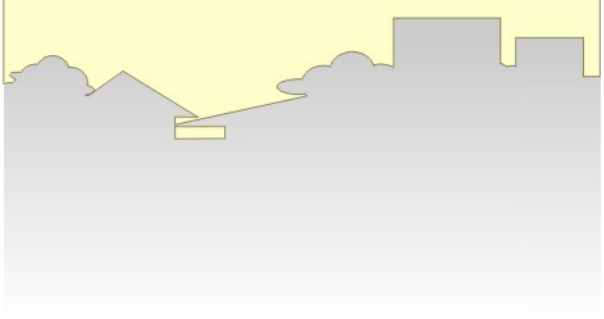
Part D

Environmental Requirements



Greater Taree
CITY COUNCIL

PART D ENVIRONMENTAL REQUIREMENTS

Contents

D1 Coastline management

About this part:

This part identifies land subject to development constraints within areas identified as having risks and hazards associated with coastal processes.

Applies to:

Land within the former Greater Taree Local Government Area identified as mapped in this part.

Date adopted by Council:

26 July 2017

Effective date:

2 August 2017

Related Policy / Technical Manual:

Manning Region Coastal Zone Management Plan July 2017

D1.1 River Street East, Cundletown

Introduction

Hazard mitigation works and structures include works such as revetments and rock fillets. Boating structures include development such as jetties and boat ramps.

Coastal foreshores, whether ocean, estuary, coastal lake, river or creek are subject to dynamic processes. Development along the foreshore can accelerate erosion of the foreshore and result in flooding. Protection of the coastal hazard areas aims to ensure protection of the coastal lands/ environment and of development in the vicinity.

Objective

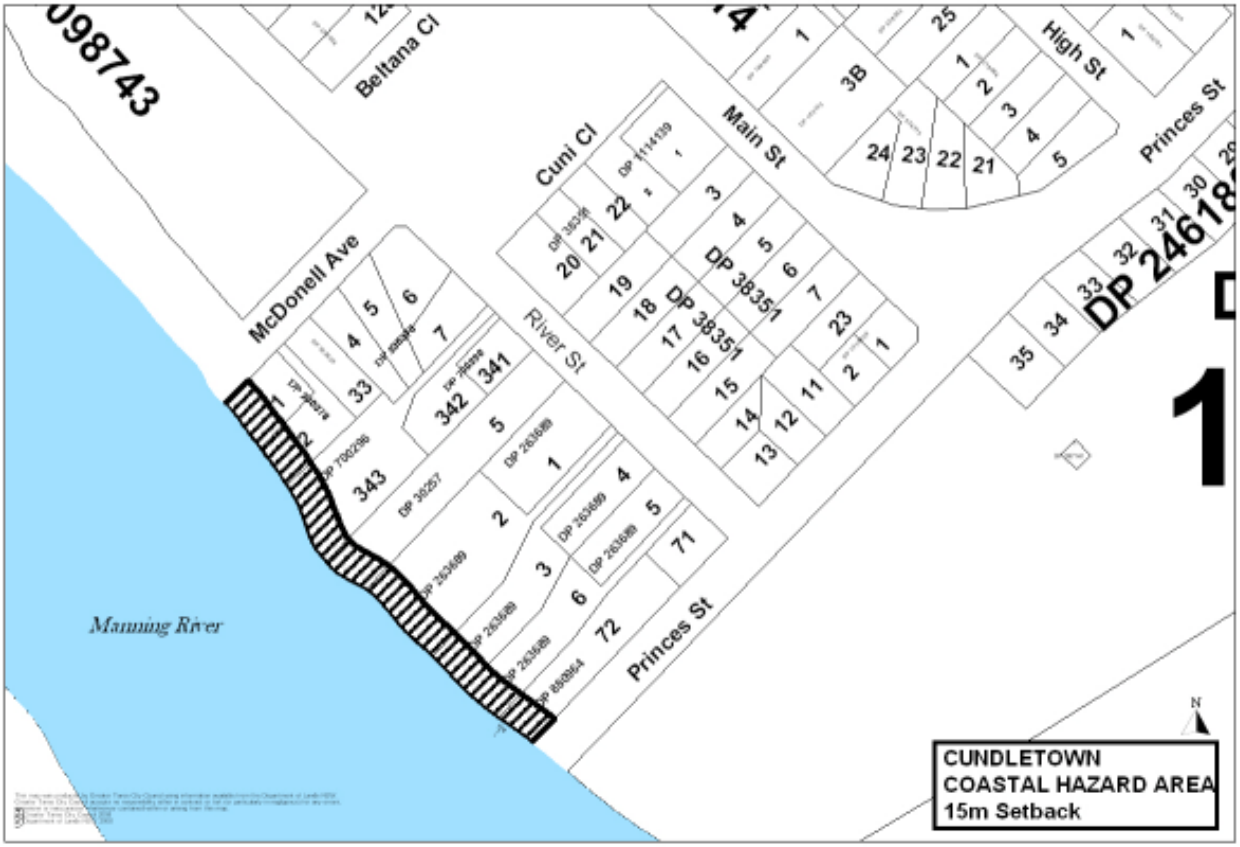
To minimise the construction of structures within areas affected by erosion.

Performance criteria

Where a setback is identified for a 'Coastal Hazard Area', development will not be permitted within this setback with the exception of hazard mitigation works and structures or boating structures.

Land affected by the part

The requirements of this part apply to land as identified in the following Map 1.



Map 1: River Street East Coastal Zone Hazard Area Setback

D1.2 Manning coastline (excluding Old Bar to Manning Point)

Introduction

For the purposes of assessment, the design life of any building or structure is taken to be 50 years, in accordance with the Building Code of Australia and Australian Standard 2870-2011.

The Coastal Planning Area, as depicted on Maps 2 – 7, can be affected by coastal processes such as erosion and wave run-up usually experienced during storm events or king tides. Climate change factors such as sea level rise are likely to exacerbate these risks in the future.

Development proposed landward of the Coastal Planning Area is not affected by D1.2.

Objectives

- To ensure that development is designed and located in response to potential coastal hazards and does not adversely impact neighbouring properties or public land.
- To ensure that development, where possible, avoids the need for physical structures or emergency works to protect the development from potential damage caused by coastal hazards.

The **Coastal Planning Area** is shown on the maps in D1.2 and represents the projected 2060 year coastal hazard line from the Manning Valley Coastal Zone Management Plan July 2017 with the addition of the area affected by the **Zone of Reduced Foundation Capacity** *** (ZRFC).

The stability of structures may be affected within the ZRFC.

Performance criteria

Subdivision:

1. All proposed allotments are to include a nominated building envelope that is located outside of the Coastal Planning Area.
2. Public services and infrastructure including sewer, water, drainage, electricity and roads are to be located outside of the Coastal Planning Area and landward of any building envelope.

New buildings:

Checklist - what do I need to address in the Coastal Risk Management Report* for my new building?

Key Question:	No	Yes
Is the new building proposed in the Coastal Planning Area	A report is not required for the new building - see item 1 below	A report certifying the building is required - see item 2 below
Is the primary road access located in the Coastal Planning Area	A report is not required for the road access	A report may be required on the road access - see item 3 below
Are the service connection points located in the Coastal Planning Area	A report is not required for the service connection points	A report may be required on the service connections - see item 4 below

1. Location - new buildings are to be located entirely outside of the Coastal Planning Area wherever possible. If this can be achieved, a report by a coastal engineer** certifying the structure is not required.

