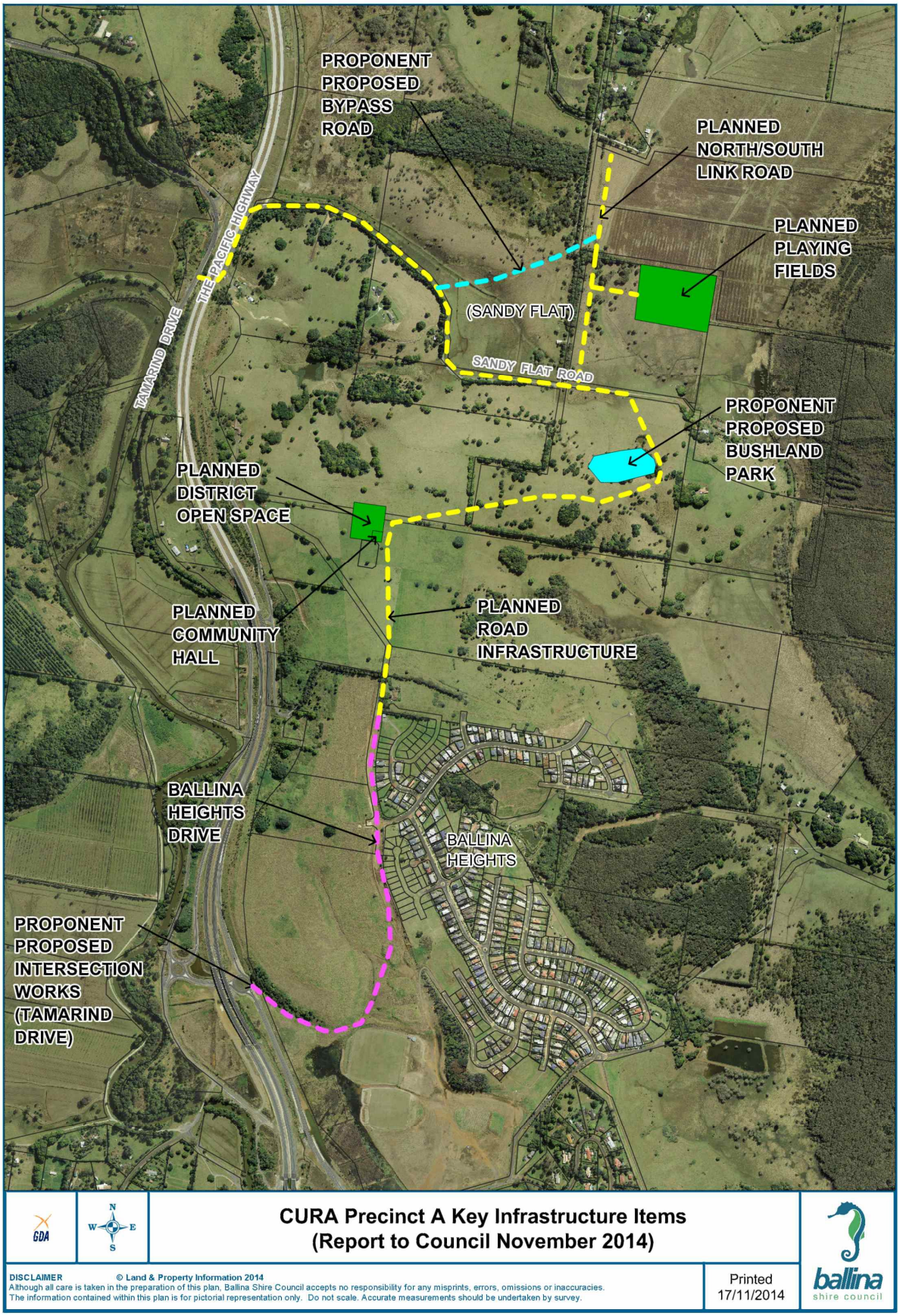
Attachment 1. Staff Assessment of Precinct A (CURA-A) Proponents' proposal for amendment of draft s.94 plan.

Proposal	Staff Assessment
The dedication of land for works delivered through s.94 plan separate to the s.94 plan.	Under this proposal, early stages of the development would not be called upon to dedicate land, whereas latter stages of the development could be expected to dedicate more land than the demand generated by that stage of the development. This could potentially undermine the delivery of the infrastructure to be provided by the development as a whole, if latter stage landholders argue that such dedication would be unreasonable. To be properly secured, such an arrangement would need to be made legally binding, such as through a voluntary planning agreement.
Removal of the planned direct north-south link road with Precinct B.	The provision of a convenient and reasonably direct linkage between the two (future) substantial new villages is considered to be strongly in the public interest. It is noted that a direct north-south link road is expected to benefit the future residents of both Precinct A and Precinct B. With respect to discouraging through traffic from Precinct B through Precinct A, it is noted that, due to a higher speed environment, south bound travel times via Sandy Flat Road and Tamarind Drive, may be less than travelling through CURA-A. Notwithstanding, a number of measures may be implemented to mitigate the potential for unnecessary through traffic, such as careful road design and the implementation of traffic calming measures. Accordingly, provisions to this effect have been incorporated into the draft development control plan for CURA-A.
The inclusion of a Precinct B bypass road.	Beyond a promise to dedicate land, the developers do not identify a funding mechanism for the delivery of the bypass road. The estimated cost of construction is $10.5 million. Further comments as per above, relating to the provision of the north-south link road.
The inclusion of the extension of Ballina Heights Drive to Sandy Flat Road in s.94 plan.	It has been previously noted, that the future upgrade of Sandy Flat Road could reasonably be made a condition of development consent in association with the future development of CURA-A. Notwithstanding, Council acknowledges the potential difficulties associated with the delivery of this road upgrade, due the staging of the

	development and mixed land ownership. It is noted, however, that including the projected cost of the upgrade into the CURA-A s.94 plan (approximately $3M works) would exceed the capacity of the Precinct A s.94 plan due to the State Government cap on development contributions (leaving $1.5M unfunded). Staff recommend the consideration of including the upgrade of Sandy Flat Road into the shire-wide s.94 roads plan, a review of which is currently underway.
The inclusion of intersection upgrade works to Tamarind Drive roundabout in the s.94 plan, for the purposes of improving intersection safety.	The developers have proposed the inclusion of works to the Tamarind Drive intersection with Ballina Heights Drive, into the CURA-A s.94 plan, for the purpose of improving the safety of the intersection. It is noted that s.94 of the EP&A Act 1979 allows the collection of contributions where it can be reasonably anticipated that the development will give rise to additional demands on public infrastructure or amenities. It is questionable as to the extent to which section 94 contributions can be used to rectify safety or design issues that potentially already exist. It is possible though to levy contributions (in full or on a proportional basis) where infrastructure capacity needs to be augmented, to accommodate additional demand created by development. It is further noted that should the intersection require upgrading as a consequence of the additional demand created by the future development of Ballina Heights and/or CURA-A, then these works could reasonably be made a condition of development consent. The identification of other priority infrastructure in the CURA-A s.94 and the imposition, by the State Government, of the cap on the maximum contribution amount that can be collected ($30,000 per dwelling) means there is insufficient capacity to include additional items in the CURA-A s.94 plan.
The inclusion of a 'Bushland Park' as a component of the planned district park infrastructure.	The proposed bushland park, although large in area (16,500m^2), does not comprise usable open space. In this regard, it is noted that 42% of the proposed park has a slope of over 30 per cent, 54% has a slope between 20 and 30 per cent slope and only 4% of the proposed park area has a slope of less than 20 per cent. Further, the site is heavily vegetated with protected native vegetation. Council's Manager of Open Spaces recommends the consolidation and centralisation of district open space facilities in order to optimise usability, embellishment

	and maintenance. Consequently, the bushland park is not considered suitable to meet district open space requirements associated with the development.
Reduced extent of site preparation works to the district park/s.	The proponents sought to reduce the amount of site preparation works, to the district park, as follows: • Reduced 'site clearing' from 10,000m^2 to 500m^2 • Reduced area of 'turf' from 9,000m^2 to 3,000m^2. No justification for reduce site works have been provided. Site preparation works, commensurate with the area of the site, will be needed to embellish the district park to the required standard. In the absence of details supporting reduced rates, it is recommended that the original estimates be retained.
Reduced assumed population yield.	The developers' proposal involved an amendment to the projected dwelling yield from 738 to 820 dwellings. Consequently, it is proposed that a development yield of 820 dwellings be assumed, for the purpose of the s.94 plan. The developers' proposal also involved the amendment of assumptions relating to the average number of persons per dwelling (from 2.7 to 2.4), with the implication that fewer facilities would be required for the same number of dwellings. It is noted that the average number of persons per dwelling in Ballina Heights/CURA-A was 3.1 persons per dwelling in 2011. Consequently, the rate chosen by Council for the s.94 plan, already provides some discount, recognising that the occupancy rate will likely decline as the locality ages. Notwithstanding, 2.7 persons per dwelling is a typical occupancy rate for new release areas. Therefore the current occupancy rate, used in the draft s.94 plan, is considered reasonable.


