PART 02 MASTER PLANNING & SUBDIVISION

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2.1 Urban Structure

2..1.1 Preamble

Statement of Intent

Kingscliff's greenfield sites will deliver additional housing supply, allocating additional land area to enable the town centre to grow, initiating a new Business and Innovation precinct to facilitate economic and employment opportunities and protect areas of environmental significance. Preservation of natural areas will frame and define the limits of urban growth and enhance ecological links throughout the settlement. Each of the existing and future precincts will have their own distinctive character derived from topographic, environmental and landscape characteristics informing land use and design led development outcomes. A network of pathways and ecological corridors will link each of the precincts with activity centres within a network of open space.

Urban Footprint Methodology

The overriding future urban development intent is to consolidate and develop existing developable urban footprints to achieve projected land use and density targets rather than contributing to 'sprawl' at the settlements rural and natural environment edges.

Based on a review of demographic trends and population projections and a review of development potential over identified key greenfield development sites, there is currently sufficient zoned greenfield development land available for development to meet a growing population for the next 30 years. Accordingly, development is only supported in the nominated urban footprint areas (Figure 2.2). Council will seek to apply appropriate environmental zoning over areas identified as ecological significance forming the conservation footprint (Figure 2.3).

Kingscliff has approximately 165ha of greenfield development land comprising a mixture of residential, agricultural, industrial, special uses and environmental protection land uses. It is noted that whilst a significant proportion of these key greenfield development sites have an R1 General Residential zoning, not all land zoned will be suitable for development factoring in development constraints (Figure 2.1 Kingscliff Locality Constraints Overlay) including areas of ecological significance (Figure 2.6 Ecologically Significant Land).

In defining the Kingscliff Urban Footprint (Figure 2.4), land identified as ecologically significant and potential offset planting areas have been removed from the defined developable footprint, in keeping with the overriding vision and guiding principles of the Kingscliff Locality Plan. There are however some instances where smaller and less connected areas of ecological significant land have been nominated for potential clearing within the urban development footprint to enable a more efficient and orderly urban structure. These cleared areas however are required to be offset with new planting within the local area calculated using a contemporary biodiversity calculator. Candidate offset planting areas have been nominated within Figure 2.3 Kingscliff Locality Conservation Footprint.

The next highest order constraint is flooding where a significant proportion of greenfield development sites within Kingscliff are currently subject to the 100 year ARI flood inundation. For the purposes of defining an urban footprint, these flood affected lands have not been discounted in recognition of the ability to fill these sites above design flood levels subject to satisfactorily meeting the provisions of Tweed DCP Part A3 – Development of Flood Liable Land including addressing flood modelling criteria and flood studies as required.

It is critical to acknowledge that the diagrammed constraints within this Code (including Kingscliff Locality Plan Part A: Context and Locality Wide Strategies and Part B: Precinct Plans) are not exhaustive of the constraints that apply to the individual greenfield development sites. Additional constraints such as drainage, acid sulphate soils, soil stability, slope and bush fire prone land, for instance, have the capacity to influence the type, style and scale of development achievable. Further discussion on these matters is contained throughout this Code and should be the subject of more extensive developer/land owner led site investigations.

Key Greenfield Development Sites

In order to guide new greenfield development sites across the locality, this Code contains design principles applicable to the greenfield development sites (Section 2.13-2.18 of this DCP). These site specific greenfield design principles align with key strategies in the Kingscliff Locality Plan. The prepared indicative structure plans illustrated within this DCP represent one potential designed outcome based on an understanding of the site constraints and the application of the desired urban design and urban structure planning principles. Given the need for a more in depth site specific analysis and master planning design processes, these diagrams do not necessarily represent the required final designed outcome. The final designed outcome will be the outcome of a design led process in consultation between developer/ land owner(s), Council and the community.

2.1.2 Objectives:

1. Consolidate and develop existing developable urban footprints to achieve projected land use and density targets in accordance with strategies, objectives and intent of the North Coast Regional Plan, Tweed Local Environmental Plan and Kingscliff Locality Plan.
2. Strengthen the character and hierarchy of settlement by maintaining strong multi-functional business centre(s), capitalise on well located infill development opportunities, minimise urban sprawl at the localities edges and maximise infrastructure and service efficiencies.
3. Facilitate the protection and management of land identified as conservation footprint and ecologically significant through appropriate land use zoning and provisions for ongoing habitat management.
4. Plan new subdivisions as connected communities framed within the hierarchy of settlement where consideration is given to the ultimate geographical extent and population target for each community that is to be formed or built upon, and the staging/timing by which it is proposed to reach that position.
5. Provide for a variety of dwelling types and choice which will meet the demographic and affordability needs of the future residential population.
6. Promote high quality design and environmental stewardship that integrates the Design Principles of this Code.

2.1.3 Development Controls:

C1. Any planning proposal, master plan, concept development application and or subdivision application over land(s) within the identified urban footprint (Figure 2.2), including over land already zoned for settlement but not yet developed, must undertake a design led master planning process in consultation with Council prior to the submission of a planning proposal or development application. This process will consider the interrelationship with the existing settlement, all site constraints, greenfield site specific planning and design principles (see Section 2.13–2.18), all other relevant principles and controls within this Code as well as Council's other applicable development control and policy instruments.

C2. This Code does not support additional urban development outside the identified urban footprint unless for critical/essential infrastructure or environmental works or land uses consistent with permissible uses prescribed within the TLEP.

2.1.4 Additional Advice:

Refer to the North Coast Regional Plan.

Refer to Kingscliff Locality Plan: Volume 1 – Context and locality wide strategies and Volume 2 – Precinct plans.

Refer to Tweed DCP Part A5 – Subdivision Design Manual.

Refer to Open Space Strategy 2019-2029.

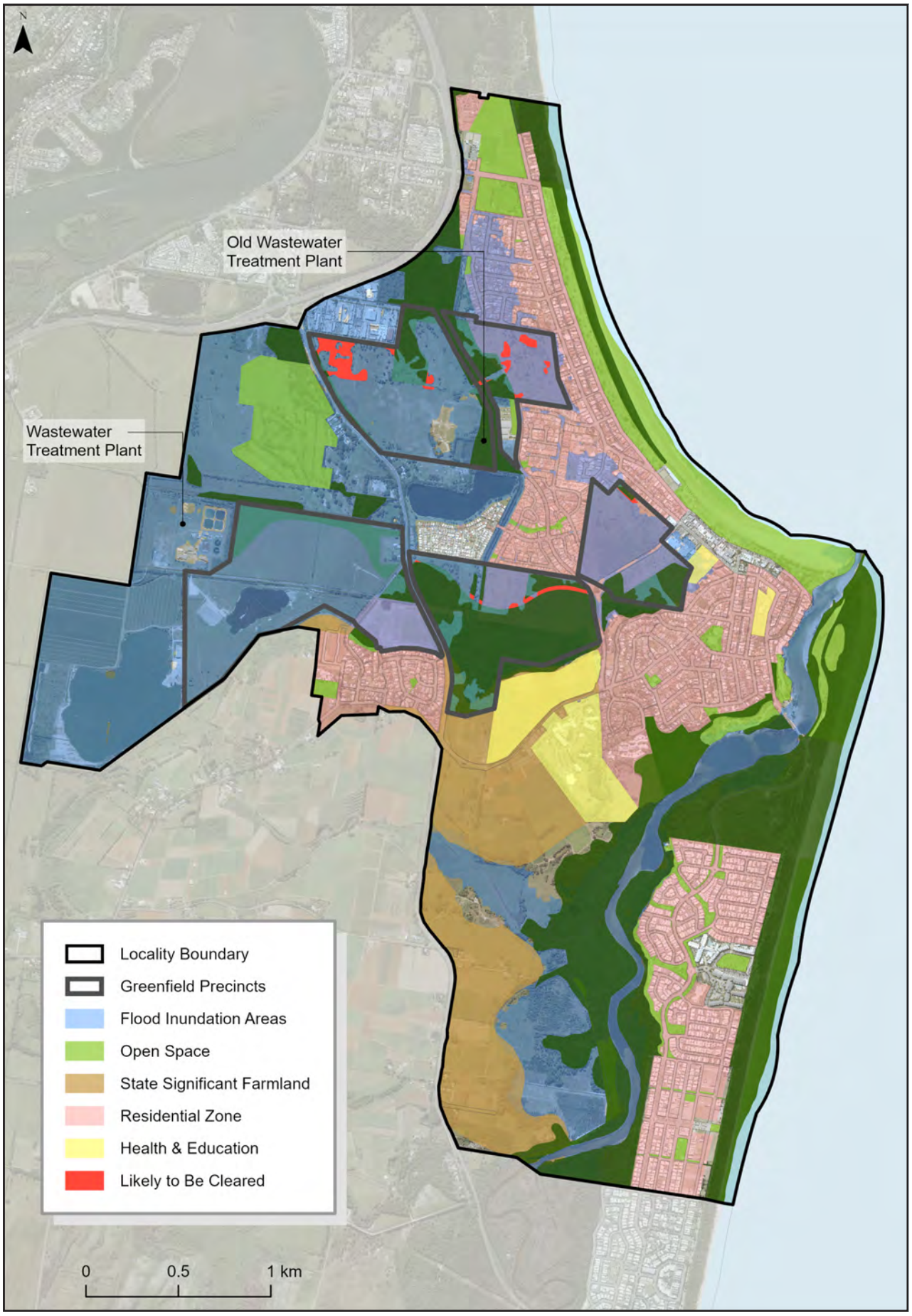


Figure 2.1 Kingscliff Locality Constraints Overlay

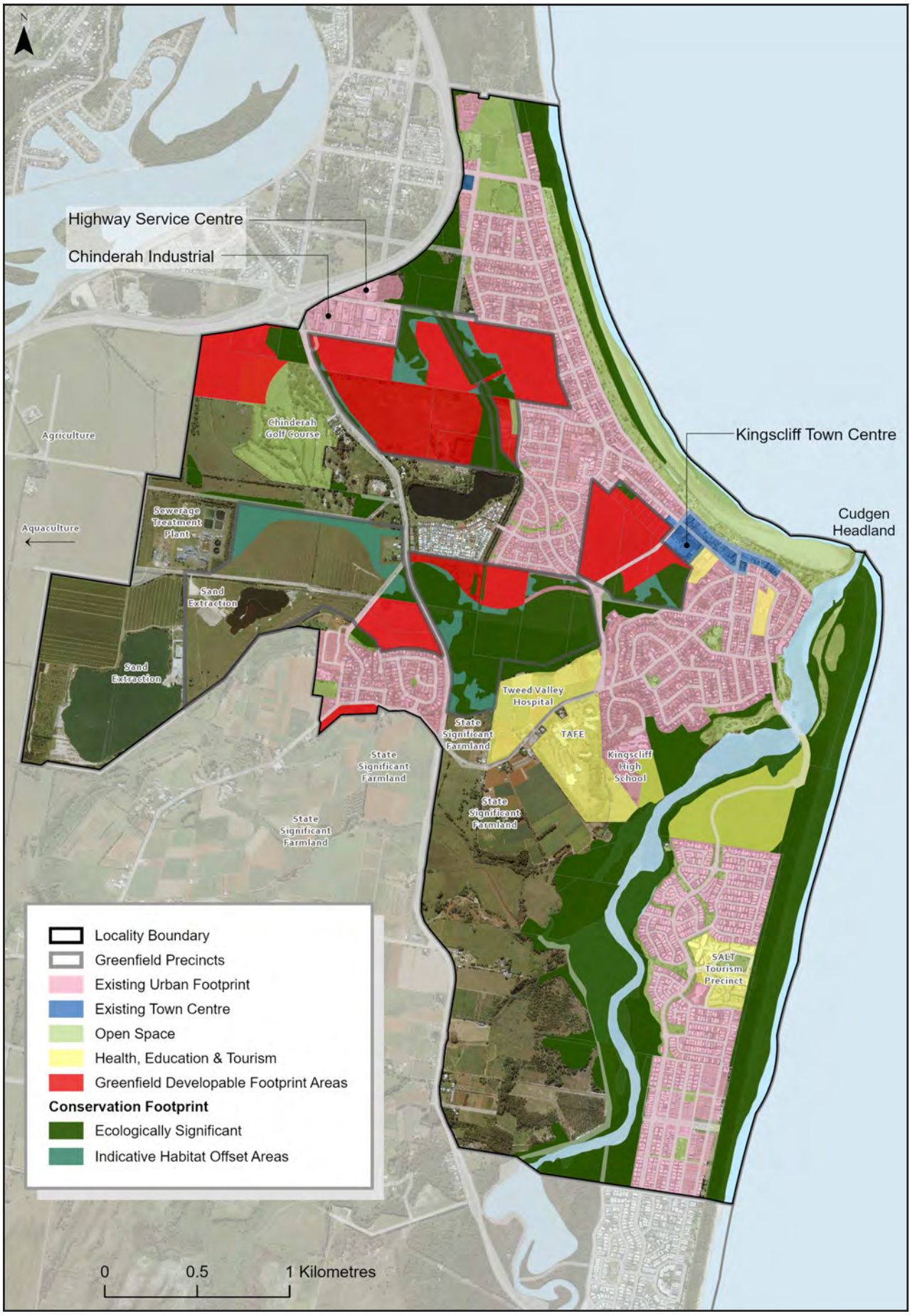


Figure 2.2 Kingscliff Locality Urban Footprint

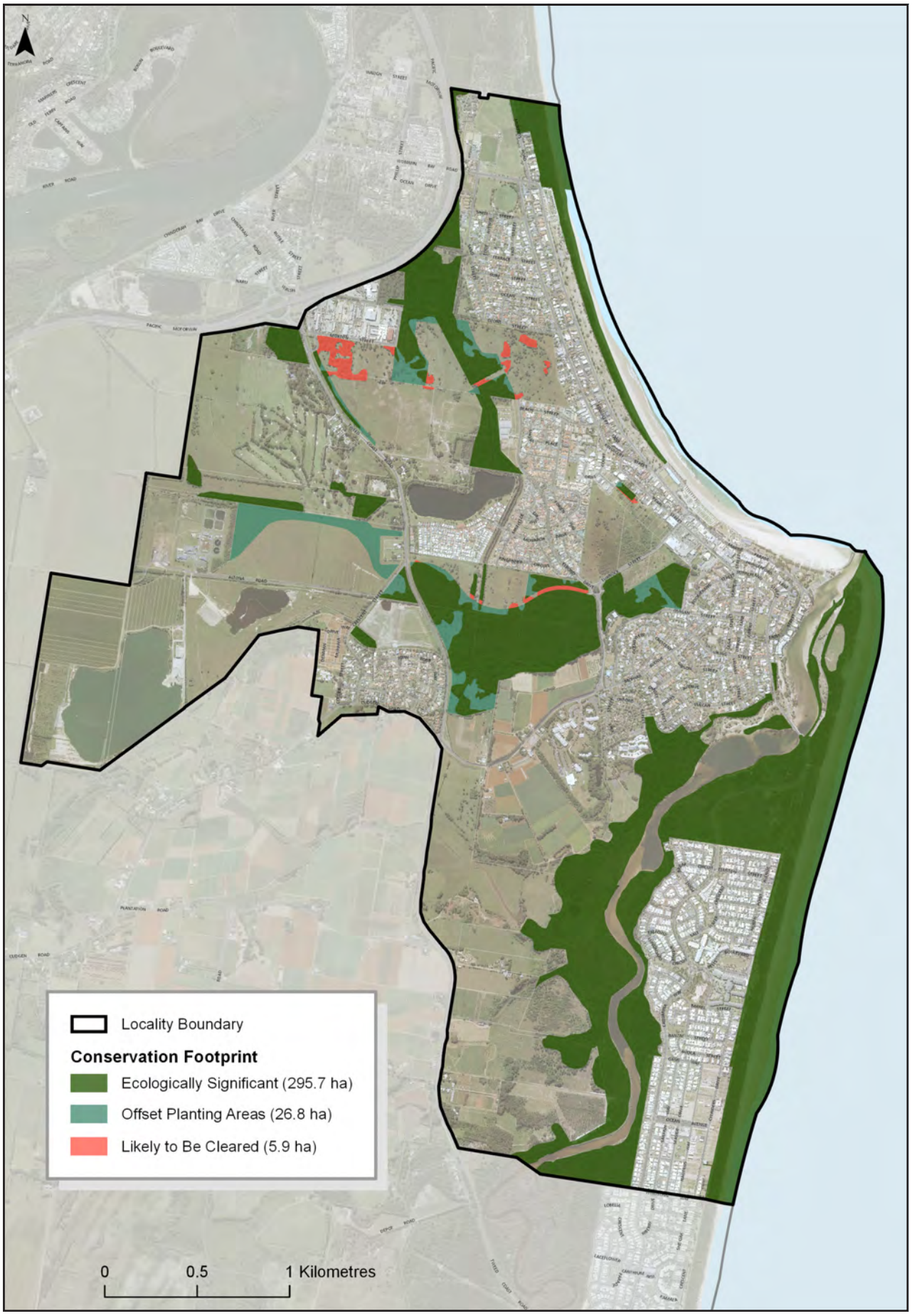


Figure 2.3 Kingscliff Locality Conservation Footprint

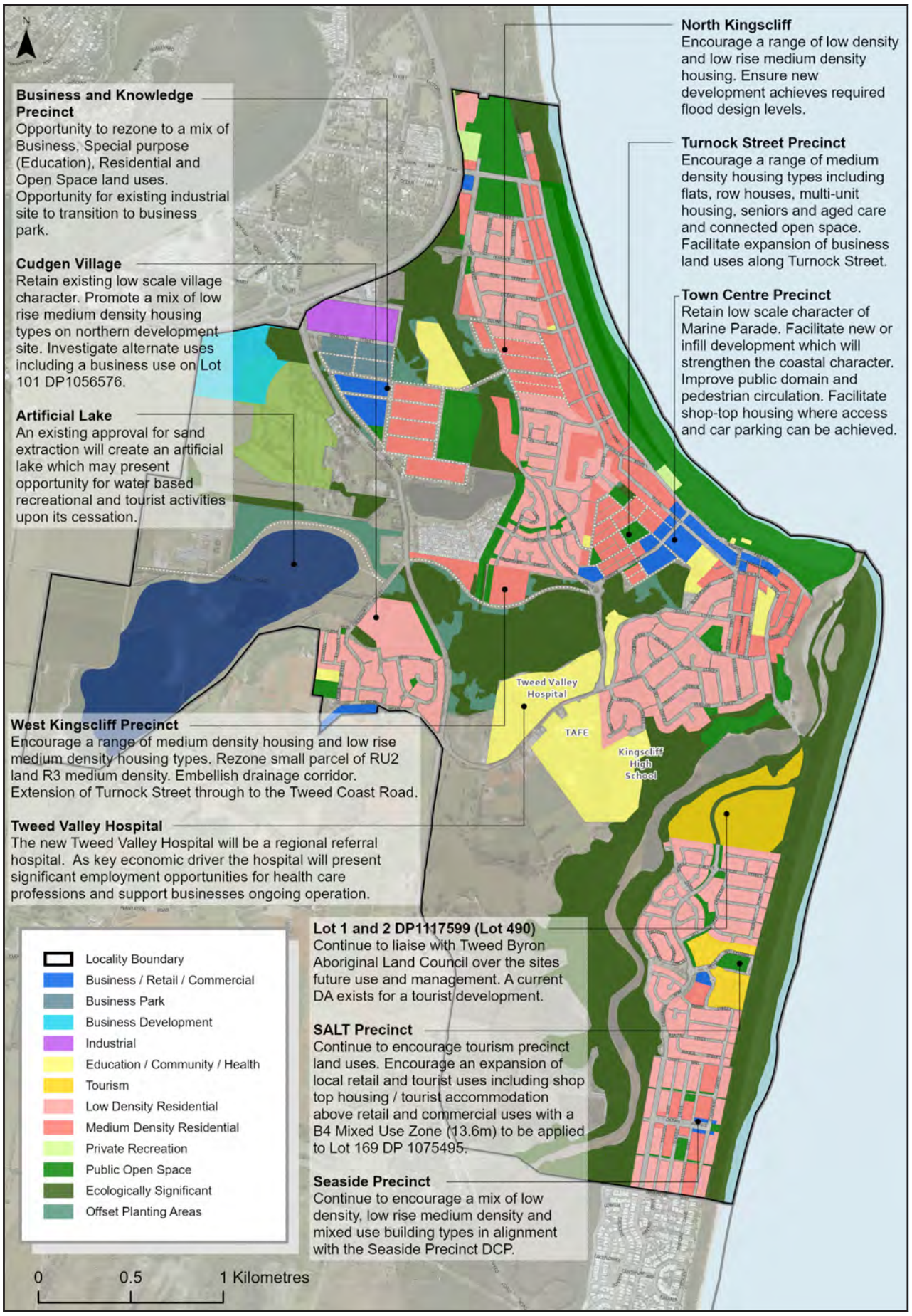


Figure 2.4 Indicative Kingscliff Urban Structure Plan

2.2 Site and context analysis

2.2.1 Preamble

Statement of Intent

All new development is to undertake a site and context analysis. Understanding a detailed site and context assessment of a site will enable the development of planning and urban design options which 'work with' the sites natural systems, opportunities and constraints early in the design process. This results in more cost effective and environmentally responsive design which balances development opportunity with environmental, natural and cultural protection. This site design led process embeds a sense of place and character within future neighbourhood developments.

Detailed site and context analysis ensures that all constraints including, but not restricted to; climatic considerations, topographic and hydrological conditions, buffers, easements, setbacks, areas of environmental protection, connecting open space areas, streets and infrastructure are integrated in a way that maximises land efficiency and minimises the overall cost and impact of development. Figure 2.5 illustrates the cyclic relationship between site and context analysis, structure planning and neighbourhood character.

2.2.3 Objective:

1. Achieve a sustainable site responsive subdivision design through detailed consideration of site natural systems, opportunities and constraints through a site analysis design process.
2. To retain the sites natural, environmental and landscape qualities into future structure design outcomes which underpins a sense of place and character.
3. Enhance local character, identity and sense of place by working with the natural features of a site, retaining key topographic features, understanding climatic influences, landscape elements, view lines and other significant natural, cultural and heritage assets.
4. Use the site and context analysis process as part of a development site's risk management by preventing unforeseen outcomes based on site conditions which could have significant financial and community implications, as well as mitigate the need for complex engineering solutions including bulk earthworks.
5. Use the site and context analysis to understand the development site's interface and adjoining land use considerations including but not limited to existing and planned adjoining development, existing street connections, operational buffers, natural hazards, infrastructure locations and requirements, environmental areas, landscape assets, scenic landscape and view lines, public open space networks, topographic and catchment drainage.

