



Ballina Development Control Plan 2012

CHAPTER 3 – URBAN SUBDIVISION

5.5 Cumbalum Precinct B

5.5.1 Application

Applies to:	
Location/s:	Cumbalum Precinct B (as shown on Special Area Controls Map - Subdivision).
Development Type/s:	Subdivision.

5.5.2 Planning Objectives

- a. provide for the integrated development of the new residential area of Cumbalum Precinct B;
- 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;
- c. provide for subdivision of land in a manner which recognises and protects biodiversity values of the land and locality, including the Ballina Nature Reserve;
- d. provide useable and well landscaped public and private open spaces to enhance aesthetics and residential amenity;
- e. provide for a energy efficient subdivision layout that is responsive to site opportunities and constraints including solar access, topography and prevailing winds;
- f. provide suitable buffers between dwellings and adjoining agricultural land, major roads and environmental attributes;
- g. provide transport corridors (roads, pathways, cycleways) that are efficient, safe and convenient for all users (including public transport providers);
- h. ensure that adequate land is set aside in appropriate locations for the range of land uses required in the village;
- i. provide for a range of residential forms and in particular encourage higher densities in locations accessible to facilities and services;
- j. ensure that service infrastructure and open space and community infrastructure is provided in an orderly and economically feasible manner; and
- k. recognise and protect the environmental values of the land.



5.5.3 Development Controls

For the purpose of this Section **Final Lot** means:

A lot to be created in the development for separate occupation not being:

- (a) A lot created by subdivision of the land that is to be dedicated or otherwise transferred to Council, or
- (b) A lot created by a subdivision of the land which may be further subdivided.

A. Element - Layout of the Village

- i. Applications for subdivision of land are to be generally consistent with the following Figures (attached in Appendix C):

Figure 1: Cumbalum Precinct B Structure Plan;

Figure 2: Cumbalum Precinct B Mobility Plan;

Figure 3: Cumbalum Precinct B Staging Plan;

Figure 4: Cumbalum Precinct B Landscaping Principles and Character;

Figure 5: Cumbalum Precinct B Open Space Ownership; and

Figure 6: Precinct B – Development Contribution Obligations dated 30 August 2012.



Notes:

The Structure Plan shows the ultimate development of Cumbalum Precinct B. The zoning will be achieved via a number of rezonings. This includes the subsequent inclusion of the E Zones in Ballina LEP 2012 and adjustments to the Zone B2 boundary shown on the Structure Plan .

- ii. Applications for the subdivision of land are to be accompanied by information demonstrating how the proposed subdivision integrates with both the *Cumbalum Precinct B Structure Plan* (Figure 1 – Appendix C) and the likely subdivision pattern of land adjoining the specific stage and utilities and infrastructure servicing the development;
- iii. The new Village Centre is to be developed with the following characteristics:
 - a. Relate strongly to the new residential area while servicing the wider catchment that uses Ross Lane on a regular basis;
 - b. Be located adjacent to Ross Lane with access provided via the internal sub-arterial and local roads;



- c. Fully service the everyday retail needs that contribute to the establishment of a viable community, with a tenancy mix designed to cater for drop-in, passing and top up shopping trips and service local convenience shopping needs for food services and professional/personal services;
 - d. Provide for 3000 m² of gross commercial space; consisting of a convenience supermarket of approximately 1400 m² and approximately 1600 m² of specialty retail (convenience, impulse, food services and professional/personal services);
 - e. Provide for two child-care centres (to allow for staging) with a potential total capacity of 175 children;
 - f. Provide for a service station on a site of approximately 4000 m², with access from internal sub-arterial and local roads;
 - g. Provide for SOHO (small office home office) dwellings – on the fringe of the centre and each offering about 150 m² to 180 m² of built area; and
 - h. Provide a gateway to the residential estate that is not dominated by a commercial built form but rather provides an intermediate transition from the rural/environmental to the built environment, through a mixture of building and landscaping elements.
- iv. The Aboriginal Cultural Site shown on the *Cumbalum Precinct B Structure Plan* (Figure 1 – see Appendix C) is to be embellished and managed as part of Stage 1 in accordance with an approved Cultural Management Plan for the land;
 - v. Open buffer mosquito zones along the eastern edge of the Village must be located as shown on the *Cumbalum Precinct B Structure Plan* (Figure 1 – Appendix C). These buffers must be free of thick shady vegetation to inhibit mosquito dispersal. Otherwise the development must occur in accordance with *Chapter 2 Section 3.6 – Mosquito Management*; and
 - vi. The development of smaller landholdings (< 10 hectares), that are not subject to the Precinct B Voluntary Planning Agreement must, achieve integration with adjoining development land, with respect to subdivision layout, access and the provision of other urban services. Conversely, larger development parcels adjacent to smaller landholdings must seek to facilitate such integration, where appropriate.

B. Element - Infrastructure Provision

Infrastructure delivery is to be provided in accordance with the Cumbalum Precinct B Voluntary Planning Agreement (VPA). Key summary provisions of the VPA are reproduced in the following section. For further detail relating to the following, refer to the VPA.

The staging, sizing and construction of infrastructure provided under the VPA is to be sufficient to accommodate the projected total development yield of the precinct, including those properties that are not subject to the VPA. The development of land not subject to the Cumbalum Precinct B VPA is to be undertaken in a manner consistent with the



staging, location and timing of infrastructure provided under the VPA and otherwise as outlined below.



Notes:

Council has signed a Voluntary Planning Agreement with the principal landowners of the Cumbalum Precinct B development. This agreement sets out the infrastructure required for the development of the Cumbalum Precinct B development and the funding and timing of that infrastructure.

The Precinct B VPA takes precedence to the extent of any consistency between this DCP and the VPA.

