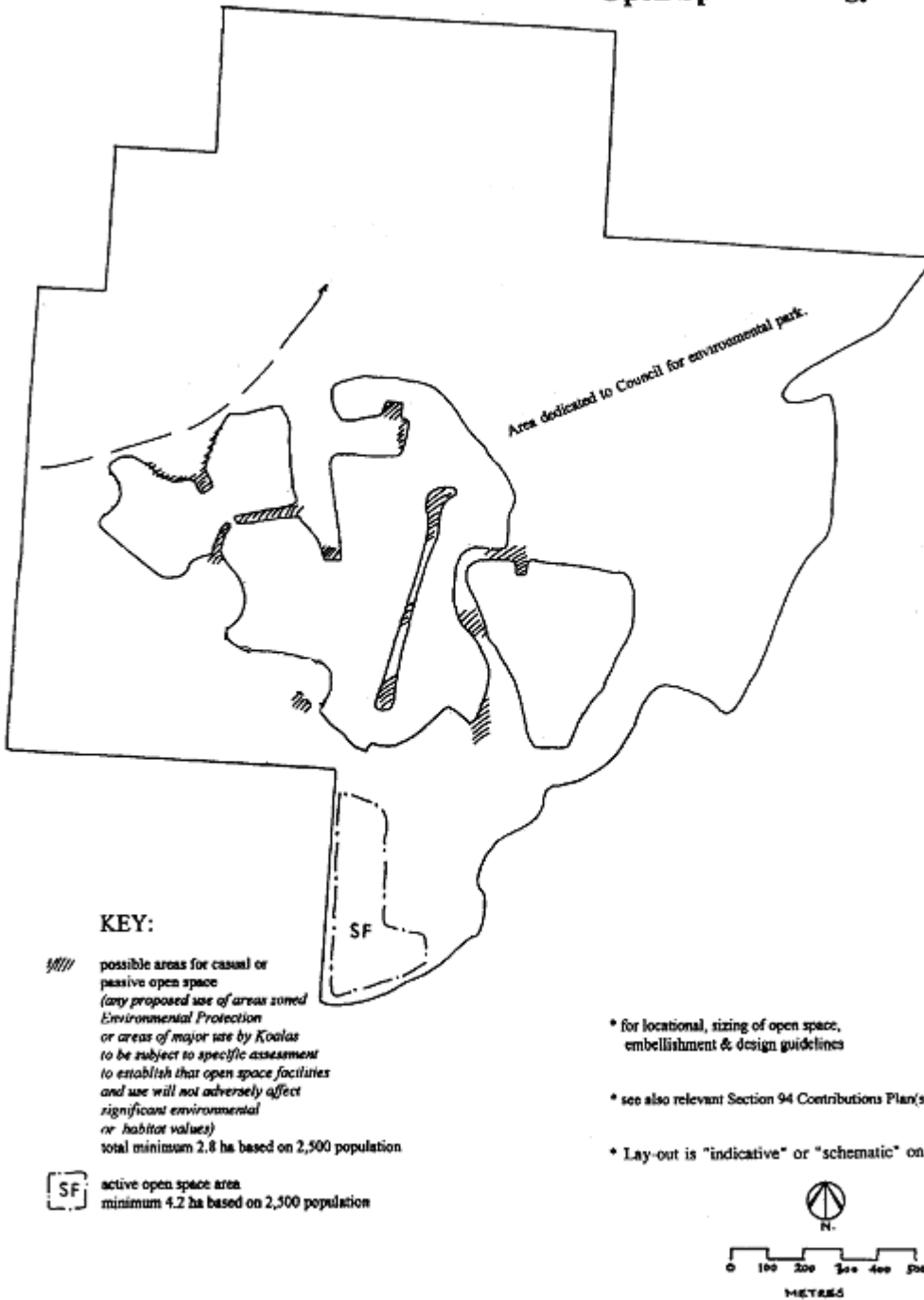
B10 - Map 3

Koala and Environmental Management Principles



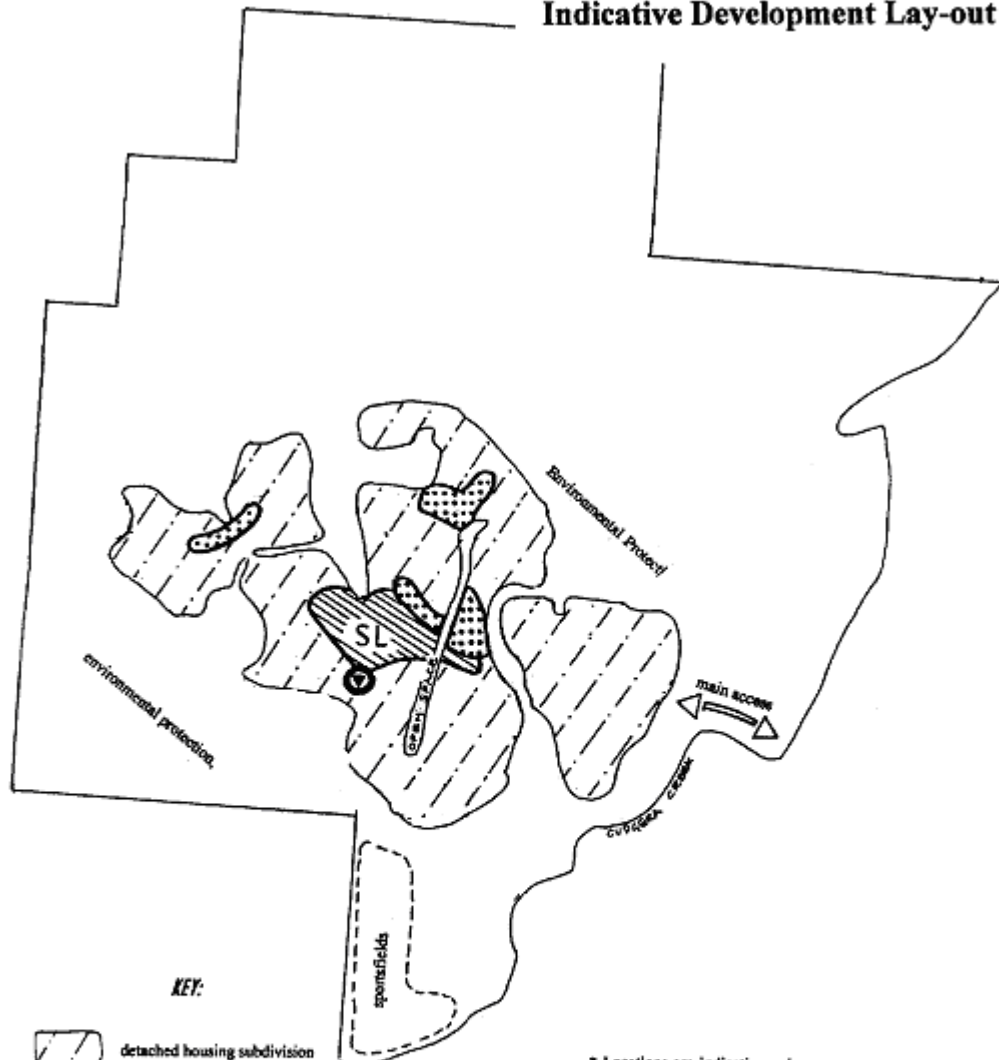
B10 - Map 4

Open Space Strategy







B10 - Map 5

Indicative Development Lay-out



KEY:

-  detached housing subdivision
-  integrated small-lot housing
-  medium density, such as town-houses
- (note: dual occupancy lots to be specified in development /subdivision application)*
-  neighbourhood shops and centre

* Locations are indicative only.



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