2.2.4 Controls:

C1. Any masterplanning, planning proposal or development application process within the identified urban footprint (Figure 2.2) must submit a site and context analysis. The site and context analysis should:

i. Be appropriately documented with 'layered' drawings and a report which documents the site constraint and development opportunities which will inform the subsequent development and design stages.

ii. Identify a development footprint based on an overlay of all known environmental, buffer, topographic, hydrological, landscape, heritage, cultural, infrastructure, hazard and climatic considerations.

iii. Demonstrate how the proposed site design responds to the identified site opportunities and constraints.

2.2.5 Additional Advice:

Refer to Tweed DCP Part A5 – Subdivision Design Manual

Dependant on the size and scale of the proposed subdivision, the site and context analysis is to be forwarded to Council for appraisal and consideration as part of a 'pre-DA' meeting prior to the submission of a development or planning proposal application.

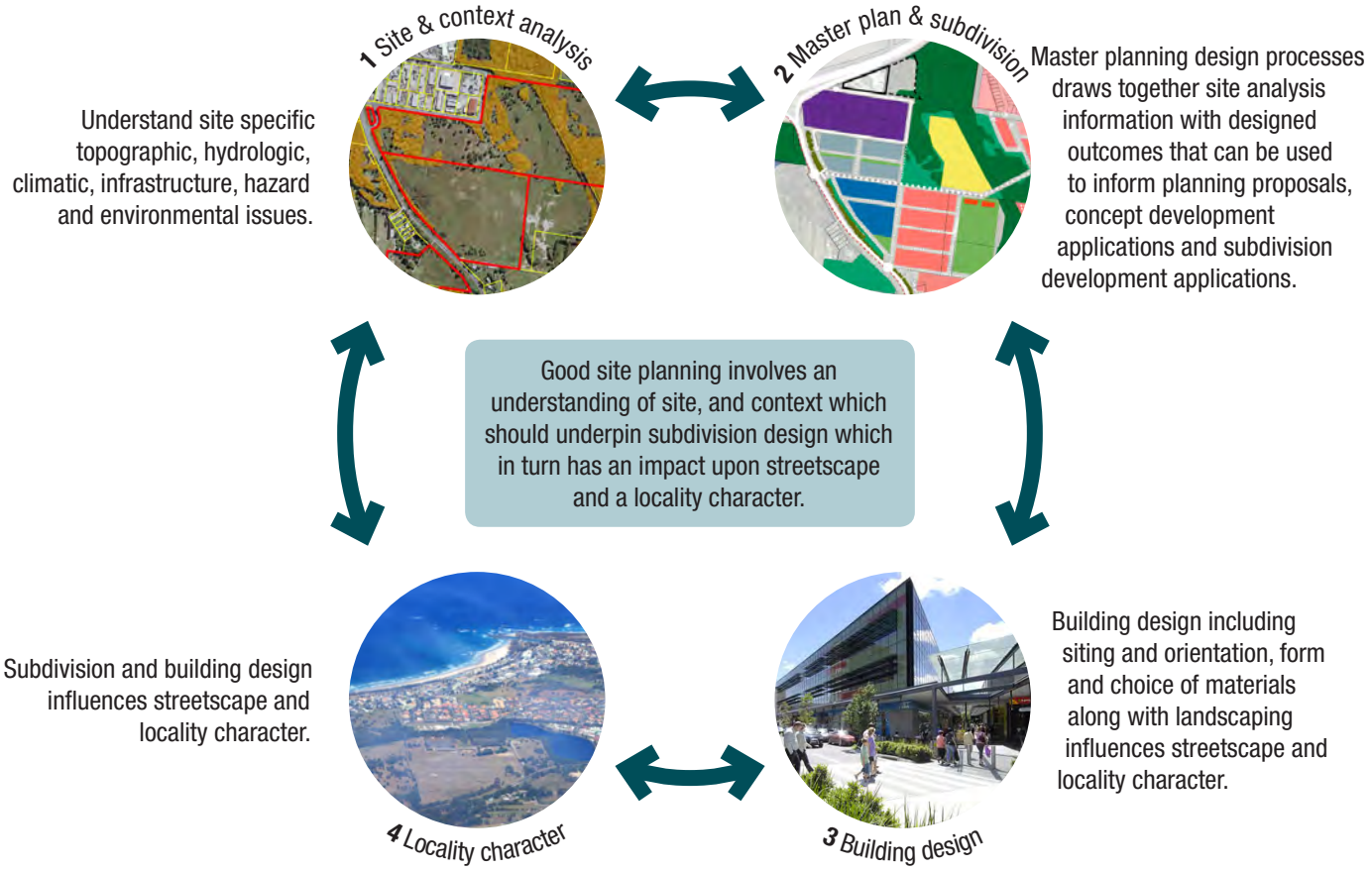


Figure 2.5 Subdivision Site and context analysis

2.3 Environment

2.3.1 Preamble

Statement of Intent

To facilitate the preservation and enhancement/rehabilitation of areas of environmental significance and provide management for the conservation of threatened and endangered species. This includes the preservation of native bushland vegetation and recognising areas of high environmental amenity value which underpin the ecological, visual and landscape character of the Kingscliff locality. Ensure that proposed uses adjacent to environmental protection zones do not have significant adverse impacts.

Preserve

Environmental surveying has identified significant tracts of lands as having environmental significance and a number of endangered ecological communities (EECs) across the locality. As part of the preparation of design led master planning and subdivision processes over development sites, flora and fauna assessments will be required to acknowledge land of environmental significance and make provision for appropriate buffering and ongoing management. In reviewing protection and vegetation management, which may eventuate in some localised clearing and vegetation offsetting, a whole of locality environmental evaluation which strategically enhances and strengthens ecological links is required. Urban development within land zoned as Environmental Protection or identified as being environmentally significant will not be supported by this Code, as indicated by the Urban Footprint illustrated in Figure 2.2.

Enhance

Kingscliff greenfield development sites contain diverse vegetation communities. These communities include coastal heath along the coastline, riparian and wetland communities along the estuarine, Melaleuca and She Oak forest in the low lying flats and Sclerophyll forest across the northern precincts. Koala habitat, including areas mapped as Preferred Koala Habitat, is also present throughout the planning area. Development proponents must explore opportunities to enhance connections between these areas of bushland. The master planning process will play a significant role to provide visual 'breaks' to the built form by way of suitably vegetated corridors permeating throughout the Kingscliff locality. Figure 2.6 provides examples of green corridors/links that must be investigated within future applications both for their environmental and urban design/visual value.

Rehabilitate

As part of the future subdivision and development of greenfield development areas of Environmental Protection are to be restored, rehabilitated and managed. The interface between and key habitat areas for protected, threatened and endangered species is a key issue which requires careful management. Urban development within a greenfield context can often reduce the amount of available habitat, fragment retained habitat and sever wildlife corridors. As discussed in other areas of this Code the desired future subdivision road pattern is to include road interfaces with natural areas rather than private land tenure, allowing an improved public interface with these areas, easier management and rehabilitation.

Figure 2.6 Ecologically Significant Land

2.3.2 Objective:

1. Protect lands identified as being ecologically significant within the conservation footprint (Figure 2.3) through land use planning.
2. Ensure ongoing management of land of ecological significance from the impacts of urban development.
3. Ensure an integrated approach to establishing any habitat offset areas in the KLP area.
4. Provide a natural growth boundary to residential development and visual relief for the proposed urban environment.
5. Provide for the rehabilitation and enhancement of degraded habitat and strengthen ecological links ensuring that comprehensive rehabilitation plans form part of any future development applications or master planning processes.
6. Provide for the protection and improvement of existing hydrological conditions into receiving drainage corridors.
7. Create new and strengthen existing wildlife corridors.

2.3.3 Controls:

C1. Any planning proposal, master plan, concept development application and or subdivision application over land(s) within the identified urban footprint (Figure 2.2) must submit:

- Flora and Fauna assessments prepared in accordance with DCP Part A19 Biodiversity and Habitat Management will be required to identify the presence of land of high environmental quality, suitable buffering and ongoing management.
- A habitat Restoration Plan incorporating any proposed habitat offset areas must be prepared in accordance with DCP Part A19 Biodiversity and Habitat Management within the conservation footprint and any required ecological buffers.

C2. Except as otherwise noted in C3 below the provisions of DCP Part A19 Biodiversity and Habitat Management apply to development in the KLP area.

C3. The clearing of areas included in the Urban Footprint (Figure 2.2) may be approved despite DCP Part A19 Biodiversity and Habitat Management providing appropriate habitat offsets are established in suitable locations within the KLP area.

C4. The long term protection and management of land within the Conservation Footprint shall be achieved through appropriate land use zoning, legal agreements (e.g. covenants, planning agreements, stewardship agreements) and potentially land dedication to a public authority such as Council.

C5. The Conservation Footprint (Figure 2.3) may only be varied through an amendment by a resolution of Council supported by an overarching master plan (or similar document) that demonstrates a no net loss ecological outcome within the Kingscliff locality area. The following conditions are the minimum requirements to meet this outcome:

- The total area of any proposed clearing shall not exceed 7.0ha.
- The quantum of any proposed offsets are calculated using a contemporary biodiversity offset calculator.
- The structural condition (as calculated using the NSW Biodiversity Assessment Method) of the tallest growth form at the proposed offset site shall be not more than the following proportions of the structural condition benchmarks for the relevant community type: 20% for forests, 30% for shrublands, and 50% for treeless wetlands.

C6. Through urban structure and master planning processes ensure existing wildlife corridors and vegetative links including those illustrated within Figure 2.6 will be maintained and enhanced. This could be by way of enhancing existing continuous vegetation or providing linking native street trees, verges, corridors and buffers where vegetation is disconnected by roads.

C7. Demonstrate appropriate buffers between developable areas and areas of ecological significance are established along with ongoing management of buffer land (see DCP Part A19 Biodiversity and Habitat Management). Infrastructure including roads should form the interface between development and ecological areas and be contained within developable footprint rather than buffer areas.

C8. Demonstrate appropriate buffers between developable areas and areas of ecological significance are established along with ongoing management of buffer land (see DCP Part A19 Biodiversity and Habitat Management). Infrastructure including roads should form the interface between development and ecological areas and be contained within developable footprint rather than buffer areas.

C9. Demonstrate how the works identified within any Habitat Management Plan(s) will be responsible for and the intended method of addressing the works required.

2.3.4 Additional Advice:

It is acknowledged that land requiring restoration works across the locality may be in fragmented ownership. To this extent, Council is open to discussion with applicants regarding delivery methods for the restoration work identified to ensure equitable distribution across the landowners and development of greenfield sites within Kingscliff. The developer will be responsible for the restoration works of the area of environmental protection to Council's satisfaction.

Where environmental areas are proposed to be dedicated to Council in any subdivision or other development, Council may enter into an agreement for a maintenance period and contribution for ongoing management prior to handover and all restoration works must be completed to Council's satisfaction. DCP Part A19 Biodiversity and Habitat Management contains details or habitat management periods and other arrangements.

Kingscliff Environment and Ecology – Kingscliff has a unique and varied ecology ranging from sensitive SEPP 14 wetlands and saltmarshes along estuary areas, melaleuca forests over low lying areas, eucalyptus forest to the north and pockets of remnant rainforest which supports significant endemic flora and fauna species.

Photo Credits: Wetlands Restoration

2.4 Green Edges Landscape Character and Views

2.4.1 Preamble

Statement of Intent

The landscape and visual character of the locality including greenfield development sites should be recognised and enhanced. Existing significant landscape features will be retained and integrated into the structure and master plan designs. There is an opportunity for new development sites to take advantage of landscape character elements in terms of retaining topography, overland flow paths, watercourses, native vegetation, view fields and other significant stands of vegetation. Outside of existing settlement areas and areas identified as greenfield development sites, non-agricultural uses which may impact the scenic landscape character are discouraged.

Recognise

The landscape and visual character of Kingscliff is underpinned by a number of varied but complimentary landscape character zones which includes coastal areas, estuary areas, wetland areas, bushland areas, open agricultural areas and built environment areas. The key landscape features include:

- The expansive coastal zone, Cudgen Creek and coastal wetland areas;
- Dominant ridge line from Cudgen Plateau along Cudgen Road to Cudgen Creek and Sunderland Point.
- The varied vegetation communities including the melaleuca and swamp she-oak forest, the open sclerophyll forests and the sedgeland and remnant rainforest pockets.
- The red soil rural and farmland areas.
- Elevated north and east views from various aspects on Kingscliff Hill to Fingal Headland, Cook Island and the Pacific Ocean and south-west elevated views from various aspects on Kingscliff Hill to Cabarita Headland and west around to Mt Warning and the Border Ranges.
- Green break or vegetated buffer (Lot 1 and 2 DP 1117599) between the northern extents of Salt and the Cudgen Creek Bridge.
- Significant street trees including the town centre Fig Trees and Cudgen Norfolk Pine Trees.

Many of Kingscliff's greenfield development sites are visible from higher vantages points both from within and outside of the locality. Some of these view fields are experienced from the northern side of the Kingscliff Hill precinct looking north over the Turnock Street precinct, the south side of Kingscliff Hill looking south towards Salt and Seaside precincts and the northern side of Cudgen Village which has a vantage looking north-east and north-west. Other vantages over greenfield development sites are experienced along the northern side of Duranbah Road and the southern side of Terranora Road. The potential impacts on these view fields over time will be the replacement of undeveloped agricultural views interspersed with vegetation with future urban development footprints. Figure 2.7 illustrates the key landscape character zones, prominent views and vantage points experienced in and around the locality.

Enhance

There is an opportunity through future subdivision design over the lower set flat greenfield development sites to strengthen and enhance landscape character. This is achieved by retaining and strengthening existing stands of vegetation and retaining key topographic features. Retention and strengthening of vegetation in particular has the effect of creating a green edge to new precincts and green buffers between precincts. Subdivision landscape design together with water sensitive urban design (WSUD) opportunities should integrate strong ecological links through precincts and where possible be combined with connecting pathways and cycle routes. Street trees should be specified to suit the local landscape character and streetscape context. Within subdivision areas street trees should be located to be clear of potential driveway cross overs and to enhance streetscaping and shade opportunities.

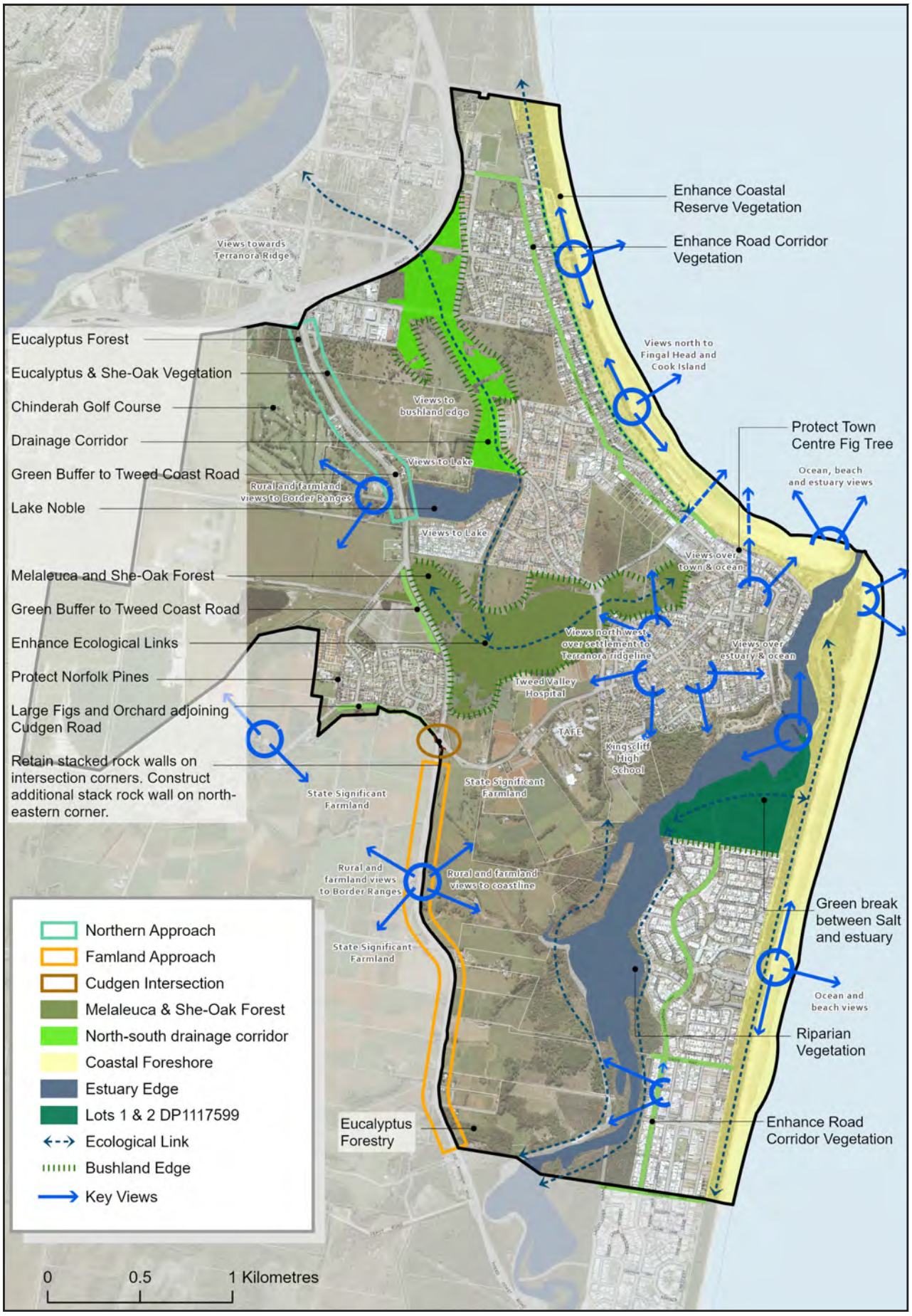


Figure 2.7 Landscape Character Zones

The northern approach – The Business and Innovation precinct forms part of the northern approach defined by sclerophyll forest on the western side and scattered She-Oak Forest on the eastern side.

Melaleuca forest – The melaleuca forest within the West Kingscliff Precinct defines the eastern and western side of Tweed Coast Road has a canopy height of between 5–15m and forms part of a larger 36ha vegetative area (to the east) which has a high ecological value.

North Kingscliff greenfield – The development and subdivision of the north Kingscliff greenfield site will require filling above the design flood level. Notwithstanding this required change in landform, the site is framed by vegetation which provides a strong contained landscape character and green backdrop to the precinct. The subdivision design should strengthen this character with consideration of terminating views lines to the bush, creating edge roads rather than back fences to the bush as well as drawing connected landscape areas through the precinct.

2.4.2 Objectives:

1. Maintain the integrity of vegetation, watercourses and natural topographic features as important features of the environmental, landscape and visual character.
2. Ensure site modifications, excavation, fill, retaining walls and engineered elements do not adversely impact on the visual and landscape character of a precinct and locality.
3. Identify and retain key landscape and visual character features of the site and seek to integrate those landscape features through a contemporary urban structure and built form outcomes.
4. Identify, retain and strengthen green breaks, important feature trees and or stands of trees within master planning and subdivision processes.
5. Ensure view sharing and maintenance of view fields including maintaining important regional and local views.
6. Retain designated State Significant Farmland. Discourage non-agricultural development outside of the defined urban footprint which will impact the landscape and visual character.

2.4.3 Controls:

C1. Any masterplan, planning proposal or development application process over the identified greenfield development sites must submit a visual impact assessment. Using Figure 2.7 as a reference the visual analysis should:

   i. Provide an assessment of the existing visual and landscape character including an assessment of any impacts from the proposed subdivision development.

   ii. Identify significant landscape features including overland flow paths, dams, native vegetation and other significant stands of vegetation across the subdivision site and seek to retain or interpret these important elements of the sites visual character. Suggested means of embodying these components include adapting existing vegetated wind break lines as street trees, to create more visually attractive streetscapes; utilising overland flow paths as ecological corridors and pedestrian and cycling links, maintain the presence of existing mature trees to assist in visually defining the identified character zones and preserving ecological habitat.

   iii. Identify landscape and character zones within the greenfield development precincts as a means of defining and containing the urban structure as well as contributing to the overall principle of creating a network of precincts connected and framed by green space.

   iv. Demonstrate how the resultant urban structure, subdivision landscape design and road layout has been informed and takes advantage of landscape and visual character conditions and principles.

2.4.4 Additional advice:

Refer to the Kingscliff Locality Plan and the Tweed Scenic Landscape Strategy.

The landowners of Lots 6 DP 727425 and part of Lot 3 DP 828298 have the opportunity to explore more innovative and publicly accessible agricultural land use pursuits given the sites high visibility and ease of access. As the site is zoned RU1 Primary Production zoning and has State Significant Farmland status it is important that the agricultural primacy is retained. Other ancillary uses could be a combination of a working farm with a range of other agricultural and/or agri-tourism and food and beverage based activities. Note these ancillary uses may be considered as 'additional permitted uses' under TLEP 2014 Schedule 1 which would be the subject of a planning proposal. Landowners are encouraged to discuss any preliminary opportunities with Council.

2.5 Land forming

2.5.1 Preamble

Statement of Intent

Maintaining the integrity and intrinsic landscape visual character by minimising bulk earthworks in co-ordination with implementing required flood and drainage mitigation measures.

The low lying and flood prone nature of much of the identified greenfield development sites will require land forming including bulk fill earthworks to ensure development sites are established above design flood levels and that flood evacuation routes are provided. A strong design focus must be employed to ensure that subdivision design meets landforming and flooding requirements while mediating potential level differentials between existing, developable and undevelopable areas to mitigate drainage, flooding and amenity related impacts.

To address the land forming subdivision considerations any masterplan, planning proposal or development application process is required to clearly identify developable envelopes as an outcome of the site analysis process and indicate required site fill levels. Where development sites adjoining existing residential precincts and areas of environmental protection, documentation is to indicate all required buffers, setbacks and adjoining site levels. Where level differentials occur, design measures to mitigate risk and amenity based issues are to be addressed.

2.5.2 Objectives:

1. Maintain and respect the landform over the entire balance of greenfield development sites including both the developable and undevelopable areas.
2. Adopt an overall bulk earthworks strategy across greenfield development sites that seeks to:
   i. Design land forming to be compatible with the overall landscape character of development sites.
   ii. Limit modification of site levels at boundaries to maintain amenity to adjoining properties.
   iii. Integrate flood mitigation and drainage works within the overall land forming and subdivision design.
   iv. To ensure site modifications, retaining walls and engineered elements do not adversely impact on adjoining existing settlement areas or the streetscape character.
   v. Ensure that fencing on top of retaining walls does not adversely impact amenity of neighbouring properties or de-stabilise retaining walls.
   vi. Reduce the need for significant post subdivision land forming.