Infrastructure External to the Development Site

- i. The developer must construct sewerage mains and pump stations so as to convey sewage to Sewerage Pump Station No.2402. The sewerage mains and pump stations must be generally located as shown on the map entitled “Precinct B – Development Contribution Obligations” dated 30 August 2012 or as otherwise approved; and
- ii. The developer must construct drinking water distribution mains from the future Ross Lane Water Reservoir to the development as shown on the map entitled “Precinct B – Development Contribution Obligations” dated 30 August 2012 or as otherwise approved;

Infrastructure Internal to the Development Site

- iii. The subdivision must be fully serviced with water, sewer, roads, drainage and underground electricity and telecommunications;
- iv. This service infrastructure is to be constructed on a staged basis to accommodate the staged release of the Village in accordance with *Cumbalum Precinct B Staging Plan* (Figure 3 – Appendix C) or as otherwise approved by Council;
- v. All service infrastructure is to be designed and constructed in accordance with the *Northern Rivers Local Government Development and Design Manual*; and
- vi. Service infrastructure internal to the development site must be provided by the developer at no cost to Council.



Dual Reticulation Water Supply

- vii. A dual-reticulation water supply for recycled water is to be provided throughout the development in accordance with Council's Recycle Water Scheme; and
- viii. The developer must 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

- ix. The intersection of the eastern access road onto Ross Lane, as shown on the *Cumalum Precinct B Structure Plan* (Figure 1 - Appendix C), is to be constructed as a two lane arterial road roundabout;
- x. The intersection off Dufficys Lane onto Ross Lane, as shown on the *Cumalum Precinct B Structure Plan* (Figure 1 - Appendix C), is to be constructed as a signalised intersection to arterial road standard;
- xi. The eastern *Proposed Sub Arterial*, as shown on the *Cumalum Precinct B Structure Plan* (Figure 1 - Appendix C), is to be constructed from Ross Lane to the southern extent shown on the Structure Plan by the developer, prior to the creation of the 600th Final Lot;
- xii. Ross Lane is to be maintained as a limited access road, with no direct vehicular access provided to adjacent residential and non-residential properties;
- xiii. The roads identified as *Proposed Sub Arterial* on the *Cumalum Precinct B Structure Plan* (Figure 1 - Appendix C) are to be designed as limited access roads. Generally, no direct vehicular access is to be provided to properties within residential precincts fronting the road. Access to non-residential precincts fronting this road is to be provided on an integrated basis, with no vehicular access to individual tenancies provided. Notwithstanding, direct access may be provided within residential precincts, in some cases, having regard for projected traffic volumes, design speed, topography and amenity;
- xiv. Safe pedestrian access is to be provided across the roads identified as *Proposed Sub Arterial* on the *Cumalum Precinct B Structure Plan* (Figure 1 - Appendix C) linking residential precincts with one another and with the Village Centre, open space and community infrastructure;
- xv. 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 generally as shown on the *Cumalum Precinct B Mobility Plan* (Figure 2 - Appendix C). Bus stops are to be provide with "hail and ride" J poles and constructed bus shelters; and
- xvi. A pedestrian / cycle path network is to be provided generally in accordance with the *Cumalum Precinct B Mobility Plan* (Figure 2 - Appendix C). Pedestrian footpaths will generally be required on local and collector roads. 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. Pedestrian / cycle paths may, in some cases, perform a drainage function and/or provide access for servicing authorities.

Stormwater

- xvii. Development is to address the development standards relating to stormwater management set out in Chapter 2. Additionally, proposals must demonstrate that development will not adversely impact on the downstream natural environment or on adjacent private property due to increased stormwater volume;
- xviii. Development proposals are to be accompanied by an integrated Stormwater Management Plan that considers the cumulative impacts associated with the development of the village as a whole;
- xix. Stormwater treatment and disposal are not to rely solely on end of line facilities. A treatment train must be provided that incorporates a range of facilities, inclusive of measures, where appropriate, within the road 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;

- xx. Any detention areas for stormwater are to be designed so as to detain water for no more than 3 days to minimise the potential for mosquito habitat and facilitate maintenance;
- xxi. Development proposals must include details of maintenance requirements associated with proposed stormwater management devices;
- xxii. To minimise the potential breeding of mosquitoes ponds and dams must incorporate the following attributes:
 - 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;
 - Normal water levels within the pond must maintain at a minimum of 600mm water depth except for the margins;



- 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; and
 - 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.
- xxiii. Stormwater management design is to consider opportunities to protect and enhance the foraging habitat of the Brolga (*Grus rubicunda*);



Notes:

During the rezoning of the land, the presence of a nesting pair of Brolga was identified on land adjacent to the development site. Preliminary investigations have suggested that the design of stormwater management devices may be designed in such a manner as to preserve or enhance foraging habitat for the species.

- xxiv. 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.



Notes:

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

Development proposals are to have regard to *Cumalum Precinct B - Additional Investigations - Additional Stormwater Investigations*, by Australian Wetlands Consulting Pty Ltd dated 13 September 2012 and to *Cumalum 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.



Earthworks and Filling

- xxii. Development applications for creation of residential lots over areas shown on the *Cumalum Precinct B Structure Plan* (Figure 1 - Appendix C) as “Potential soft soils” or “Fill required to above flood levels” must be accompanied by information (including plans and sections) to show works required to address geotechnical and flooding issues as applicable.

C. Element – Open Space and Community Facilities

Sporting Fields

- i. Sporting Fields are to be provided by the developer in the location shown on the *Cumalum Precinct B Structure Plan* (Figure 1 - Appendix C). The following sporting facilities are to be provided for every 300 Final Lots:
- 1 Playing Field;
 - 1 Court;
 - Clubhouse and amenities;
 - Public (road) access; and
 - Car parking.
- ii. The sporting fields are to be initially established prior to the creation of the 300th Final Lot that creates the need for the sporting fields;
- iii. The sporting fields are to be designed and located to make efficient use of the site and so as to be capable of being expanded through future stages of the development such that each open space area will comprise a minimum area of 4 hectares; and
- iv. Playing fields are to be constructed and maintained, to a standard acceptable to the Council, for a minimum of two years prior to the creation of the Final Lots to which facility relates. The type of court to be provided must be that specified in writing by the Council.

District Parks

- v. District Parks, for passive recreation, are to be provided by the developer in the locations shown on the *Cumalum Precinct B Staging Plan* (Figure 3 - Appendix C). District parks with a minimum area of 4050 m² are to be provided for every 300 Final Lots;
- vi. District Parks are to be embellished, to Council's satisfaction, and may include walking paths, picnic shelters, BBQ facilities and play equipment; and
- vii. District Parks are to be provided prior to the creation of the 300th Final Lot that creates the need for the District Park.