2. Construction –
    a) New buildings within the Coastal Planning Area (in whole or part) must be accompanied by a Coastal Risk Management Report from a coastal engineer to certify that:
        i. the foundations and footings of the building are designed to achieve safe bearing into the stable foundation zone***; and
        ii. the building has been designed with a minimum habitable floor level that provides adequate protection from inundation by ocean wave run-up;

        OR

    b) An alternative method to address coastal hazards is to propose development that is able to be relocated, modified or easily removed when the risk becomes unacceptable. Such development requires certification from an engineer that the structure meets these functions and details of how it can be removed from the land or modified if/when required.

Ocean wave run-up refers to the height above ocean levels (including tide and storm surge) reached by the waves along our beaches.

3. Access –
    a) New buildings on properties where the primary road access is located within the Coastal Planning Area (in whole or part) are to be designed so that that driveway access to the building:
        i. is provided outside of the Coastal Planning Area wherever possible; and
        ii. access is not located between the building and the Coastal Planning Area if an alternative location is available; and
        iii. is provided from the secondary road frontage on a corner allotment;

        OR

    b) Where access cannot be designed to meet one of the above requirements, evidence is to be submitted that the occupants of the dwelling can evacuate the property if the road access or driveway is damaged as a result of a coastal hazard.
4. Services - new buildings are to be designed so that new connections to public services and infrastructure such as sewer, water, drainage and electricity:
    a) are located outside of the Coastal Planning Area wherever possible; and
    b) are not located between the building and the Coastal Planning Area if an alternative connection point is available.

Additions and alterations:

Checklist - do I need to provide a Coastal Risk Management Report with my additions and alterations?

Key Question:	**No**	**Yes**
Is my addition within the Coastal Planning Area?	A report is not required - see item 1 below	A report is required - see item 2 below
Are my building alterations within the Coastal Planning Area	A report is not required - see item 1 below	A report is required - see item 3 below

1. Additions and alterations - are to be located entirely outside of the Coastal Planning Area wherever possible. If this can be achieved, a report by a coastal engineer certifying the structure is not required.

2. Additions - that are proposed within the Coastal Planning Area (in whole or part), are:
    a) to be accompanied by a Coastal Risk Management Report from a coastal engineer to certify that the foundations are designed to ensure safe bearing into the stable foundation zone;

    OR

    b) an alternative method to address coastal hazards is to propose development that is able to be relocated, modified or easily removed when the risk becomes unacceptable. Such development requires certification from an engineer that the structure meets these functions and details of how it can be removed from the land or modified if/when required.

3. Alterations - to a building within the Coastal Planning Area (in whole or part), other than those permitted as exempt development, are to be:
    a) accompanied by a Coastal Risk Management Report from a coastal engineer to certify that:
        i. the alterations do not place any additional load on the existing footings of the building; or
        ii. the existing foundations are capable of carrying the additional load and provide safe bearing into the stable foundation zone; or
        iii. additional foundations have been designed to carry the additional load and will ensure safe bearing into the stable foundation zone.

    OR

    b) an alternative method to address coastal hazards is to propose development that is able to be relocated, modified or easily removed when the risk becomes unacceptable. Such development requires certification from an engineer that the structure meets these functions and details of how it can be removed from the land or modified if/when required.

Ancillary structures:

Checklist - do I need to provide a Coastal Risk Management Report with my ancillary structures?

Key Question:	**No**	**Yes**
Are masonry structures proposed in the Coastal Planning Area	A report is not required	A report is required - see item 3 below
Are coastal protection works proposed in the Coastal Planning Area	Not applicable	A report is required - see item 4 below

1. Location - ancillary structures are to be located entirely outside of the Coastal Planning Area wherever possible. If this can be achieved a report by a coastal engineer, certifying the structure, is not required.

2. Lightweight structures - such as sheet metal garden sheds and detached timber pergolas do not require a report from a coastal engineer certifying the structure.

3. Masonry structures - such as swimming pools and retaining walls are permitted within the Coastal Planning Area if they are accompanied by a Coastal Risk Management Report from a coastal engineer to certify that the structure is designed:
    a) so that it is structurally separate from existing building/s; and
    b) to ensure safe bearing into the stable foundation zone.

4. Coastal erosion protection structures - must be accompanied by a Coastal Risk Management Report from a coastal engineer to certify that the structure is designed and located wholly on private land and must not cause damage to, or otherwise adversely impact, an adjacent, neighbouring or public property.

Note:

* A report from a coastal engineer is a Coastal Risk Management Report that addresses the proposed development in relation to the *Coastal Risk Management Guide - Incorporating sea level rise benchmarks in coastal risk assessments* (2010), produced by the NSW Office of Environment and Heritage and available at: www.environment.nsw.gov.au/resources/water/coasts/10760CoastRiskManGde.pdf

** Certain applications for development within the Coastal Planning Area must be accompanied by a report from a coastal engineer certifying the structure. A 'coastal engineer' is a suitably qualified and registered engineer with specialist experience in geotechnical and/or coastal marine processes.

*** For the purposes of this DCP the ***stable foundation zone*** is to be regarded as natural dune material occurring ***landward and/or below*** the ***zone of reduced foundation capacity*** as defined in the Coastal Risk Management Guide. A copy of the Guide is available at: www.environment.nsw.gov.au/resources/water/coasts/10760CoastRiskManGde.pdf

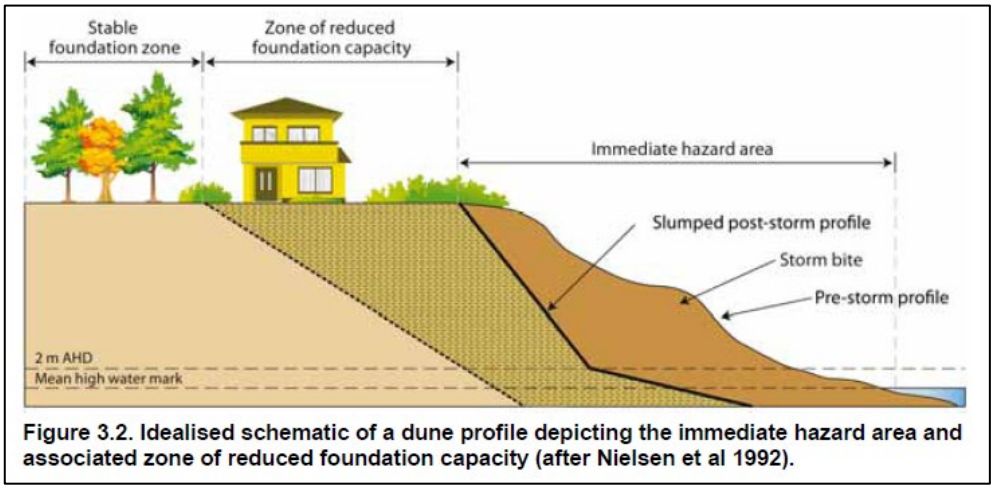


Figure 3.2. Idealised schematic of a dune profile depicting the immediate hazard area and associated zone of reduced foundation capacity (after Nielsen et al 1992).