2.5.3 Development Controls:

C1. Any masterplan, planning proposal or development application process over the identified greenfield development sites must submit:

- Plans displaying compliance with the development controls outlined in the Tweed Development Control Plan Part A5 – Subdivisions Manual.
- Accurately represented and documented detail of all proposed site works including cut, fill and all retaining and interface walls which demonstrate minimisation of earthworks and integration of land forming design with flood mitigation works including flood evacuation routes and drainage works.
- Land forming plans are to detail the location, management and final placement of soils in order to preserve and productively re-utilise.
- Acid Sulphate Soil Management Plans over low lying sites where land forming is proposed.

C2. Maintain the integrity of natural topographic and landscape features as an important part of the locality and precinct character by including the following:

- As part of the subdivision and land forming design use the road layout to define the developable envelope where it adjoins natural areas.
- Step and landscape retaining walls and batters to filled areas at developable area edges rather than a single vertical retaining wall.
- Utilise WSUD drainage swales where appropriate improve water permeability across development sites, reduce the overall quantity of fill required to provide adequate drainage, mitigate flood impacts and strengthen landscape character.

C3. Where greenfield development sites directly interface with existing settlement areas, fill levels shall be consistent where both are above design flood level. Where existing settlement sites are below design flood level heights, new development areas are to be constructed at design flood levels. Where there will be resultant level differentials between existing and new development sites, the interface boundaries shall be carefully design to incorporate adequate buffers and/or setbacks to:

- incorporate required drainage works;
- ensure retaining walls/ batters are designed to reduce visual impacts; and
- integrated landscaping.

2.5.4 Additional advice:

Refer to the Tweed DCP Part A5 – Subdivision Manual and DCP Part A3 – Development of Flood Liable Land.

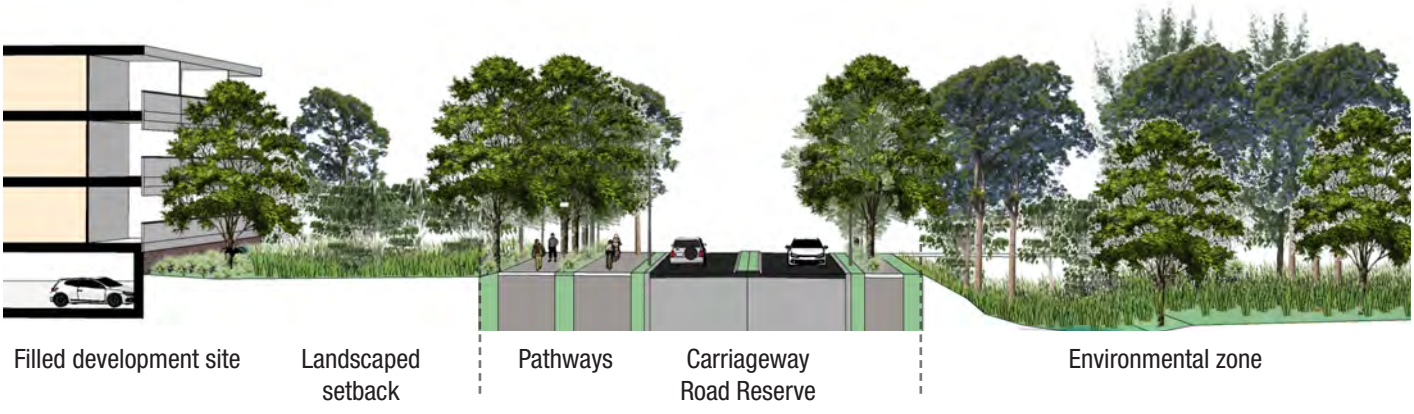


Figure 2.8 Land forming – Roads serve as the interface between filled development areas and environmental areas providing a physical buffer as well as good landscape and drainage opportunities.

2.6 Traffic Access and Movement

2.6.1 Preamble

Statement of Intent

The Tweed Coast Road is to be reinforced as the key collector road with new east-west connections through the West Kingscliff Precinct (Turnock Street extension) and through the Business and Innovation Precinct improving access to the town centre, Tweed Valley Hospital and residential precincts. The road network is to be supplemented by an embellished pedestrian and cycling path network including a new path along the length of the existing north-south drainage corridor. New subdivision roads are to generally be aligned in a north-south and east-west orientation to maximise the opportunity for best solar orientation for allotments. The curvilinear streets and cul-de-sacs which result in reduced connections, movement legibility and less regular shaped lots are discouraged.

Road Network

Tweed Coast Road is the connector and key movement corridor which services the Kingscliff locality. The Tweed Coast Road provides direct access onto the Pacific Highway allowing ease of movement north to Tweed Heads and beyond to the Gold Coast where many of the local residents commute each day to work. The stretch of Tweed Coast Road between the intersection with the Pacific Highway to Casuarina is planned to be widened to four lanes in the future as part of the Tweed Road Development Strategy. The general road network has been illustrated in Figure 2.9 - Kingscliff Locality Road Network Strategy .

Despite the relative proximity to the highway, there is only one point of access between Tweed Coast Road and Kingscliff township via the Cudgen intersection. To improve the connector options into the township from Tweed Coast Road, an extension to Turnock Street intersecting with Tweed Coast Road near the Altona Road intersection and the Ozone Street link has been included within the Tweed Road Development Strategy. The timing and alignment of this new collector road will be dependent on the development of the West Kingscliff precinct and traffic generation from new land release areas to the east. In addition new upgrades are planned for the Tweed Coast Road and Cudgen Road intersection to accommodate additional traffic movements associated with the Tweed Valley Hospital.

To the south, Casuarina Way connects to the Tweed Coast Road at Casuarina Town Centre. It connects South Kingscliff across Cudgen Creek to Sutherland St. This traffic can then enter the town centre at Pearl St/Moss St or use the local access streets (Viking St and McPhail Ave) to connect with Cudgen Road and the Tweed Coast Road beyond.

Road Layout

Road layouts in new subdivisions must provide an efficiency of vehicular, pedestrian and cycle movement as well as work to optimise solar orientation for future development sites. Given the relatively flat topography of the greenfield development sites, new subdivision roads are to generally be aligned in a north-south; east-west orientation to maximise the opportunity for best solar allotment orientation. The orthogonal street pattern enhances through connections, legibility and results in more regular shaped building lots rather than curvilinear streets and cul-de-sacs.

The road layout is to reflect and buffer urban development from environmental land and hazards by forming the boundary between urban development to environmental land, (including informal open space such as wildlife corridors and significant overland flow paths). A road layout that avoids a private interface to environmental land and green corridors will assist in the ongoing maintenance, retains public access to environmental land or informal open space as well as provide high levels of amenity to pedestrians and road users.

Kingscliff greenfield development sites should seek to integrate with the wider residential fabric of the locality. The creation of a logical street network that acknowledges and respects its wider context and contributes to improved connectivity and accessibility throughout the locality is encouraged. Road networks which result in dead end or enclave development are generally discouraged.

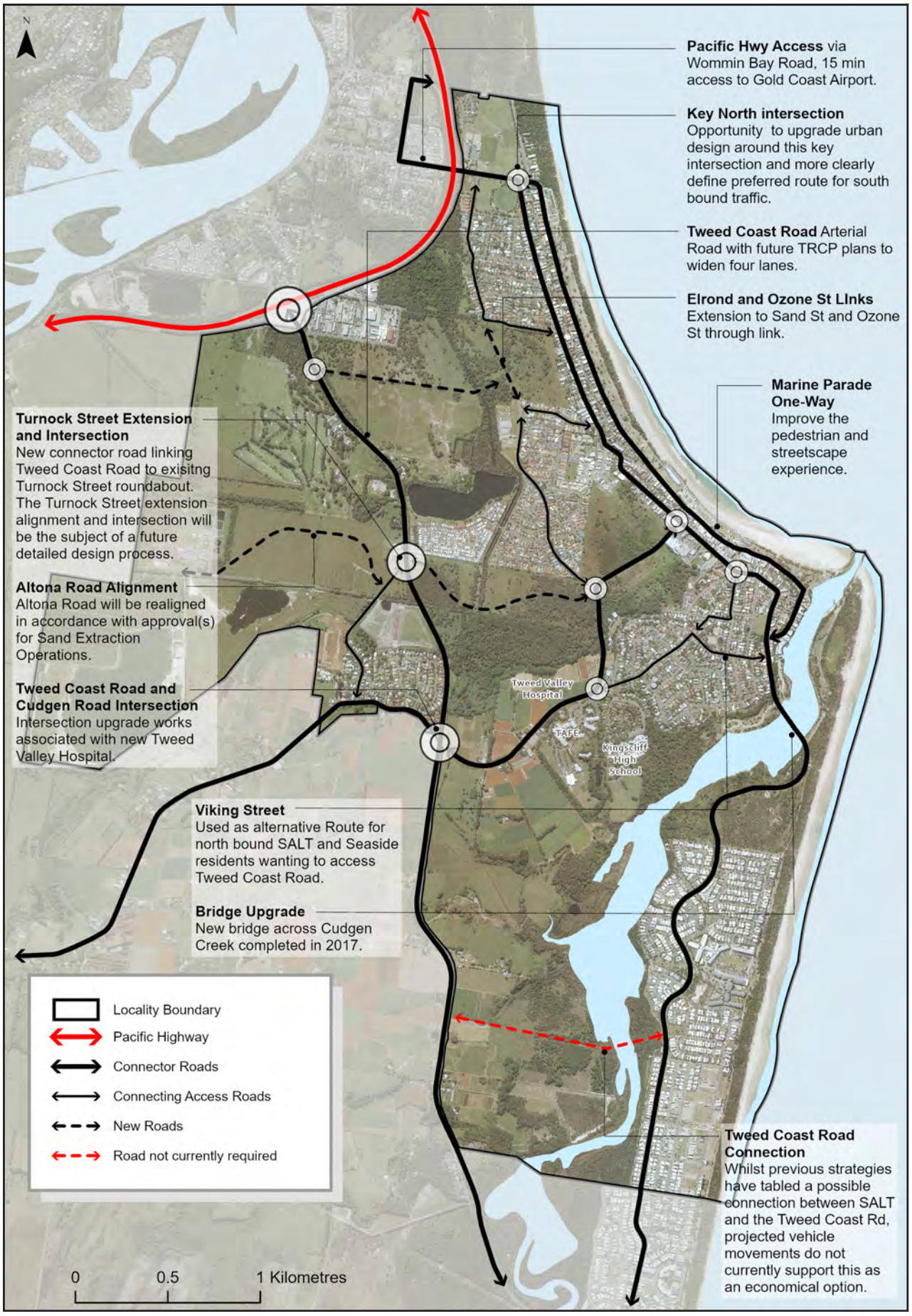


Figure 2.9 Kingscliff Locality Road Network Strategy

2.6.2 Objectives:

1. Establish a robust urban structure across development sites which achieves an efficient vehicular, pedestrian and cycle movement and optimised allotment configuration and solar orientation to development footprints. Preference grid road network with direct routes over circuitous road networks.
2. Preference a grid road network allowing through connections and movement over circuitous routes with dead ends and cul-de-sacs.
3. Ensure that there is sufficient road capacity to support future traffic growth and that the existing intersection methods of control are adequate to accommodate future traffic levels.
4. Achieve a road network across the locality that provides strong integration between the existing urban areas and new development areas with new roads in accordance with the Tweed Road Development Strategy.
5. Achieve a road network that establishes a clear and legible configuration contributing to way finding and establishing a strong streetscape character in terms of carriage widths, verge, street trees and implementation of water sensitive urban design principles.
6. Achieve a high level of streetscape amenity along Turnock Street including the extension through to Tweed Coast Road which is befitting of this new urban gateway route.
7. Integrate pedestrian and cycle movement networks within existing urban areas and new development areas with a particular focus on making connections to activity centres and open space areas.
8. Integrate the principles of WSUD into street and open space design where practical.

Streets for people as well as cars – New streets should be designed to provide opportunities for safe pedestrian and cycle connectivity, WSUD treatments, appropriate street and pedestrian lighting and tree lined streets to achieve a high level of visual and user amenity.

2.6.3 Development Controls:

C1. Any master plan, planning proposal, concept development application and/or subdivision application over the identified greenfield development sites must submit:

- Traffic Study in reference to Tweed Road Development Strategy.
- Road network plan including flood evacuation routes.
- Street sections.
- Pedestrian and cycling strategy.

C2. Any subdivision application over the identified greenfield development sites (Figure 2.2) seeking development consent prior to the construction of the Turnock Street extension must be accompanied by a traffic study demonstrating the ability for the proposal to be accommodated by existing or alternative proposed road networks to the satisfaction of Council.

C3. The design of Turnock St extension is to include a range of public domain treatments which address efficient traffic movement as well as pedestrian movement, landscape and streetscaping, WSUD treatments where possible and establishment a key entry statement at the intersection with Tweed Coast Road. The alignment is to be generally inaccordance with KLP Precinct Plan: West Kingscliff Figure 8.27.

C4. Road layout design and street sections are to complement the relatively flat landscape character of the greenfield sites with a preference for a grid urban structure enabling regular allotment shapes and better through connections and movement over circuitous routes with dead ends and cul-de-sacs.

C5. Ensure that a road forms the edge to the natural and environmental protection areas providing a public rather than private interface to the buffers and areas of environmental protection for bushfire and ecological management access.

C6. Road layout and design is to integrate opportunities for street lighting, landscaping and street trees with a preference for underground services.

C7. A pedestrian and cycling strategy is to be submitted with any subdivision development and illustrate how the proposed subdivision will integrate pedestrian and cycle paths within the development site which connects into the pedestrian and cycling network.

C8. Where identified on Figure 2.10 shared pathways should be integrated and developed as part of the road and pedestrian and cycling network.

C9. The design of pedestrian pathways, access routes, areas of public domain and building design is to accommodate the movement and access needs of electric wheel chairs, mobility scooters and walking aid. This includes the provision of appropriate areas for the parking and recharging of mobility devices.

C10. Applicants must investigate integration of public transport services in consultation with the local public transport provider and ensure those considerations are incorporated into any masterplan, planning proposal or development application process. This includes routes suitable for a buses, a central bus interchange and bus stops, suitable pavement widths and appropriate bus stop locations.

C11. Suitable locations for bus shelters should be determined as part of the road layout planning to ensure ease of access to further encourage this sustainable mode of transport. Bus shelters must be designed to a universal access design standard and include lighting.

2.6.4 Additional advice:

Refer to the Tweed DCP Part A5 – Subdivision Manual and DCP Part A3 – Development of Flood Liable Land.

Refer to the Tweed Road Development Strategy and Pedestrian and Mobility Plan.

New Bus Interchange – The adopted Tweed Public Transport Strategy is to develop a Rapid Bus Transit Corridor Plan from Gold Coast Airport Transport Hub to Pottsville through Kingscliff with links to Murwillumbah.

Encourage cycling and walking – A network of pathways and cycleways should connect all residential areas with key open space and activity centres.

Universal design – New bus shelters, pathways and public domain areas should be designed to meet universal access design standards.

Turnock Street Montage – Turnock Street will form the main access road into Kingscliff township from the Tweed Coast Road and Tweed Valley Hospital. It will be designed as a tree lined boulevard with dedicated pedestrian and cycle path providing street trees for shade and streetscape amenity.

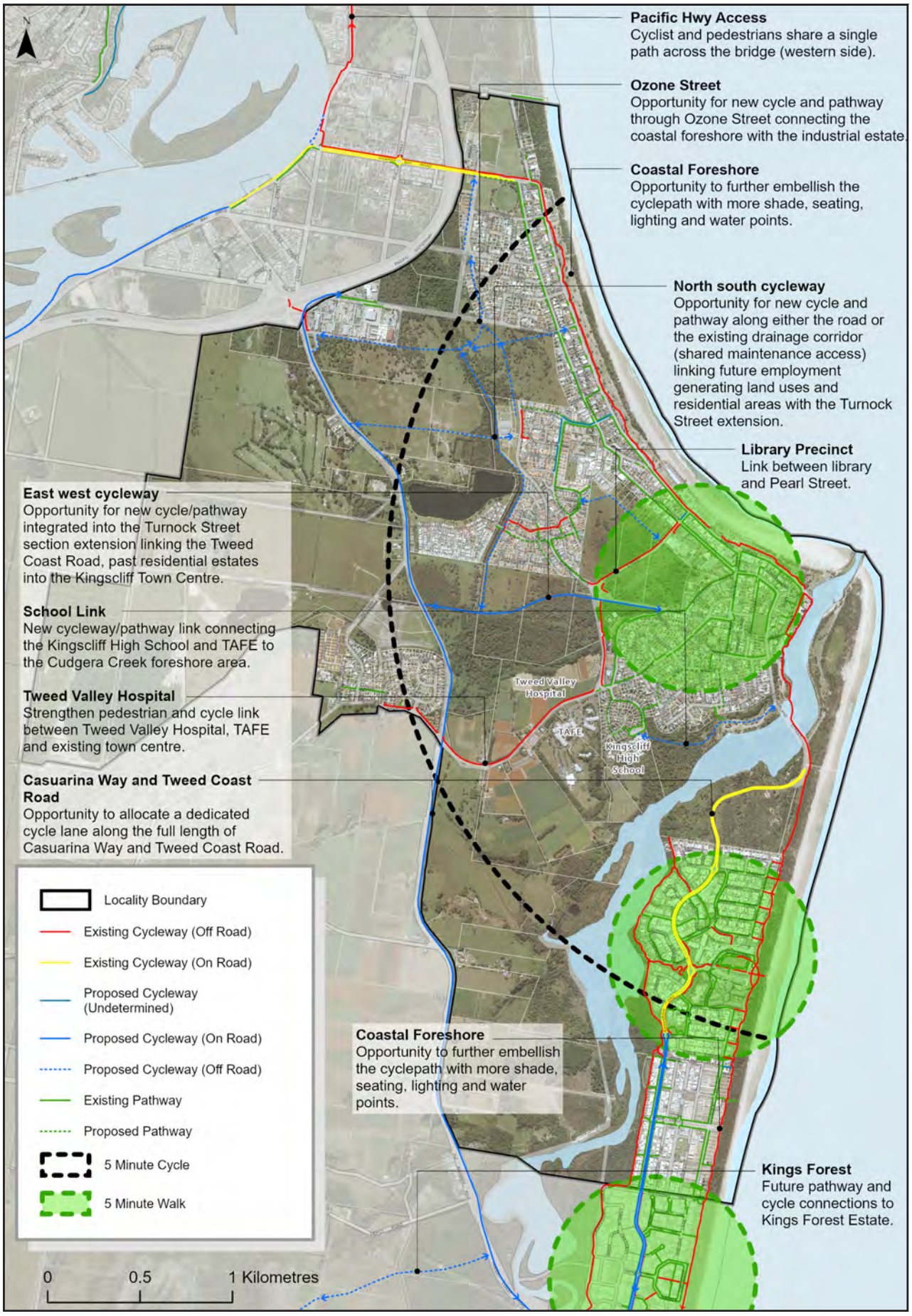


Figure 2.10 Kingscliff Pedestrian and Cycle Network

2.7 Open Space

2.7.1 Preamble

Statement of Intent

The Kingscliff locality will have a connected network of open space offering a diverse range of open space types. This includes active open space such as sports fields, passive open space including neighbourhood parks, walkways, cycle paths as well as nature based recreation opportunities. New areas of open space will be well located and easy to access with the target that all residential precincts will be within 500m walking proximity. There is opportunity to integrate existing north-south and east-west drainage corridors as pedestrian and cycling links connecting residential precincts with key activity centres such as the town centre, employment areas, schools and community landuses. An extended pedestrian and cycling path network which safe and well lit with regular rest points will improve user amenity and may lead to a reduced number of local car movements.

Integrated Open Space

Figure 2.11 illustrates the existing provision of active and passive open space within Kingscliff. Figure 2.12 illustrates the potential future active and passive open space which includes the following embellishments and additions:

- Continued embellishment of the Kingscliff Sport and Recreation Complex which provides 13.4ha of active open space serving the existing sports clubs and residential population.
- Continued embellishment of the coastal foreshore areas which is a highly accessible lineal passive open space area linking the northern residential precincts with the town centre as well as providing access to the beach.
- An additional 9.5ha of open space within the Business and Innovation Precinct to meet future active and passive open space need.
- Embellishment of parks in existing residential precincts and the provision of new parks throughout the future greenfield development sites ensuring all residents are within a 500m walkable catchment to open space and contributing to the overall network of open space.
- Embellishment of a future north-south pedestrian and cycling link following the existing drainage corridor.
- Improve the amenity of the east-west pedestrian and cycle link along Turnock Street to be extended through to Tweed Coast Road.
- Provision of a future east-west pedestrian and cycling link across the Business and Innovation Precinct and North Kingscliff.
- Potential for 16.6ha of land within the Cudgen Precinct (west of Tweed Coast Road) as a long term opportunity to provide additional active and passive open space at the cessation of sand extraction.

Both active and passive open space must integrate strongly with the localities urban structure and greenfield development design principles. Where increased densities are proposed, there will be a requirement for proportionally more public open space. New open space areas will be integrated with the wider open space network. In the case of greenfield development sites there is a good opportunity to utilise the existing drainage corridors as pedestrian and cycling paths between residential and open space areas.

Alternate Open Space Provision

Whilst there is currently a shortfall of planned and funded active open space servicing Kingscliff now and into the projected future, there is a surplus of passive open space on account of the extensive coastal foreshore reserves. The coastal reserves currently provide good proximity and access to many existing and planned residential precincts. As such Kingscliff is uniquely positioned to investigate and promote alternative open space and recreation options. Accordingly, where it can be demonstrated that a surplus exists within a walkable proximity of residential precincts Council is open to greenfield development master plans to investigate alternative passive open space outcomes.

