



# Site Management Plan

**Tura Head Coastal Reserve (The Point) and  
Dolphin Cove Reserve**

**October 2019**



## Document Control

Rev No	Date	Revision Details	Author	Reviewer	Approver
1	28/02/2018	Original published	A Morrison	J Grady	A Basford
2	18/09/2019	Draft revised reported to Council (Updated Maps, CI resolution items, meeting records)	J Grady		A McMahon
3	30/10/2019	Report to and adopted by Council (revisions post feedback on draft D19/84743)	J Grady	A McMahon	BVS Council
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## Introduction

This plan has been developed taking into consideration:

- results of community engagement (drop-in session, workshop and online survey)
- submissions from two local community groups
- the range of values present at the site

In addition, independent expert advice has been sought by council regarding the appropriate management of cultural heritage and environmental values present on the site.

Furthermore, several draft versions of the plan have been refined through working with community groups and Council to move towards a plan that achieves a balance between competing priorities.

## Purpose

This Site Management Plan (SMP) aims to provide a clear direction for management, operations and maintenance of Tura Head Coastal Reserve (adjacent to The Point) and Dolphin Cove Reserve. The SMP provides site specific management actions, informed by overarching policy documents such as Council's *Community Land - Generic Plan of Management* (refer to Legal/Policy section below) and directions from the Council resolution (refer to Appendix I).

The SMP addresses community needs while ensuring compliance with legal responsibilities, and that works are consistent with council policies and procedures. A key element of the SMP is to identify tasks and service frequencies and to best align these to the resources, interests and capacity of those with an interest in managing the site.

This plan includes:

- Site Development works (Attachment A). These works will provide additional or upgraded assets in the reserve.
- Site Operations and Maintenance tasks (Attachment B). These works ensure existing assets are 'fit for purpose' into the future.
- BVSC Bushfire hazard reduction works map (Attachment C).
- Advice on the management of the site regarding threatened Long-nosed Potoroo habitat from the NSW Office of Environment and Heritage (Attachment D).
- Expert botanical advice on vegetation management issues/considerations of the site (Attachment E), species selection for revegetation (Attachment F) and invasive species requiring management (Attachment G).
- A vegetation species list for the site (Attachment H).

Other relevant documents:

- BVSC Community Land - Generic Plan of Management
- Bega Valley Local Environmental Plan (BVLEP 2013)
- The Vegetation of 'The Point' Reserve at Dolphin Cove and adjacent areas (Cameron 2018)
- Beaches of the NSW Coast (Short 2006)
- Leisure and Recreation Asset Management Plan (2017)
- BVSC Specification – Paths and Trails
- BVSC Specification – Vegetation
- BVSC Bushfire Risk Management Plan

## About Tura Head Coastal Reserve, The Point and Dolphin Cove Reserve Location

The area covered by this SMP is shown in Figure 1. It includes areas of two Council reserves, Tura Head Coastal Reserve and Dolphin Cove Reserve, separated by a drainage line/creek that discharges onto North Tura Beach.



**Figure 1** Area covered by the SMP (pink polygon)

## Legal/Policy framework

The information below provides an overview of the legislation that informs management of the site. In short, works and development on the site cannot conflict with the zoning and classification.

### Local Government Act 1993 land classification

Council's *Community Land - Generic Plan of Management (POM 2010)* covers parks, sport grounds, natural areas and general community land including the land referred to in this SMP, the site. The Plan is Council's overarching policy position on what can be done on various parcels of land in line with the *Local Government Act 1993*.

The site of the SMP is specifically included in the POM 2010 and is categorised as Natural Area Bushland.