Figure 1: Diagram from NSW Office of Environment & Heritage *Coastal Risk Management Guide* (2010)

Additional information can be found at the following links:

http://www.environment.nsw.gov.au/resources/water/coasts/10760CoastRiskManGde.pdf

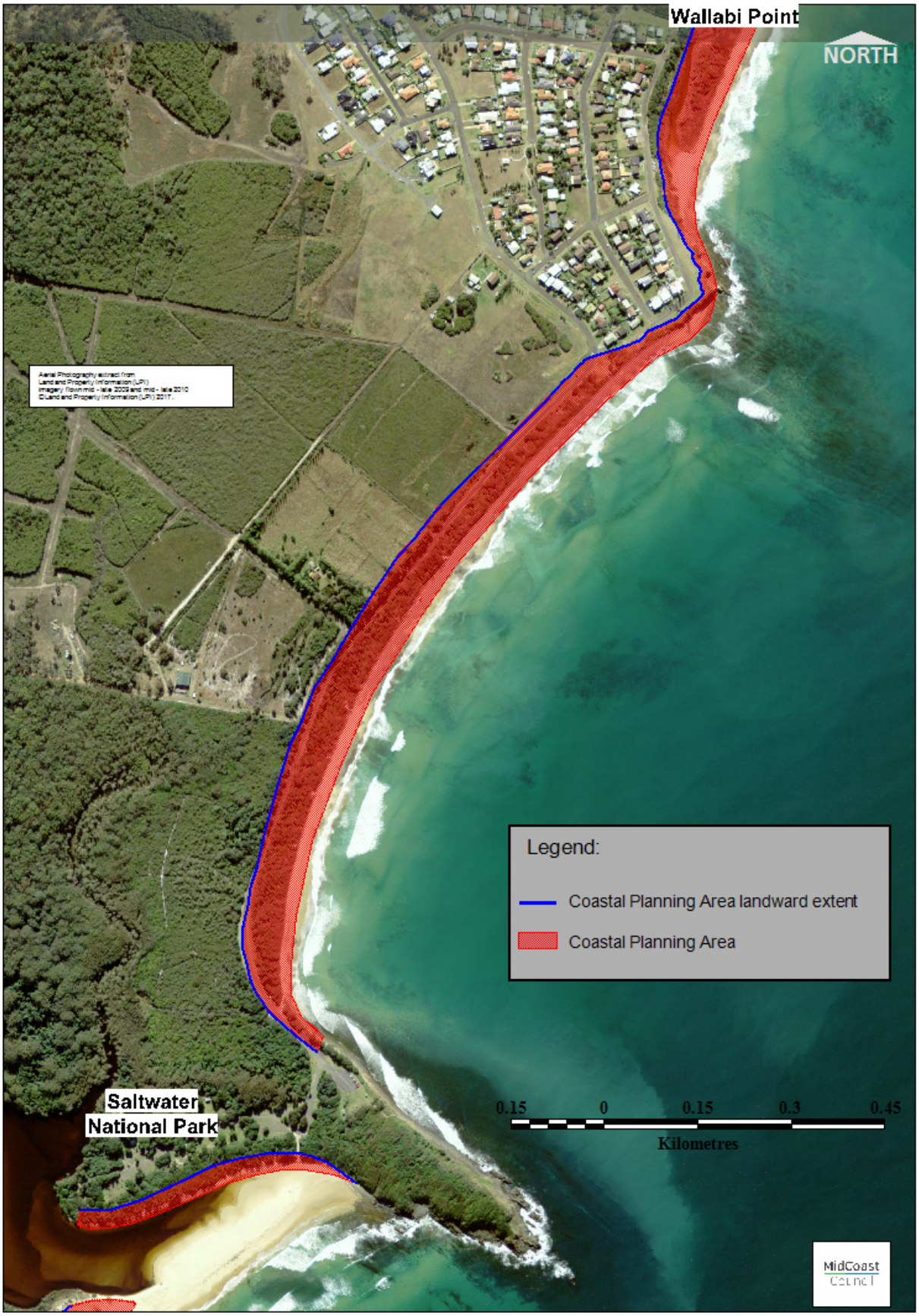
http://www.environment.gov.au/archive/coasts/publications/nswmanual/index.html

http://www.legislation.nsw.gov.au/maintop/view/inforce/epi+572+2008+cd+0+N

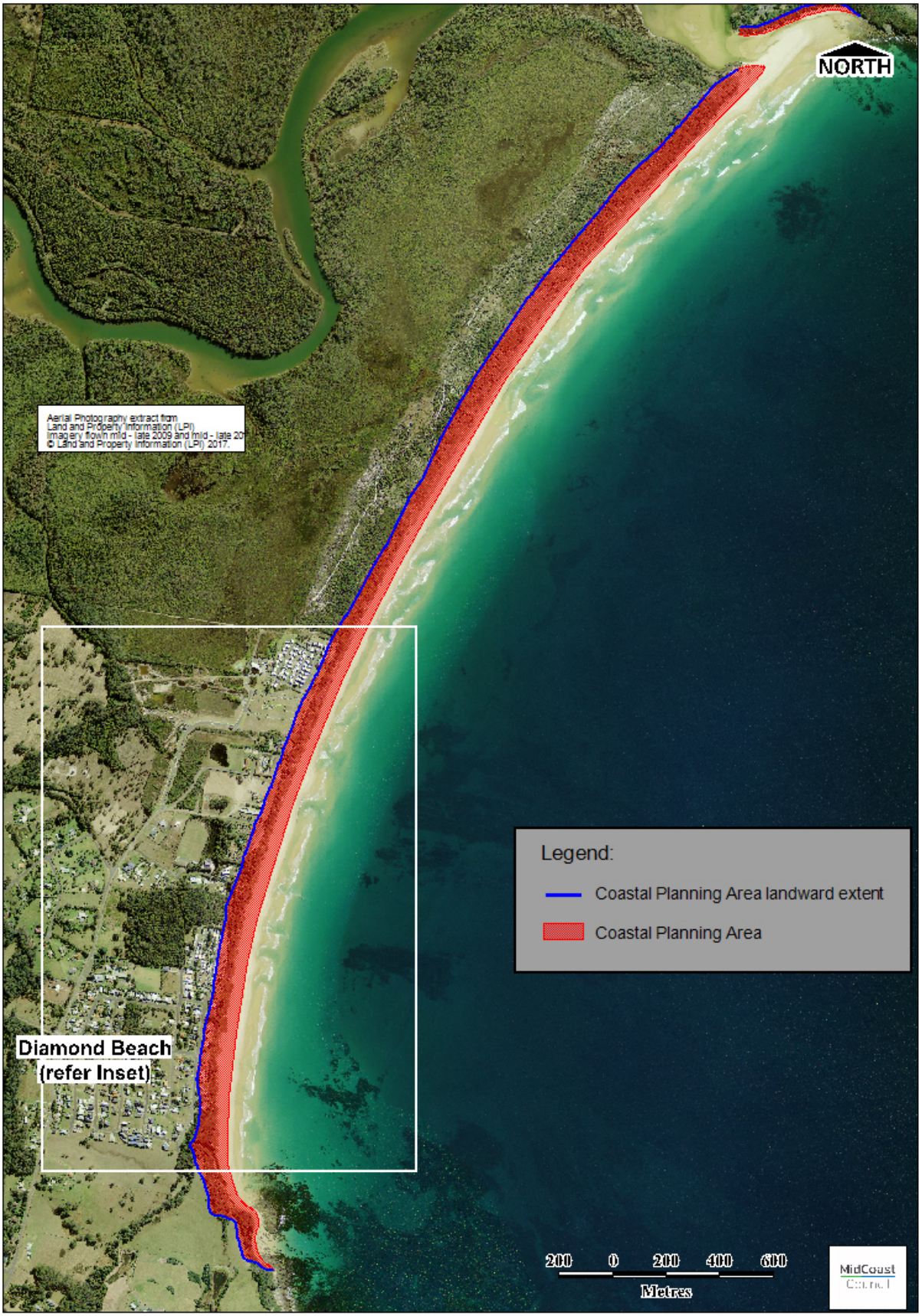
Land affected by the part

The requirements for this part apply to land as identified on the following maps as the Coastal Planning Area.