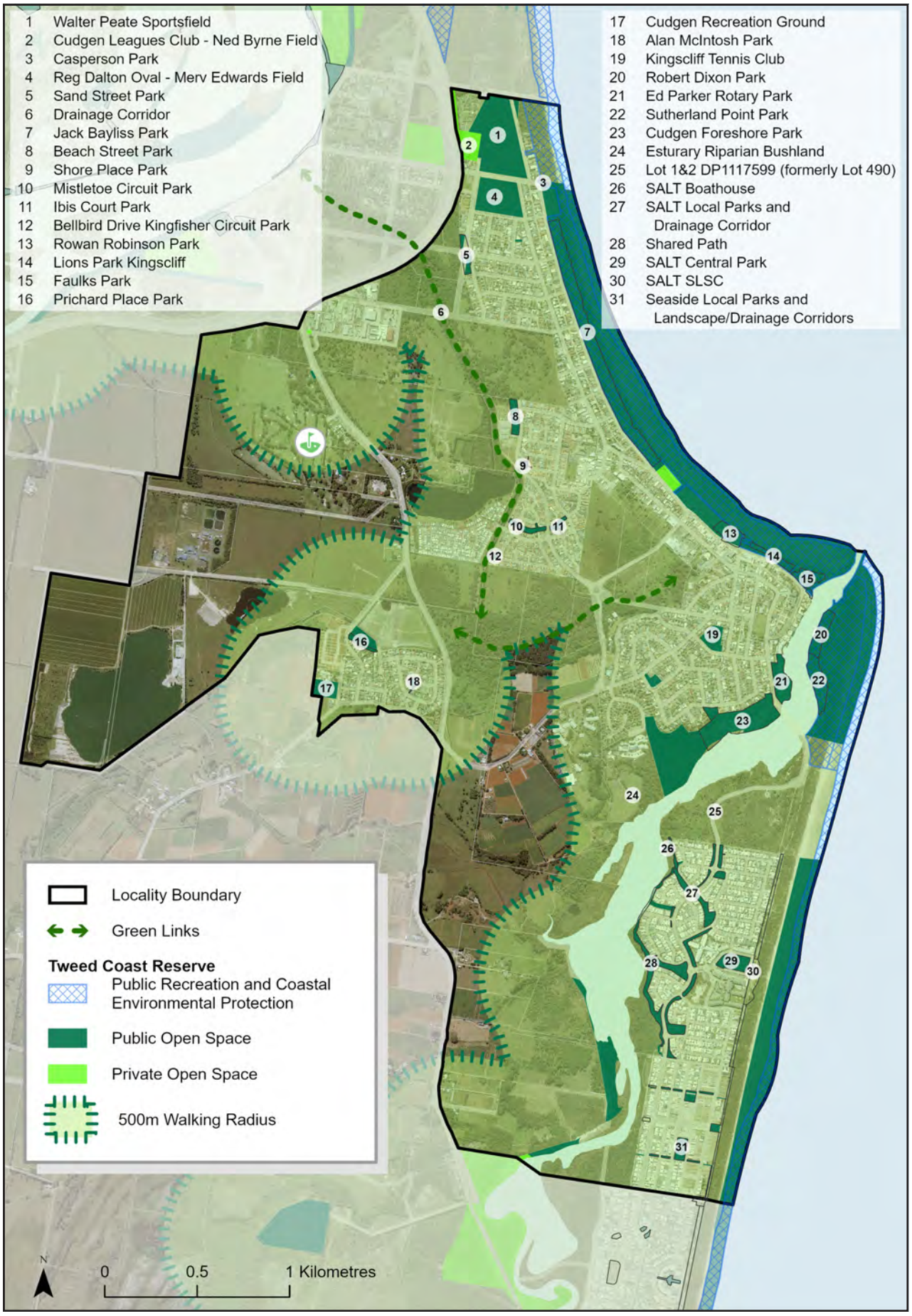


Figure 2.11 Existing Distribution of Open Space

Investigations into alternate forms of open space provision should seek to harness the attributes of the site, locality context and open space need. For example, embellishing both existing and new pedestrian and cycling paths could be considered in lieu of providing additional passive open space area where there is a demonstrated surplus within a particular walkable area. Other alternatives could include monetary contributions towards the further embellishment of existing open space areas, provision of an off leash dog park, development of a family and youth precinct (including skate park) or contribution towards streetscape and public domain projects within the town centre.

The possibility of nature based recreation may be present in areas of ecological significance, open space would not be the prime use and as such could not be considered as such for the purpose of provision of open space quantities. Scenic and environmental values often conflict with recreational uses that may lead to the degradation of these areas. Whilst Council encourages investigations into the delivery of alternate forms of open space these uses must be balanced against preserving and protecting the environmental qualities of the Kingscliff locality.

2.7.2 Objectives:

1. Ensure the provision of additional active and passive open space within the Kingscliff locality is consistent with future demand as identified within the Open Space Strategy (2019-2029) and build upon the existing network of open space across the locality and beyond.
2. Ensure a diverse range of open space to support a variety of active and passive recreational activity improving community health and well-being as well as reflecting expressed community need.
3. Integrate open space location and design within the overall design of new development sites to ensure ease of accesses and a high level of visibility which will in turn strengthen sense of place, precinct character and amenity.
4. Ensure that open space is conveniently located, of suitable dimensions, is fit for intended use, unencumbered and is safely accessible to all users.
5. Capitalise on opportunities to incorporate important landscape features, scenic qualities, cultural or historic characteristics within open space areas.
6. Provide a network of pedestrian, shared paths and cycleways to connect open space areas across the locality. This includes the extension of pathways through ecological areas as a form of nature based recreation.
7. Ensure commitment to the design of high quality multi-functional open spaces that are welcoming, attractive accessible and safe, incorporating the principles of universal design, social inclusion and sustainability.
8. Provide opportunity for developer investigations into alternate open space types, uses and facilities in lieu of standard open space requirements in areas where there is a demonstrated surplus of passive open space.
9. Integrate the principles of water sensitive urban design (WSUD) principles into street and open space design.

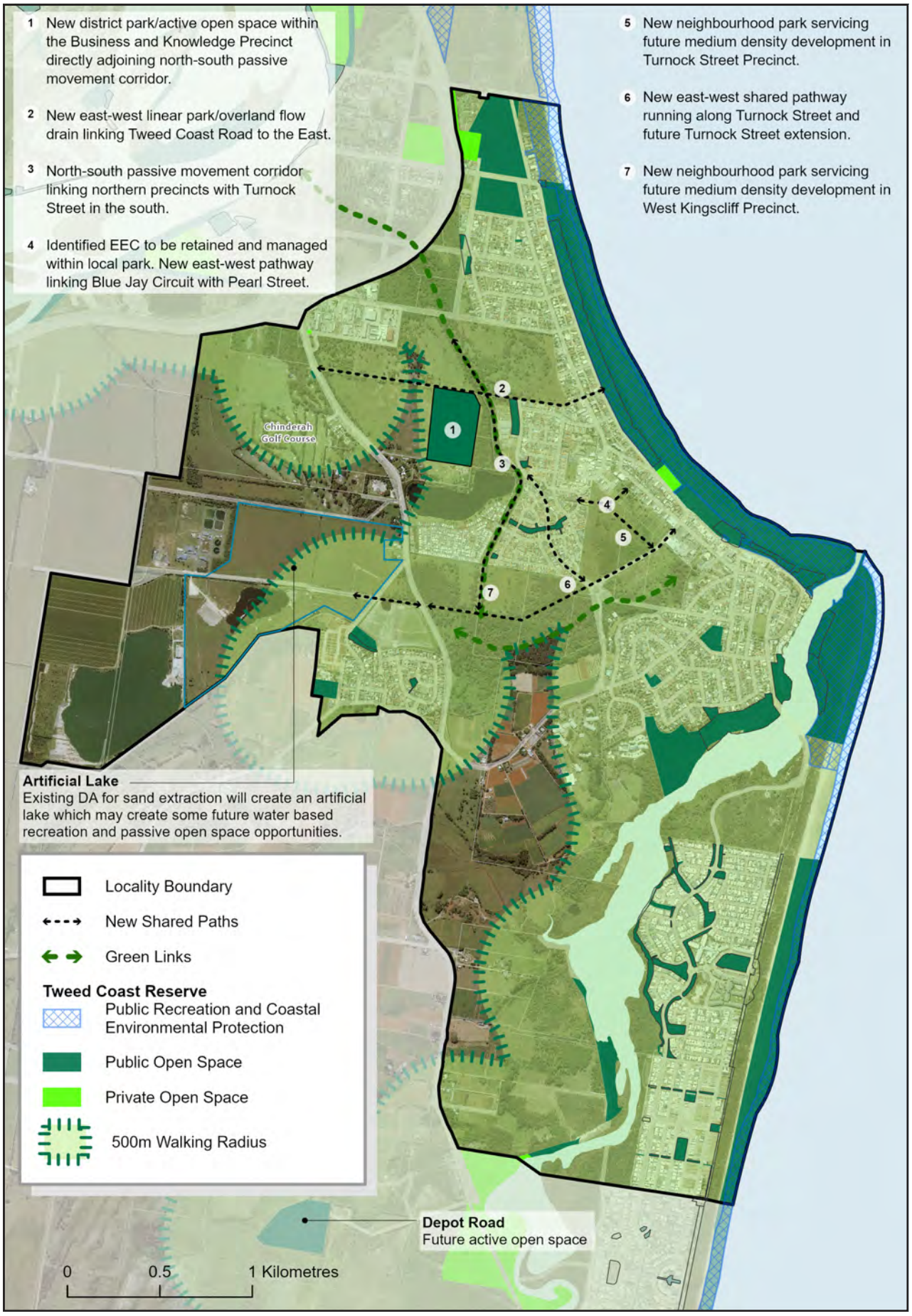


Figure 2.12 Potential new greenfield open space area

Kingscliff – Existing			
Population (2016) – 9611 people			
Open Space Rates	**Required (ha)**	**Existing (ha)**	**Difference (ha)**
DCP Part A5 – Active 1.7ha/1000	16.33ha	13.4ha	-2.93ha
DCP Part A5 – Passive 1.13ha/1000	10.86ha	47.93ha	+37.07ha
Total Open Space Required	**27.19ha**		
Total Open Space Existing	**61.33ha**		
Difference	**+34.14ha**		

Kingscliff – Projected			
Population (2036) – 10 998 people			
Open Space Rates	**Required (ha)**	**Existing/Indicative Master Plan (ha)**	**Difference (ha)**
DCP Part A5 – Active 1.7ha/1000	18.69ha	22.9ha	+4.21ha
DCP Part A5 – Passive 1.13ha/1000	12.4ha	52ha	+39.6ha
District Park	2ha	2ha	0
Total Open Space Required	**31.09ha**		
Total Open Space Provided	**76.9ha**		
Difference	**+45.81ha**		

Kingscliff – Combined existing and Greenfield Development Sites			
Population (2036) – 14 000 people			
Open Space Rates	**Required (ha)**	**Existing/Indicative Master Plan (ha)**	**Difference (ha)**
DCP Part A5 – Active 1.7ha/1000	23.8ha	22.9ha	-0.9ha
DCP Part A5 – Passive 1.13ha/1000	15.82ha	52ha	+37.11ha
District Park	2ha	2ha	0
Total Open Space Required	**41.62ha**		
Total Open Space Provided	**76.9ha**		
Difference	**+35.28ha**		

Table 1 Existing and Greenfield Open Space Provision – Combined existing and potential new greenfield open space area to 2036 based on both population rate increases (source: profile id) and population increases based off indicative greenfield development structure plans. Areas derived from indicative structure plan illustrated within this DCP Part And thereby will be subject to variation as part of more detailed structure and master planning processes over key greenfield development sites. The high rate of passive open space relates to existing extensive areas of coastal reserves.

2.7.3 Development Controls:

C1. Any masterplan, planning proposal or development application process over the identified greenfield development sites must submit:

- Open Space and Landscape Plan

C1. Active and passive open space is to be provided as detailed within Figure 2.12 specifically:

- 9.5ha (gross) as active open space and district park (min. 2ha) within the Business and Innovation Precinct.
- 1ha (gross) passive open space within the West Kingscliff Precinct.
- 1.8ha (gross) passive open space within the Turnock Street Precinct.
- Consideration of future active open space over the lands west of the Tweed Coast Road which may be required to meet district open space requirements will be considered at the cessation of sand mining operations.
- Provide open space within 500m of all residents living in medium and higher density housing (a walkable distance) without having to cross a major road or other physical barrier.

C2. In lieu of providing additional passive open space in new greenfield sites where there is a demonstrated surplus (based on population yields against DCP Part A5 open space rates and 500m walkable proximity to existing passive open space) there is opportunity to vary DCP Part A5 passive open space requirements. This could include the proportional development or provision of monetary contributing via a voluntary planning agreement in consultation with Council on the following or other agreed open space projects:

- Embellishment of a north-south pedestrian and cycling paths adjoining the existing drainage corridor across the Business and Innovation, North Kingscliff and West Kingscliff Precincts.
- Embellishment or establishment of connecting pedestrian and cycle paths between open space areas.
- Development of a family and youth precinct (including skate park) within an agreed location and in consultation with the community.
- Public domain embellishment projects.
- Embellishment of existing passive open spaces.
- Development of a new regional park.

C3. Design detail of each open space area including appropriate embellishments (amenities, water points, lighting, park furniture, landscaping, play equipment, shelters, bbqs etc) are to be lodged with development applications that include open space land.

C4. Subdivision design shall integrate pedestrian and cycling paths connecting to the key open space areas, residential precincts with the village centre and surrounding residential areas.

2.7.4 Additional advice:

The above controls are to be read in conjunction with the criteria and provisions set out within Tweed DCP Part A5 – Subdivision Manual and the Open Space Strategy 2019-2029 where this plan does not make specific reference to a control or open space quantity covering the same matter.

Refer to Sports Field Strategy 2015.

Refer to Kingscliff Sport and Recreation Complex Master Plan.

Refer to Open Space Strategy 2019-2029.

Refer Contribution Plan Section 7.11 – CP07 – West Kingscliff.

2.8 Dwelling and Allotment Mix

2.8.1 Preamble

Statement of Intent

A diverse range of housing types will be developed across the greenfield development sites to meet Kingscliff's demographic and affordability housing needs with a strong focus on responding to the local character and subtropical climatic context. Greenfield development precincts will strengthen the urban structure of Kingscliff by increasing density particularly within and around the activity centres.

Urban Structure and Lot Sizes

A range of lot sizes and housing types are to be developed across Kingscliff's greenfield development sites to reflect the localities housing opportunities (Figure 2.4 & 2.13) and density targets (Table 2) which include:

- Developing a mix of business uses and shop top housing and tourist accommodation within the Town Centre and Turnock Street Precincts where onsite car parking can be provided.
- Developing a mix of shop top housing, residential flats and low rise medium density housing within the Turnock Street and West Kingscliff Precincts.
- Developing a mix of low rise medium density housing typologies with 9.0m building height and low density housing within the North Kingscliff Precinct.
- Developing a mix of residential types including residential flat buildings, shop top housing, tourist accommodation, student housing, low rise medium density and low density housing types within the Business and Innovation Precinct where appropriate design flood levels and flood evacuation routes can be provided.
- Increasing the supply of suburban allotments providing additional lower density residential opportunities where green fill sites directly adjoin existing low density development (North Kingscliff, West Kingscliff, Turnock St and Cudgen precincts).
- Retain the existing low density character of existing residential precincts throughout the locality encouraging new infill development to be more responsive to the subtropical climate and context.

Diversity of Housing Choice

Greenfield development will need to respond to future housing needs including projected population age structures and household composition. It is anticipated that there will be an increasing demand for housing for single and couple households, first home owners, down sizing elderly residents, seniors housing and dedicated aged care with aligned health services. The development of the regional Tweed Valley Hospital will also increase the need for short-term as well as long term accommodation to accommodate patients, families, employees and students.

To meet these future housing needs there needs to be a strong focus on promoting diverse housing types within the new greenfield development areas. More diverse housing types will include better designed residential flat buildings, shop top housing units, tourist accommodation, senior living and aged care housing, small lot housing, low rise medium density housing types (terraces, row housing, manor houses) as well as live /work housing types. The provision of additional one and two bedroom housing options for singles and couples, and integration of universal and flexible housing design principles will be important to meet the localities diverse demographic sectors.

It is important that appropriate housing types and density are planned within greenfield sites commensurate to a site's proximity and access to activity centres services. This means higher density housing types are planned closer to the existing town centre and the future centre within the Business and Innovation precinct. Low rise medium density and lower density housing types are more suited further from the activities centres typically adjoining existing areas which have a lower density character.

Low density residential dwellings should be designed to be responsive to the subtropical coastal character.

Additional low rise medium density which includes row houses terrace houses, manor houses are encouraged to increase diversity of housing supply.

Residential flat developments and tourist developments are encouraged close to activity centres to correlate increased density with access to services.

Mixed use development to include an active retail and commercial edge at street level and residential units above is encourages within activity centres.

Figure 2.13 Kingscliff Housing Typologies

Kingscliff Locality Greenfield Development Sites					
Greenfield Site	**Greenfield Developable footprint area**	**Approximate Dwellings/Population[1]**	**Indicative Land Use/Housing type**	**Net Area**	**Target/Yield**
Turnock Street	19.78ha	627 dw 1144 people	Shop top residential (12.2m) (Density@ 30dw/ha)	3.84ha	115 dw 207 people
			Residential flat buildings (12.2m) (Density@ 80dw/ha)	5.12ha	411dw 740 people
			Small lot and low rise medium density (9.0m), Lots between 250 – 450s^{qm} Medium density @ 30dw/ha	2.5ha	75 dw 135 people
			Low density residential (450 – 600sqm) lots @ 16 dph)	1.68ha	26 dw 62 people
West Kingscliff	8.78ha	368 dw 662 people	Residential flat buildings (12.2m) (Density@ 80dw/ha)	3.62ha	290 units 522 people
			Small lot and low rise medium density (9.0m), Lots between 250 – 450s^{qm} Medium density @ 30dw/ha	2.59ha	78 dw/units 140 people
North Kingscliff	13.96ha	400 dw 795 people	Small lot and low rise medium density (9.0m), Lots between 250 – 450s^{qm} Medium density @ 30dw/ha	7.66ha	230 dw/units 414 people
			Low density residential (450 – 600sqm) lots @ 16 dph)	4.57ha	73 dw 175 people
Business and Innovation Precinct[2]	76.65ha (15.68 IN1)	592 dw 1094 people	Shop top residential (12.2m) (Density@ 30dw/ha)	2 ha	60 units 108 people
			Residential flat buildings (12.2m) (Density@ 80dw/ha)	4.4ha	352 units 633 people
			Small lot and low rise medium density (9.0m), Lots between 250 – 450s^{qm} Medium density @ 30dw/ha	4.4ha	132 dw/units 238 people
			Low density residential (450 – 600sqm) lots @ 16 dph)	3ha	48 dw 115 people
Altona Road	10ha	144 dw 345 people	Low density residential (450 – 600sqm) lots @ 16 dph)	9ha	144 dw 345 people
Cudgen[3] (Currently being developed)	4.5ha	40 dw 94 people	Low density residential (450 – 600sqm) lots @ 16 dph)	4.5ha	40 dw 94 people
Seaside [4] (Currently being developed)	32	409 dw 961 people	Small lot and low rise medium density (9.0m), Lots between 250 – 450s^{qm}	32	409 dw 961 people
Total	**165.67ha**	**2580 dw 5095 people**			

1 Household occupancy assumes 2.4 persons per dwelling (Average occupants per household – North Coast-Kingscliff 2016 Source: profile id), 1.8 persons per unit.

2 Business and Innovation combines a mix of industrial, business park, education campus, retail, open space and residential uses which may significantly vary depending on the final master plan outcome. 60% of site can be filled in accordance with the TFMP.

3 Based on DA13/0024

4 Allotments counted off TSC cadastre 2017.

Note: Target residential densities measured as 'site density' based off indicative masterplan.

Table 2 Density and Housing/Allotment Type Targets – Areas/density rates/targets in the above table have been derived from indicative structure plan illustrated within this DCP Part And are to be used as a benchmark as part of more detailed structure/master planning process over key greenfield development sites. As such the final density yields and targets for each site will vary in relation to the final structure plan/master plan.

2.8.2 Objectives:

1. Develop a more diverse range of housing types and allotment sizes to appeal to a Kingscliff's demographic and affordability profile.
2. Achieve a stronger sustainability focus with subdivision and housing design, connectivity between residential precincts and embellished open spaces and public domain across greenfield development sites.
3. Strengthen the urban structure of Kingscliff by increasing density within and around the existing and future business centres, increase opportunity for medium density housing typologies as well as increasing supply of suburban allotments particularly adjoining existing residential precincts.
4. Promote opportunity for additional shop top residential and tourist accommodation within the town centre where site access and onsite car parking can be accommodated.

2.8.3 Development Controls:

C1. Any masterplan, planning proposal or development application process over the identified greenfield development sites must submit:

- Density and housing type plan.
- Affordable housing strategy.
- Architectural design guidelines.

C2. Prepare a Density and Housing Type Framework Plan, including a structure plan and ancillary schedules of:

- A range of allotment sizes including but not limited to integrated development lots (greater than 1,200sqm), large lots (greater than 800sqm), suburban blocks (450-800sqm), small lots (200-450sqm) and medium density housing types (typically 1 dwelling per 200sqm).
- A range of housing types which meets the needs of Kingscliff's demographic and affordability profile including but not limited to shop top housing units, tourist accommodation units, residential flat buildings, low rise medium density housing types (multi-unit development, townhouses, row houses, manor houses etc) small lot housing and suburban lot housing.

C3. Meet the density yield targets identified within this section of the Code as they apply to greenfield development sites. Where these yields cannot be met or exceeded, the justification for the departure or variation is required. Density and yield offsets around different parts of the precinct will be considered.

C4. Prepare an affordable housing strategy over each of the identified greenfield development areas which allocates a proportion of housing types to specifically meet affordable housing need. The affordable housing strategy is to be prepared through co-ordinated negotiations between Council, the developer and affordable housing providers to set and meet agreed affordable housing benchmarks (housing type and quantity), procurement and management.

2.8.4 Additional advice:

Developer initiated architectural design guidelines can be implemented across development sites to provide design guidance to future developers and home builders and be reflective of the precinct desired future character. Design guidelines are to embody the principles of passive design as well as objectives, design principles and development controls within the residential section of this plan, other sections of the Tweed DCP Part A and statutory requirements such as SEPP 65 and the apartment design guidelines. Design guidelines should clearly set out the approvals process including reference to the prevailing planning framework and approvals process.

2.9 Urban Design, Streetscape & Public Domain

2.9.1 Preamble

Statement of Intent

The town centre, main streets and open space areas are to form the focus for public domain embellishments within the Kingscliff locality. The overriding strategy is to progressively implement a range of public domain and infrastructure improvements across existing and new greenfield development sites. Well designed areas of public domain and streetscapes improve pedestrian movement and comfort,as well as contributing to the overall visual and streetscape amenity. This in turn builds on and contributes to the overall locality character, identity and sense of place.