PROPONENT PROPOSED BYPASS ROAD
PLANNED NORTH/SOUTH LINK ROAD
PLANNED PLAYING FIELDS
THE PACIFIC HIGHWAY
TAMARIND DRIVE
(SANDY FLAT)
SANDY FLAT ROAD
PROPONENT PROPOSED BUSHLAND PARK
PLANNED DISTRICT OPEN SPACE
PLANNED COMMUNITY HALL
PLANNED ROAD INFRASTRUCTURE
BALLINA HEIGHTS DRIVE
BALLINA HEIGHTS
PROPONENT PROPOSED INTERSECTION WORKS (TAMARIND DRIVE)
GDA
N
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CURA Precinct A Key Infrastructure Items
(Report to Council November 2014)
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ballina shire council

Ballina Shire Development Control Plan 2012

CHAPTER 3 – PRECINCT-SPECIFIC CONTROLS - CUMBALUM VIEWS

5.6 Cumbalum Views

5.6.1 Application

Applies to:	
Location/s:	Cumbalum Precinct A, to be known as Cumbalum Views (as shown on Special Area Controls Map – Subdivision)
Development Type/s:	Subdivision

5.6.2 Planning Objectives

a. Establish *"Cumbalum Views"* as a distinct residential community reflecting its location, topography and views.

b. Provide reasonable certainty for developers and residents regarding the broad subdivision layout while providing flexibility with respect to the detailed configuration of roads and allotments and the built form of Cumbalum Views.

c. Ensure that the future urban development of Cumbalum Views integrates with the Ballina Heights Estate (in terms of road and pathway networks, infrastructure servicing, active and passive open space etc) and allows the creation of a unique character which differentiates it from Ballina Heights.

d. Ensure that the future urban development of Cumbalum Views complements the urban development to the north and east in terms of access, facilities and infrastructure.

e. Ensure that infrastructure is designed and provided on a co-ordinated basis having regard for the likely future staging of the urban area.

f. Ensure that infrastructure services, open space and community infrastructure is provided in an orderly and economically feasible manner, sufficient to service the needs of future residents.

g. Provide for a range of residential densities and built forms.

h. Encourage higher density residential development in locations that are well situated in respect of facilities and services.

i. Ensure that residential allotments are of a sufficient size and shape to accommodate anticipated diversity of housing densities/uses.

j. Create a functional, attractive and pleasant place to live with a central public open space that forms the community hub.

k. Provide a balanced outcome of respecting and linking environmental qualities, topography and efficient development of built form while protecting the environmental values of the land.

5.6.3 Development Controls

A. Element - Layout of the Village

i. Development applications for the urban subdivision of the land are to be generally consistent with the following plans (refer Appendix A):

Figure 1: Structure Plan – Cumbalum Views

Figure 2: Mobility Plan – Cumbalum Views

Figure 3: Open Space Plan – Cumbalum Views

Figure 4: Landscape and Special Places Plan – Cumbalum Views

Figure 5: Staging Plan – Cumbalum Views

Figure 6: Context Plan – Cumbalum Views

ii. Applications for the subdivision of land (not involving Strata subdivision) are to be accompanied by information that demonstrates how the proposed subdivision stage integrates with:

- The plans contained in Appendix A, referred to above;
- The existing or likely subdivision pattern (particularly roads, pedestrian pathways, open space, ecologically significant land) of the land adjoining the specific stage (including land in the Ballina Heights Estate to the south, the proposed new urban area to the north and any future urban areas to the east); and
- The utilities and infrastructure servicing of the subdivision (including existing infrastructure services).

iii. Cumbalum Views is to be developed with the following characteristics:

- A residential character with smaller lots that respond to the topography along the local connector and bus route, and a diversity of housing types and lot sizes across the remaining land;
- A public realm which strengthens its residential character and includes a central community hub and open space adjacent to the water reservoirs, and an entry statement at the southern entrance to the precinct;
- A predominantly local traffic environment with minimal through traffic from urban development to the north and Ross Lane;
- A diversity of housing that is orientated to public roads and open space to enhance surveillance of the public areas;
- The creation of sport fields in the north-eastern area of the precinct that links to the recreational area of the urban area to the north; and

iv. An integrated network of pedestrian/cycle paths is to be provided throughout Cumbalum Views to provide safe, convenient and direct access to and within the residential precincts.

v. A child care centre (or pre-school) site is to be provided within 400m of the central district park.

B. Element – Infrastructure Provision

i. The subdivision is to be fully serviced with water, sewer, roads, drainage and underground electricity and telecommunications services.

ii. Service infrastructure is to be constructed on a staged basis to accommodate staged land release in accordance with – *Cumbalum Views Staging Plan* - Figure 5.

iii. Service infrastructure internal to the development site is to be provided by the developer at no cost to Council.

Dual reticulation water supply

iv. A dual-reticulation water supply for recycled water is to be provided throughout the development in accordance with Council's Recycled Water Scheme.

v. The developer is to incorporate on the Certificate of Title for all allotments, Restrictions as to User which requires all dwellings and buildings with plumbing (including commercial buildings and the like) to make provision for recycled water service plumbing and facilities to the approval of Council.

Roads and access

vi. The road hierarchy through Cumbalum Views is to be based on major access/egress road connections from the south, via Ballina Heights Drive (BHD), and from the north via connection to Sandy Flat Road and future link road connection to Cumbalum Precinct B. Internal roads are to be designed to reflect current engineering standards and the amenity of the residents, and take into account the topography and drainage characteristics of the land.

Notes:
Variations from engineering standards, where specific uses and conditions may warrant a departure from those standards, will be considered on merit.

vii. Safe pedestrian access is to be provided across Cumbalum Views precinct, as shown in *Cumbalum Views Mobility Plan* – Figure 2 so that residential areas can link with one another, the shopping centre in Ballina Heights, open space, sports fields and community infrastructure.

viii. Traffic calming measures are to be implemented at the northern entrance to Cumbalum Views, as shown on the *Cumbalum Views Mobility Plan* – Figure 2, to encourage south-bound through-traffic (from the north) to travel via Sandy Flat Road

and Tamarind Drive rather than passing through Cumbalum Views. These traffic calming measures are to be implemented while maintaining reasonably convenient and direct connections between Cumbalum Views and Cumbalum Precinct B, in both directions.

ix. The road network is to be designed to provide for designated bus routes and bus stops in locations which provide safe and convenient access for residents.

Pedestrian/cycle network

x. An integrated pedestrian/cycle path network is to be provided as shown on *Cumbalum Views Mobility Plan* – Figure 2. The pedestrian/cycle path may, in some cases, perform a drainage function and/or provide access for servicing authorities.

xi. A pedestrian path is to be provided at or near the head of any cul-de-sac so as to connect adjacent cul-de-sacs and enable pedestrians and/or cyclists to have direct access from one cul-de-sac to the other without having to travel a longer distance by road.

xii. One primary off road pedestrian/cycle path (minimum 2m width) is to be provided to link Ballina Heights with Cumbalum Views (as shown on *Cumbalum Views Mobility Plan* Figure 2).

Traffic management facilities

xiii. At the southern and northern entrances to Cumbalum Views, the road treatment should change to encourage a slowing of traffic movement but also to assist with the creation of a transition into Cumbalum Views.

Public transport movement

xiv. The main local collector road is to be constructed as generally shown on the *Cumbalum Views Structure Plan and Mobility Plan*– Figure 1 and 2, and function as the primary public transport route through Cumbalum Views.

xv. The main local collector is to be designed to accommodate designated bus routes and bus stops in locations which provide safe and convenient access to residents.

xvi. The public transport route is to provide a turn around loop on the northern end of each stage of Cumbalum Views while it is under construction to ensure efficient public transport services from Cumbalum Views to Ballina Heights and to Ballina town can occur easily in both directions.

Stormwater

xvii. Development proposals are to demonstrate that development will not adversely impact on the downstream natural environment or on adjacent private property due to increased stormwater volume.

xviii. The developer is to incorporate on the Certificate of Title for all allotments Restrictions as to User which identifies installation and maintenance obligations for stormwater treatment devices (where required).

xix. Development applications for subdivision are to be accompanied by an integrated Stormwater Management Plan for each stage in order that the cumulative impacts associated with the development of Cumbalum Views as a whole are considered. Major stormwater detention/treatment areas are identified on *Cumbalum Views Structure Plan* – Figure 1.

xx. Stormwater detention areas are to be located above the Q100 flood level.

xxi. Stormwater treatment and disposal are not to rely solely on end of line facilities. A treatment train is to be provided that incorporates a range of facilities, inclusive of measures, where appropriate, within the subdivision. To limit the impact of the increased volume of surface run-off from urbanisation on downstream hydrology, infiltration measures for low event (<Q1) storms are to be incorporated into the stormwater management system.

Notes:
Best stormwater management practices include dispersion techniques such as dissipaters, litter and debris control traps and associated trunk line drainage structures in controlling sediment and reducing phosphate/nitrate levels. Where possible and practicable, these structures are to be designed sympathetically with the surrounding environment and constructed of natural materials such as boulders and rock features and landscaped.

xxii. Stormwater detention areas are to be designed so as to minimise the potential for mosquito habitat and facilitate easy maintenance. To achieve this, stormwater design is to:

- Detain water for no more than 3 days
- Be developed in consultation with a qualified mosquito consultant;
- Consider and avoid the potential for weed proliferation;
- Be developed in consultation with Council, to ensure the design facilitates easy maintenance; and.
- Include details of maintenance requirements.

Notes:
In order to minimise the potential for stormwater ponds and dams to harbour mosquitoes, stormwater detention areas should incorporate the following attributes:

i. The batter around the dam/pond is to be as steep as practical (within the design standards for public safety) to minimise shallow water (< 600mm) suited to mosquito breeding. If fencing is not used for public safety, a batter not less than 1:6 is recommended;

ii. Normal water levels within the pond must maintain at a minimum of 600mm water depth except for the margins;

iii. Design to facilitate wind action over the waterbody to keep the water surface disturbed to reduce availability to mosquito larvae (this requires contact with a stable surface film for respiration). Basin margins should not be planted with shrubs or trees;

iv. Aquatic macrophytes should not be planted in more than 60% of shallow water around the margin. Where planted, macrophytes must be clumped with separations of open water allowing wind disturbance on the water surface; and

v. Be designed in consultation with a qualified mosquito consultant/entomologist.

xxiii. Development proposals are to incorporate environmental monitoring measures to enable staged post-development monitoring of downstream stormwater impacts at key stages in the development process. This is to include pre-development monitoring to allow benchmarking of the pre-development environmental characteristics. The location of water quality monitoring points is to be determined in consultation with the Council, prior to the placement of monitoring equipment.