Map 2: Harrington to Crowdy Head



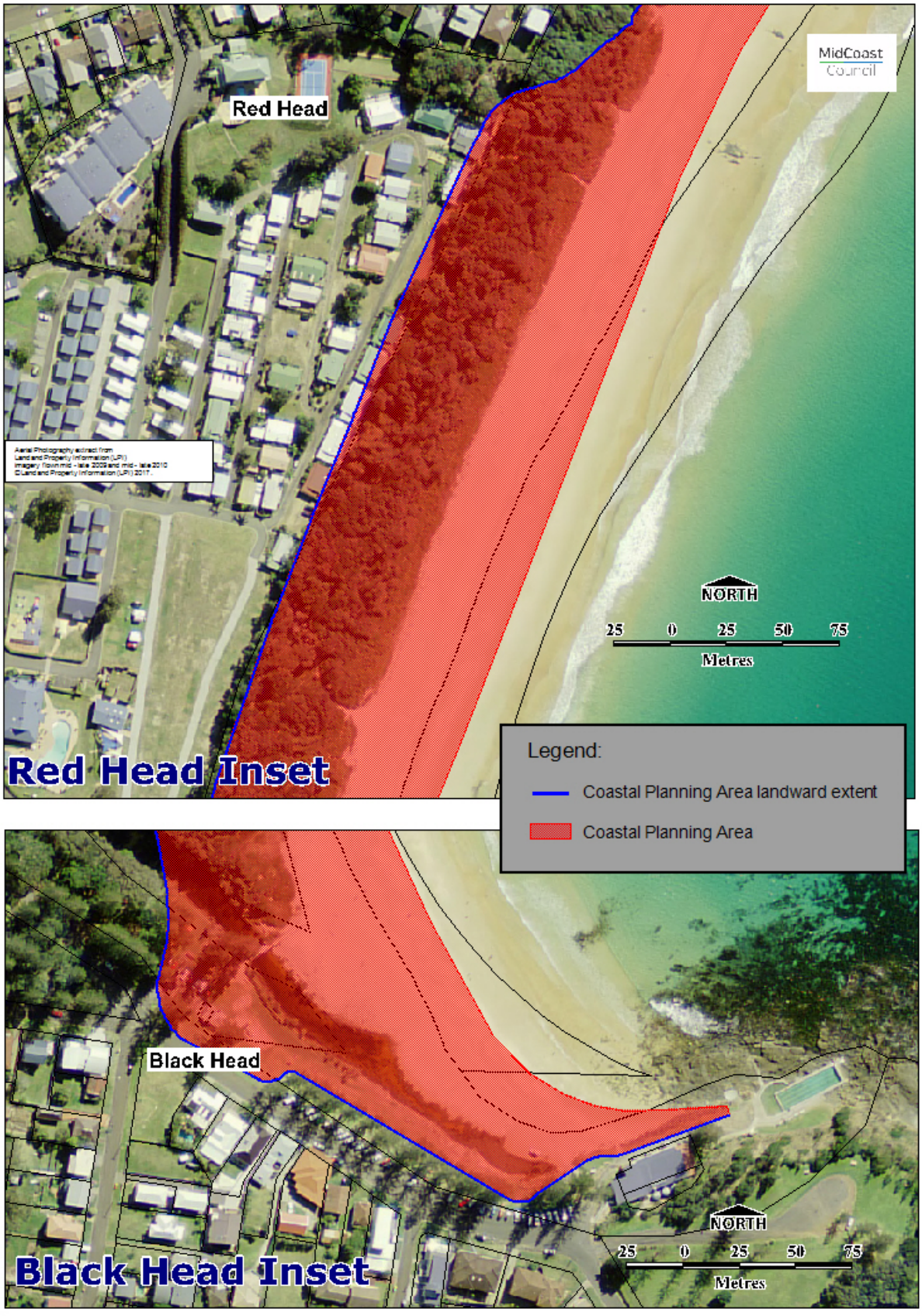
Map 3: Saltwater to Wallabi Point



Map 4: Diamond Beach to Saltwater

Map 5: Diamond Beach Inset

Map 6: Black Head to Red Head



Map 7: Black Head and Red Head Insets

D1.3 Old Bar to Manning Point

Introduction

This area is an actively eroding coastline which is likely to experience continued beach erosion, particularly during storm events. Climate change impacts such as anticipated sea level rise is likely to exacerbate this situation.

For the purposes of coastal management these areas have been mapped and development controls identified to manage the risk posed from building in these areas. It is also important to have the landowners accept that this risk could mean the eventual removal of these structures from the land.

Development proposed landward of the Coastal Hazard Line is not affected by D1.3.

Objectives

- To ensure that development is designed and located in response to potential coastal hazards and does not adversely impact neighbouring properties or public land.
- To allow development, despite coastal hazards, where risks associated with these hazards are accepted.

Performance criteria

Development seaward of the Immediate Hazard Line

Government agencies can undertake construction in this area, as permitted under relevant legislation.

i. Construction of structures is to occur landward of this line.
ii. Coastal management measures can be undertaken in this area (e.g. sand replenishment and revetments) as long as they do not unreasonably affect neighbouring properties or public land and have mechanisms in place for the maintenance or removal of these following storm events.
iii. Subdivision in this area shall not result in the creation of additional development lots.

Note: The Immediate Hazard Line is shown on the maps later in this part. The line represents the landward extent of foreshore erosion that could occur in very large storms, such as those experienced in the early 1970s along the NSW coastline. Development should be avoided in this area.

Development between the Coastal Hazard Line and the Immediate Hazard Line

A **Risk Management Plan** must be submitted for all development within this area.

1. All development applications must be accompanied by a Risk Management Plan that demonstrates that the landowner is aware of the risks applicable to the land. The complexity of the Risk Management Plan will be dependent on the size and location of the development. The Risk Management Plan must include:
   a) An acknowledgement of the risk of developing in this area.
   b) Details indicating how the identified risks will be managed [this could be as simple as detailing how the structure can be demolished or removed in the future].
   c) If the development is of a scale that has the potential to generate offsite impacts, evidence of how these impacts have been considered and addressed.
2. Subdivision in this area shall not result in the creation of additional development lots.