2.9.2 Objectives:

1. Strengthen the public interface design of precincts which are discrete with their own identity through land use and building types but are interconnected by a network of green spaces for environmental quality, recreation, walking, cycling and streetscape amenity.
2. Consider the hierarchy and level of finish of streetscape and public domain areas across the locality through the application of contemporary urban design, streetscape and public domain principles and designed outcomes.
3. Ensure that the public domain and streetscapes within the town centre and residential areas are fit for purpose in terms of the considered use of spaces as well as the consideration of material selections.
4. Integrate the principles of universal design within new buildings, public domain areas and community facilities to ensure safe and equitable access for all users.

2.9.3 Development Controls:

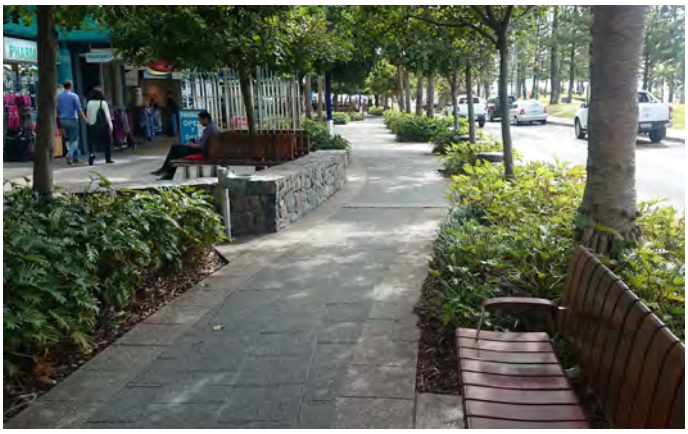
C1. Any masterplan, planning proposal or development application over the identified greenfield development sites must submit:

- Open space, public domain and landscape master plan.

C2. Preparation of an open space, public domain and landscape master plan should including but not be limited to:

- A plan which nominates street tree planting, drainage corridors, buffer areas, passive open space and public domain areas. Street trees are to be nominated to relate to and strengthen the street pattern hierarchy. The street trees are to be positioned in a location where they are unlikely to conflict with the location of future driveways.
- Integration of universal design and crime prevention through environmental design (CPTED) principles.
- Application of water sensitive urban design (WSUD) principles to the streets, passive open space and drainage corridors where possible.
- The inclusion of street plans and sections (one for each different street typology) illustrating the relationship between allotments (illustrate indicative front of buildings adjoining streets) and other street interfaces, verge and street tree planting, street lighting, pavement, footpaths and any other embellishments.
- Incorporate universal design and CPTED principles in all public domain, open space and community infrastructure.
- A schedule of finishes and materials which identifies key public domain improvement elements including but not limited to pavement, landscape, street lights, bollards, street furniture, bus shelters, shade structures. Materials and finishes should be reflective of a contemporary coastal settlement and be of a standard capable of withstanding the marine environment.

Town Centre Public Domain – Public domain within the extended town centre greenfield development sites requires a high level of public domain improvements.



Turnock Street – The greenfield development sites along Turnock Street have the opportunity to create a shaded tree lined public domain areas with a widened pedestrian footpath embellished with street furniture and areas for outdoor dining.

Open Space Embellishment – Public domain areas incorporated within areas of open space should include bbq and shelters in strategic locations within new greenfield residential parks and public domain areas.

Water sensitive urban design – Integrate water sensitive urban design outcomes into the street, verge and pathway design to increase opportunities for storm water infiltration and provide additional shade.

Business and Innovation Precinct Public Domain – Public domain improvements within a Business Park context could include a series of smaller interconnected landscaped public domain areas fostering strong pedestrian connectivity, water sensitive urban design (WSUD) and a high level of outdoor amenity for workers and residents alike.

2.10 Solar Orientation and Passive Design

2.10.1 Preamble

Statement of Intent

Achieve a favourable solar orientation for all allotments in new subdivision areas. Regular shaped allotments with either a N-S or E-W orientation make it easier to design a house which can integrate passive design principles.

Maximise Energy Efficiency

Subdivision design and buildings are to be responsive to the climatic conditions of the site including solar path, solar exposure/shading, prevailing breezes, appropriate materials, internal and external living area configurations. Recognised solar orientation guidelines advocate the best orientation range within 20 and 30 degrees of north-south or east-west (Amcord, 1997, p275).

Within a new greenfield subdivision allotment orientation is directly related to road structure planning. In this context regular rectilinear shaped allotments, formed by north-south and east-west streets in a grid road network to achieve uniform development allotments and optimise solar orientation opportunities for future building design.. Housing allotments with an east-west lot orientation generally provide a good solar design opportunities with the northerly aspect aligned with the long boundary along which living and external living spaces are best located. North-south lot orientation result in allotments on the north side of a street having good solar access to the rear yard and allotments on the south side of a street having good solar access in the front yard. In all cases the configuration of habitable spaces with generally north facing living spaces, decks, courtyards and highlight windows all provide opportunity to draw natural light into the floor plan.

2.10.2 Objectives:

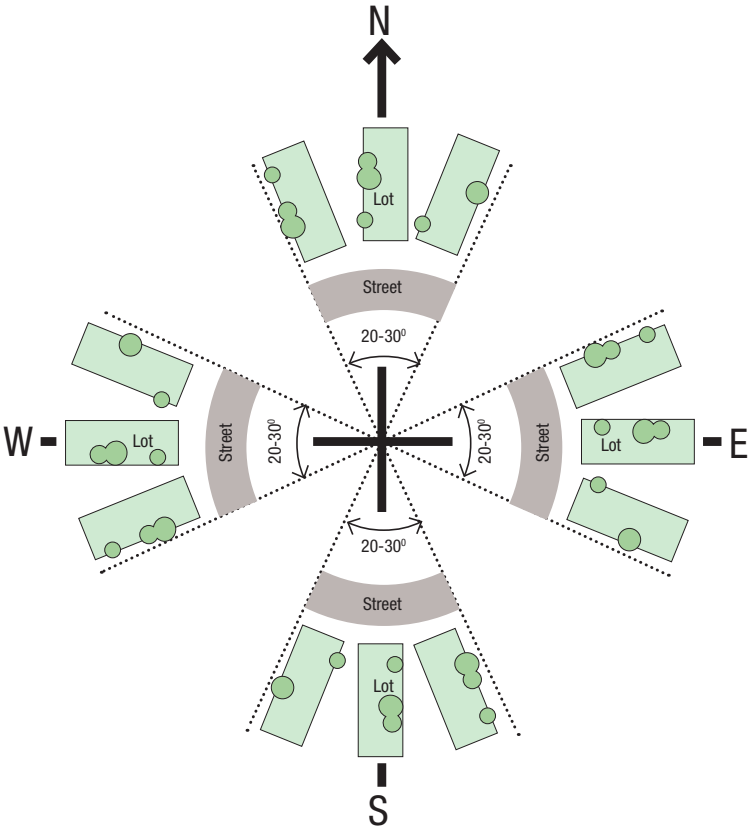
1. Encourage subdivision design which maximises opportunities for good solar orientation and access to prevailing breezes.
2. Encourage subdivision design which results in development sites and allotments with shapes which are easy to design to and build on.
3. Encourage subdivision design which take advantage of the relatively flat greenfield development sites to utilise a grid road structure which will optimise a north-south and east-west allotment configuration.
4. Discourage curvilinear and cul-de-sac urban structures which result in a lower proportion of allotment with optimised solar orientation and results in awkward shaped allotments.

2.10.3 Development Controls:

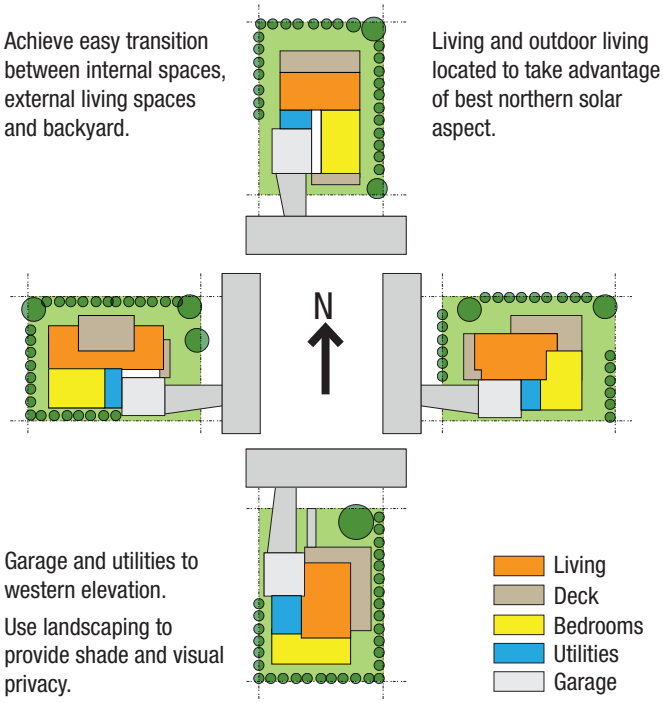
C1. Any masterplan, planning proposal or development application process over the identified greenfield development sites must:
- Integrate principles of passive subdivision design (solar orientation, prevailing breezes, landscape) into the designed outcomes and to generally provide a grid road network to achieve uniform development allotments and optimise solar orientation opportunities for future building design.
- Submit a solar orientation plan and schedule of allotments with a breakdown of solar orientation.

C2. Demonstrate by way of diagrams and or plans how a minimum of 75% of all new lots to meet the optimum solar orientation between 20-30 degrees of N-S or E-W and prevailing breezes have been considered in relation to orientation, size, width and depth to achieve optimised building blocks.

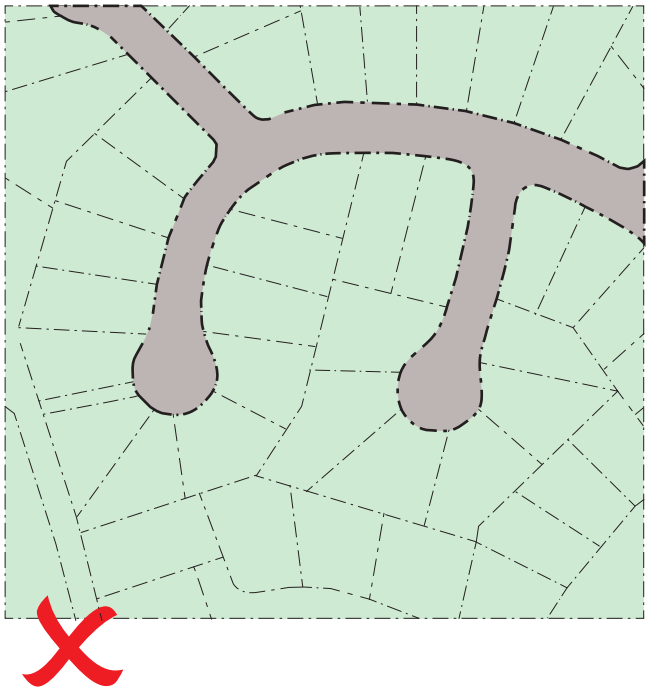
C3. A diagrammatic site analysis is to be produced for each individual allotment prior to the release of a subdivision certificate which identifies contributing climatic and environmental factors (solar path, prevailing winds, key view lines) and optimised floor plan diagram illustrating habitable living, external living, non-habitable, utility and garage zones for consideration by future owner/occupants.



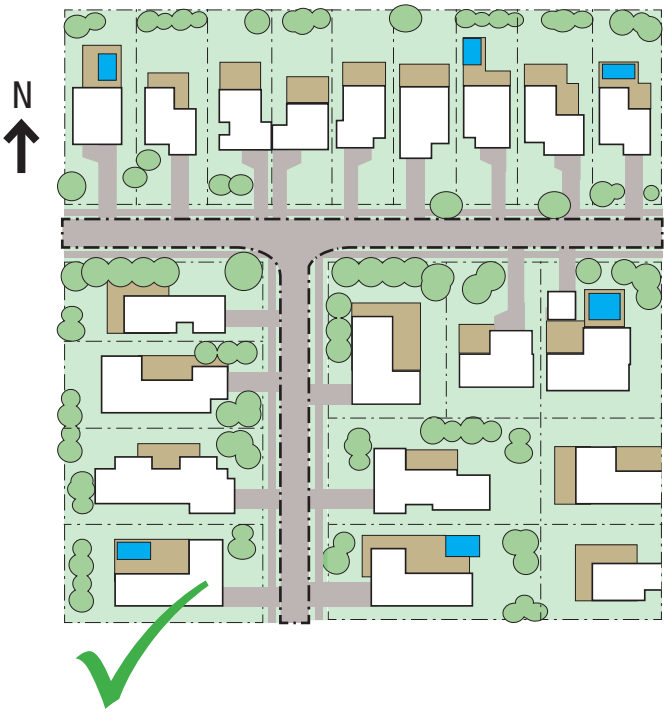
Site Orientation diagram - best orientation range within 20 and 30 degrees of a N-S or E-W



Building orientation- New buildings are to be responsive to the climatic conditions of the site including solar path, solar exposure/shading, prevailing breezes, appropriate materials, internal and external living area configurations.



Avoid curvilinear and cul-de-sac urban structures which result in a lower proportion of allotments with optimised solar orientation and lead to awkward shaped allotments which are harder to design to and build on.



Grid road network results in rectilinear allotments with favourable north-south or east-west orientation which are easier to design to and build on.

Figure 2.14 Passive Solar Design for Subdivision

2.11 Design Principle 11: Hazards and Resilience

2.11.1 Preamble

Statement of Intent

All new greenfield development sites are to be appropriately designed to mitigate and manage various site constraints including bushfire, flooding, sea level rise, coastal hazards, stormwater runoff, land slip, acid sulfate soils and other hazards to ensure future resilience.

2.11.2 Objectives:

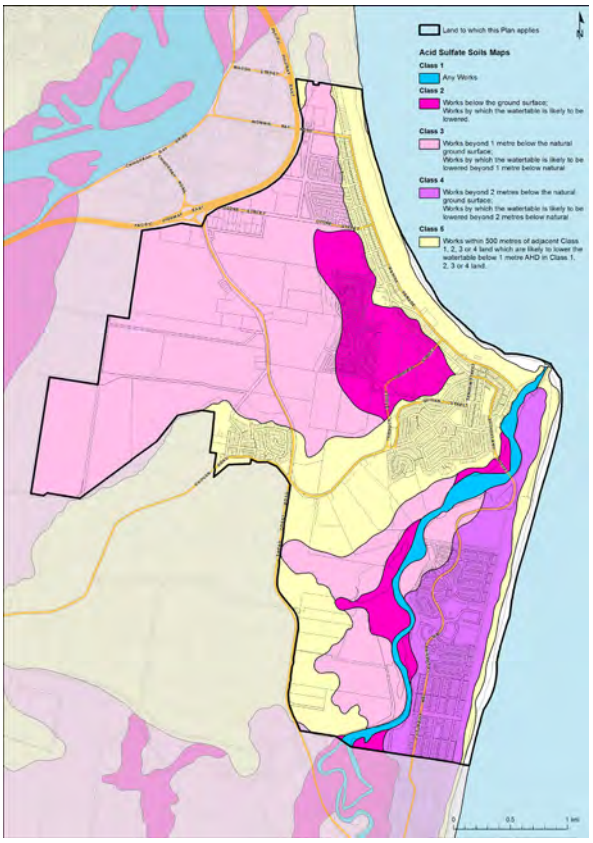
1. Ensure only suitable development and land uses within land identified as affected by a Probable Maximum Flood.
2. Ensure that development is appropriately designed to accommodate potential climate change impacts.
3. Ensure that any soil contamination is identified and suitably mitigated prior to the development of greenfield development sites.
4. Minimise the disturbance of acid sulfate soils.
5. Ensure subdivision layout responds to and manages bushfire hazards.
6. Incorporate design elements and urban buffers, such as lot size and orientation, perimeter roads or overland drainage reserves, to enable the maintenance of existing vegetation and provide adequate separation of residential land uses from any hazard.
7. Ensure areas identified as 'currently unsuitable' are excluded from development for urban purposes or other purposes that are sensitive to soil stability.

2.11.3 Development Controls:

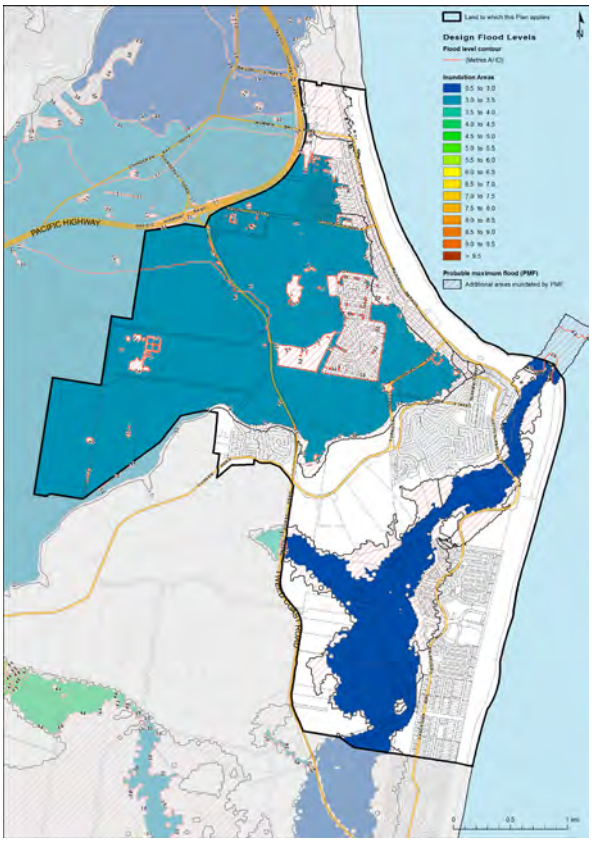
C1. The following information is to be submitted with any masterplan, planning proposal or development application process over the identified greenfield development sites:

- Demonstrated compliance with the provisions of the Tweed DCP Part A3 – Development of Flood Liable Land and Tweed Valley Floodplain Risk Management Study and Plan.
- Detail of all site investigations (including underground and site boring) to provide adequate information to prepare designs and assess construction methods.
- Detail of all necessary geotechnical investigation and analysis to ensure that the subdivision and all works associated with the subdivision are stable and will not be subject to subsidence, landslip, mass movement or significant erosion in the short and long term.
- A Site Audit Statement (SAS) certifying the land is suitable for the proposed use. The SAS is to be prepared by an Environmental Protection Agency Accredited Contaminated Site Auditor under the provisions of the Contaminated Land Management Act, who is to be engaged to oversee the contamination investigation and any necessary remediation of the site.
- On greenfield development sites adjoining the Kingscliff drain undertake studies in consultation with Council to further understand the mechanisms for existing acid sulfate soils discharge events that result in significant iron floc discharges within the Kingscliff drain and the Tweed River. Further studies will be used to inform remedial actions and future works required to address ASS issues in the Kingscliff Drain.

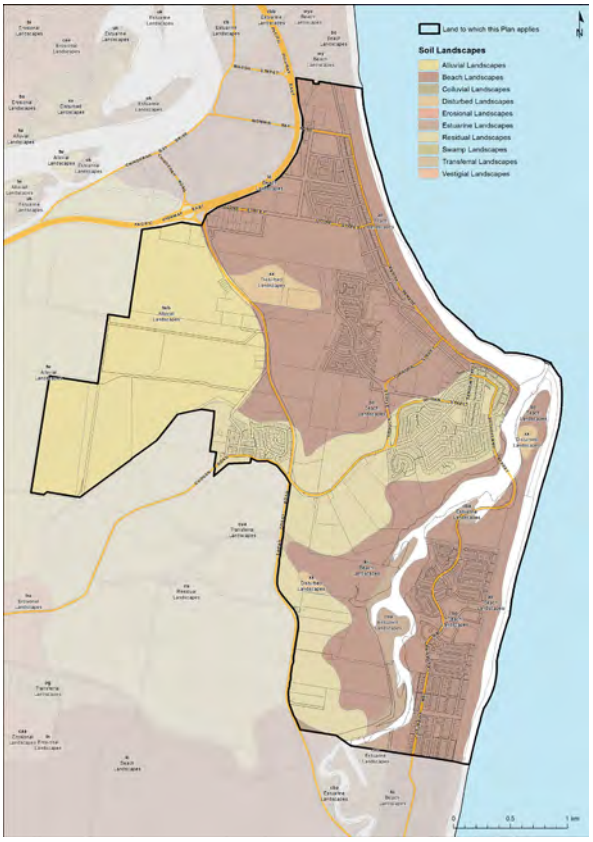
C2. Required Asset Protection Zones must not be provided on public land (with the exception of roads) and are to be incorporated within development allotments.



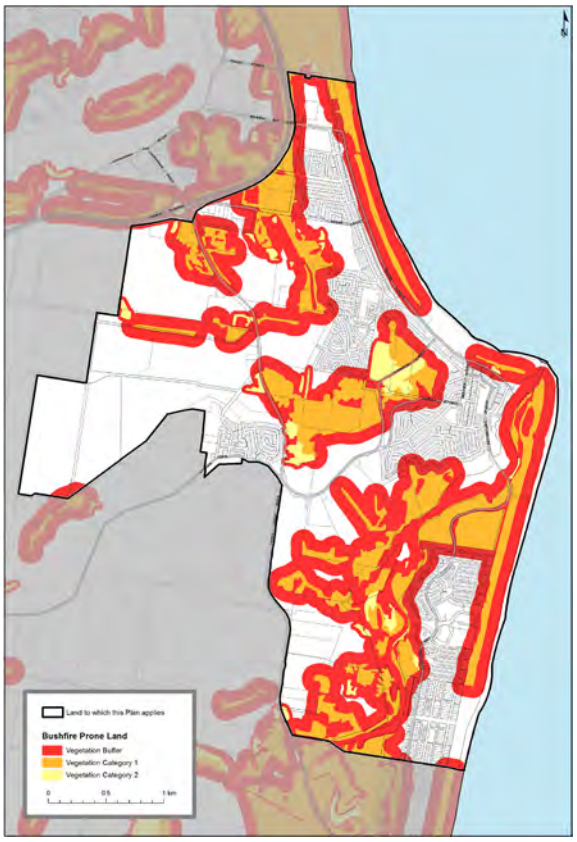
Acid Sulfate Soils



Flooding



Soil Stability



Bushfire Prone

Figure 2.15 Hazards and Resilience Constraints

2.12 Design Principle 12: Infrastructure

2.12.1 Preamble

Vision

Progressively implement the design and construction of essential services for the Kingscliff locality and ensure the coordinated and efficient delivery of infrastructure across identified greenfield development sites.