Notes:
A suitably qualified ecologist (eg. Science degree) must be retained and consulted in the preparation of the stormwater management strategy. The name and experience of the author(s) must be clearly stated.

Development proposals are to have regard to *Cumbalum Ridge: Inundation Investigation for Ballina Nature Reserve and Adjacent Properties*, by BMT WBM dated December 2012. Alternative stormwater systems may be considered provided that it is demonstrated that the system will achieve the required criteria for stormwater management.

xxiv. On completion of each stage stormwater management and devices to be located on public land are to be handed over to Council.

Earthworks and filling

i. Broad scale re-contouring (cut and fill) of the land surface is to occur only where it forms part of, and is integrated into, the lot and road layout for a "greenfield subdivision" and where it is undertaken by the developers of the subdivision during the subdivisional works.

ii. Any development application for residential subdivision is to be accompanied by engineering plans that detail the proposed extent and method of re-contouring at subdivision and individual lot scales (including details of all cut and fill and any retaining structures).

iii. Where retaining structures are proposed/required, they are to be of a uniform and integrated type and appearance so that there is consistency in their design/construction and so that they present well in the local landscape and streetscape.

iv. Earthworks on created residential lots are generally restricted to a maximum cut or fill of 1500mm from the finished ground level upon completion of the bulk subdivision works for a single cut/fill, or a maximum of 1100mm per cut/fill where more than one cut/fill is proposed for the lot.

C. Element – Open Space and Community Facilities

i. Open space and community facility infrastructure is to be provided in accordance with the Cumbalum Urban Release Area Precinct A s.94 Developer Contributions Plan, and otherwise as outlined below.

Sporting fields

ii. District sporting fields are to be provided for by the developer in the location shown on the *Structure Plan Cumbalum Views* - Figure 1. The following sporting facilities are to be provided:

- 1.2 full size playing fields/1000 head of population (two required);
- 1.0 court/1000 head of population (two required);
- Clubhouse and amenities;
- Public (road) access; and
- Car parking as per Council standards.

iii. The sporting fields and amenities are to be fully established prior to the linen release of the 450th lot at Cumbalum Views, if provided by the developer as works-in-kind.

iv. The sporting fields are to be designed and located to comprise a minimum area of 4 hectares of usable space (not including access ways or battle axe handle areas).

District parks

v. A district park for passive recreation, comprising a 10000m^2 site, is to be provided and located as depicted on the *Structure Plan Cumbalum Views* - Figure 1. Native vegetation areas are not to be counted in the calculation of the area of district park to be provided.

vi. The embellishment of the district park is to be provided prior to the linen plan release of the 250th residential lot, if provided by the developer as works-in-kind. Embellishment may include walking paths, picnic shelters, BBQ facilities and play equipment, in accordance with the s.94 plan that applies to the land.

Local Parks

vii. Local parks, comprising a minimum usable park area of 2000m^2, are to service a walkability catchment of 400m and are to be provided consistent with the *Structure Plan Cumbalum Views* - Figure 1.

viii. The local park is to be provided prior to the linen release of the 250th residential lot, the second local park is to be provided prior to the linen release of the 500th lot, and the third local park is to be provided prior to the linen release of the 700th lot.

ix. The local parks are to be embellished with play equipment, landscaping, seating and shelter.

Community building

x. A community building (eg hall) is to be provided for by the developer in the location shown on the *Structure Plan Cumbalum Views* - Figure 1.

xi. The community building is to comprise a minimum gross floor area of 250m^2 inclusive of an auditorium comprising a minimum of 170m^2, and is to be supported with required car parking and landscaping. The site on which the community hall is to be located is to comprise a minimum of 1000m^2, calculated separately to the district park.

xii. The community building is to be provided prior to the linen release of the 450th residential lot at Cumbalum Views, if provided by the developer as works-in-kind.

xiii. The community building is to be designed with articulation and roof forms that create an iconic structure for the new community.

D. Element – Special Places

i. The district passive open space area (District Park) with a minimum area of 10000m^2 is to be developed in close proximity to the water reservoir, as the key "special place" for the community, as shown on the *Landscape and Places Plan Cumbalum Views* – Figure 4.

ii. A local urban community garden in Cumbalum Views is to be provided in association with the district park.

iii. The "special place" district park should align with the collector road to facilitate view sharing down the road that links the site with the coast and hinterland views.

iv. Within 200m of entering Cumbalum Views from the north and south an entry feature is to be provided with landscaping, public art and a change of road materials/treatment.

v. The entry road from Ballina Heights into Cumbalum Views is to align with the "special place" district park and be planted to create an avenue of trees as shown in *Landscape and Special Places Plan Cumbalum Views* – Figure 4.

vii. The subdivision is to incorporate the key site features as outlined on the *Landscape and Special Places Plan Cumbalum Views* – Figure 4 into the subdivision design and layout for Cumbalum Views to create visual interest and place making elements in the community.

E. Element – Residential Precincts

i. Subdivision layouts are to provide for a range of housing types including dwelling houses, dual occupancies, residential flat buildings and multi dwelling housing.

ii. Smaller lots or higher density residential development shall generally be located within 200m of the district or local parks or along the dedicated bus route.

iii. Cumbalum Views is to rely on the commercial and retail centre that will be contained in the Ballina Heights Estate to the south.

iv. Residential areas and broad staging nominated in the *Staging Plan Cumbalum Views* – Figure 5 is (as far as practicable), to achieve the net residential density contained in the table below.

Note:
Net residential density is the number of dwellings per hectare measured over the net developable area being the total area (in hectares) of residential allotments, local roads and local parks, and excluding all other land uses and environmental lands.

Stage	Anticipated Yield (dwellings)	Percentage Yield	Net Developable Area (ha)	Net Residential Density (dw/ha)
1	455	55%	40.30	11.3
2	245	27%	20.53	11.9
3	120	18%	15.95	7.5
Total	**820**	**100%**	**76.78**	**10.7**

v. Allotments that are designed to accommodate residential flat buildings and multi dwelling housing should preferably be situated in locations which adjoin open space and which have convenient access to services and amenities. Such allotments should also satisfy the following:

- not have an average slope of greater than 20%;

- not be of a battle-axe shape/configuration; and
- preferably be a corner lot.

vi. Residential lots that are identified at the subdivision stage as requiring specific residential design requirements to mitigate road traffic noise shall have relevant restrictions applied on the title of the lot.

Notes:
Contemporary road noise standards are to be met. At the endorsement of this DCP, these standards were that noise standards be met as per "Environmental Criteria for Road Traffic Noise (DECCW) for external road noise of LAeq (15 hour) 55 dB(A) between 7 am and 10 pm and LAeq (9 hour) 50 dB(A) from 10pm to 7 am.

vii. Residential lots which are larger than 800m^2 and within 200m convenient access to public open space, community facilities and/or the village centre site of the Ballina Heights Estate, are to locate the primary dwelling on the lots in such a way as to have the ability at some future stage, to have a second detached dwelling erected on the lot.

Notes:
The purpose of the "flexible lot" is to provide for situations where a young family builds/occupies a dwelling house with a large yard (providing children with a safe and secure yard for recreation/play) and then when the children grow up and leave, enables the parents to continue to live in their original house with reduced land area and management/maintenance obligations as a consequence of a second dwelling being built on the lot (facilitates aging-in-place).

Element – Landscaping

i. Roads that have a collector function, namely the major bus route, are to be provided with kerb-side tree planting so that such roads comprise tree lined boulevards or avenues as outlined on *Landscape and Special Places Plan Cumbalum Views* – Figure 4.

ii. Landscaping treatments in the public realm are to:

a. Provide for tree lined public streets planted in a manner consistent with best practice in landscape design;

b. Comply with the Ballina Shire native endemic plant palate;

c. Create a strong overall landscape character to the Precinct; and

d. Be integrated with the WSUD approach for the Precinct.

iii. Key vegetation/trees as identified in the *Landscape and Special Place Plan* - Figure 4 is to be retained as key features and landscaping of the site. These trees are to be retained wherever possible and disturbance prevented to the root zones. Specific survey of isolated trees must be completed and included in any civil designs.

F. Element – Environmental Aspects

Environmental restoration and management

i. Areas identified as Environmental Land on the *Cumbalum Views Structure Plan* – Figure 1 are to be rehabilitated and embellished in accordance with the requirements set out below.

- Development applications are to be accompanied by a Vegetation Management Plan (VMP) that applies to all environmental management land within the stage, other than the Aboriginal Cultural Site.
- Cleared buffers are to be provided, for bushfire and mosquito management purposes (combined), on land of no more than 15° grade, on land adjacent to rehabilitated environmental areas. Access and grade are to be such that cleared buffers can be easily maintained. Buffers may be incorporated into roadways, environmental areas (if clear of vegetation) or on private allotments. Where buffers are provided on private lots, appropriate Asset Protection Zones are to be provided in accordance with the requirements of the NSW Rural Fire Service.

Notes:
Provision for bushfire and mosquito management buffers was incorporated into the zoning of the land where possible. Space for cleared buffers has been provided within some of the environmental rehabilitation areas. Notwithstanding, the requirements for cleared buffers on land adjacent to (rehabilitated) environmental areas are to conform with Council's open space maintenance requirements and/or the Bushfire Protection requirements of the NSW Rural Fire Service.