The core objectives for the management of Natural Area Bushland are to:

- Ensure the ongoing ecological viability of the land by protecting the ecological biodiversity and habitat values of the land, the flora and fauna (including invertebrates, fungi and micro-organisms) of the land and other ecological values of the land.
- Protect the aesthetic, heritage, recreational, educational and scientific values of the land.
- Promote the management of the land in a manner that protects and enhances the values and quality of the land and facilitates public enjoyment of the land, and to implement measures directed to minimising or mitigating any disturbances caused by human intrusion.
- Restore degraded bushland.
- Protect existing landforms such as natural drainage lines, watercourses and foreshores.
- Retain bushland in parcels of a size and configuration that will enable the existing plant and animal communities to survive in the long term.
- Protect bushland as a natural stabiliser of the soil surface.

The POM 2010 also lists permitted uses for Natural Area Bushland as follows:

- Informal recreation and the construction of facilities to cater for these activities;
- Approved environmental rehabilitation projects requiring ecological restoration activities associated with the protection and conservation of flora and fauna;
- Establishing, enhancing and maintaining vegetation to provide:
  - a windbreak;
  - enhanced scenic value or visual screening;
  - habitat for native wildlife;
  - a suitable buffer for the protection of neighbouring watercourses or wetlands; and
- Fire hazard reduction in accordance with the Bush Fire Risk Management Plan or Council Reserve Bushfire Hazard Reduction Program and statutory regulations.

### Local Environmental Plan Zoning

In addition to categorising council land under the *Local Government Act 1993*, land is zoned for use under the Bega Valley Local Environmental Plan (BVLEP 2013). A large area that this SMP covers is Zoned RE1 Public Recreation. The BVLEP 2013 zones most of the public reserves across the Shire as RE1 Public Recreation. The objectives of RE1 are:

- *To enable land to be used for public open space or recreational purposes.*

- To provide a range of recreational settings and activities and compatible land uses.
- To protect and enhance the natural environment for recreational purposes.

The RE1 public land within the Bega Valley Local Government Area covers a wide range of sites, features and attributes including: major sporting facilities; local parks and playgrounds; small pocket reserves; beaches; and many other public settings.

The works identified in this SMP are consistent with the *Community Land - Generic Plan of Management (2010)* and the *Bega Valley Local Environmental Plan (2013)*. Increased levels of development, over clearing of vegetation or inappropriate vegetation planting at the site are likely to conflict with the established planning framework.

## Key values and uses

The site is not dissimilar to many coastal reserve areas across the shire. The features of the site can be broadly categorised into five key value/use areas:

### Recreation

The site provides a range of recreational opportunities, consistent with the land categorisation and zoning (as described above). Walking tracks provide pedestrian access to viewing platforms and North Tura Beach via beach access stairs and the site is a popular area for dog walkers, walkers and beach goers. Cleared areas near the southern viewing platform provide a setting for picnics and other group gatherings.

Throughout the year the main users of the site are Tura Beach residents and the site is regarded by Bega Valley Shire Council as a **Local** recreational area in terms of its asset service hierarchy (hierarchy from highest to lowest asset usage and service is: Regional Assets, District Assets then Local Assets). Applying this hierarchy ensures assets support the site usage, i.e. they are fit for purpose.

The natural visual amenity and undeveloped nature of the BVSC coastline is a key marketing advantage of the region's tourism industry and a large part of the appeal of living in and visiting the Bega Valley Shire. This SMP supports this branding by providing recreational activities in a natural setting while protecting the visual amenity from the coast and sea to the land and natural bushland surrounds.

North Tura Beach is an exposed beach with a beach hazard rating of 6 (Short 2006) (with 1 being a low hazard rating and 10 being the most hazardous rating). It is one of the many moderately hazardous beaches in the Shire (the highest beach hazard rating in the Shire is 7) so remote supervision signage (warning signage) and emergency access to the top of the stairs are important considerations for recreation management.

### Biodiversity

Tura Beach area has a high diversity of fauna and flora and is home to a number of threatened species listed under state and federal legislation. Threatened species including long-nosed potoroos (*Potorous tridactylus*) and eastern pygmy possums (*Cercartetus nanus*) have been recorded in close proximity to the site. The native vegetation on site provides habitat for both of these species and there is a high likelihood that both species use the site for foraging and/or dispersal. Correspondence from the NSW



Office of Environment and Heritage regarding the significance of management of the site for long-nosed potoroo conservation is included in Attachment D.