Infrastructure Planning

The future development potential of the identified urban release and employment generating lands combined with substantial infill development opportunities within Kingscliff and Cudgen will place an increased capacity on existing water sewer, telecommunication and electrical infrastructure. Development scenario's and expected population yields need to be considered in relation to the future planning of these infrastructure services as part of the master planning and subdivision design process.

The efficient delivery, roll out and considered integrated design of additional required infrastructure needs to be a key consideration within the early design phases of the greenfield development sites. In this regard, Council must consider how to most effectively service the area and provide for future development needs within Council's budget and works program, integrated with appropriate developer participation and contribution.

Water Infrastructure

The indicative water reticulation system is illustrated in Figure 2.16. The Kingscliff and Cudgen localities fall within five water zones including Duranbah, Cudgen, Cudgen Booster (Cudgen Village), Kingscliff and Kingscliff Booster (Kingscliff Hill).

The water supply to the Kingscliff District is sourced from the Bray Park Water Treatment Plant (WTP) and pumped to Hospital Hill Reservoirs in Murwillumbah before transported by different trunk main systems. The area north of Cudgen Creek receives water from the trunk main located along Tweed Valley Way which reticulates to a pumping station in Chinderah where it is pumped into the Kingscliff Hill Reservoirs then gravity fed to the urban area. The area south of Cudgen Creek receives its water from the trunk main located along Environ Road supplying the Duranbah Reservoirs, where it is gravity fed north to service Salt, Seaside City, Casuarina and south to other regions.

Future extra storage capacity will be required at the Duranbah Reservoir site and additional transfer capacity (ie: trunk mains) to cater for additional populations forecast to the south of Cudgen Creek. Additional storage capacity is not planned for future populations in Kingscliff to the north of Cudgen Creek, however additional transfer capacity is planned. Opportunities for water infrastructure expansion include the construction of a trunk main to connect the areas north and south of Cudgen Creek, which will provide an additional source of water during main breaks.

Wastewater Infrastructure

The indicative sewerage system is illustrated in Figure 2.16. The new Waste Water Treatment Plant (WWTP) was established to the west of the township off Altona Road which has a capacity to treat 6 megalitres per day, equivalent to 25,000 people. The WWTP which services Kingscliff, Fingal, Chinderah, Cudgen, South Kingscliff (Salt) and Casuarina utilises a chemically enhanced biological nutrient removal (CEBNR) process which results in a high quality of the discharged effluent. A small percentage of the A Class treated effluent is reused for irrigation purposes at the nearby Golf Course. The remaining treated effluent is discharged into the Tweed River.

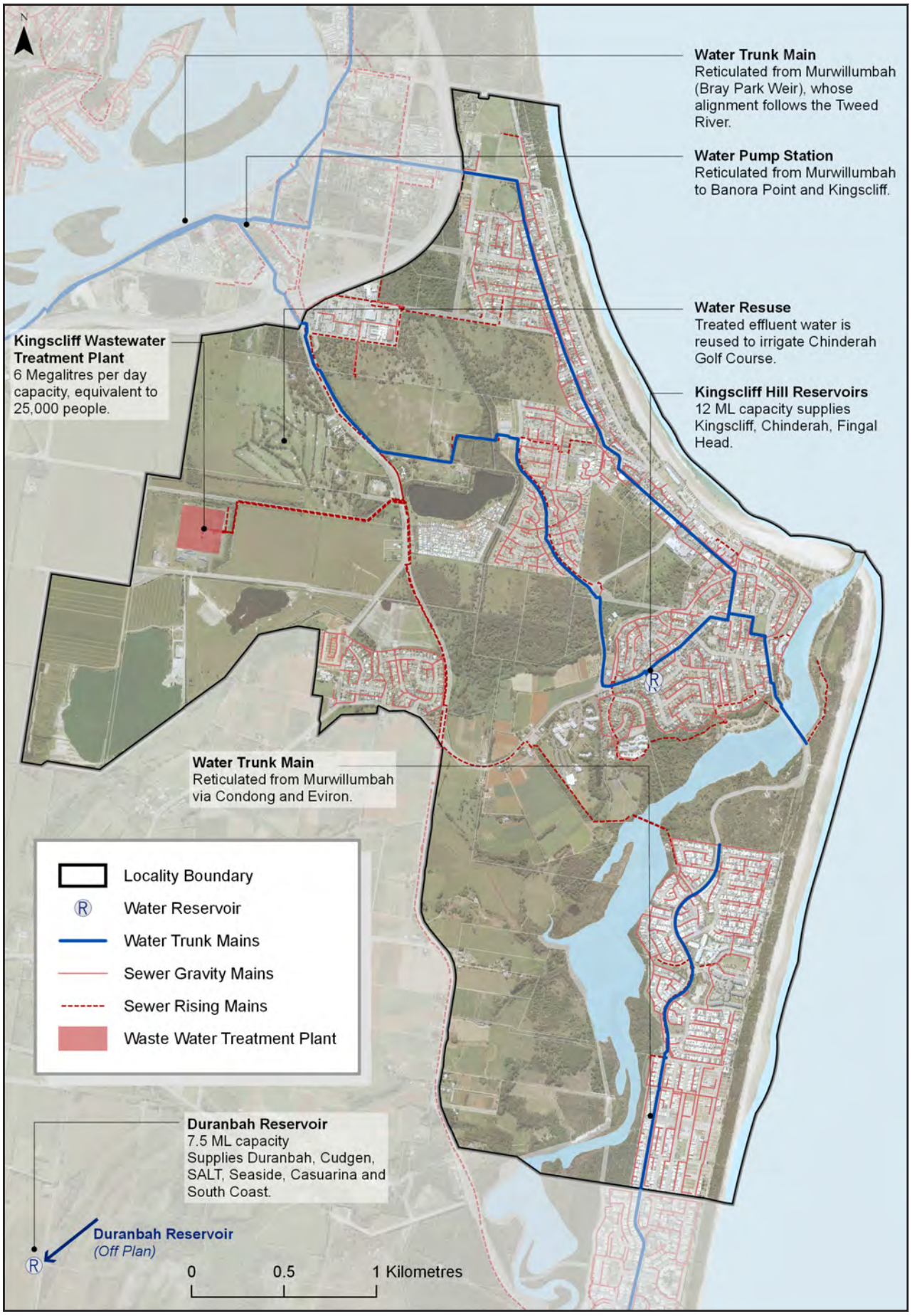


Figure 2.16 Kingscliff Water and Sewer Infrastructure

Stormwater Infrastructure

Given the significant existing and future development in and around the study area, there is a need to update the Kingscliff Catchment and Drainage Management Plan (jointly by Council and stakeholder landowner) and investigate alternate options in terms of the longer term stormwater drainage infrastructure requirements, water treatment and management strategies. This may include the implementation of a wider north-south drainage corridor which would have the benefit of restoring a marine vegetative environment to treat receiving water, addressing potential acid sulfate soil issues as well as providing a linear open space area and pedestrian and cycling paths. It is particularly important at the master planning level to implement the principles of water sensitive urban design and onsite water treatment and reuse systems over future development sites.

Electrical Infrastructure

Essential Energy is a NSW Government-owned corporation, with Delivery Partners for building, operating and maintaining the electricity network with numerous service providers facilitating individual connections. There are currently no planned service upgrades programmed for the Kingscliff locality in the immediate future. The further extension of electrical infrastructure as part of a staged release of future development sites will be designed and planned as part of the development approvals process.

Existing telecommunication and NBN Infrastructure

Once a Government-owned corporation, Telstra which owns, builds, maintains and operates telecommunications networks is now a public company. This network includes Kingscliff's predominantly above ground pole infrastructure. Since the privatisation of Telstra and the deregulation of telecommunications service there are now numerous telecommunication and internet service providers facilitating individual connections.

The National Broadband Network (NBN) is a national open-access data network which is under development and roll out across Australia. It is based on the premise that fixed line and wireless broadband connections are sold to retail service providers (RSP), who then sell Internet access and other services to consumers. Currently, the NBN Co is planning to acquire and build up to 20 fixed wireless facilities across the Tweed Shire including Kingscliff. The fixed wireless system uses cellular technology to transmit radio signals to and from a small antenna fixed on the outside of a home or business, which is pointed directly towards the fixed wireless facility (antenna).

Service Infrastructure Issues

The ultimate capacity will be to provide for a district population catchment of 50,000 people which will include the Kings Forest release area. The existing water and sewer systems will require increased capacities and staged future planning and upgrades to meet this projected population. In addition to new infrastructure servicing new release areas, the existing water and sewer infrastructure, particularly within older residential estates will also require staged upgrading and improvement to ensure efficient services capable of meeting increased demand.

Infrastructure Opportunities

- The construction of a trunk water main to connect the areas north and south of Cudgen Creek, which will provide an additional source of water during main breaks. Opportunity to increase water supply capacity at Duranbah Reservoir and to meet future population needs.
- Opportunity for developers to incorporate demand management into their developments, such as third pipe and other reuse strategies, to reduce water demand.
- Opportunity to expand the existing Kingscliff Wastewater Treatment Plant to meet future population needs.
- Opportunity for appropriate sites to reuse the Kingscliff Wastewater Treatment Plant A Class water and biosolids.
- Greenfield development sites to incorporate NBN ready infrastructure.
- Undertake an integrated stormwater drainage strategy which takes into account existing drainage regime and capacity and future need based on identified greenfield development sites.

2.12.2 Objectives:

1. Progressively implement the design and construction of essential services for Kingscliff's' existing settlement areas and greenfield development sites and ensure coordinated and efficient delivery.
2. Preserve existing catchment boundaries and utilise existing water courses and gully lines for conveyance where practical and environmentally sustainable.
3. Ensure the provision of minor and major stormwater collection and conveyance systems for the development land.
4. Ensure the provision of stormwater quality control devices to meet Council's stormwater quality objectives in accordance with Development Design Specification D7 – Stormwater Quality.
5. Ensure the provision of stormwater detention/retention devices and level spreaders to ensure that stormwater discharge from the development does not create significant adverse impacts on receiving water bodies, wetlands and environmental land.

2.12.3 Development Controls:

C1. The following information is to be submitted with any Development Application for subdivision:
- Water Servicing Plan.
- Sewer Servicing Plan.
- Stormwater Management Plan.
- Erosion and Sediment Control Plan (ESCP).

C2. Any proposal must comply with the Demand Management Strategy adopted by Council employing minimum sized rainwater tanks and connected roof areas as well as reduced infiltration gravity sewers and other measures to reduce demand on water supply and load on wastewater systems.

C3. Land affected by potential water infrastructure, as depicted in Figure 2.16, shall not be used for any other purpose than for water supply infrastructure unless Council specifically determines that the land is no longer required for that purpose.

C4. A stormwater management plan is to accompany all greenfield development which will take account of potential development scenarios and implement a more holistic and water sensitive urban design approach to managing stormwater drainage. This would include revisiting the preferred design of key drainage corridors particularly in dealing with the existing north-south drain and potential acid sulfate soil issues.

C5. All new development sites are to integrate the location of a fibre ready, pit and pipe network (including trenching, design and third party certification) to NBN CO's Specifications, to allow for the installation of Fibre To The Home (FTTH) broadband services.

C6. All new development sites are to integrate existing or propose new lawful point(s) of discharge from greenfield development sites into adjoining natural areas or receiving stormwater drains.

2.12.4 Additional advice:

Refer to the Tweed DCP Part A5 – Subdivision Manual and relevant infrastructure design standards.

2.13 Key Greenfield Site – Turnock Street Precinct

2.13.1 Character Statement

The Turnock Street Precinct will accommodate opportunities for town centre expansion as well as a mix of medium density housing types to take advantage of the walkable proximity to the existing town centre and coastal foreshore. The tree lined streetscape of Turnock Street will be befitting of its town centre gateway location and include pedestrian and cycle paths along its length. The protection of ecologically significant areas to the south of Turnock Street will link with lands further to the west strengthening the forming a 'green heart' to the locality as well as providing nature based passive recreation opportunities. The key planning and design opportunities include:

- The expansion of the town centre uses west along Turnock Street incorporating active ground floor retail/ commercial uses adjoining the Kingscliff Shopping Village site and shop top housing mix uses extending further west along Turnock Street.
- A mix of use landuses fronting Turnock Street to have a public domain interface with the street including widened footpath, areas for outdoor dining and street trees.
- A mix of residential flat buildings fronting Turnock Street and low rise medium density housing opportunities across the northern portion of the precinct take advantage of the sites flat topography and good walking proximity to the existing town centre.
- The design of Turnock Street as a well landscaped visually attractive connector street integrating traffic movement, cycle and pedestrian paths, parking, shade, lighting and WSUD befitting of the primary access road from Tweed Coast Road into the Kingscliff township.
- The protection of areas identified as being ecologically significant and nomination of areas for offset planting.

2.13.2 Planning and Design Principles:

P1. Undertake a master planning process to underpin future planning proposal, concept development application or subdivision development application(s) as required to achieve a balance of character defining town centre built form and public domain, medium density residential housing, network of open space, strong pedestrian and cycling paths and areas of environmental protection. The master plan process should:

- Facilitate town centre staged growth and expansion along Turnock Street to include an expanded range of retail, commercial, community, open space, tourist and shop top residential uses through a B4 Mixed Use zoning with building height to 13.6 metres (post bulk earth works fill).
- Facilitate higher density residential development immediately west of the town centre expansion area along Turnock Street through a R3 zoning with a building height to 12.2 metres (post bulk earth works fill). Housing opportunities including residential flat buildings and low rise medium density housing types to take advantage of the flat site and good proximity to the existing town centre. Building heights to 12.2 metres (post bulk earth works fill). Land use and density targets based on the Turnock Street indicative structure plan (refer Table 3).
- Integrate principles of passive subdivision design (solar orientation, prevailing breezes, landscape) into the designed outcomes and to generally provide a grid road network to achieve uniform development allotments and optimise solar orientation opportunities for future building design.

P2. Reinforce Turnock Street as the principle collector road which will ultimately link the Tweed Coast Road with the Kingscliff township by:

- Designing Turnock Street as a tree lined boulevard to provide a high level of visual and user amenity.
- Co-ordinated access to avoid multiple driveway and or building access points off Turnock Street.
- Inclusion of a dedicated pedestrian and cycle lane linking areas of west Kingscliff with the town centre with shade, seating, lighting and water points at regular intervals.

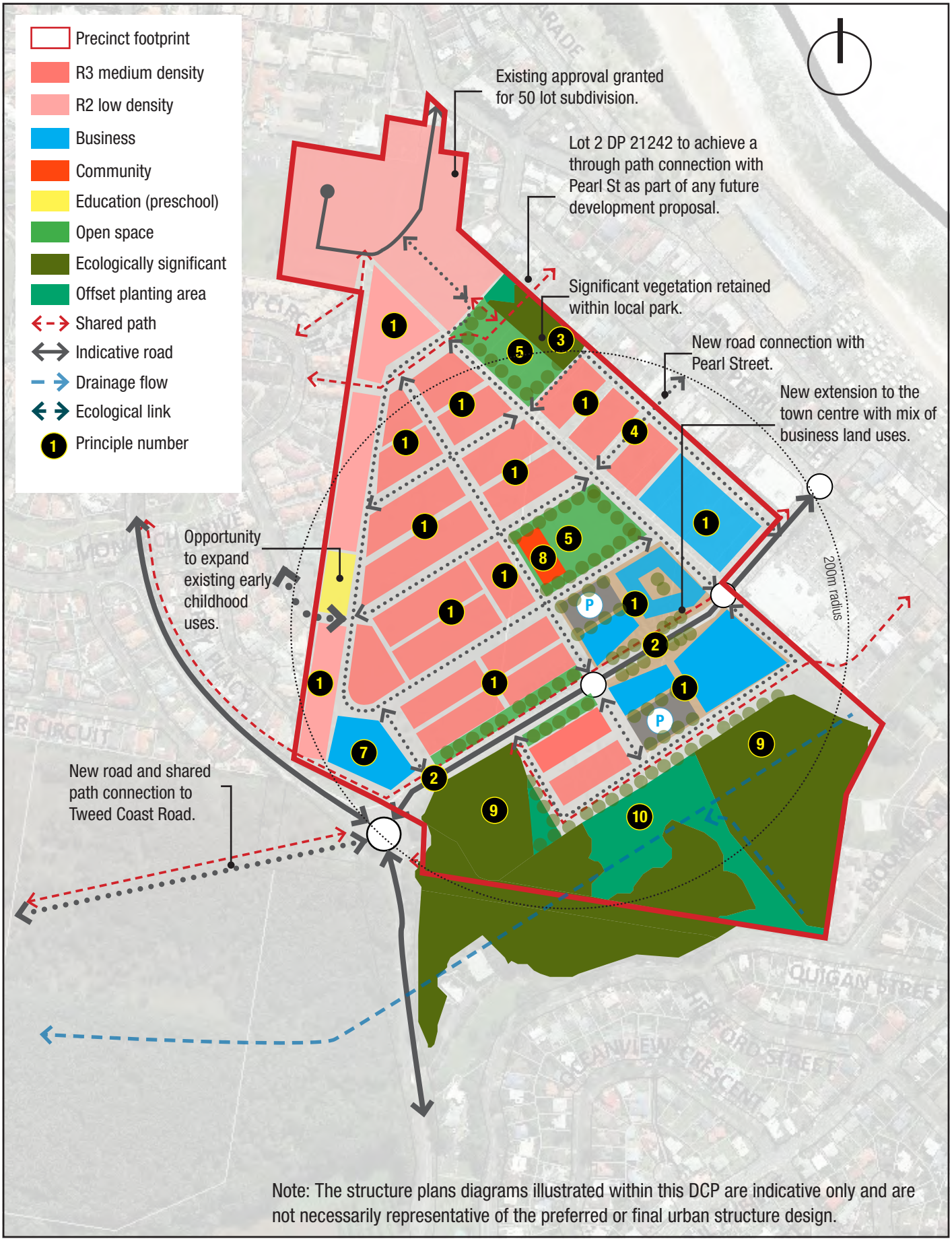


Figure 2.17 Indicative Turnock St Precinct Structure Plan

- Providing public domain interface for new town centre buildings fronting Turnock Street.
- Integrated street lighting, parking, landscape bays and WSUD streetscape elements.

P3. Retain the identified Endangered Ecological Community (EEC) within the northern portion of the precinct as an environmental zone set within an area of public open space RE1. Within this area of RE1 create a pedestrian connection which has the capacity to link through to Pearl Street across Lot 2 DP 21242 to achieve a through path connection with Pearl St as part of any future development proposal.

P4. Utilise Lot 6 DP 21242 as a road reserve providing access from Pearl Street into the development site.

P5. Development of local and neighbourhood parks within this precinct to cater for the passive recreational needs of future residents. At least 50% of the park perimeter is to have direct road frontage to encourage universal accessibility and visibility. The park should be landscaped and embellished to achieve a high level of user amenity and be a defining element of the future character of the precinct.

P6. Integrate a pedestrian and cycle path network throughout the precinct and connect with surrounding existing and proposed residential areas and open space. The pathway network is to achieve user comfort and amenity in terms of co-location of street trees for shade, adequate lighting and regular waypoints with water points and seating.

P7. Relocate town centre service station to a new site fronting the Turnock St roundabout which could be co-located with other retail tenancies or small scale commercial workspace.

P8. Develop a new multi-purpose community building which could include a community centre, community meeting rooms, incubator workspace. Ideally, this building should be highly visible and accessible. In addition there is a need for additional preschool and early childhood facilities within the locality which could potentially be co-located with the new multi-purpose community building.

P9. Facilitate the protection and management of land identified as environmentally and/or ecologically important through appropriate land use zoning and provisions for ongoing habitat management.

P10. Identify lands for offset planting and provisions for ongoing habitat restoration and management.

Turnock Street Precinct – Turnock Street will be a tree line boulevard with pedestrian and cycle pathways along its length. Land uses will be a combination of medium density housing types as well as opportunity for town centre expansion to the east.

Turnock St Precinct – Land Use and Residential Density Targets					
Land Use	**Area (ha or sqm)**	**Building Height**	**Density Target (dph) (Site Density)**	**Dwelling/Unit No.**	**Projected Pop. (2.4 /1.8 per dw)**
R2 Low Density	1.68ha	9m	16	26	62
R3 Medium density	5.12ha	12.2m	80	411	740
R3 Medium density	2.5ha	9m	30	75	135
B4 Mixed Use	3.85ha	12.2-13.6m	30	115	207
Community Use	0.35ha	13.6m	–	–	–
Open Space	1.66 ha	–	–	–	–
Road Reserve/Infrastructure	1 ha (25%)	–	–	–	–
Total	**16.16ha**	**9-13.6m**	**16-80 dph**	**627**	**1144 persons**
Open Space Required					
Open Space Type	**Rate**	**Required**	**Existing**	**Structure Plan**	**Difference**
Active	1.7ha/1000	1.86ha	–	–	-1.86ha
Passive	1.13ha/1000	1.03ha	–	2 ha	+0.97ha

Table 3 Turnock St Land Use and Residential Density Targets

Note: Target residential densities measured as 'site density' based off indicative masterplan.