- Proposals that involve the dedication of land to Council, as marked on *Open Space Plan Cumbalum Views* - Figure 3, are to include details of the proposed condition of the subject land upon dedication and when it is proposed that the land will be dedicated. The rehabilitation condition of the land is to be to Council's satisfaction prior to dedication. A minimum of eighty percent canopy cover (as per Walker and Hopkins 1990) is to be achieved over areas that are to be fully revegetated prior to dedication to Council.

- The majority of environmental lands will be retained in private ownership unless agreed otherwise by Council at the subdivision stage. If large lots are to be situated so to retain significant vegetation, then a feasible dwelling site is to be nominated for each such lot.
- Proposals that involve land marked on *Open Space Plan Cumbalum Views* - Figure 3 as *land to be rehabilitated and held in a single holding or Community Title* are to show how the land will be effectively managed in private ownership.
- Restoration plantings must use locally sourced stock and reflect locally occurring species within swamp sclerophyll, rainforest and wetland communities. All plants must be at least 200mm in height when planted.

Notes:
Any Vegetation Management Plans prepared must be completed by suitably qualified personnel (eg. Bush Regeneration Certificate II, Science degree).

Minimum prescriptions for Vegetation Management Plans are as follows:

1. The structure of the plan must be as follows:
   - (a) Introduction
   - (b) Aims and objectives
   - (c) Site description
   - (d) Relevant legislation
   - (e) Methodology
   - (f) Results of site assessment
   - (g) Management recommendations
   - (h) Key performance criteria
   - (i) Monitoring and reporting
   - (j) Conclusion
   - (k) References
   - (l) Appendices (where relevant)

2. The content must include:
   - A. Property descriptions and plans,
   - B. Zoning descriptions and plans,
   - C. Relevant legislation and/or polices/guidelines,
   - D. Detailed description of methods to be employed and rationale,
   - E. Vegetation description, classification and mapping using a standardised current system (eg. BioMetric, VIS 2.0),
   - F. Details on any threatened flora, fauna or communities listed under the TSC Act 1995 or EPBC Act 1999,
   - G. Specific prescriptions for the management of Hairy Jointgrass (Arthraxon hispidus) consistent with the recommendations in a specific (separate) Hairy Jointgrass Management Plan,
   - H. Description of vegetation condition, specifically with regard to weed species,
   - I. Inventory of flora at the site (both native and introduced), detailed description of restoration or weed control methods, using maps where relevant,
   - K. Detailed descriptions of measures to re-instate vegetation within remnant linkages on steep slopes or land prone to flooding,
   - L. Detailed descriptions (and maps) showing the relationship between vegetation management and infrastructure services (utilities, stormwater etc),

…cont.

Notes (continued):

M. Details (and plans) regarding the construction of any structures, boardwalks, pathways or fences within or adjacent areas,
N. Details concerning any integration of hard or soft landscaping with areas of vegetation subject to management,
O. Detailed description of any other relevant management strategies (eg. seed collection, translocation),
P. Incorporation of Asset Protection Zones (APZs) for bushfire protection,
Q. Examination of any limiting measures which may reduce the implementation of prescribed works,
R. Detailed description of Key Performance Indicators (KPIs) to achieve the objectives,
S. Prescribed monitoring program (linked to KPIs),
T. Timetable of works including all management strategies, timing of works, monitoring schedules and estimated costings for nominated works,
U. Recommendations for any other works which are worthy of consideration,
V. Methodology must be consistent with current best practice and contain the following information:
   a. Measures to treat/control weeds at the site using approved herbicides,
   b. Detailed planting prescriptions including: plant provenance, species selection, planting densities, planting methods, aftercare, mulching, plant protection, wallaby protection (if required), watering and fertilizing,
   c. Protocols to reduce potential for introduction and/or management of plant pathogens, and
   d. Details on any stabilisation /erosion/control measures where relevant.
W. Maps and plans must be clear and easily understood and clearly show the extent of works. All maps must have a legend, north point and scale bar
X. The name and qualifications of the Author/s must be clearly stated.

Rainforest restoration on steep slopes

ii. For proposals involving the restoration of steep slopes (greater than 18°), Vegetation Management Plan/s are to provide specific details on how restoration works on steep slopes are to be managed, in particular:

- Access details across steep slopes with regard to weed control, planting and maintenance for personnel, vehicles and/or machinery;
- Details regarding the need for any specialised stabilisation or erosion controls; and
- Details regarding the use of any machinery for earthworks (benching, cut etc) and provision of detailed design(s).

Retention of mature paddock trees

iii. Areas of significant trees are to be retained as identified in the *Landscape and Special Places Plan* – Figure 4.

iv. The retention of native paddock trees is to be incorporated into the preliminary subdivision design process, having regard for the following:

- Trees must be retained wherever possible and disturbance prevented to the root zones;
- Specific survey of isolated trees must be completed and included in any civil designs;
- A buffer is to be established to protect any existing mature fig trees. Such buffer will extend a minimum of 20m beyond the edge of the fig tree's canopy; and
- Where isolated trees are threatened species listed in the TSC Act 1995 or EPBC Act 1999 specific protection measures are to apply and buffer zones of a minimum of 12 times the diameter at breast height (dbh) of the tree are to apply (ie. in accordance with AS 4970-2009). Where threatened species are 'absorbed' within restoration areas, buffering requirements do not apply.

Note:
Mature paddock trees have a range of benefits including fauna habitat, sources of seed/fruit, shade, wind protection and aesthetic values.

Retention provisions apply only to native trees or mature non-native trees of aesthetic or other values (eg. Norfolk Pine, ornamental figs). Mature exotic trees (namely Camphor Laurel) are not bound by these prescriptions.

Hairy joint grass

v. A specific Hairy Joint Grass Management Plan (HJMP) is to be developed where appropriate, to achieve a strategic approach for the species and to ensure long-term conservation outcomes are achieved. The HJMP must be integrated with the VMP such that both plans are aligned in their objectives and methods whereby outcomes are not contradictory. Where practical, one integrated HJMP is to be prepared for Cumbalum Views in its entirety.

Note:
It is recognised that due to tenure and development timeframes, more than one HJMP may be need to be prepared.

G. Element – Staging

i. Staging of development and servicing shall generally be in accordance with *Cumbalum Views Staging Plan – Figure 5*.

Notes:
Staging of Cumbalum Views is based on the efficient servicing of urban development lands for the precinct, and is linked to construction of roads and stormwater, water and sewerage infrastructure.