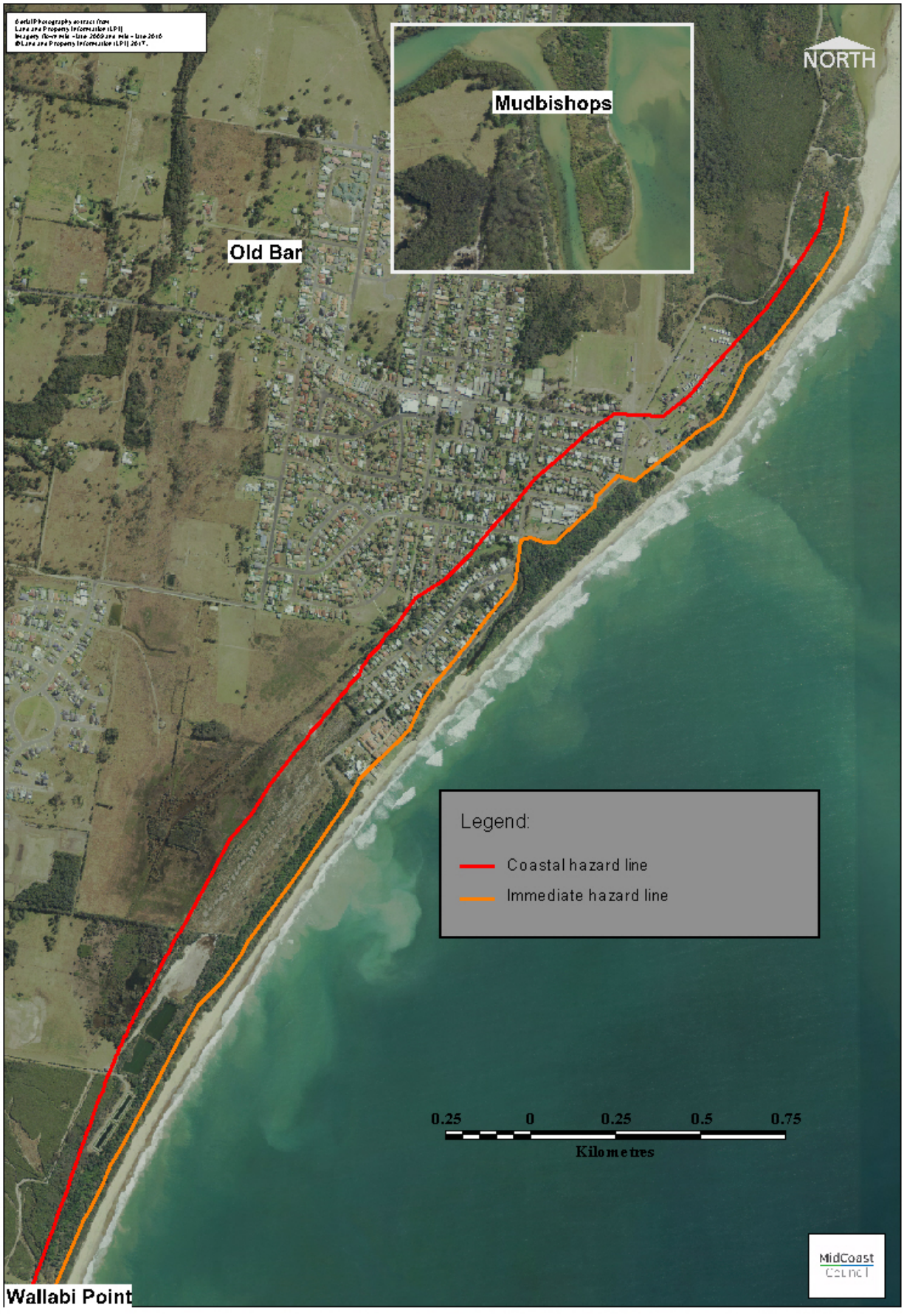
Definitions:
1. **Coastal Hazard Line** – the area of land which may be affected by coastal hazards that would impact upon the structural integrity of a building or development.
2. **Immediate Hazard Line** – landward extent of the foreshore potentially lost during a major storm event.

Note:
1. By developing in this area, landowners accept that they may ultimately have to demolish or remove the structure if the coastline continues to recede.
2. For development landward of this area no development controls apply from this part.
3. Any consent for development in this area will have a condition imposed pursuant to section 88E of the *Conveyancing Act 1919* imposing a public positive covenant that serves as a mechanism to link the approved Risk Management Plan outcomes to the land in perpetuity and additionally make future purchasers aware of the coastal risks to development constructed on this land [if structures are reassessed in the future as being landward of the Coastal Hazard Line, following a reassessment of the coastal erosion hazard, then this public positive covenant can be removed].

Land affected by the part

The requirements for this part apply to land as identified on the following maps.

Map 8: Farquhar Park to Manning Point



Map 9: Old Bar to Farquhar Inlet

Map 10: Old Bar Inset

D2 Environmental buffers

About this part:

This part identifies land subject to development constraints within identified buffer areas to sewerage treatment works, abattoirs, quarries, landfill sites and other uses with potential amenity impacts.

Applies to:

Land within the former Greater Taree Local Government Area identified as a buffer area in Map 2 and/or as described in the performance criteria in this part.

Date adopted by Council:

23 October 2019

Effective date:

6 November 2019

Related Policy / Technical Manual:

Department of Planning Circular No. E3 - Guidelines for Buffer Areas Around Sewage Treatment Plants.

Introduction

Buffer areas identify locations of potential landuse conflict. Council is required to responsibly manage development within areas affected by identified buffers to sewerage treatment works, abattoirs, quarries and other sites for a variety of impacts including noise, vibration and odour.

Objectives

- Limit new development in areas that might now or in the future be subject to impacts from sewerage treatment works, abattoirs quarries and landfill sites.
- To ensure a buffer is provided between residential development and agricultural or industrial activities so as to minimise the potential for land use conflict.

Performance criteria

For a development application for land within a buffer area, Council shall consider:

1. The environmental conditions within the buffer area and any hazards likely to be encountered by the proposed development.
2. The likely risks to persons proposing to reside or be employed in the proposed development.
3. The nature and intensity of the proposed development.
4. The likely influence of the proposed development on the continued operation or potential future of any development or activity within the buffer area.
5. Any development application or development over Lot 61 DP 1252146, Lot 54 DP 1042462, Lot 8 DP 1170882 and Lot 6 DP 833772 shall include a 50-metre wide buffer as defined by Map 2. A mechanism is to be implemented to ensure any habitable building cannot be built within the buffer. Along the southern residential zone edge, a road may be constructed in the part of the buffer zoned rural provided a mechanism is implemented to ensure any habitable building cannot be built within the buffer. If a road is not provided in the part of the buffer zoned rural then

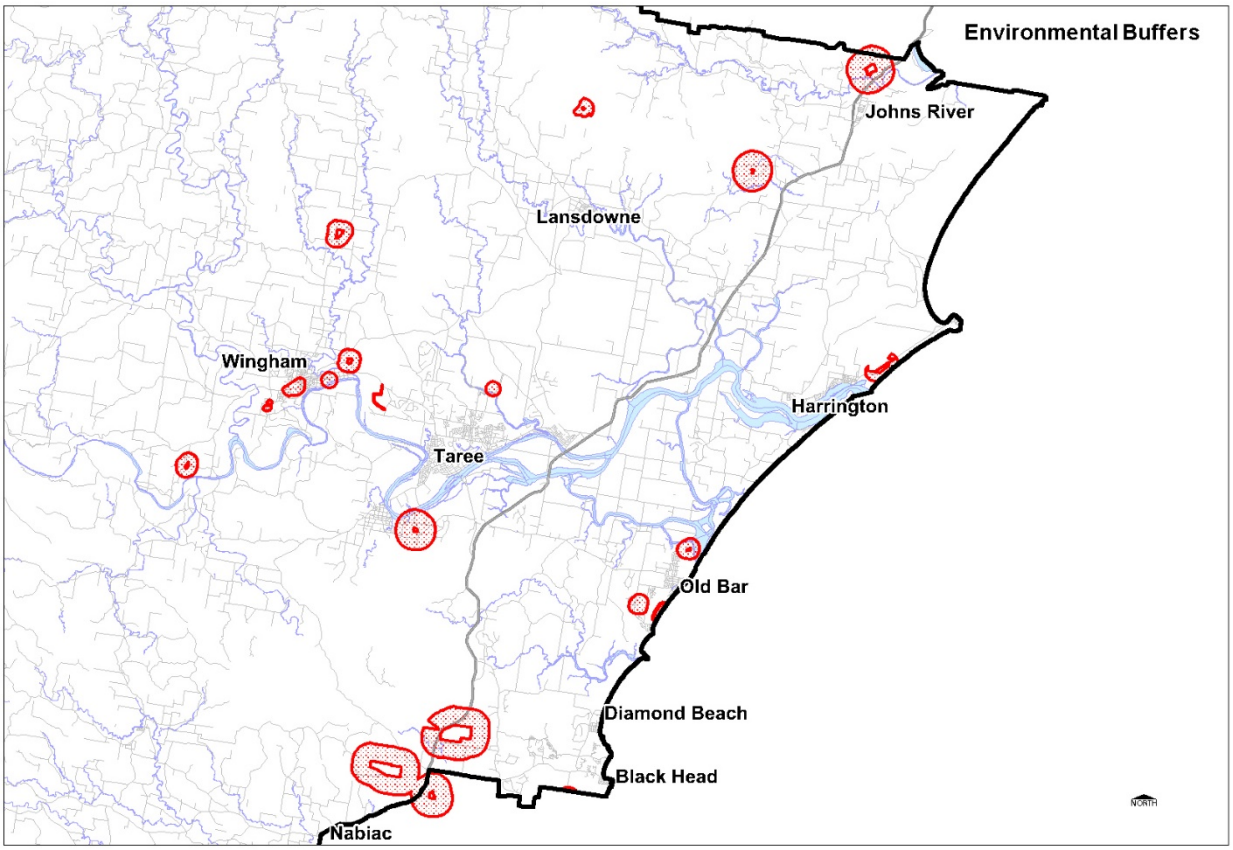
the 50m buffer is to extend north from the boundary of the residential zone.