Figure 2.18 Indicative Turnock Street Section – Mixed Use Interface

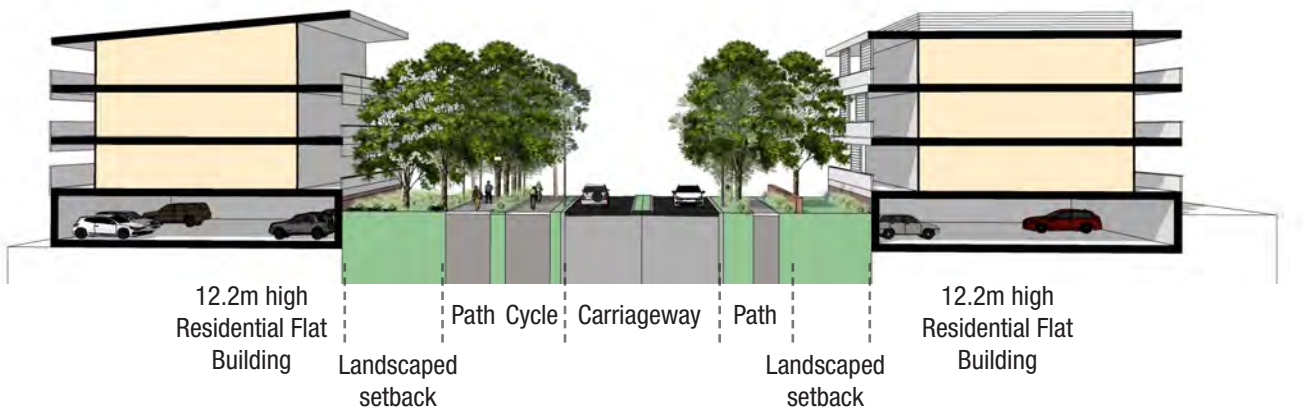


Figure 2.19 Indicative Turnock Street Section – Residential Interface

2.14 Key Greenfield Site – West Kingscliff Precinct

2.14.1 Character Statement

The greenfield development site within the West Kingscliff Precinct will be accessed from the Turnock Street (west) extension which will form the primary vehicular access from the Tweed Coast Road into the Kingscliff township. The greenfield development site presents an opportunity to develop a range of medium density, low rise medium and low density residential housing types with the southern development boundary defined by the Turnock St extension alignment and areas of environmental protection south of the road alignment. Well defined north-south and east-west strong pedestrian and cycling paths will connect the greenfield development site to existing residential precinct areas to the immediate north and the Kingscliff township to the east. The protection of ecologically significant areas to the south of Turnock Street will link with lands further east strengthening the forming a 'green heart' to the locality as well as providing nature based passive recreation opportunities.

The key planning and design opportunities for this greenfield development site include:

- Construction of the Turnock Street extension which will form the new primary collector road and gateway from the Tweed Coast Road into the Kingscliff township to include a dedicated cycle and walking path.
- Maintaining a 'green edge' to Tweed Coast Road through the protection of environmentally sensitive vegetation which provides a strong ecological link through the precinct and separates the urban areas of West Kingscliff from Cudgen.
- Facilitate a mix of low rise medium density residential development heading west along the extended Turnock Street to take advantage of the close proximity to the existing centre and encouragement of higher densities along principle movement corridors.
- Pursue the embellishment of the north-south drainage corridor for combined drainage, vegetation, open space and pedestrian and cycling paths.

2.14.2 Planning and Design Principles:

P1. Undertake a master planning process to underpin future planning proposal, concept development application or subdivision development application(s) as required to facilitate a range of low rise medium and low density residential housing types framed by the Turnock St extension and areas of environmental protection to the south. The master plan process should:
   - Delineate areas of environmental protection from the developable portion of the site by the Turnock St (west) extension.
   - Integrate the development site with the existing West Kingscliff residential areas to the immediate north by way of the road network, pedestrian and cycling paths and compatible interface land use and housing types.
   - Integrate principles of passive subdivision design (solar orientation, prevailing breezes, landscape) into the designed outcomes and to generally provide a grid road network to achieve uniform development allotments and optimise solar orientation opportunities for future building design.
   - Integrate water sensitive urban design treatments and designed outcomes as part of the existing drainage corridor and overall subdivision design.
   - Address all potential flood impacts and mitigation strategies including design flood levels and flood evacuation routes east along Turnock St and up along Cudgen Road.
   - Embellishment of the north-south drainage corridor for combined drainage, vegetation, open space and pedestrian and cycling paths.
   - Develop a neighbourhood park adjoining the north-south drainage corridor embellished to meet the passive open space needs to the local residents resulting in a green edge to the precinct.
   - Identification of lands to be dedicated for on site compensatory planting as a result of any vegetation clearing which may be nominated for removal from part of the identified development site as part of the master plan process.

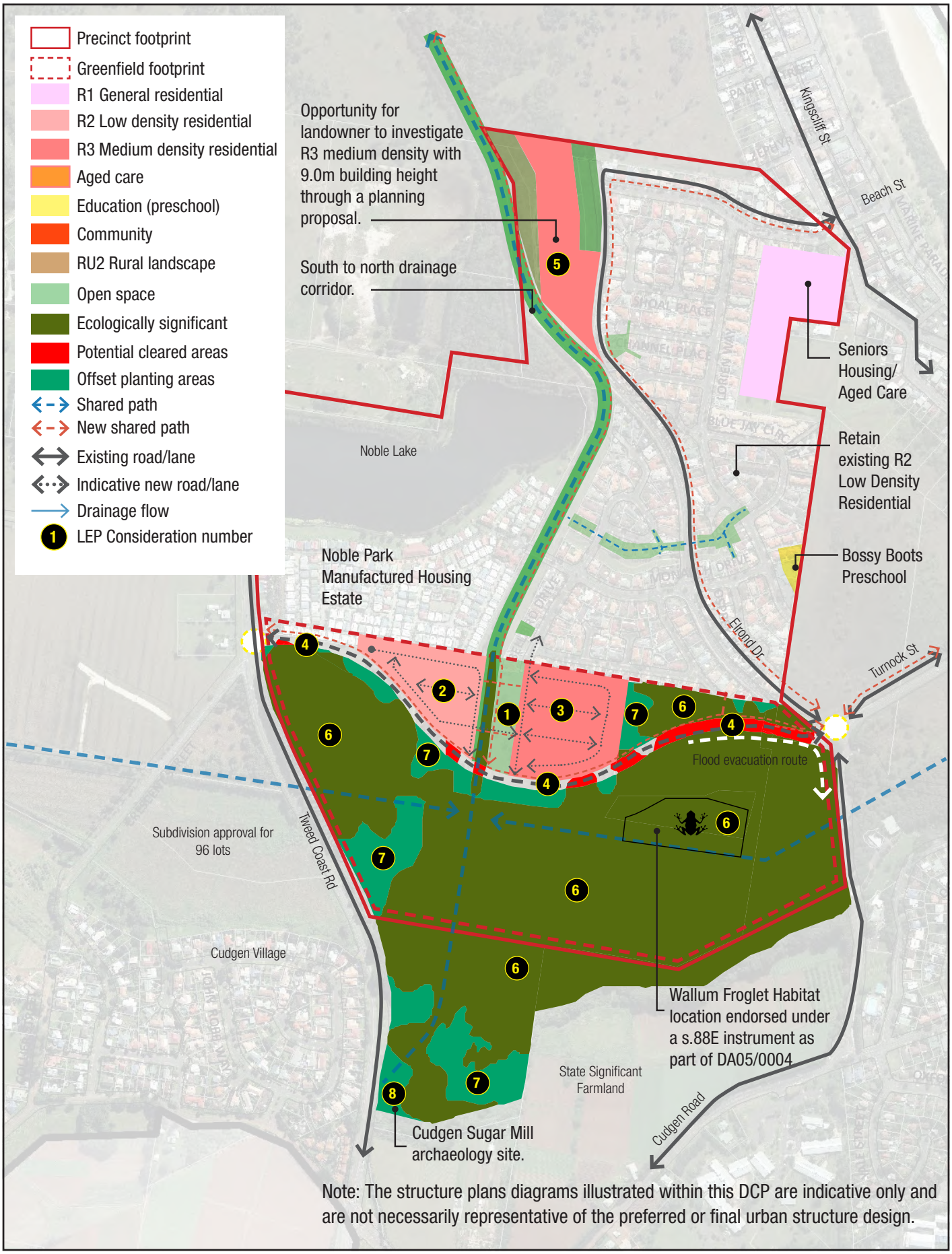


Figure 2.20 West Kingscliff Precinct Indicative Structure Plan

P2. Facilitate the rezoning of land immediately south of the Noble Park Manufactured Home Estate from RU1 Rural Landscape to a residential land use. This land parcel is to be considered in the context of the masterplanning process for the West Kingscliff greenfield development areas. This includes consideration of adequate buffers, landscape setbacks and boundary interface to the future Turnock Street extension.

P3. Achieve a mix of housing types including residential flat buildings to 12.2m (eastern extents) and low rise medium density housing to 9.0m (western extents). Land use and density targets are identified in Table 4.

P4. Reinforce the extended Turnock Street as the principle collector road which will ultimately link the Tweed Coast Road with the Kingscliff township by:

- Designing Turnock Street as a tree lined boulevard to provide a high level of visual and user amenity.
- Utilising the alignment of the Turnock Street extension to delineate between developable area (north of alignment) and lands identified as being ecologically significant (south of alignment) generally in accordance with Figure 8.27 of the West Kingscliff Precinct Plan.
- Co-ordinated access points for development fronting Turnock Street to avoid multiple road/driveway access points off Turnock Street.
- The inclusion of a dedicated shared pedestrian and cycle lane along the northern side of the Turnock St extension linking areas of West Kingscliff with the town centre with shade, seating, lighting and water points at regular intervals.
- Integrated street lighting, parking, landscape bays and WSUD streetscape elements.
- Integrating a generous landscape buffer/setback within the Turnock Street extension reserve capable of sustaining street trees and understory vegetation adjoining development sites with appropriate fencing treatments to achieve a high level of visual amenity, landscape and urban design. Fences shall not be the dominant visual element along this road extension.

P5. Investigate residential land use options including R3 Medium density with 9.0m building height over Lot 129 and 130 DP1039348 currently zoned RU2 Rural landscape against the site constraints including proximity to environmental protection areas, flooding and bushfire.

P6. Facilitate the protection and management of land identified as environmentally and/or ecologically important through appropriate land use zoning and provisions for ongoing habitat management.

P7. Identify lands for offset planting and provisions for ongoing habitat restoration and management.

P8. Undertake a heritage review of the old Cudgen Sugar Mill site.

West Kingscliff Precinct – Land use and Residential Density Targets					
Land Use	**Area (ha)**	**Building Height**	**Density Target (dph)**	**Dwelling/Unit No.**	**Projected Pop. (2.4/1.8per dw)**
R2 Low Density (existing)	32.2ha	9m	16	497	1168
R3 Medium density (greenfield)	3.62ha	12.2m	80	290	522
R3 Medium density (greenfield)	2.59ha	9m	30	78	140
Noble Park Estate (existing)	21.9ha	9m	–	254	597
Open Space (Passive)	1.2ha	–	–	–	–
Road Reserve/Drainage Corridor/Infrastructure	19.3ha (16%)	–	–	–	–
Total	**80.81ha**	**9m-12.2m**	**16-80 dph**	**1119**	**2427**
Open Space Required					
Open Space Type	Rate	Required	Existing	Structure Plan	Difference
Active	1.7ha/1000	4.12ha	–	–	-4.12
Passive	1.13ha/1000	2.74ha	1.76ha	1.2ha	+0.22ha

Table 4 West Kingscliff Land Use and Residential Density Targets

Note: Target residential densities measured as 'site density' based off indicative masterplan.

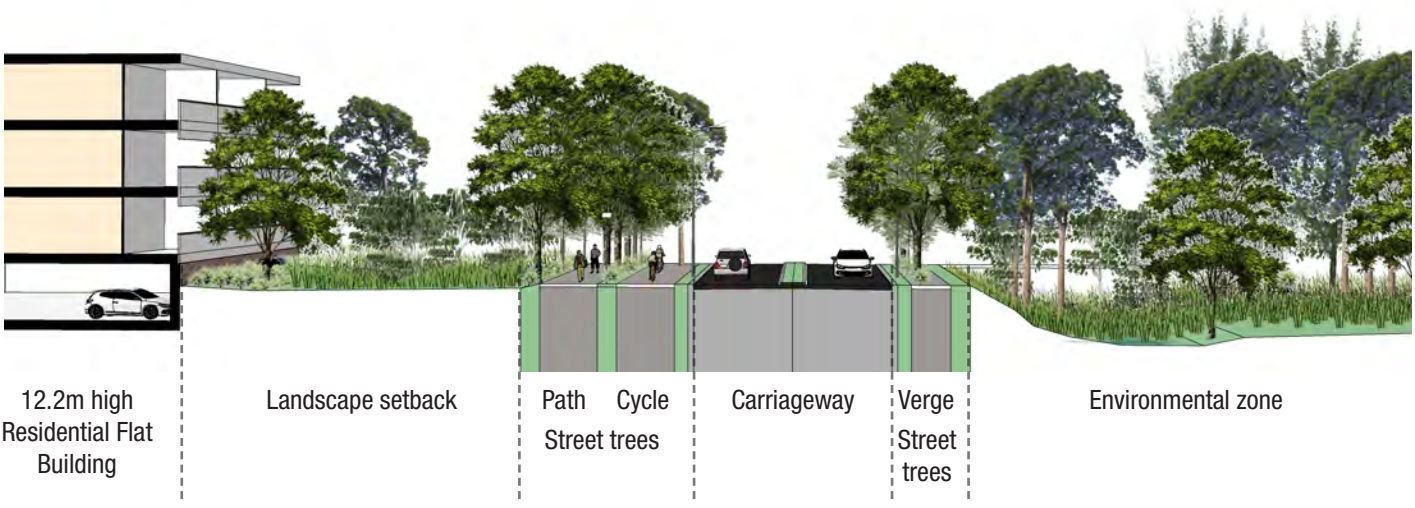


Figure 2.21 Indicative Turnock Street (West) Extension Section

2.15 Key Greenfield Site – North Kingscliff Precinct

2.15.1 Character Statement

The North Kingscliff Precinct greenfield development site adjoins existing low density residential dwellings north of Ozone Street and low density and low rise medium density dwellings south of Sand Street. The infill residential development site will facilitate additional low rise medium density housing types including small lots, terrace houses, row houses, courtyard housing and low rise multi-unit development. Low density development and suburban allotments will adjoining existing low density suburban allotments to avoid amenity and interface impacts. The road network will provide additional east-west and north-south vehicle, pedestrian and cycling connections. The development of the future Business and Innovation precinct will require a flood evacuation route.

The key planning and design opportunities for this greenfield development site include:

- Development of the north Kingscliff Precinct greenfield development site with a mix of housing types including low density residential housing, small lot housing and low rise medium density residential.
- Subdivision configuration of this site needs to consider the locality movement (vehicular, pedestrian, cycle) opportunities and open space network. This may include; Ozone Road connection west to a future intersection with Tweed Coast Road; and a new north-south road connecting Elrond Drive with Sand Street.
- Increasing residential density and building heights fronting Kingscliff Street which is the key north-south collector road and public transportation route and western side of Sand Street with an R3 medium density zoning and building height of 9m to enable low rise medium density housing types.
- Reducing minimum lot size to encourage coastal small lot housing and additional dual occupancy infill development whilst maintaining a low density character.
- Encouraging secondary dwelling development within the existing residential areas providing affordable housing, aged housing in place and inter generational family housing opportunities.
- Embellish north-south drainage corridor for combined drainage, vegetation, open space and pedestrian and cycling paths. Pursue a dedicated on road cycle path the length of Kingscliff Street/Pearl Street.

2.15.2 Planning and Design Principles:

P1. Undertake a master planning process to underpin future planning proposal, concept development application or subdivision development application(s) as required including facilitating a range of low density residential and low rise medium density housing types between Sand and Ozone Street and facilitate low rise medium density housing types along the western side of Kingscliff Street. The structure plan/master plan process should include:

- A neighbourhood park appropriately sized and embellished to meet the passive open space needs to the local residents.
- A new north-south road connecting Elrond Drive with Sand Street.
- A new east-west road(s) connecting an Elrond Drive with the greenfield development site (Business and Innovation precinct) to the west.
- A continued east-west alignment of the local road network resulting in predominantly north-south allotments to achieve a predominantly grid road network to achieve uniform development allotments and optimise solar orientation opportunities for future building design.
- Integrate principles of passive subdivision design (solar orientation, prevailing breezes, landscape) into the designed outcomes and to generally provide a grid road network to achieve uniform development allotments and optimise solar orientation opportunities for future building design.

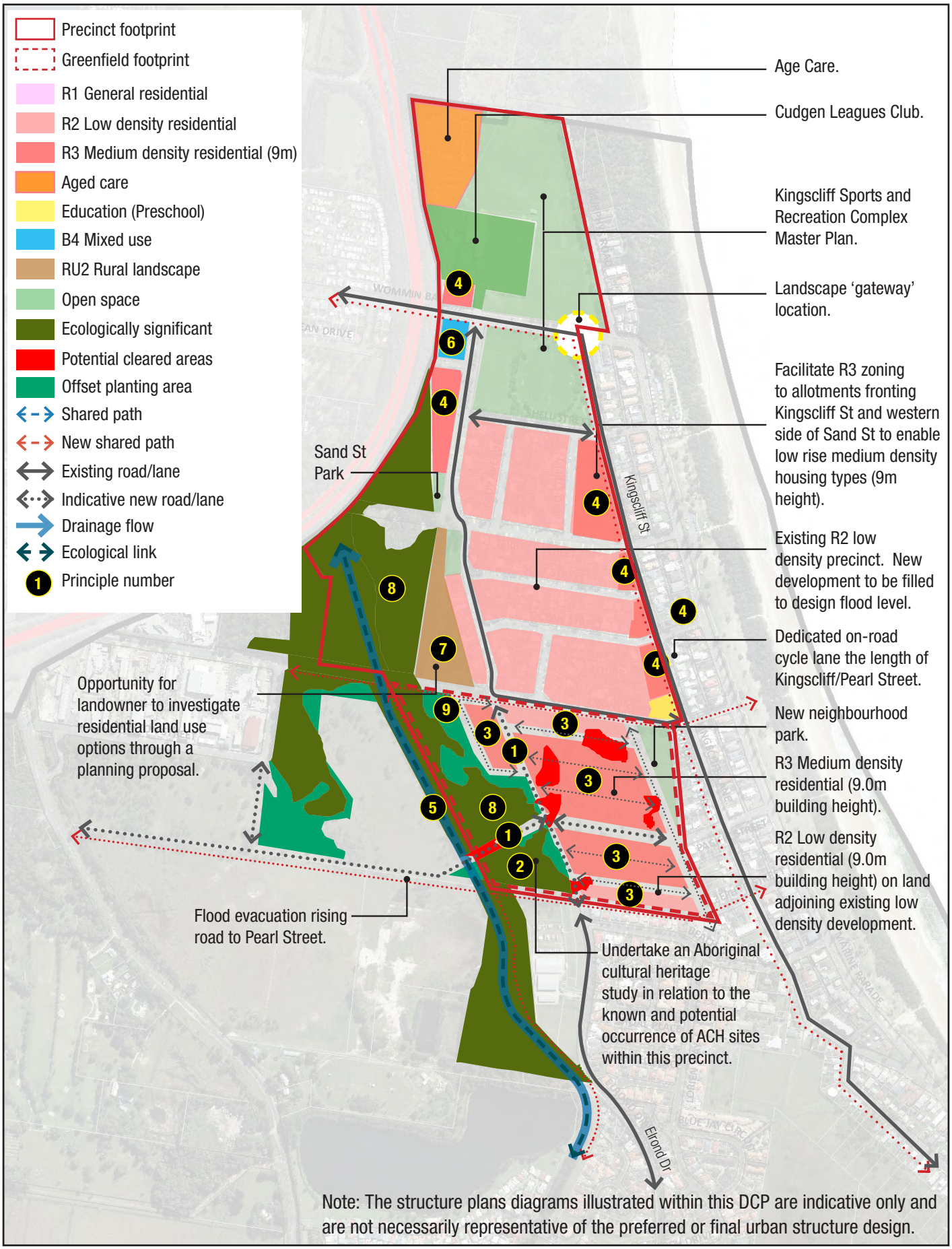


Figure 2.22 Indicative North Kingscliff Precinct Structure Plan

P2. Given the known and potential occurrence of Aboriginal Cultural heritage sites within this precinct, there will be a requirement to undertake an Aboriginal Cultural Heritage Assessment in consultation with the Tweed Byron Aboriginal Land Council regarding the future planning, design and construction of development within this precinct.

P3. Achieve a balance and mix of housing types including a low density housing to 9.0 metres (post fill), low rise medium density housing to 9.0m (post fill). Land use and density targets have been identified in Table 5. Where green field development adjoins or interfaces with existing R2 Low Density development, new development shall similarly be R2 Low Density residential development.

P4. Amend land use zoning from R2 Low Density residential to R3 Medium Density residential with a 9.0m building height to:

- Allotments fronting Kingscliff Street (western side) which is the key north-south collector road and public transportation route to allow low rise medium density housing types (Lot 1 DP758751, Lots 12-16 Sec 13 DP758571, Lots 6-10 Sec 14 DP758751, Lots 6-7 Sec 15 DP758751, Lot 50 DP1112250 being Lots 1-2 SP78936, Lots 1-2 Sec 16 DP 758571, Lot 30 DP1130320 being Lots 1-2 SP81156, Lot 4 Sec 16 DP758571 being Lots 1-2 SP39784, Lot 1 DP1183849, Lots 7-21 Sec 16 DP 758571).
- Allotments on the western side of Sand Street north of Terrace St (Lot 37-39 DP249808, Lot 101 DP1240865 being Lots 1-2 SP99903).
- Allotments on the north side of Wommin Bay Road adjoining Cudgen Leagues Club (Lot 1 DP391999, Lot 5 DP878585, Lot A DP370864, Lot B DP370864, Lot 1-2 SP63190).

P5. Integrate a pedestrian and cycling network throughout the precinct and connect with surrounding existing and proposed residential areas and open space. The pathway network is to achieve user comfort and amenity in terms of co-location of street trees for shade, adequate lighting and regular way finding with water points and seating. This includes:

- Strengthen pedestrian and cycling links towards the coastal foreshore reserve.
- Lighting of pathways.
- Embellishment of the north-south drainage corridor for combined drainage, vegetation, open space and pedestrian and cycling paths.
- Dedicated on-road cycle lane along the length of Kingscliff Street/Pearl Street.

P6. Encourage the development of a local retail centre fronting Wommin Bay Road within the northern portion of this precinct which may also provide opportunity for shop-top housing, small general store or site to relocate the town centre service station site.

P7. Investigate residential land use options over Lot 4 DP 1243907 accessed off Ozone Street against site considerations including proximity to environmental protection areas, potential for Aboriginal cultural heritage sites, flooding and bush fire.

P8. Facilitate the protection and management of land identified as environmentally and/or ecologically important through appropriate land use zoning and provisions for ongoing habitat management.

P9. Identify lands for offset planting and provisions for ongoing habitat restoration and management.