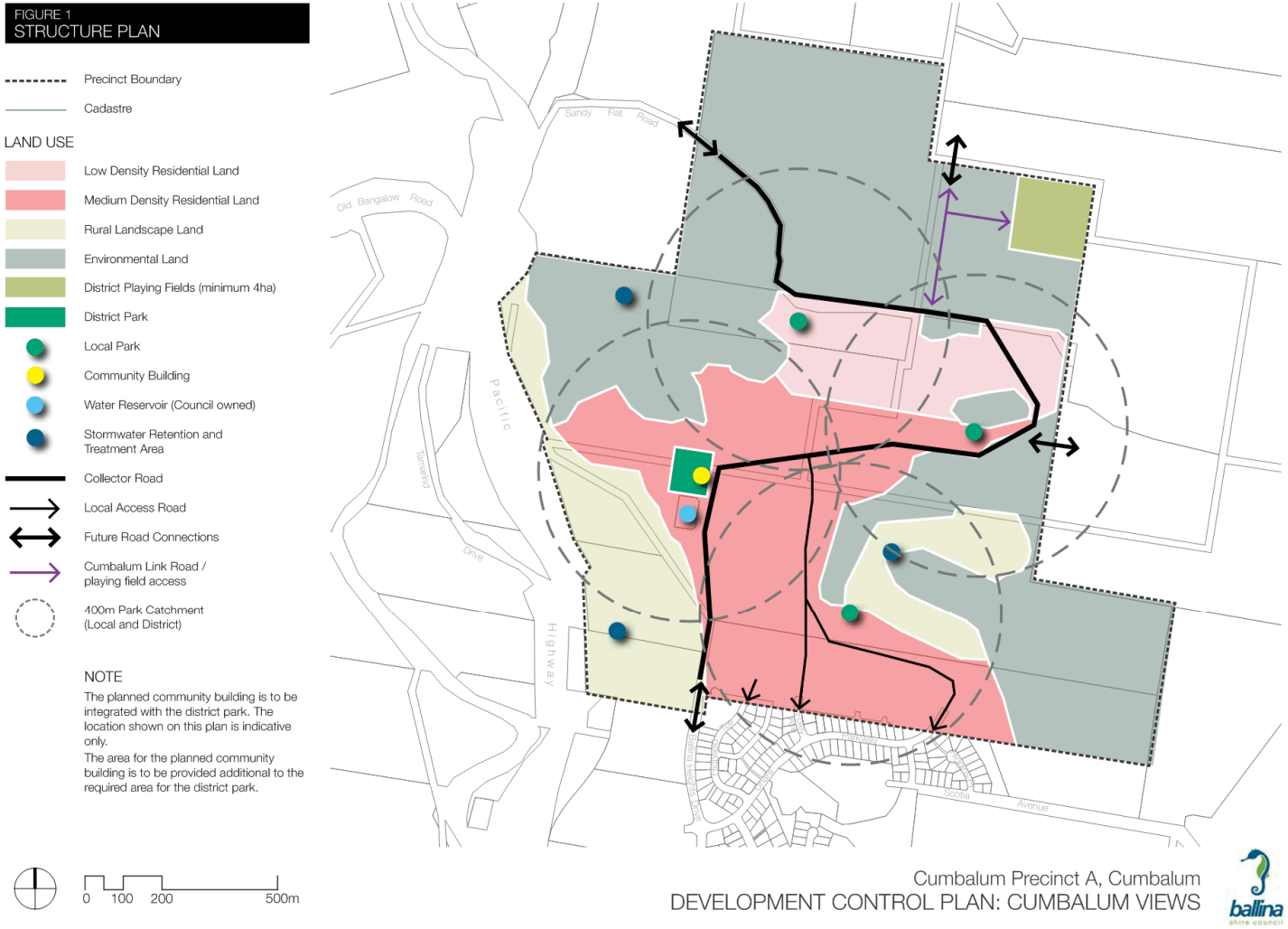


FIGURE 1
STRUCTURE PLAN
Precinct Boundary
Cadastre
LAND USE
Low Density Residential Land
Medium Density Residential Land
Rural Landscape Land
Environmental Land
District Playing Fields (minimum 4ha)
District Park
Local Park
Community Building
Water Reservoir (Council owned)
Stormwater Retention and Treatment Area
Collector Road
Local Access Road
Future Road Connections
Cumbalum Link Road / playing field access
400m Park Catchment (Local and District)
NOTE
The planned community building is to be integrated with the district park. The location shown on this plan is indicative only.
The area for the planned community building is to be provided additional to the required area for the district park.
0 100 200 500m
Sandy Flat Road
Old Bangalow Road
Pacific
Highway
Tamarind
Drive
Scotia
Avenue
Cumbalum Precinct A, Cumbalum
DEVELOPMENT CONTROL PLAN: CUMBALUM VIEWS
ballina
shire council

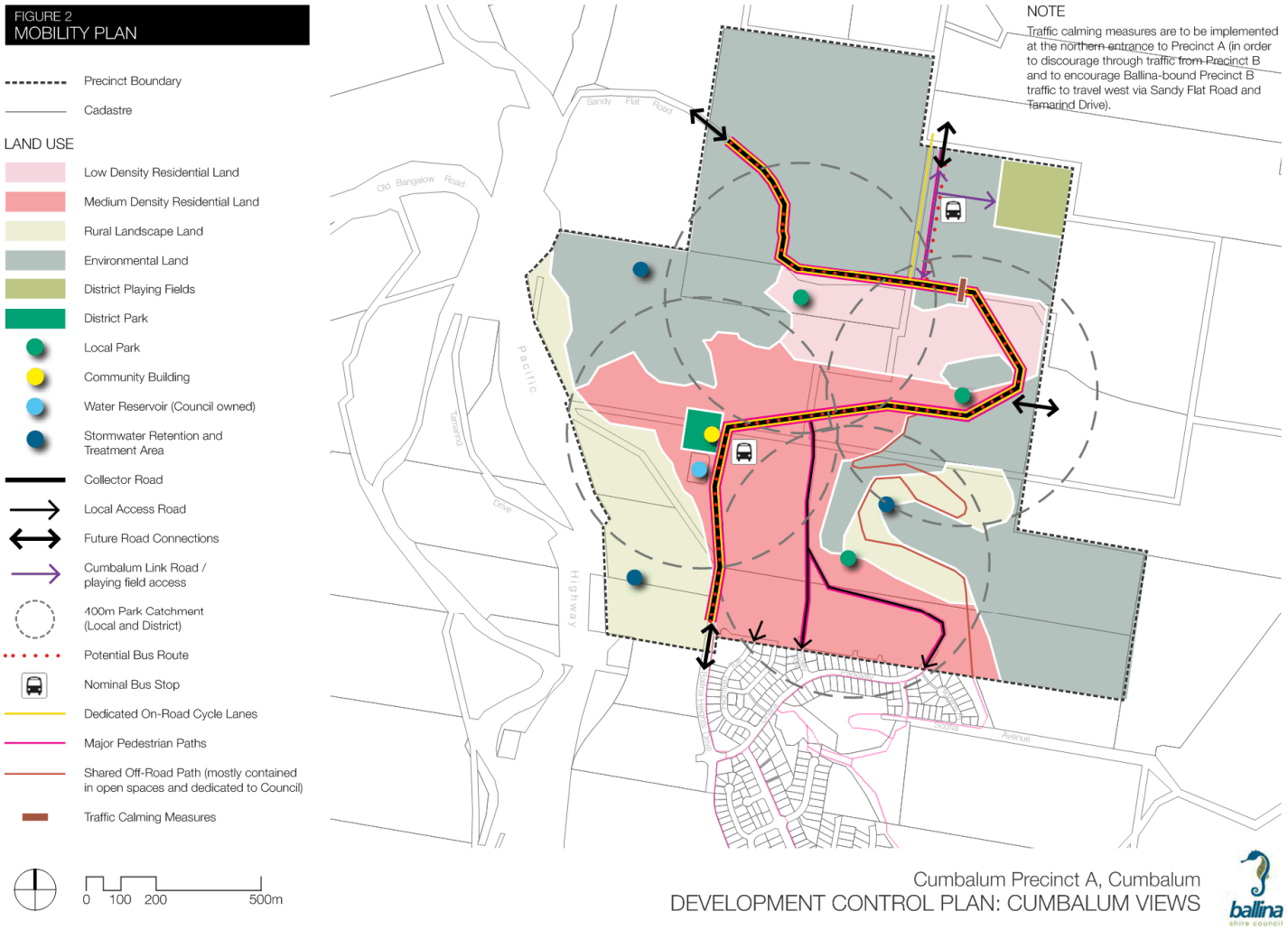


FIGURE 2
MOBILITY PLAN
Precinct Boundary
Cadastre
LAND USE
Low Density Residential Land
Medium Density Residential Land
Rural Landscape Land
Environmental Land
District Playing Fields
District Park
Local Park
Community Building
Water Reservoir (Council owned)
Stormwater Retention and Treatment Area
Collector Road
Local Access Road
Future Road Connections
Cumbalum Link Road / playing field access
400m Park Catchment (Local and District)
Potential Bus Route
Nominal Bus Stop
Dedicated On-Road Cycle Lanes
Major Pedestrian Paths
Shared Off-Road Path (mostly contained in open spaces and dedicated to Council)
Traffic Calming Measures
0 100 200 500m
NOTE
Traffic calming measures are to be implemented at the northern entrance to Precinct A (in order to discourage through traffic from Precinct B and to encourage Ballina-bound Precinct B traffic to travel west via Sandy Flat Road and Tamarind Drive).
Sandy Flat Road
Old Bangalow Road
Pacific Highway
Tamarind Drive
Cumbalum Precinct A, Cumbalum
DEVELOPMENT CONTROL PLAN: CUMBALUM VIEWS
ballina shire council