Local Parks

- viii. Local Parks are to be provided by the developer in the location shown on the *Cumalum Precinct B Structure Plan* (Figure 1 - Appendix C). Local Parks with a minimum area of 2100 m² are to be provided for every 240 Final Lots;
- ix. The Local Parks are to be provided prior to the creation of the 240th Final Lot that creates the need for the Local Parks; and
- x. The Local Parks are to be embellished with play equipment, landscaping, seating and shelter.

Community Halls

- xi. Community Halls are to be provided by the developer in the location shown on the *Cumalum Precinct B Structure Plan* (Figure 1 - Appendix C). One Community Hall is to be provided for every 880 Final Lots;
- xii. Community Halls are to be provided comprising a minimum gross floor area of 250 m². Each Community Hall is to include an auditorium comprising a minimum of 170 m² and is to include required car parking and landscaping; and
- xiii. The Community Halls are to be provided prior to the creation of the 880th Final Lot that creates the need for the Community Hall.

D. Element - Residential Precincts

- i. Subdivision layouts are to provide for a range of housing types including dwelling houses, dual occupancies and medium density housing;
- ii. Each stage nominated on the *Cumalum Precinct B Structure Plan* (Figure 1 - Appendix C) is to achieve the target dwelling yields nominated in the Table below;

Target Stage Dwelling Yield

Stage	Total dwellings	Percentage yield	Total Area	Net Residential Density
Stage 1	801	32%	69.7	11.5 dw/ha
Stage 2	1069	43%	73.0	14.6 dw/ha
Stage 3	360	14%	24.3	14.8 dw/ha
Stage 4	256	10%	41.1	6.2 dw/ha
TOTAL	2486	100%	208.2	11.9 dw/ha

Net Residential Density is measured over the net developable area being the total area of residential allotments, local roads and local parks, and excluding all other land uses.



- iii. To reduce the impact of residential land on adjacent agricultural land, a *Land Use Conflict Risk Assessment* must be carried out prior to the subdivision of land adjacent to any agricultural land. The subdivision design must incorporate any buffers, vegetated/earth screens, perimeter roads or other measures recommended as a result of the *Land Use Conflict Risk Assessment*;
- iv. Residential areas must be protected from road traffic noise associated with the Pacific Highway and Ross Lane such that the relevant road noise standard can be met, being as per the 'Environmental Criteria for Road Traffic Noise (ECRTN)' prepared by the Department of Environment, Climate Change & Water (DECCW) for external road noise of LAeq(15 hour) 55 dB(A) between 7am – 10pm and LAeq (9hour) 50 dB(A) from 10pm – 7 am. These measures are to be implemented as part of the subdivision of the land. This to generally include the 3 m high landscaped earth noise bund along Ross Lane as shown on the *Cumalun Precinct B Structure Plan (Figure 1 – Appendix C)*; and
- v. Allotments identified at subdivision stage as requiring specific residential design requirements associated with mitigation of road traffic noise must have relevant restrictions on title applied.

E. Element - Environmental protection areas

- i. Areas identified as Environmental Conservation or Environmental Management on the Cumalun Precinct B Structure plan (Figure 1 – Appendix C) must be rehabilitated and embellished in accordance with the requirements set out below.
 - Development applications must be accompanied by a Vegetation Management Plan (VMP) that applies to all environmental protection zoned 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 must 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 must 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 *Dedicated to Local Council* on the *Cumbalum Precinct B Open Space Ownership* plan (Figure 5 - Appendix C), must 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 must 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;
- Proposals that involve land marked *Land to be rehabilitated and held in a single holding or Community Title* or marked as *Land to be rehabilitated and become part of the adjoining lots* on the *Cumbalum Precinct B Open Space Ownership* plan (Figure 5 - Appendix C) must 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 policies/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,...cont.



Notes (continued):

- 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),
- 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 must have specific details on how restoration works on steep slopes are to be managed, in particular:
 - A. Access details across steep slopes with regard to weed control, planting and maintenance for personnel, vehicles and/or machinery,
 - B. Details regarding the need for any specialised stabilisation or erosion controls, and
 - C. Details regarding the use of any machinery for earthworks (benching, cut etc) and provision of detailed design(s).



Notes:

Steep slopes require special consideration as the safe operation of vehicles, plant or machinery is difficult. Additionally safety hazards may also exist for personnel working in these areas. These areas should be reforested with rainforest vegetation so that (in the long term) they become self-sustaining.

Retention of mature paddock trees

- iii. The retention of native paddock trees must be incorporated into the preliminary subdivision design process. These 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. Where isolated trees are threatened species listed in the TSC Act 1995 or EPBC Act 1999 specific protection measures must apply and buffer zones of a minimum of 12 times the diameter at breast height (dbh) of the tree must apply (ie. in accordance with AS 4970-2009). Where threatened trees are 'absorbed' within restoration areas, no buffers apply.



Notes:

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 and may be removed where required



Removal of Rough-shelled Bush-nut

- iv. Proposals involving the removal of immature stems of the threatened species Rough-shelled Bush-nut (*Macadamia tetraphylla*) must incorporate the following into a Vegetation Management Plan for the land:
 - A. Prior to the removal of any Rough-shelled Bush-nut, seed from other mature Rough-shelled Bush-nut at the site must be collected and struck so that 'replacement' trees are available for restoration plantings, and
 - B. For every seedling/sapling of Rough-shelled Bush-nut removed, compensation must be achieved by the planting of ten (10) 'replacement' trees propagated from local seed (as described above) within subtropical rainforest communities.

Hairy Jointgrass

- iv. A specific Hairy Jointgrass Management Plan (HJMP) must be developed 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 Precinct B in its entirety. It is recognised that due to tenure and development timeframes, more than one HJMP may be need to be prepared.