6. That:
   a) any residential development on Lot 53 DP 1042462 and any development on Lot 54 DP 1042462 and Lot 61 DP 1252146 shall include sufficient setback that ensures no adverse impacts from nearby industrial uses; and
   b) any residential development on Lot 53 DP 1042462 and any development on Lot 54 DP 1042462 and Lot 61 DP 1252146 must not adversely impact the operations of any adjoining industrial uses by causing those currently compliant industrial uses to not comply (without significant amendment to their operations) with any statutory approvals, licences, conditions or the like that are in force for those industrial uses.

   These impacts are required to be demonstrated through certified air pollution, odour and noise reports.

Land affected by the part

The requirements of this part apply to land as identified in the following Map 2 – Environmental Buffers.



Map 2 – Environmental Buffers

D3 Earthworks, Erosion and Sedimentation

About this part:

This part provides the basic guidelines for earthworks and erosion and sediment control.

Applies to:

All applications for the placement of fill, building and road works, developments, subdivisions and activities which will or could involve:

- Disturbance of or placing of fill on the soil surface, and/or changes to the contours of the land;
- Change in the rate and/or volume of runoff flowing over land, or directly/indirectly entering receiving waters.

Related Policy/Technical Manual:

Greater Taree City Council's AUSPEC Guidelines 2nd Edition

Protection of the Environment Operations Act 1997

Managing Urban Stormwater- Soils and Construction Volume 1, 4th Edition (Landcom, 2004)

Managing Urban Stormwater- Soils and Construction Volume 2 A-E (Department of Environment and Climate Change NSW, 2008)

Note: Managing Urban Stormwater- Soils and Construction Volumes 1 and 2 A-E are referred to here on in as the Blue Book. Where there is an inconsistency between the Blue Book and the control measures specified in this Development Control Plan (DCP), the Blue Book will prevail to the extent of the inconsistency.

This section seeks to ensure that site planning for any proposed development takes into account the topography, geology and soils of the site and surrounding land. It also aims to minimise disturbance to existing landforms, costly earthworks and to protect existing and proposed development from becoming unstable.

This section applies to all land within Greater Taree LGA where any proposed development or land use involves the disturbance of the existing ground surface or placement of fill thereon, and/or result in changes to the shape of the land. While this will include the excavation and filling of land, it may also include significant landscaping works and topsoil stockpiling.

D3.1 Earthworks

Objectives

1. Minimise cut and fill through site sensitive subdivision, road layout, infrastructure and building design.
2. Sensitively locate dwellings to ensure minimisation of site works prior to construction of a dwelling.
3. Minimise additional earthworks of lots during the dwelling construction phase.
4. Allow land forming only where it enhances the use and character of land.
5. Ensure no adverse impact occurs to local drainage characteristics (including peak flows, velocity and depth of flow).
6. Ensure land forming operations do not silt or pollute waterways, drainage lines and wetlands, damage topography or adversely affect bushland.
7. Ensure land forming does not increase the potential for the inundation of water on any other land during the full range of flood events.
8. Ensure appropriate environmental controls are applied to conserve the landscape and protect the surrounding environment.
9. Establish, maintain and promote appropriate rehabilitation and revegetation techniques to ensure the future use of land is not adversely affected.
10. Protect and enhance the aesthetic quality and amenity of the area by controlling the form, bulk and scale of land forming operations to appropriate levels.
11. Ensure properties in the vicinity are not adversely affected by any earthwork operations during or post construction.
12. All retaining walls shall be constructed in a manner that is aesthetically compatible with the surrounding environment.

Performance Criteria

General

1. Subdivision and building work should be designed to respond to the natural topography of the site wherever possible, minimising the extent of cut and fill (i.e. for steep land houses will need to be of a split level design or an appropriate alternative and economical solution.)
2. Subdivision and building work shall be designed to ensure minimal cut and fill is required for its construction phase.

Cut and Fill and Retaining Walls – Residential Development

The following specific provisions apply to the development on rural or residential allotments only for the purposes of residential or ancillary development (as covered by Part H of the DCP).

1. The maximum amount of cut shall not exceed 1m. The maximum amount of fill shall not exceed 1m.
2. Fill within 2.0m of a property boundary shall be fully contained by the use of deepened (drop) edge beam construction with no fill permitted outside of this building footprint.
3. The use of a deepened edge beam shall not exceed 1m above natural ground level.
4. Where filling is required alongside a driveway, it shall be retained by a retaining wall.
5. Council will consider permitting greater cut for basement garages and split level designed development on steeply sloping sites.
6. All retaining walls proposed are to be identified in the development application. Excavations affecting adjoining properties are to be retained or shored immediately. All other approved retaining walls are to be in place prior to the issue of an occupation certificate.

Steep/Unstable Land

1. Development on land having a natural gradient of 1:6.7 (15%) or greater shall not be approved unless a geotechnical study, including guidelines for structural and engineering works on the land has been considered by Council.

Note: *Development on sites with a natural gradient of less than 15% may also require a geotechnical assessment depending upon site characteristics*

Use of Virgin Excavated Natural Material (VENM)

1. All land forming operations should involve the use of clean fill (also known as Virgin Excavated Natural Material or VENM). The VENM must also meet the same salinity characteristics of the receiving land. Council may consider alternatives to VENM on merit.

Note: *The Protection of the Environment Operations Act defines VENM as:*
"Natural material (such as clay, gravel, sand, soil or rock fines):

a. *that have been excavated or quarried from areas that are not contaminated with manufactured chemicals or process residues, as a result of industrial, commercial, mining or agricultural activities, and*
b. *that does not contain any sulfidic ores or soils or any other waste."*

Development applications which involve earthworks must be accompanied by supporting information which addresses some or all of the following issues subject to the scope and extent of the proposed earthworks:

Land

1. soil conservation;
2. landfill stability (geo-technical specification and supervision, batter slopes, compaction and treatment, and surface and subsoil drainage);
3. fill, depth, volume and quality (consolidation, leachate and stability);
4. surface levels, treatment and landscaping;
5. if there is existing unauthorised fill, a report on possible land contamination, fill quality, leachate and other detail; and
6. pre and post-development land use.