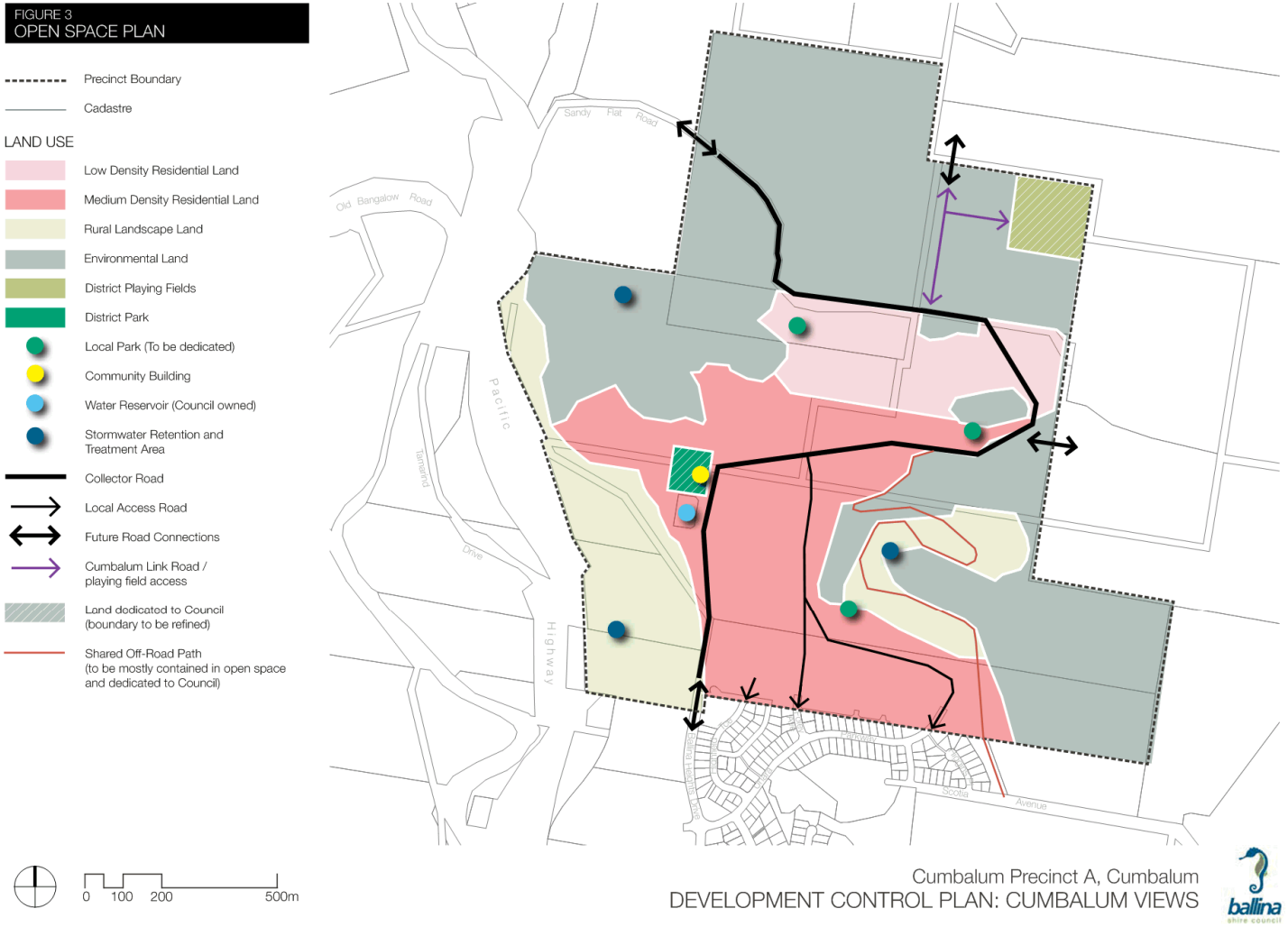


FIGURE 3
OPEN SPACE PLAN
Precinct Boundary
Cadastre
LAND USE
Low Density Residential Land
Medium Density Residential Land
Rural Landscape Land
Environmental Land
District Playing Fields
District Park
Local Park (To be dedicated)
Community Building
Water Reservoir (Council owned)
Stormwater Retention and Treatment Area
Collector Road
Local Access Road
Future Road Connections
Cumbalum Link Road / playing field access
Land dedicated to Council (boundary to be refined)
Shared Off-Road Path (to be mostly contained in open space and dedicated to Council)
Sandy Flat Road
Old Bangalow Road
Pacific
Highway
Tamarind
Drive
Scotia
Avenue
0 100 200 500m
Cumbalum Precinct A, Cumbalum
DEVELOPMENT CONTROL PLAN: CUMBALUM VIEWS
ballina
shire council

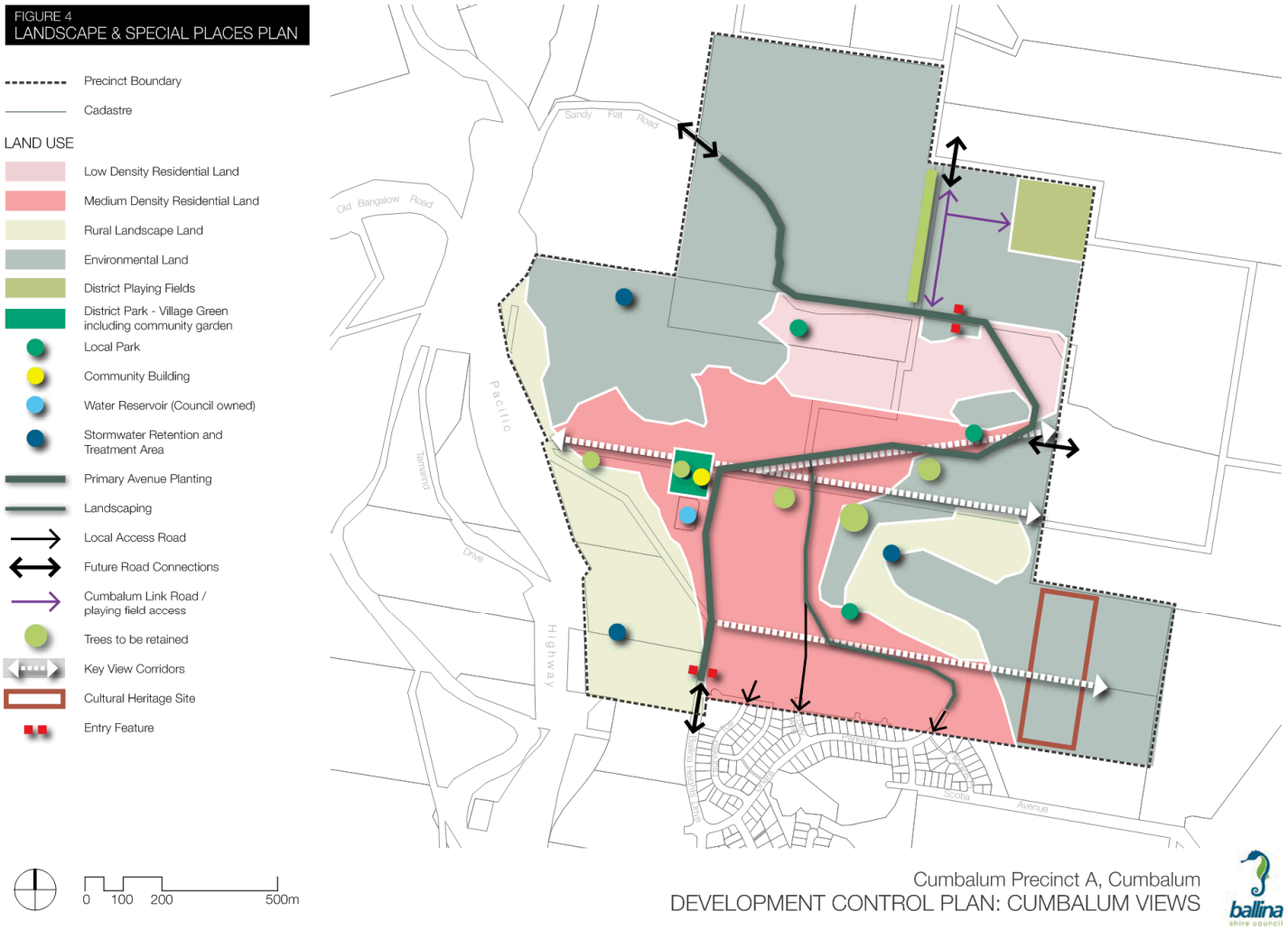


FIGURE 4
LANDSCAPE & SPECIAL PLACES PLAN
Precinct Boundary
Cadastre
LAND USE
Low Density Residential Land
Medium Density Residential Land
Rural Landscape Land
Environmental Land
District Playing Fields
District Park - Village Green including community garden
Local Park
Community Building
Water Reservoir (Council owned)
Stormwater Retention and Treatment Area
Primary Avenue Planting
Landscaping
Local Access Road
Future Road Connections
Cumbalum Link Road / playing field access
Trees to be retained
Key View Corridors
Cultural Heritage Site
Entry Feature
Sandy Flat Road
Old Bangalow Road
Pacific
Highway
Tamarind
Drive
Scotia
Avenue
0 100 200 500m
Cumbalum Precinct A, Cumbalum
DEVELOPMENT CONTROL PLAN: CUMBALUM VIEWS
ballina
shire council

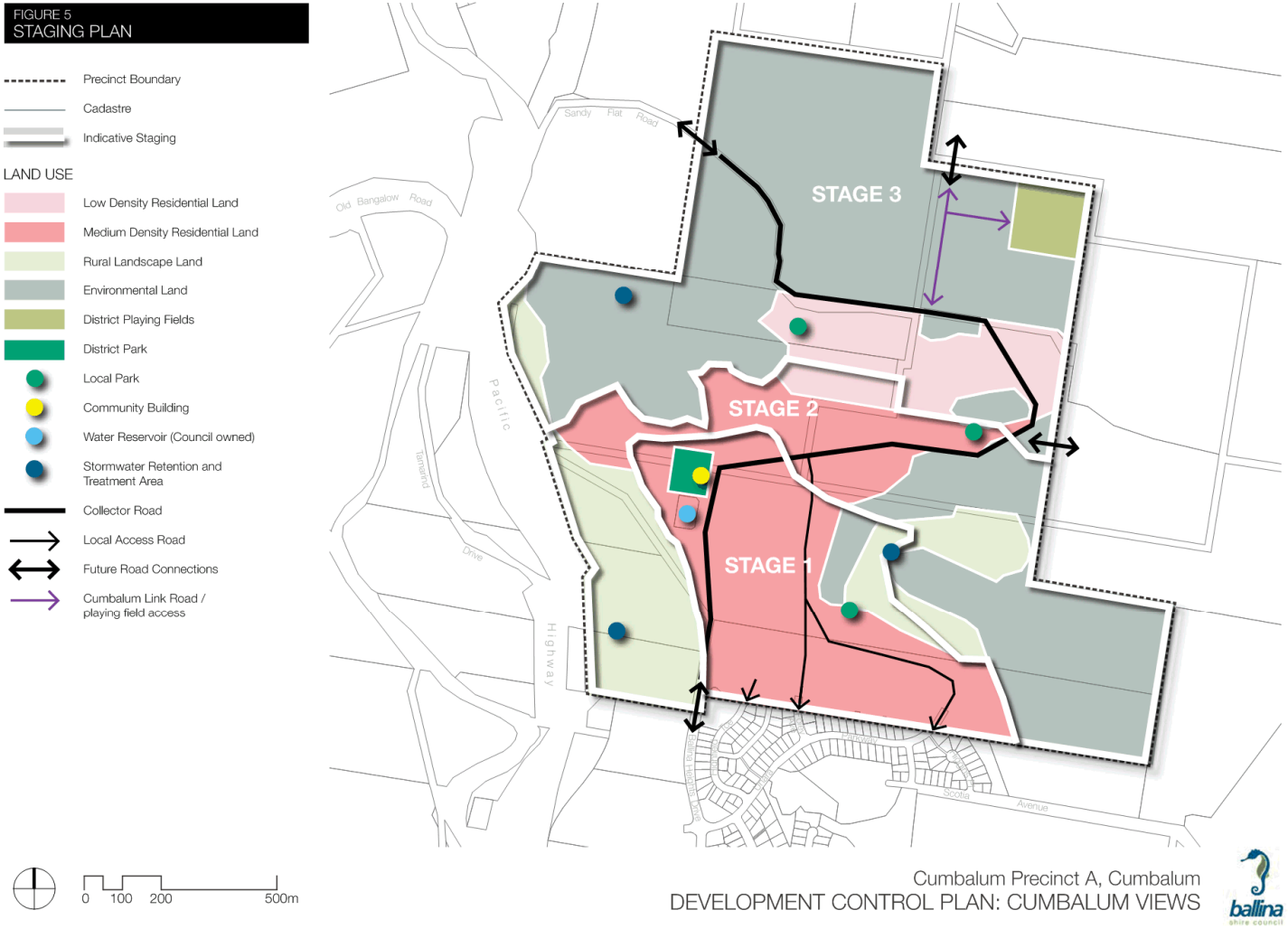


FIGURE 5
STAGING PLAN
Precinct Boundary
Cadastre
Indicative Staging
LAND USE
Low Density Residential Land
Medium Density Residential Land
Rural Landscape Land
Environmental Land
District Playing Fields
District Park
Local Park
Community Building
Water Reservoir (Council owned)
Stormwater Retention and Treatment Area
Collector Road
Local Access Road
Future Road Connections
Cumbalum Link Road / playing field access
STAGE 3
STAGE 2
STAGE 1
Sandy Flat Road
Old Bangalow Road
Pacific
Highway
Tamarind
Drive
Scotia
Avenue
0 100 200 500m
Cumbalum Precinct A, Cumbalum
DEVELOPMENT CONTROL PLAN: CUMBALUM VIEWS
ballina
shire council