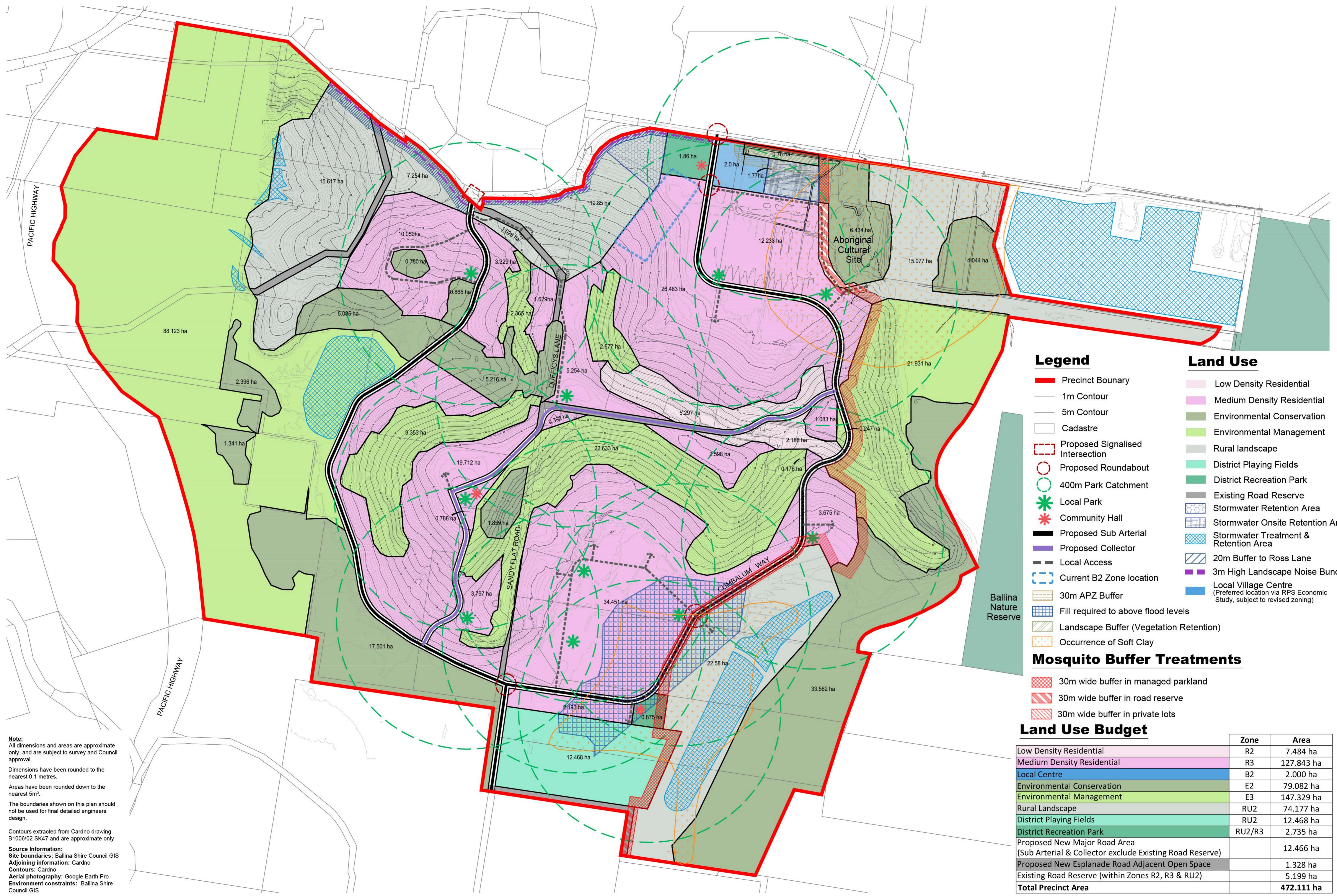
Notes:

Listed Threatened species Hairy Jointgrass (*Arthraxon hispidius*) has been identified on parts of the site.

Hairy Jointgrass Management Plans are to refer to *Ballina Bypass Arthraxon hispidius (Hairy Joint Grass) Translocation and Management Project: Final Report* prepared for Ballina Bypass Alliance by Dr Andrew Benwell (2012)

In addition to the Structure and Contents specified for VMPs above the HJMPs must include the following:

- A. Detailed mapping and description, including area calculations and occurrences based on Lot/DP,
- B. Specific management prescriptions for Hairy Jointgrass (HJG) at the site,
- C. Detailed information regarding HJG offsetting/compensation/removal etc,
- D. Detailed descriptions of measures to re-instate HJG such as direct seeding, translocation, planting out of propagated plants (etc), and
- E. Detailed descriptions (and maps) showing the relationship between HJG management and infrastructure services (utilities, stormwater etc) if relevant.



Legend

- Precinct Boundary
- 1m Contour
- 5m Contour
- Cadastre
- Proposed Signalled Intersection
- Proposed Roundabout
- 400m Park Catchment
- * Local Park
- * Community Hall
- Proposed Sub Arterial
- Proposed Collector
- Local Access
- Current B2 Zone location
- 30m APZ Buffer
- Fill required to above flood levels
- Landscape Buffer (Vegetation Retention)
- Occurrence of Soft Clay

Land Use

- Low Density Residential
- Medium Density Residential
- Environmental Conservation
- Environmental Management
- Rural landscape
- District Playing Fields
- District Recreation Park
- Existing Road Reserve
- Stormwater Retention Area
- Stormwater Onsite Retention Area
- Stormwater Treatment & Retention Area
- 20m Buffer to Ross Lane
- 3m High Landscape Noise Bund
- Local Village Centre (Preferred location via RPS Economic Study, subject to revised zoning)

Mosquito Buffer Treatments

- 30m wide buffer in managed parkland
- 30m wide buffer in road reserve
- 30m wide buffer in private lots

Land Use Budget

	Zone	Area
Low Density Residential	R2	7.484 ha
Medium Density Residential	R3	127.843 ha
Local Centre	B2	2.000 ha
Environmental Conservation	E2	79.082 ha
Environmental Management	E3	147.329 ha
Rural Landscape	RU2	74.177 ha
District Playing Fields	RU2	12.468 ha
District Recreation Park	RU2/R3	2.735 ha
Proposed New Major Road Area (Sub Arterial & Collector exclude Existing Road Reserve)		12.466 ha
Proposed New Esplanade Road Adjacent Open Space		1.328 ha
Existing Road Reserve (within Zones R2, R3 & RU2)		5.199 ha
Total Precinct Area		472.111 ha