Water

1. location of watercourses and/or wetlands on the site and adjoining land and the distance between such watercourses/wetlands and the proposed land forming operation;
2. stormwater management;
3. pre and post-development flood levels and velocities;
4. stormwater pollution control;
5. easements required over channels/floodways and detention structures;
6. sullage;
7. leachate;
8. the depth of groundwater from the surface;
9. the quality of local groundwater;
10. the location of groundwater users in the area and the beneficial use of groundwater; and
11. compliance with Protection of the Environment Operations Act.

Rehabilitation (including sites where material is sourced)

1. Soil testing which identifies any soil related issues on the site e.g. potential acid sulphate soils (which may have been transported to the site and used as landfill), structural stability, plant nutrient requirements and any other plant growth limiting factors.
2. Rehabilitation/revegetation techniques must include the following:
   - land management controls;
   - water management controls;
   - rectification works; and
   - earthworks staging plan.
3. Preparation of a landscaping plan prepared by a suitably qualified person which addresses the following:

   final land use;
   - vegetation to be retained and removed and rehabilitated;
   - site stabilisation proposed;
   - weed control programs to be employed; and
   - plant details (type, number, location, staking, common and botanical names and maturity details).
4. Species used in revegetation should be selected to achieve short, medium and long term soil stability and include a diversity of endemic species of local provenance.
5. Revegetation techniques may not be required for all development applications it will be dependent on site constraints.

D3.2 Erosion and sediment control requirements

Objectives

1. Avoid soil erosion through the use of effective erosion and sediment control measures both during and following any works.
2. Reduce pollution by avoiding land degradation and disturbance of vegetation on site, hence reducing pollution impact to downstream areas and receiving waters and their ecosystem.
3. Minimise costs involved in unblocking drains and water bodies, cleaning of roads and compensating for the loss of topsoil through improved sedimentation and erosion control.
4. Improve water quality by reducing sedimentation
5. Ensure dust generation is minimised.

Performance criteria

1. All development shall incorporate soil conservation measures to control soil erosion and siltation during and following completion of development.
2. An Erosion and Sediment Control Plan must be lodged with every development application. This must be prepared in accordance with the Managing Urban Stormwater – Soils and Construction, Landcom (*The Blue Book*) and Council's Engineering Specifications. The Plan is to provide appropriate erosion and sediment controls to cover the period during and after construction.
3. The standard ESCP is to identify the erosion and sediment control measures required for the site. The following information is required as a minimum in a standard ESCP:
    a. Locality details (address, lot number, etc.),
    b. North point and scale,
    c. Property boundaries and adjoining roads,
    d. Existing land contours,
    e. Location of existing trees and vegetation,
    f. Location of existing significant landscape features,
    g. Existing watercourses and drains flowing through and/or adjacent to the site,
    h. Outline of proposed building/structures and disturbed areas,
    i. Proposed vehicular access,
    j. Extent of vegetation to be cleared,
    k. Extent of earthworks and limits of cut and fill,
    l. Location of proposed stockpiles,
    m. Location of proposed temporary and permanent site drainage,
    n. Location of proposed temporary erosion and sediment control measures,
    o. Location of temporary and permanent revegetation areas,
    p. An explanation of any changes to the erosion and sediment controls as the works proceed,
    q. Supplementary notes covering inspection and maintenance requirements.

4. Additional information is required for large or complex developments. The detailed ESCP is to provide more detailed consideration and is to be prepared in accordance with the *Blue Book*. The *Blue Book* states that an ESCP should comprise of a set of drawings showing the proposed site controls and a narrative describing how erosion and sediment control will be achieved on site. The narrative should also include proposed measures for ongoing maintenance of the installed controls. In addition to the information required for a Standard ESCP, the Detailed ESCP should include:
    a. Soil classification and statement regarding erosion hazard and soil erodibility,
    b. Site access and site management through the various stages of the work,
    c. The nature and extent of regrading and filling,
    d. Locations where ground cover will be maintained as 'no access' areas,
    e. Topsoil storage, protection and re-use methodologies,
    f. Catchment area and runoff calculations,
    g. Details of the diversion of stormwater from upslope areas around disturbed areas,
    h. Site rehabilitation including schedules and revegetation programs,
    i. The frequency and nature of maintenance activities recommended,
    j. Symbols key/legend,
    k. Standard notes.
5. All disturbed areas shall be progressively rehabilitated.
6. The Plan must demonstrate that re-use of the existing soil material on the site has been implemented as far as possible.
7. All sediment and erosion controls proposed by the Plan are to be installed prior to the commencement of any construction works and appropriately maintained from the construction to stabilisation phase.
8. Appropriate dust suppression measures must be implemented during all construction works.

Soil and Water Management Plan Requirements

1. SWMP's (Soil and Water Management Plan) will include detailed calculations to determine the soil loss and the size of any sediment basins that may be required on the site. In addition to the information required for an ESCP, a SWMP should include:
    a. The location of lots, public open space, stormwater drainage systems, schools, shopping centres/community centres (if nearby),
    b. The location of land designated or zoned for special uses,
    c. Location and diagrams of all erosion and sediment controls used on site,
    d. Locations, calculations and engineering details of any sediment basins,
    e. Location and details of other stormwater management structures such as; constructed wetlands, gross pollutant traps, trash racks or separators.

General requirements:

1. The development must ensure minimal potential or actual soil erosion through design, construction and operational controls. Controls are to prevent the export of sediment whether as windblown or by sediment laden stormwater discharges and restrict stormwater flow over exposed areas during construction and related activities.
2. Minimise the extent of soil disturbance by retaining vegetation and reducing the need for earthworks.
3. Requirements for Erosion and Sediment Control are derived from the *Blue Book*; however the following bullet points provide guidance on clearing and earthworks, drainage, erosion and sediment control devices, site access, topsoil and stockpiles, and stabilisation and rehabilitation.

Clearing and earthworks:

1. ESCPs will show the extent of land disturbance and identify vegetation to be retained,
2. Disturbance to vegetation and land will be minimised. Site excavations will be designed and located to minimise cut and fill requirements,
3. Site disturbance will be minimised by scheduling works so that one phase of work is completed and rehabilitated before commencement of another,
4. Protection barrier fencing will be installed to avoid disturbance or damage to stabilised or sensitive areas,
5. Earthworks must not commence before all ESCPs have been prepared and submitted, and required erosion and sediment control measures are installed.

Drainage:

1. All upslope run-off will be intercepted above the site and diverted around all areas to be disturbed using diversion drains, earth banks, sediment fence or sandbags,
2. Diversion drains will be made erosion proof by stabilising and bare soil should discharge safely to a sediment control structure or turfed/stabilised area,
3. Where an open drain or watercourse flows through the construction site, measures such as sandbags should be installed to decrease flow velocities and prevent sediment materials entering waters,
4. For building works, all roof guttering and downpipes will be installed and connected to an approved drainage system immediately after fixing roof material. Where stormwater management is not immediately available, downpipes should discharge away from the building site onto a stabilised area (i.e. geo-textile sheet) within the property boundary.

Site access:

1. Vehicular access to the site will be restricted to a single, well defined, all-weather access consisting of 40mm aggregate. The access location must be shown on the site plan and clearly marked out on the site using boundary markers or similar,
2. Vehicular access must be controlled to prevent sediment being tracked onto adjoining land and roads. Aggregate and sediment deposited on sealed roads should be thoroughly swept and removed to prevent this material entering the drainage system,
3. Vehicular operation within the construction site should be limited to approved areas by placement of operational boundary markers or similar,
4. Materials must not be placed in the gutter to provide access to the site.