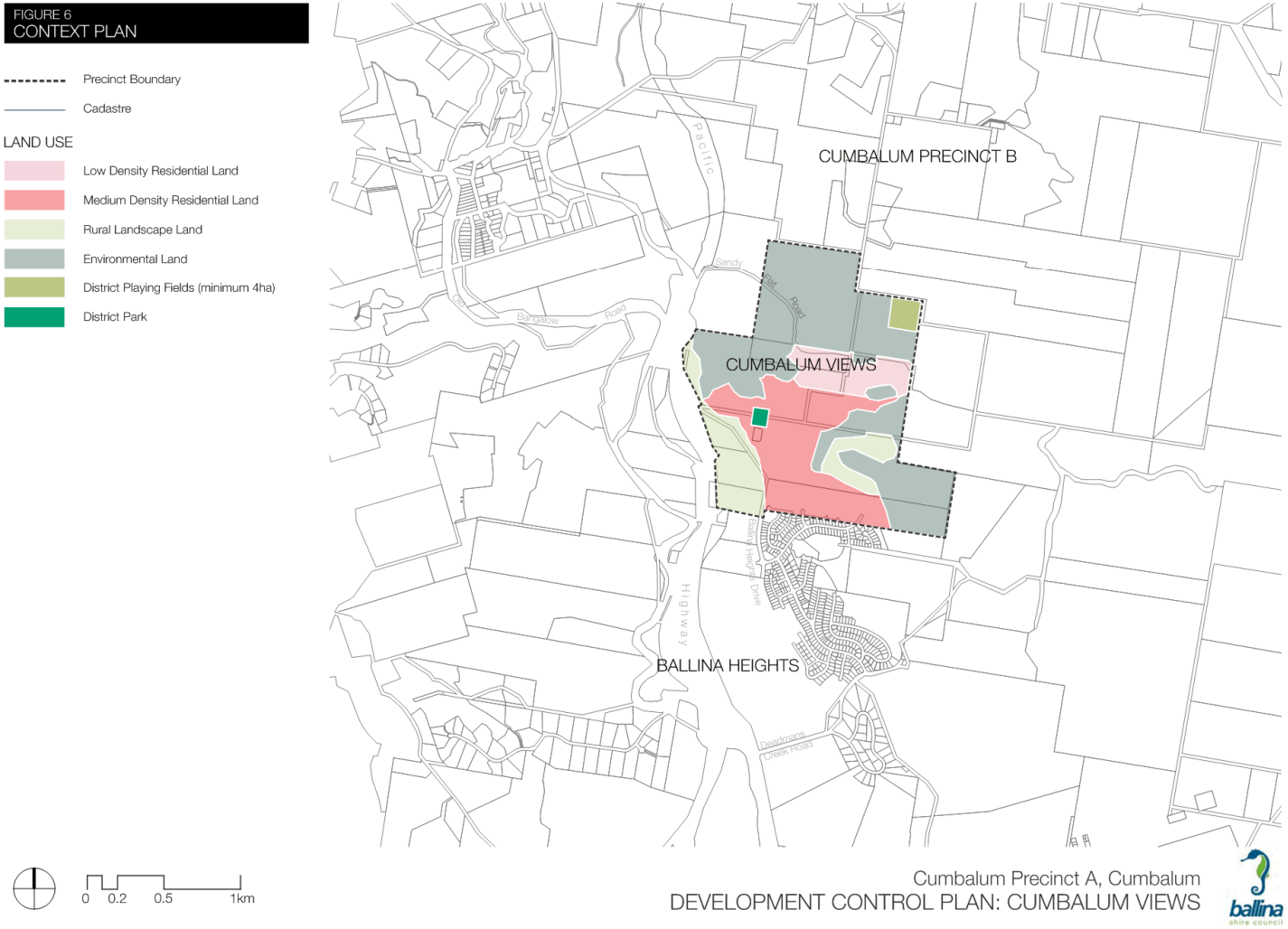
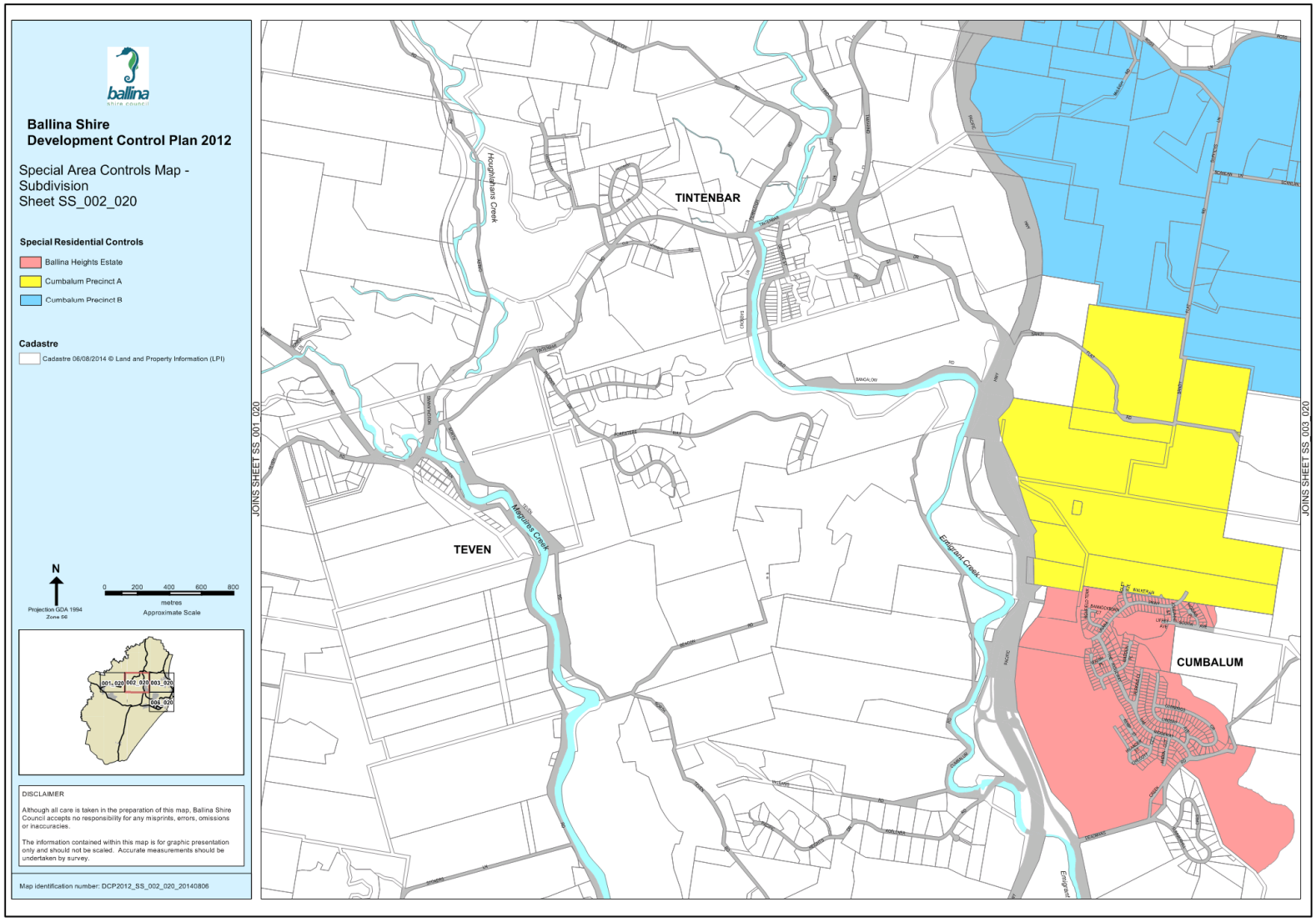


FIGURE 6
CONTEXT PLAN
Precinct Boundary
Cadastre
LAND USE
Low Density Residential Land
Medium Density Residential Land
Rural Landscape Land
Environmental Land
District Playing Fields (minimum 4ha)
District Park
CUMBALUM PRECINCT B
CUMBALUM VIEWS
BALLINA HEIGHTS
Pacific
Highway
Sandy Flat Road
Bangalow Road
Deadmans Creek Road
0 0.2 0.5 1km
Cumbalum Precinct A, Cumbalum
DEVELOPMENT CONTROL PLAN: CUMBALUM VIEWS
ballina shire council