Note:
 All dimensions and areas are approximate only, and are subject to survey and Council approval.
 Dimensions have been rounded to the nearest 0.1 metres.
 Areas have been rounded down to the nearest 5m².
 The boundaries shown on this plan should not be used for final detailed engineers design.
 Contours extracted from Cardno drawing B1006102 SK47 and are approximate only.
Source Information:
 Site boundaries: Ballina Shire Council GIS
 Adjoining information: Cardno
 Contours: Cardno
 Aerial photography: Google Earth Pro
 Environment constraints: Ballina Shire Council GIS

FIGURE 1 - Tintenbar Structure Plan

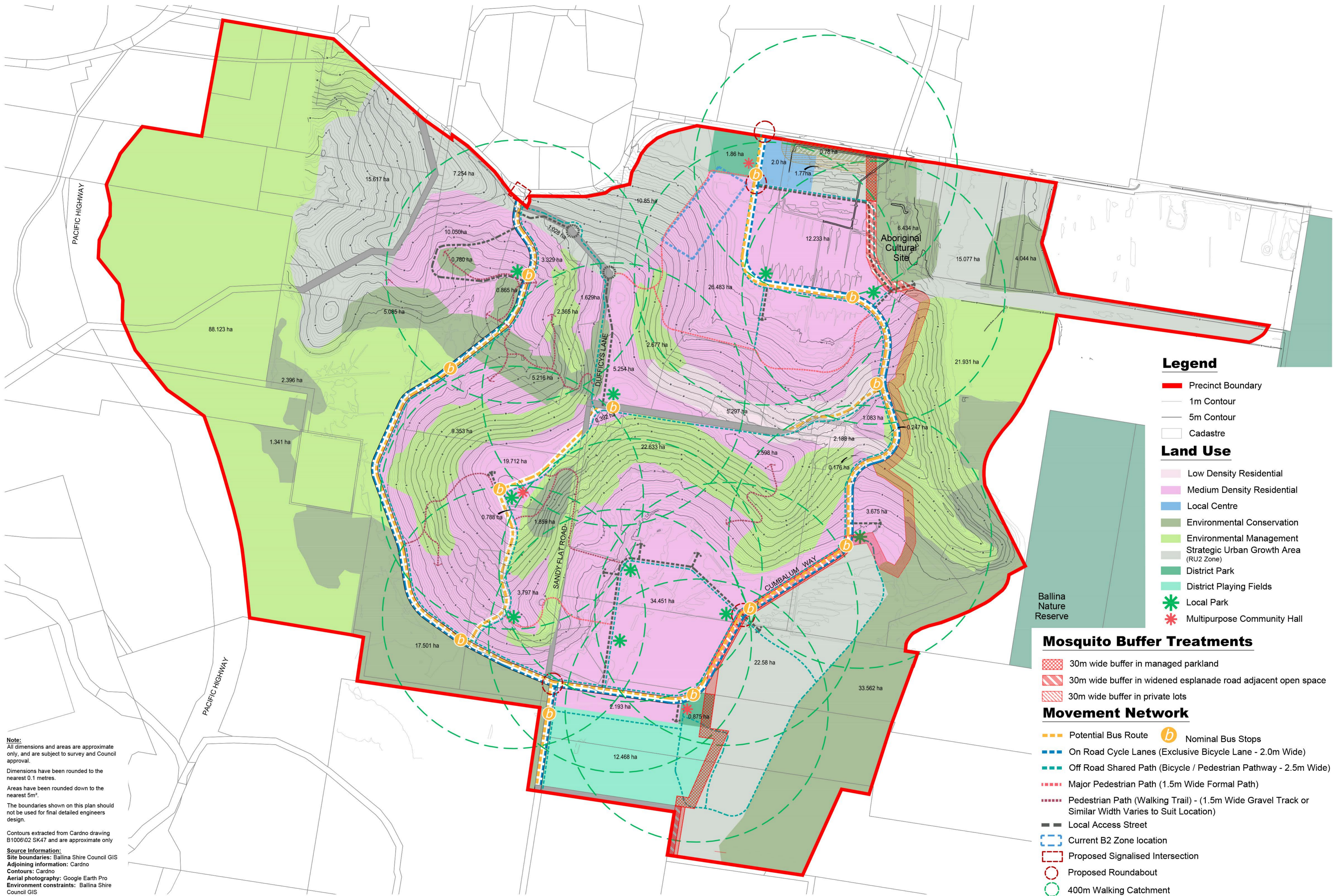


FIGURE 2 - Tintenbar Mobility Plan

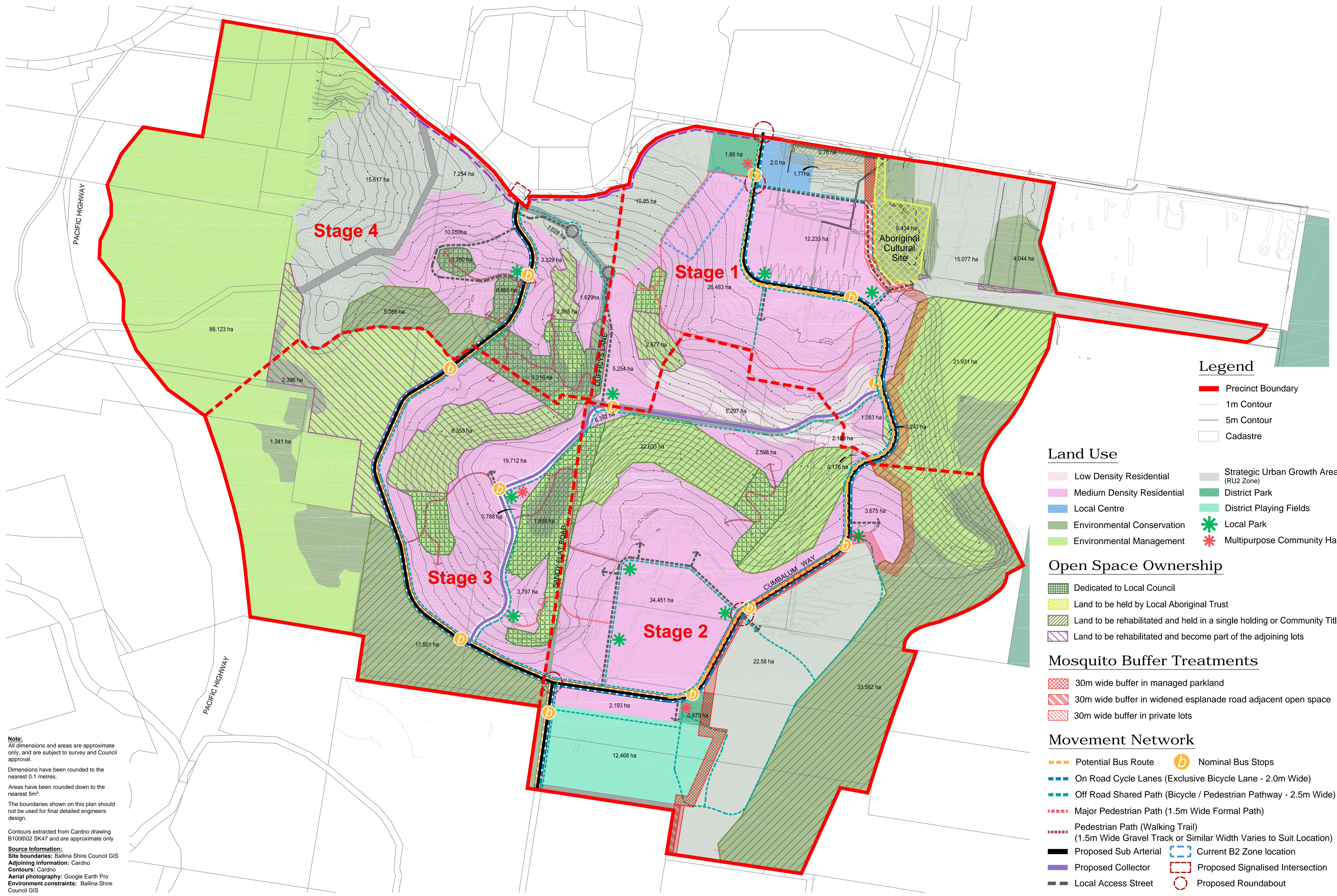
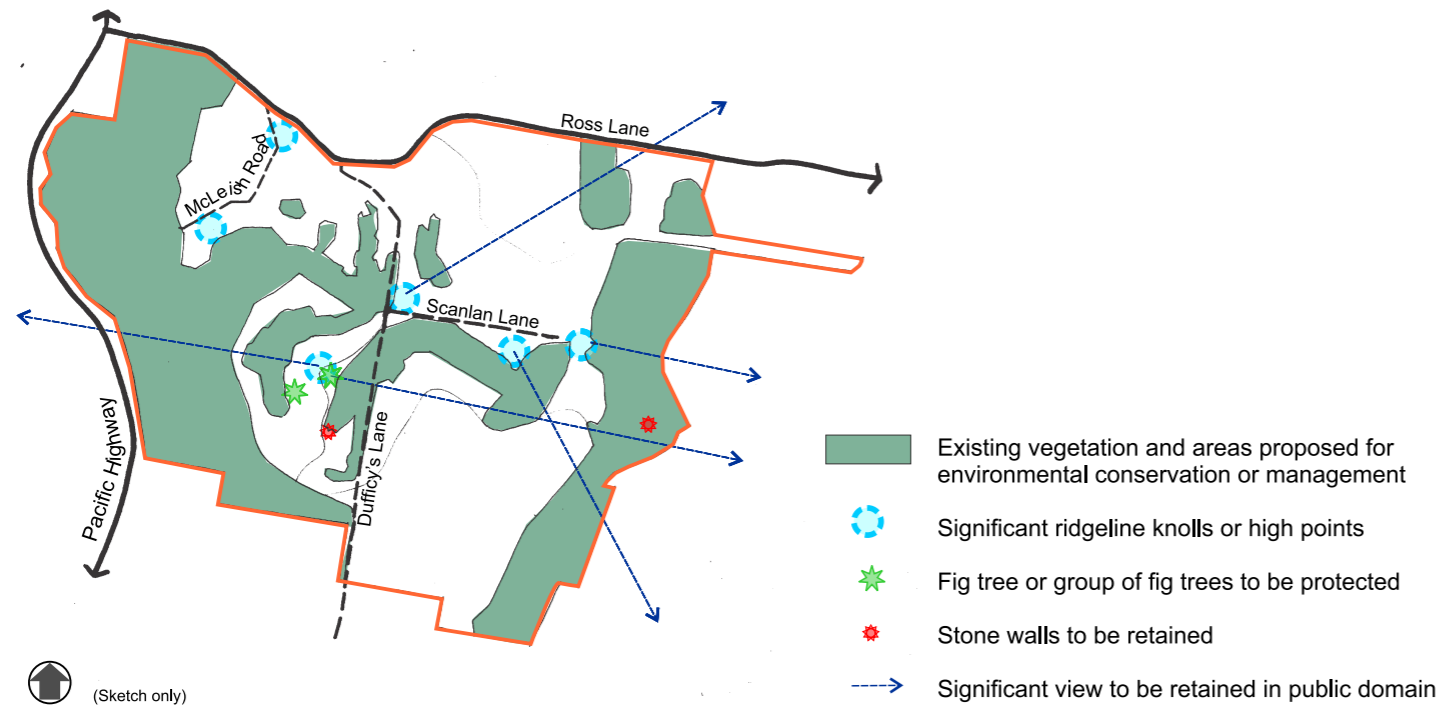


FIGURE 3 - Tintenbar Staging Plan



(Sketch only)

Existing Significant Landscape Features

Existing significant landscape features are elements of the site which should be retained, protected or enhanced and promoted as key visual features of the landscape.