North Kingscliff Precinct – Land Use & Residential Density Targets					
Land Use	**Area (ha)**	**Building Height**	**Density Target (dph)**	**Dwelling/Unit No.**	**Projected Pop. (2.35 per dw)**
R2 Low Density (existing)	22.2ha	9m	10.9	242	568
R3 Medium Density (existing)	0.76ha	9m	28.9	22	52
R2 Low density (greenfield)	4.57ha	9m	16	73	175
R3 Medium Density (Rezone)	3.4ha	9m	30	102	184
R3 Medium Density (greenfield)	7.66ha	9m	30	230	414
Open Space (greenfield Passive)	0.8ha	-	-	-	-
Open Space (existing Active)	12ha	-	-	-	-
Open Space (Private Recreation)	3ha	-	-	-	-
Road Reserve/Drainage Corridor/Infrastructure	11.19ha (16%)	-	-	-	-
Total	**66.29ha**	**9m**	**10-50 dph**	**669**	**1393**
Open Space Required					
Open Space Type	**Rate**	**Required**	**Existing**	**Master Plan**	**Difference**
Active	1.7ha/1000	2.36ha	12ha	-	+9.6ha
Passive	1.13ha/1000	1.57ha	0.86ha	0.78ha	+0.07ha

* North Kingscliff Sportsfields serves broader locality active open space need.

Note: Target residential densities measured as 'site density' based off indicative masterplan.

Table 5 North Kingscliff Land Use and Residential Density Targets

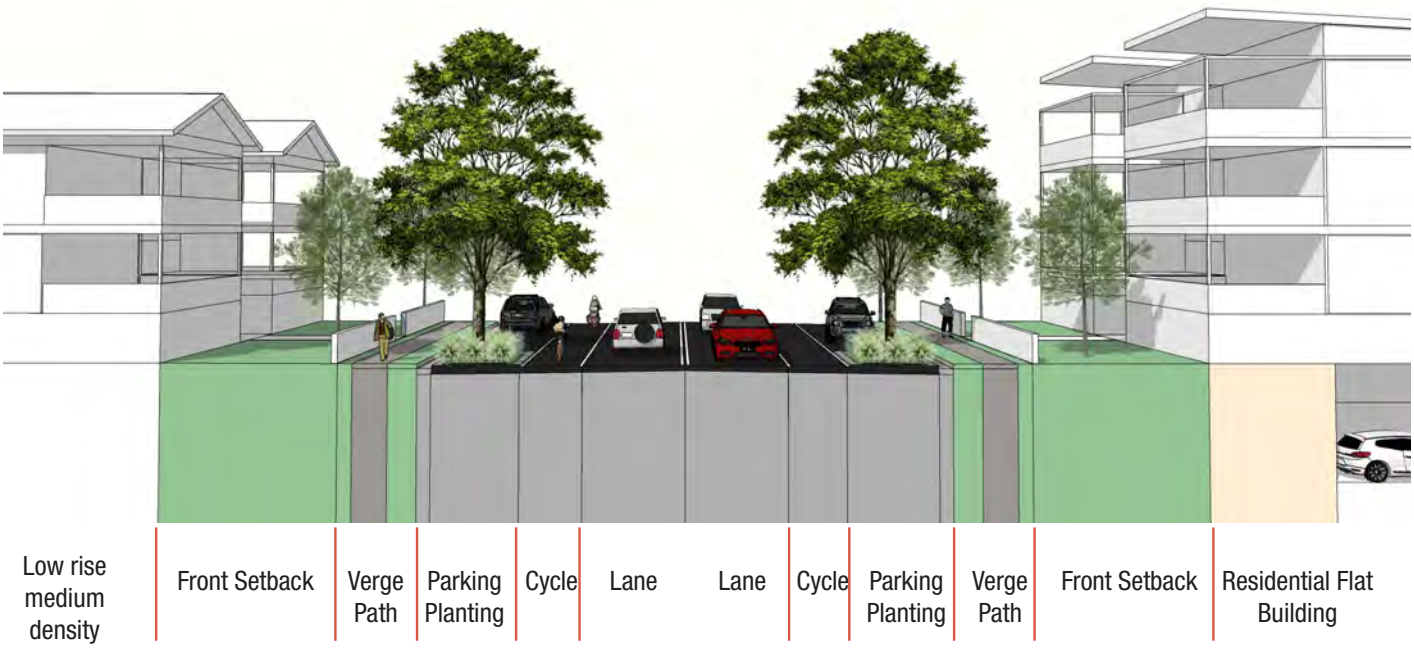


Figure 2.23 Indicative Kingscliff St Section

2.16 Key Greenfield Site – Business and Innovation Precinct

2.16.1 Character Statement

The Business and Innovation precinct will play a key transformative role to expand economic and employment generating land uses servicing both Kingscliff and the sub-regional area. Given the large site area (47.5ha) and ready access to the Pacific Highway, the Business and Innovation Precinct is strategically positioned to deliver a range of employment generating land uses including a business park, education campus, creative industries hub, cultural and entertainment uses, community facilities and a new local centre. These employment generating land uses will be supported by a mix of medium density residential housing types and embellished network of open space and public domain areas. The key planning and design opportunities for this greenfield development site include:

- The development a regionally scaled business park (approx 75000sqm).
- The establishment of a regional education campus (University and/or TAFE expansion).
- Enable the transition of the existing Chinderah Industrial Estate into business park and creative industries hub by enabling a wider range of business and commercial permissible landuses.
- The development of a new local retail centre to serve the immediate future resident population and complement the existing Kingscliff town centre (approx 10000-15000sqm).
- Establishing a retail 'high street' through the precinct with integrated public domain and landscape.
- The development of a range of medium density and low rise medium density residential housing typologies.
- The development of an open space network including additional active open space (sportsfields) to meet the future need of the growing locality population.

2.16.2 Planning and Design Principles:

P1. Undertake a master planning process to underpin any future planning proposal or development application (including concept development application or subdivision development application) to facilitate the future development of the Business and Innovation Precinct as a regionally significant employment generating precinct. The Business and Innovation precinct will establish a mix of employment generating land uses including a business park (B4), a retail centre (B2), light and creative industries (IN1), cultural and entertainment uses, community facilities, opportunity for a health and/or education campus (SP), network of open spaces and a mix of residential housing types. It is anticipated that the Business and Innovation Precinct would accommodate many new businesses and land uses which will have a connection to the Tweed Valley Hospital including allied health services or other ancillary business and service related land uses. The master plan process should include:

- A developer initiated and funded economic and retail centres feasibility assessment to evaluate proposed staged land use and floor area development scenarios/projections within the context of the Tweed retail and centres hierarchy.
- A developer initiated and funded site specific flood study and mitigation strategy which identifies lands to be filled (maximum 65% of the overall site), evacuation routes and location of surface drains as integrated with the road and open space structure/networks with reference to the Tweed Valley Floodplain Risk Management Strategy (TVFPRMS).
- A developer initiated built form character study reviewing the relationship between building heights and 3d massing study, FSR, site coverage, network of open space and public domain, view and visual impact analysis to underpin development standards within any future planning proposal.
- A developer initiated traffic impact study based on envisaged land use and projected GFA/density outcomes with reference to the Tweed Road Development Strategy (TRDS).
- A Site Contamination and Rehabilitation Plan over the decommissioned WWTP site to determine remediation requirements for future uses (open space).

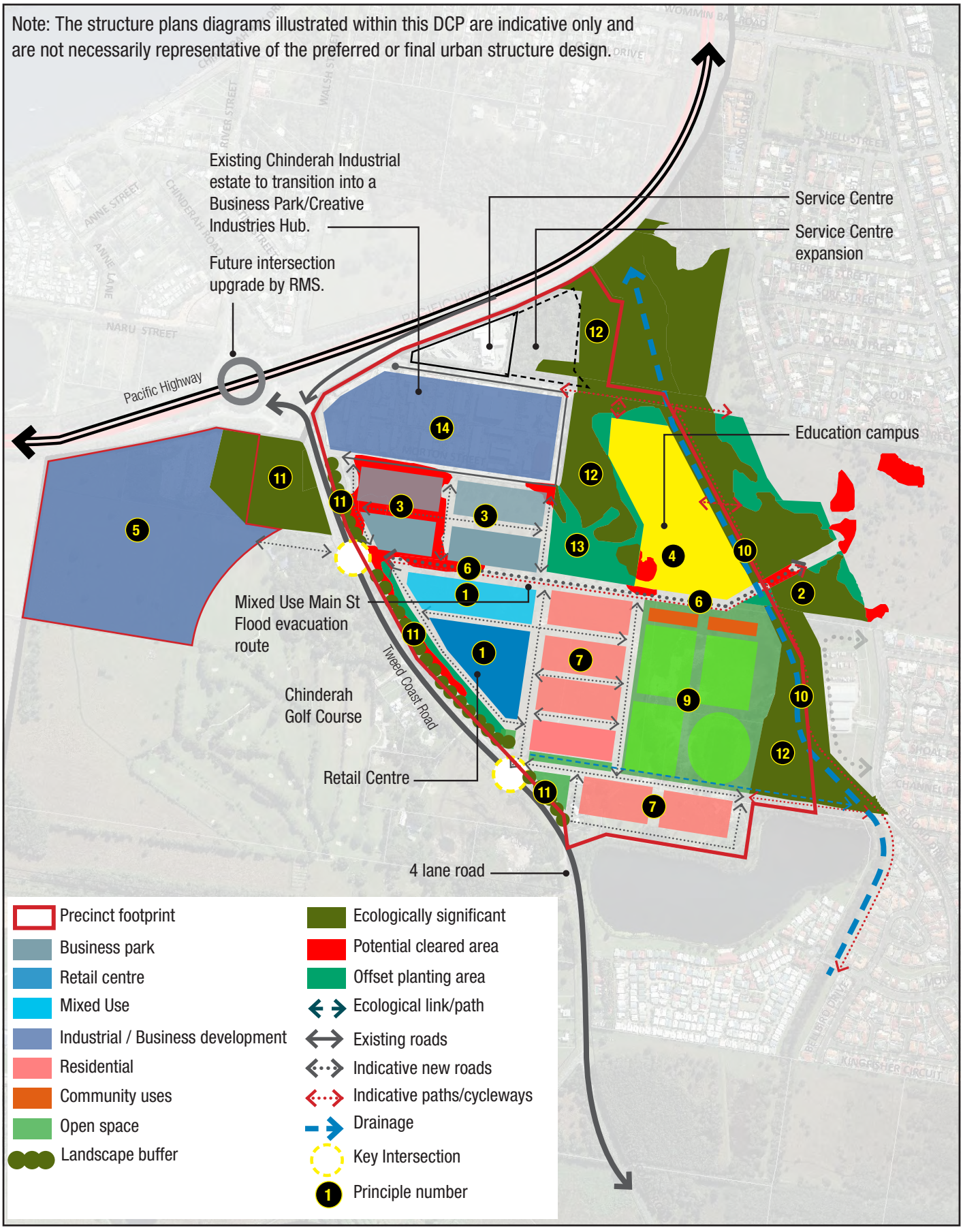


Figure 2.24 Indicative Business and Innovation Precinct Structure Plan – Business & Education Campus Option

- Integrate principles of passive subdivision design (solar orientation, prevailing breezes, landscape) into the designed outcomes and to generally provide a grid road network to achieve uniform development allotments and optimise solar orientation opportunities for future building design.

P2. Given the known and potential occurrence of Aboriginal Cultural heritage and South Sea Islander cultural heritage sites within this precinct, there will be a requirement to undertake an Aboriginal and South Sea Islander Cultural Heritage Assessment in consultation with the Tweed Byron Aboriginal Land Council and South Sea Islander Community regarding the future planning, design and construction of development within this precinct.

P3. Provide opportunity for the development of a business park within the precinct up to 13.6m in height to encourage more intensive employment generating land uses, commercial and business opportunities.

P4. Integrate opportunity for the development of an education campus which may provide opportunities for a university campus and/or an expanded Kingscliff TAFE.

P5. Facilitate a change of land use from IN1 General Industrial to B5 Business Development over lands to the west of Tweed Coast Road providing opportunity for larger floor plate and light industrial uses where it can be demonstrated that traffic access, environmental management, Aboriginal cultural heritage and flood management related issues can be appropriately addressed through a master planning process.

P6. Create a principle east-west collector road linking Tweed Coast Road across the precinct as a tree lined boulevard to the east to intersect with a future Elrond Drive extension. This collector road should:

- Be design as a flood evacuation route rising road to the east.
- Facilitate the development of a mixed use/main street development over part of its length which may provide fine grain active retail street level with residential and or commercial uses above and public domain street edge.
- Integrate street lighting, parking, landscape bays and WSUD streetscape elements.
- Include a dedicated shared pedestrian and cycle lane network throughout the precinct with shade, seating, lighting and water points at regular intervals.

P7. Facilitate a mix and diversity of medium density housing opportunities through residential zoning including residential flat buildings up to 12.2m, low rise medium density housing, low density housing, affordable and aged housing, student accommodation (ancillary with an education or health campus).

P8. Achieve affordable housing outcomes through co-ordinated negotiations between Council, the developer and affordable housing providers to meet agreed affordable housing benchmarks established through an Affordable Housing Strategy to be undertaken by the developer. Land use and density targets have been identified in Table 6 Business and Innovation Precinct Land Use and Residential Density Targets.

P9. Allocation of a large open space area (approximately 9.5ha) to cater for the active and passive recreational needs of future residents. Open space area adjoining the north-south drainage corridor, over part of the rehabilitated WWTP site could act as an overland flow storage area and buffer to lands identified as being ecologically significant.

P10. Embellish the north-south drainage corridor as a defining 'green corridor' for combined drainage, vegetation link, open space and shared pathway uses.

P11. Create a 20m wide vegetative buffer to Tweed Coast Road frontage providing a 'green edge' to the site with opportunity to plant out with large street trees and under storey vegetation. The intent of the landscape setback is to strengthen the landscape character of the area and potentially screen level differential between Tweed Coast Road and finished design flood level across the development site. To effectively achieve this the setback may need to be substantially increase dependent on design outcomes.

P12. Facilitate the protection and management of land identified as environmentally and/or ecologically important through appropriate land use zoning and provisions for ongoing habitat management.

P13. Identify lands for offset planting and provisions for ongoing habitat restoration and management.

P14. Facilitate the transition of the existing Chinderah Industrial Estate into business park and creative industries hub by enabling a wider range of business and commercial permissible landuses.

Business and Innovation Precinct – Land Use & Residential Density Targets					
Land Use	**Area (ha)**	**Building Height**	**Density/Employment***	**Dwelling /GFA (A/2xh)**	**Projected Pop./Jobs**
SP1 Knowledge Campus	6ha	13.6m	1/50sqm (E)	50 000sqm	1000 jobs
B7 Business Park#	5ha	13.6m	1/20sqm (E)	75 000sqm	3750 jobs
B4 Mixed Use (Dwellings)	2ha	13.6m	30 (D)	60	108 people
B4 Mixed Use (Business)	2ha	13.6	1/44sqm (E)	10 000sqm	227 jobs
B2 Local Centre (Retail)	2.6ha	10m	1/44sqm (E)	13 000sqm	295 jobs
B5 Business Development#	16.5ha	10m	1/90sqm (E)	82 500sqm	916 jobs
IN1 Industrial (Existing)	8.0ha	10m	1/50 (E)	40000sqm	800 jobs
Service Centre	4.0ha	10m	1/44sqm (E)	2000sqm	45 jobs
R3 Medium Density (greenfield)	4.4ha	12.2m	80 (D)	352(D)	633 people
R3 Medium Density (greenfield)	4.4ha	9m	30 (D)	132 (D)	238 people
R2 Low Density (greenfield)	3ha	9m	16 (D)	48 (D)	115 people
Open Space (Passive – District Park)	1.4ha	–	–	–	–
Open Space (Active)	8.1ha	–	–	–	–
Road Reserve/Buffers/ Drainage/Infrastructure	13.7ha (15%)	–	–	–	–
Total	**81.1ha**	**9m**	**16-80 dph**	**592 dwellings/270,500sqm**	**1094 people/ 7000 jobs**
Open Space Required					
Open Space Type	**Rate**	**Required**	**Existing**	**Master Plan**	**Difference**
Active	1.7ha/1000	1.85ha	–	9.0ha	+7.65ha
Passive	1.13ha/1000	1.23ha	–	1.23ha	0.0ha

* Employment density derived from City of Sydney Floor Space and Employment Survey 2012, City of Perth 2009.

Business Park and Business Development serving a broader regional catchment.

Note: Target residential densities measured as 'site density' based off indicative masterplan.

Table 6 Business and Innovation Precinct Land Use and Residential Density Targets

1. Business Park
2. Incubator business precinct
3. Education Campus
4. Main Street / Shop top
5. Retail centre
6. Residential precinct
7. Open space
8. Overland flow paths

Business and Innovation Precinct: This precinct has the opportunity to play a strong transformative role to expand sub-regional economic and employment generating land uses. Future employment and economic growth has the opportunity to diversify opportunity within existing industry pillars including tourism, agriculture, education, health and construction.

2.17 Key Greenfield Site – Cudgen Village Precinct

2.17.1 Character Statement

The Cudgen greenfield development site will extend the existing village urban footprint north over filled land bounded by the Tweed Coast Road and Crescent St. The development site will facilitate additional low density residential housing types complementing the existing Cudgen residential character as well as providing an opportunity to develop low rise medium density development which may include seniors housing. This future residential area will be visually screened from the Tweed Coast Road by a vegetative buffer along its length. The parcel of land with frontages to both Tweed Coast Road and Crescent Street presents opportunity for a small retail centre and/or service station servicing the convenience needs of the immediate resident population and Tweed Coast Road travellers. Following the conclusion of sand extraction to the west of the settlement there is also long term opportunity to develop regional active open space facilities as well as a holiday park with associated facilities fronting the artificial lake (private recreation).

The key planning and design opportunities for this greenfield development site include:

- Retain the low scale landscape residential character of Cudgen Village.
- Pursue a subdivision pattern based around principles of sustainable design which will allow a range of housing typologies and mix of density including opportunity for some low rise medium density housing and seniors housing.
- Facilitate opportunity for some business and tourist land uses which may be associated with adjoining agricultural land uses including a fresh produce market, food and beverage uses, rural tourist uses and accommodation and or small scale retail uses servicing the existing Cudgen Village.
- Review active and passive recreation uses and holiday or tourist accommodation and associated ancillary retail and food and beverage uses surrounding the future artificial lake at the cessation of sand extraction operations.
- Embellishment of the existing Cudgen Recreation Ground.

2.17.2 Planning and Design Principles:

P1. Undertake a master planning process to underpin future planning proposal, concept development application or subdivision development application(s) as required to facilitate:
   - Future residential development across the developable portion Lot 1 DP 828298 currently zoned R1 General Residential to achieve a mix of housing types, stormwater works, environmental protection and a 10m landscaped buffer along the Tweed Coast Road frontage.
   - Detailed design of the intersection of Altona Road with Tweed Coast Road and the Turnock Street extension (dependent on final alignment).
   - Integrate principles of passive subdivision design (solar orientation, prevailing breezes, landscape) into the designed outcomes and to generally provide a grid road network to achieve uniform development allotments and optimise solar orientation opportunities for future building design.
   - Integration of water sensitive urban design as part of the overall subdivision design.
   - Create a 10m wide vegetative buffer to Tweed Coast Road frontage providing a 'green edge' to the site with opportunity plant out with trees and understorey vegetation.

P2. Investigate future opportunity to establish a holiday park / tourist accommodation adjoining the future artificial lake with a RE2 Private Recreation zoning. As part of the master plan process address key opportunities and site constraints including flooding and proximity to the wastewater treatment plant. A Management Plan would be required to identify methods to manage, maintain, fund and implement the works necessary over this 'lake precinct' while protecting the integrity of receiving environmental land.

P3. Maintenance of a 500m buffer surrounding the waste water treatment plant restricting any residential or tourist development within that buffer.

Figure 2.25 Cudgen Village Indicative Structure Plan

P4. Undertake a stormwater drainage strategy for the precinct.

P5. Encourage landowners of Lot 101 DP 1056576, which has a R2 Low Density Residential zoning, to investigate additional permitted uses given the difficulty to achieved required buffers between any future residential development and the adjoining State Significant Farmland. Additional uses may be associated with adjoining agricultural land uses including a fresh produce market, food and beverage uses, rural tourist uses and accommodation and or small scale retail uses servicing the existing Cudgen Village.

P6. Facilitate the protection and management of land identified as environmentally and/or ecologically important through appropriate land use zoning and provisions for ongoing habitat management.

P7. Identify lands for offset planting and provisions for ongoing habitat restoration and management.

P8. Locate and undertake heritage assessment on South Sea Islander walls within the area and remnants of the old Cudgen Sugar Mill and devise appropriate heritage management options based on the assessment.

P9. Integrate a pedestrian and cycling network of path throughout the precinct and connect with surrounding existing and proposed residential areas and open space. The pathway network is to achieve user comfort and amenity in terms of co-location of street trees for shade, adequate lighting and regular way finding with water points and seating. This includes:

- Strengthen pedestrian and cycling links towards Kingscliff township via the new Turnock St extension and along Cudgen Road passing the Tweed Valley Hospital site / Kingsclifff TAFE.
- Lighting of pathways.
- Provision for on-road cycle along Tweed Coast Road.

Cudgen is a contained low scale residential settlement surrounded by agricultural land uses. Being elevated there are a number of long views experienced around the town. Housing types are predominantly single detached dwellings however there are also some dual occupancy developments throughout the precinct and a 25 dwelling multi-unit development accessed off John Robb Way.

Cudgen Precinct – Land Use & Residential Density Targets					
Land Use	**Area (ha)**	**Building Height**	**Density Target (dph)**	**Dwelling/Unit No.**	**Projected Pop. (2.35 per dw)**
R2 Low Density (existing)	14 ha	9m	13–35	200	470
R2 Low density (undeveloped)	10.69 ha	9m	16	144	345
Open Space (Existing Passive)	0.5 ha	–	–	–	–
Open Space (Existing Active)	1.22 ha	–	–	–	–
School	0.8 ha	9m	–	–	–
Road Reserve/Drainage Corridor/ Infrastructure	7.38ha (19%)	–	–	–	–
TOTAL	**38ha**	**9m**	**13-35 dph**	**344**	**815**
Open Space Required					
Open Space Type	**Rate**	**Required**	**Existing**	**Master Plan**	**Difference**
Active	1.7ha/1000	1.38ha	1.72ha	–	+0.34ha
Passive	1.13ha/1000	0.92ha	0.5ha	0.5ha	+0.08ha

Note: Potential future open space north of Altona Road alignment not included due to the planned long-term sand extraction over the site.

Table 7 Cudgen Land Use and Residential Density Targets

Note: Target residential densities measured as 'site density' based off indicative masterplan.

Future Artificial Lake: Opportunity for a wide range of active and passive recreation uses as well as tourism accommodation or holiday park fronting a future artificial lake as RE2 Private Recreation.