A significant value of the site is the habitat connectivity it provides, linking Bournda National Park to the north with Tura Head Coastal Reserve and further south to Short Point. This link is particularly important as the site is a 'pinch point' where coastal habitat connectivity narrows significantly due to residential development. Habitat fragmentation through clearing of native vegetation is a key threatening process listed under the *NSW Biodiversity Conservation Act 2016* so maintaining appropriate habitat connectivity is a key consideration for management of the site.

## Vegetation

Due to the community debate around management of the vegetation on the site a consultant botanist was engaged by Council to assess the vegetation in terms of what species are present, which of these naturally occur on site and which do not naturally occur along with management recommendations. A list of species identified and the location within the site that they generally occur can be found in Attachment H. Management issues/considerations identified by the consultant along with recommendations for revegetation works can be found in Attachment E and Attachment F respectively.

Vegetation on site is classified as Tall Heath, specifically Coastal Headland Scrub (following the classification system of Keith 2004). Due to differences in the underlying geology the natural vegetation differs on the north and south side of the small creek that bisects the site. This has implications for choosing appropriate species for any revegetation works. An opportunity to assist the development of the relatively fire resistant and threatened vegetation community, Littoral Rainforest, along the creek line was identified in the report. The vegetation, particularly on The Point side of the creek was found to have been impacted by illegal clearing. Council will continue to monitor the site for vegetation vandalism and will investigate any evidence of unlawful vegetation clearing.

The wattle species that dominates the vegetation on this southern side of the creek was identified as *Acacia sophorae* (Coastal Wattle) a close relative of *Acacia longifolia* (Long-leaved wattle, Sydney Golden wattle, Sallow wattle) and one of the naturally occurring native species of the site. Again, habitat connectivity was considered one of the most important aspects of vegetation management.

## Cultural Heritage

All headlands in the Shire have significant cultural heritage value to Aboriginal people, and any works whether formalising paths or installing new items, need to be appropriately assessed and managed under Due Diligence requirements set out by the NSW Office for Environment and Heritage.

As the SMP area is a landscape feature with a high likelihood of the presence of Aboriginal artefacts (a headland and within 200m of the sea) all works that involve, or could lead to, ground disturbance has been minimised (e.g. excavation for track works or vegetation removal). Council has engaged an archaeologist to assess the site and the proposed works to ensure works comply with the *National Parks and Wildlife Act 1974*, the main piece of NSW legislation for managing and protecting Aboriginal cultural heritage.

## Bushfire mitigation

The risk of Bush Fires in the Bega Valley Shire is managed through the development of the Bega Valley Bush Fire Management Plan. This plan is developed by the Bega Valley Bush Fire Management Committee, coordinated by the Rural Fire Service and including representatives from land management agencies (including BVSC) and stakeholder groups. The Plan identifies the levels of Bush Fire risk across the Bega Valley Local Government area and sets out a five-year program of treatments in order to manage bush fire risks. Council works closely with the RFS to develop and implement a bushfire hazard reduction program from the treatments identified in the plan. This program includes Asset Protection Zone (APZ) management (slashing, hand clearing, mulching) hazard reduction burning (in partnership with the RFS) and community education. Works relevant to this SMP include maintaining an APZ in the reserve adjacent to the residential properties and slashing of the APZ and fire trails between Bournda National Park and the Dolphin cove residential area (refer to Attachment C). The width of APZs to the east of the Dolphin Cove and The Point residential areas are generally 40% greater than the minimum required under the RFSs Planning for Bushfire Protection 2006 (the requirement for tall heath vegetation is 15-23m wide depending on slope and existing APZs are up to 36m wide). It is proposed to maintain these existing widths to provide public open space along with asset protection in the event of a bushfire event.