Landscape Character Area A



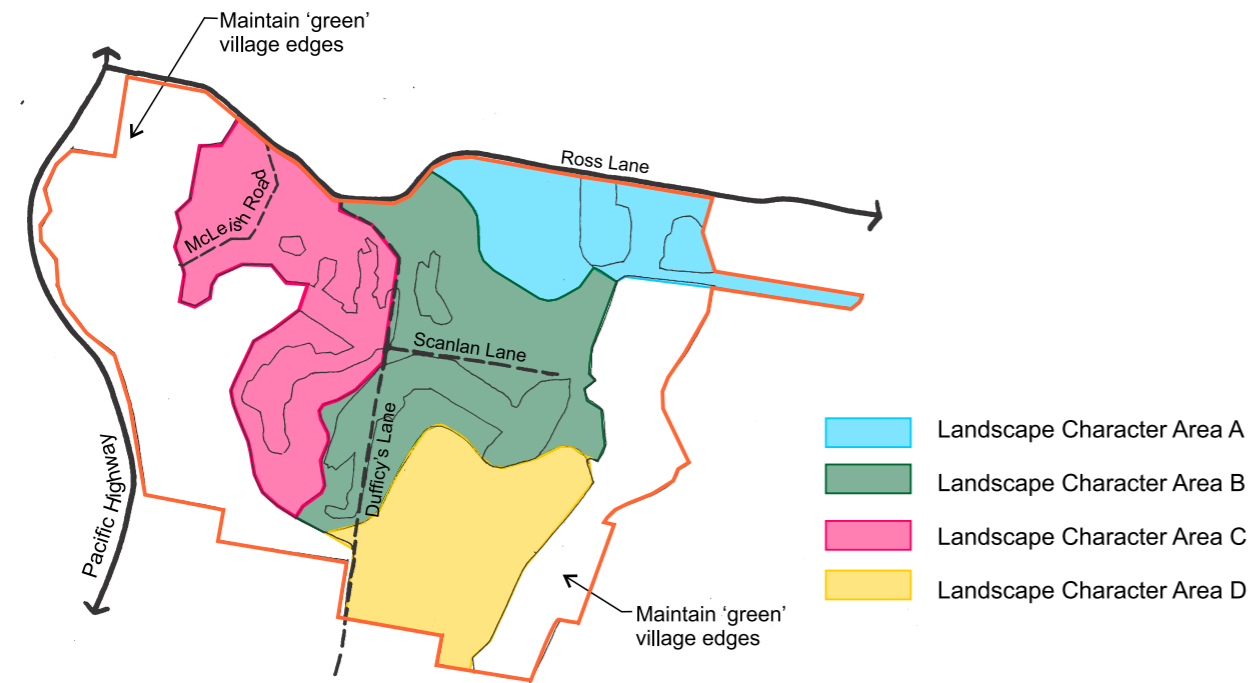
Landscape Character Area B



Landscape Character Area C



Landscape Character Area D

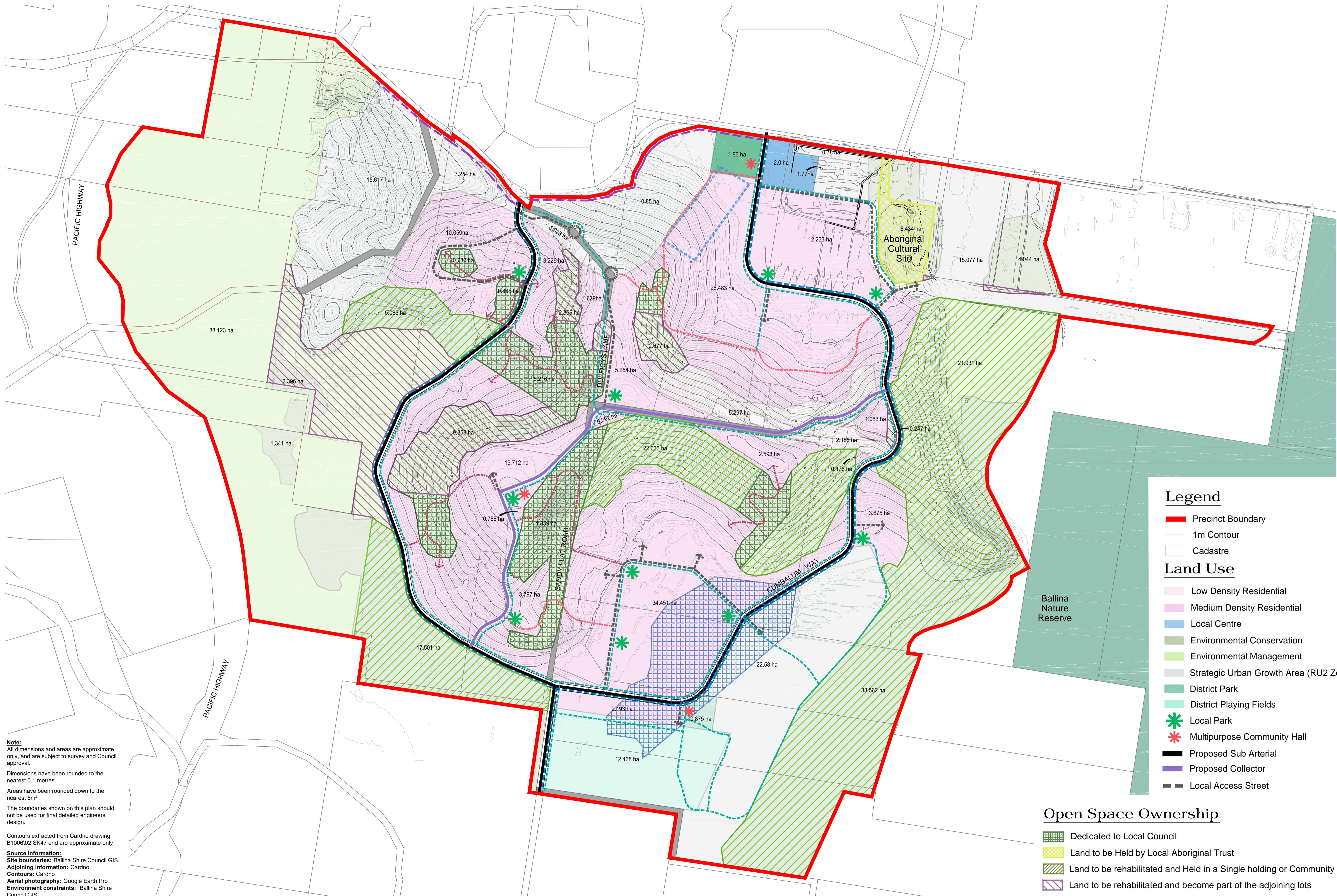


(Sketch only)

Landscape Character Areas

These areas represent proposed landscape themes for residential and rural land uses.