Ballina Shire
Development Control Plan 2012
Special Area Controls Map - Subdivision
Sheet SS_002_020
Special Residential Controls
Ballina Heights Estate
Cumbalum Precinct A
Cumbalum Precinct B
Cadastre
Cadastre 06/08/2014 © Land and Property Information (LPI)
N
0 200 400 600 800
metres
Approximate Scale
Projection GDA 1994 Zone 56
DISCLAIMER
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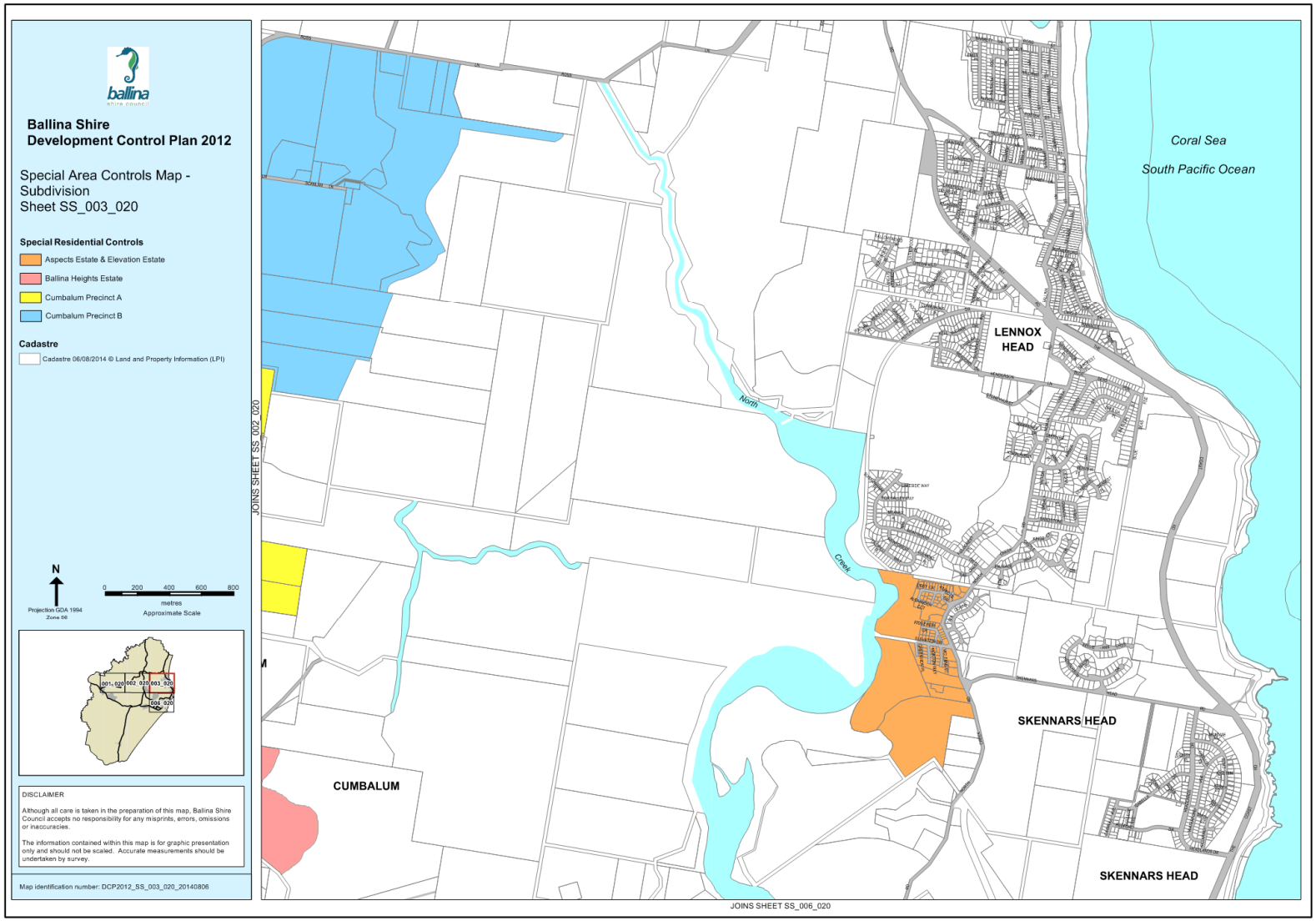
The information contained within this map is for graphic presentation only and should not be scaled. Accurate measurements should be undertaken by survey.
Map identification number: DCP2012_SS_002_020_20140806
JOINS SHEET SS_001_020
JOINS SHEET SS_003_020
TINTENBAR
TEVEN
CUMBALUM
Houghlahans Creek
Maguires Creek
Emigrant Creek


Ballina Shire
Development Control Plan 2012
Special Area Controls Map - Subdivision
Sheet SS_003_020
Special Residential Controls
Aspects Estate & Elevation Estate
Ballina Heights Estate
Cumbalum Precinct A
Cumbalum Precinct B
Cadastre
Cadastre 06/08/2014 © Land and Property Information (LPI)
N
Projection GDA 1994 Zone 56
0 200 400 600 800
metres
Approximate Scale
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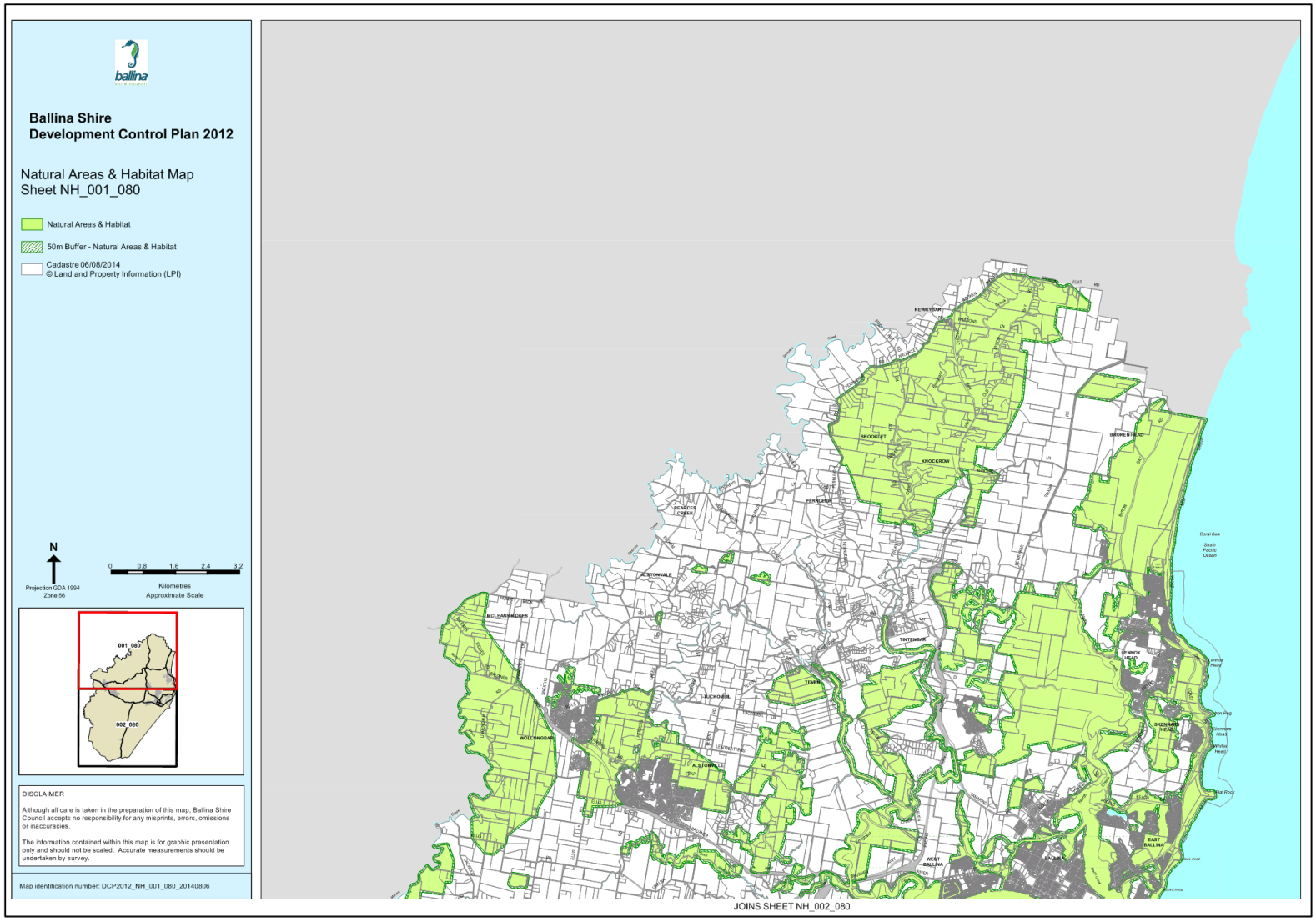
Map identification number: DCP2012_SS_003_020_20140806
JOINS SHEET SS_002_020
Coral Sea
South Pacific Ocean
LENNOX HEAD
North
Creek
SKENNARS HEAD
CUMBALUM
SKENNARS HEAD
JOINS SHEET SS_006_020


Ballina Shire
Development Control Plan 2012
Natural Areas & Habitat Map
Sheet NH_001_080
Natural Areas & Habitat
50m Buffer - Natural Areas & Habitat
Cadastre 06/08/2014
© Land and Property Information (LPI)
N
Projection GDA 1994
Zone 56
0 0.8 1.6 2.4 3.2
Kilometres
Approximate Scale
001_080
002_080
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Map identification number: DCP2012_NH_001_080_20140806
JOINS SHEET NH_002_080