Topsoil and stockpiles:

1. Topsoil is the best growing medium for revegetation as it contains seeds of endemic species, nutrients and organic matter essential for plant growth. It will be stripped and saved before disturbance of the work area commences, in order to maintain the viability of seed that may be stored in the soil. Topsoil stockpiles should not exceed 2m in height. Topsoil should be respread on the site as soon as practical after completion of works.
2. Stockpiles of erodible building materials or soils will not be located on a nature strip, footpath, roadway, kerb, access, reserve or watercourse without Council approval,
3. Sediment fences will be placed around stockpiles. The placement of vegetation and/or turf next to stockpiles may also reduce run-off from those stockpiles. Coverage of stockpiles with plastic or geo-textile may also be required to prevent wind erosion,
4. Stockpiled material that is scheduled to remain undisturbed for more than 14 days will be covered and stabilised to avoid erosion at the location of placement,
5. Any stockpiled or unwanted spoil remaining on site will be removed on completion of works.

Stabilisation and rehabilitation:

1. Soil stabilisation is to provide a protective cover to the soil to reduce the erosive effects of wind, rain and overland flows. Native vegetation is the most effective protective cover, but other covers including mulching, hydro-mulching, erosion matting, native turfing and chemical binders may also be used,
2. All disturbed areas should be progressively stabilised as soon as practical after completion of each stage of works,
3. Topsoil should be re-spread on site and vegetation should be reused where possible,
4. Use of vegetated terraces and/or turf strips along embankments may provide quick stabilisation for those areas,
5. All erosion and sediment control devices should be kept in place until the site is full stabilised,
6. A new area of disturbance should not be commenced until the stabilisation works for the currently disturbed areas is complete.

Erosion and sediment control devices:

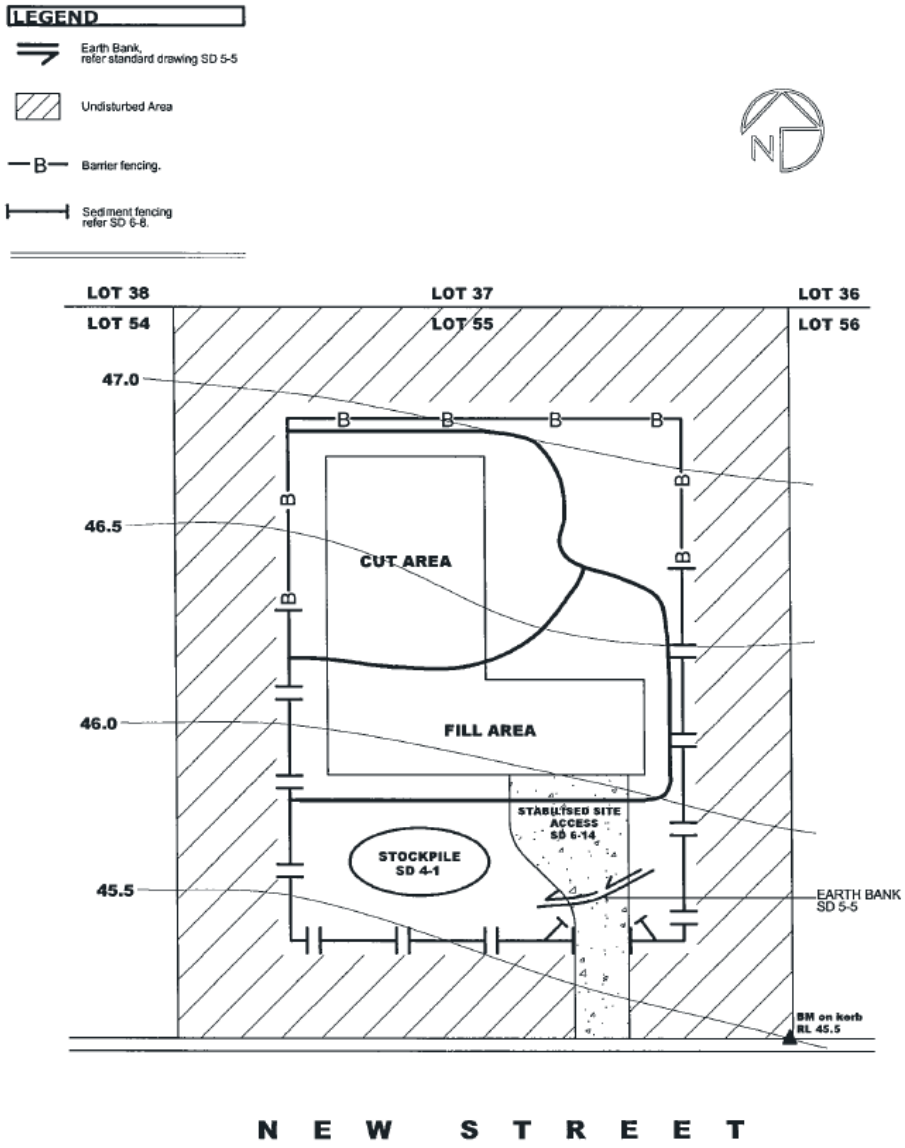
A number of options are available to prevent erosion and control sedimentation. Correct installation and the full suite of options available are outlined in the *Blue Book*.

Examples of erosion and sediment control devices include but are not limited to:

- Sediment fences or similar trapping measures are to be properly installed within the property boundary and down slope of any cleared and/or disturbed area. Sediment fences are to be used in preference to straw bales,
- Silt sausages or silt bags are to be placed across open drains and around drainage inlet pits, pipe head walls and kerb inlets to reduce flow velocities and capture sediment,
- Jute mesh fabric is to be pinned to steep slopes and steep slope drains to prevent erosion during heavy rain periods,
- A turf filter strip is to be laid and maintained along the down slope boundary, or adjacent to the kerb and gutter, to act as a final filter for any run-off leaving the property,
- Sediment traps are small dams designed to hold water and allow sediment to settle before discharge to waterways. Sediment traps are used where water flows have been concentrated, such as in drainage lines and gutters. They may be constructed from a range of materials including geo-textile, gravel, gabion or sandbags.

Standard ESCP example:

The below ESCP is extracted from the *Blue Book* and is an example of a standard ESCP. Examples of other erosion and sediment control plans and SWMPs are available in the *Blue Book*.



D4 Vegetation Management

About this part:

This DCP chapter facilitates the implementation of the MidCoast Vegetation Management Policy.

Applies to:

This DCP chapter applies to private land identified by the mapping referenced in the MidCoast Vegetation Management Policy.

Date adopted by Council:

28 July 2021

Effective date:

30 September 2021

Related Policy / Technical Manual:

Vegetation Management Policy

D4.1 Vegetation Management

Introduction

The MidCoast Vegetation Management Policy has been prepared pursuant to Part 3 of the *State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017* (the SEPP). This DCP chapter facilitates the implementation of the MidCoast Vegetation Management Policy (the Policy).

The Policy and this DCP chapter help to achieve the aims of the SEPP to protect the biodiversity values and to preserve the amenity through the preservation of trees and vegetation.

Objective

The objective is to identify vegetation for protection for the purposes of the *State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017* and to provide a trigger for assessment under the Vegetation Management Policy.

Controls

1. Removal or pruning of vegetation on land to which the *State Environmental Planning Policy (Vegetation in Non-Rural Areas) 2017* applies, must comply with the process outlined in the Vegetation Management Policy.