FIGURE 4 – Tintenbar Village Landscaping Principles and Character



Legend

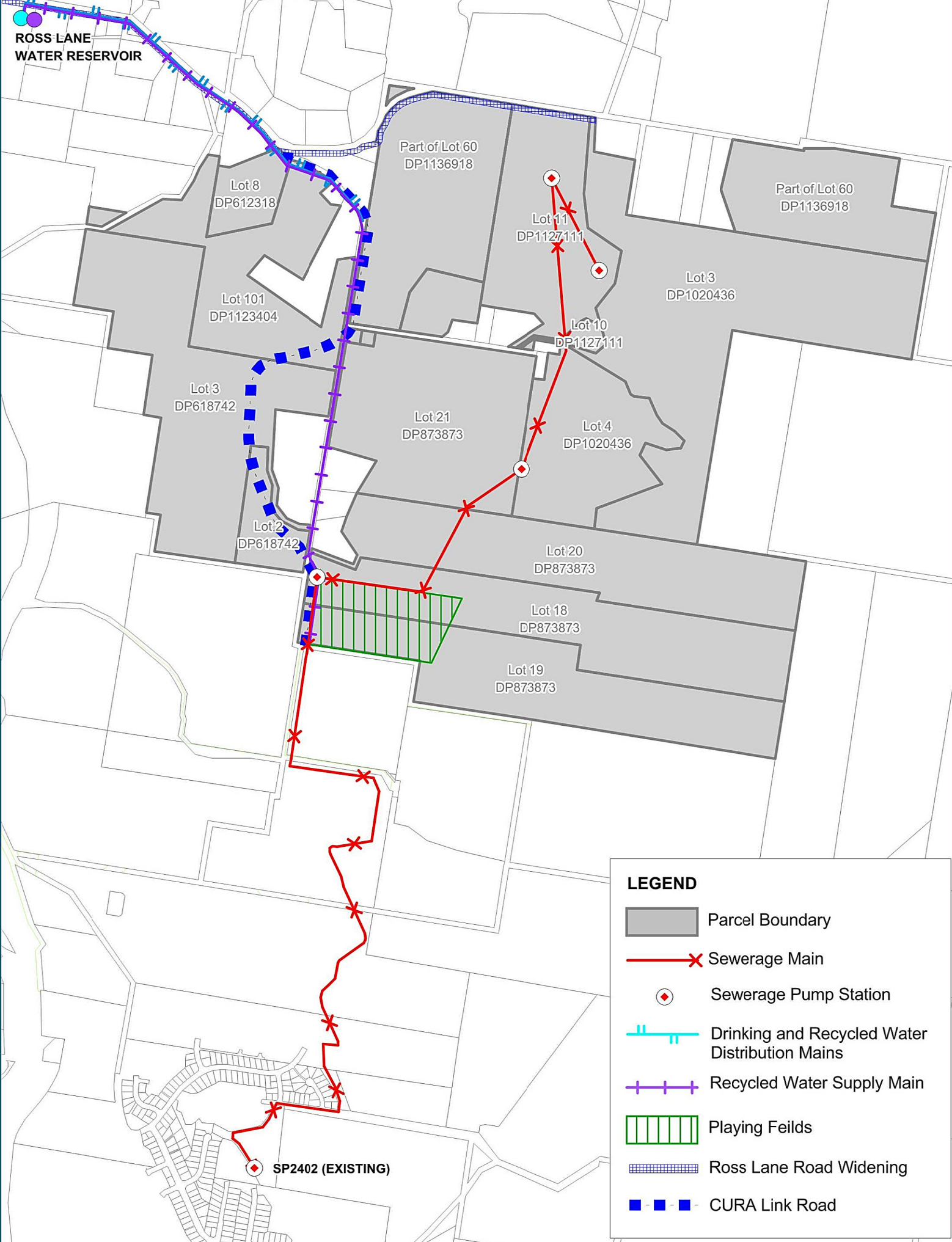
- Precinct Boundary
 - 1m Contour
 - Cadastre
- Land Use**
- Low Density Residential
 - Medium Density Residential
 - Local Centre
 - Environmental Conservation
 - Environmental Management
 - Strategic Urban Growth Area (RU2 Zone)
 - District Park
 - District Playing Fields
 - ✱ Local Park
 - ✱ Multipurpose Community Hall
 - Proposed Sub Arterial
 - Proposed Collector
 - Local Access Street

Open Space Ownership







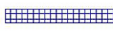

- Dedicated to Local Council
- Land to be Held by Local Aboriginal Trust
- Land to be rehabilitated and Held in a Single holding or Community Title
- Land to be rehabilitated and become part of the adjoining lots

Note:
 All dimensions and areas are approximate only, and are subject to survey and Council approval.
 Dimensions have been rounded to the nearest 0.1 metres.
 Areas have been rounded down to the nearest 5m².
 The boundaries shown on this plan should not be used for final detailed engineers design.
 Contours extracted from Cardno drawing B1006/02 SK47 and are approximate only
Source Information:
 Site boundaries: Ballina Shire Council GIS
 Adjoining information: Cardno
 Contours: Cardno
 Aerial photography: Google Earth Pro
 Environment constraints: Ballina Shire Council GIS

ROSS LANE
WATER RESERVOIR



LEGEND

-  Parcel Boundary
-  Sewerage Main
-  Sewerage Pump Station
-  Drinking and Recycled Water Distribution Mains
-  Recycled Water Supply Main
-  Playing Feilds
-  Ross Lane Road Widening
-  CURA Link Road



Precinct B - Development Contribution Obligations



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Although all care is taken in the preparation of this plan, Ballina Shire Council accepts no responsibility for any misprints, errors, omissions or inaccuracies.

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