## Volunteer involvement

At the 11 October 2017 meeting council resolved to establish a volunteer group to assist in the management and maintenance of the public reserves in the vicinity of The Point and Dolphin Cove Drive.

It is expected that the volunteer group will be involved in some of the Operational and Maintenance activities listed in Attachment B of this SMP.

It is important for volunteers wishing to be involved in operational or maintenance activities at this site to note the following:

- Each and every volunteer must be inducted into Council's volunteer program.
- Volunteers must abide by Council's WHS policies and procedures.
- Volunteer work must be consistent with the intent of this SMP and discussed with, and authorised by, Leisure and Recreation staff prior to the works being undertaken.
- Volunteers are not to use chemicals in their duties.
- Volunteers are not to operate machinery such as brush-cutters and chainsaws. Operation of wiper snippers, ride on mowers and lawn mowers will be permitted when the volunteer operators have undertaken a specific induction process.

## Attachment A - Site Development

Number	Item	Task	Key actions	Priority
1	Walking tracks (Track Class 2 - all access)	Upgrade track from southern pump station car park to the southern viewing platform (The Point) to provide an all-weather, disabled access track.	<ul style="list-style-type: none"> <li>• Due diligence archaeological assessment</li> <li>• Design track including drainage/track surface</li> <li>• Engage contractor</li> </ul>	1
2	Emergency Access	<p>Formalise the eastern access track down to the southern (The Point) beach access stairs as an emergency vehicle access.</p> <p>Determine the best emergency access point (easement between 25 and 14 The Point, or easement between 42 and 40 Bournda Cct)</p>	<ul style="list-style-type: none"> <li>• Liaise with ambulance and Fire Rescue NSW staff regarding the best access points</li> <li>• Due diligence archaeological assessment</li> <li>• Install authorised vehicle access gates with appropriate locks</li> </ul>	1
3	Prevent unauthorised vehicle access	<p>Install emergency services access gates at the northern end of Rebecca Place, Casey Jane Court and Dolphin Cove Drive and along Pacific Way between 2 Bournda Circuit and 284 Pacific Way.</p> <p><b><i>Council Resolution 21/11/2018 removed 'bollards'</i></b></p>	<ul style="list-style-type: none"> <li>• Due diligence archaeological assessment</li> <li>• Fabricate galvanised 'pipe' or chain gates</li> <li>• Engage contractor to install gates (include utilities search)</li> </ul>	2
4	Prevent unauthorised vehicle access	Repair wire fencing along the boundary of Bournda National Park and Dolphin Cove reserve and install temporary star picket and sight wire fences behind undeveloped lots on Bournda Circuit and The Point.	<ul style="list-style-type: none"> <li>• Due diligence archaeological assessment</li> <li>• Notify adjacent landholders</li> <li>• Engage contractor to install fence</li> </ul>	2

Number	Item	Task	Key actions	Priority
5	Walking tracks  (Track class 2 - Emergency Access)	<p><b>Council Resolution 21/11/2018</b></p> <p><b><i>add the following wording ‘decrease vegetation in (old) Dolphin Cove Carpark and also clear access path to a width of 3 metres wide to the top of the northern beaches.’ NB Amended during consultation to be alternate track alignment and alternate under canopy mown area at the top Dolphin Cove Stairs.</i></b></p> <p>Develop track for pedestrians and emergency vehicles from the Dolphin Cove carpark to near the top of the northern beach access stairs.</p>	<ul style="list-style-type: none"> <li>• Due diligence archaeological assessment</li> <li>• Engage contractor</li> </ul> <p><b>Further item post site meetings July 2019:</b></p> <ul style="list-style-type: none"> <li>• <b><i>Aim for Dolphin Cove Carpark to viewing platform track to be ‘all weather’ (decomposed granite)</i></b></li> </ul>	1
6	Mapping and delineation	<p><b>Council Resolution 21/11/2018</b></p> <p><b><i>1. Council delineate and identify by way of a map: a) open areas and current beach access routes, which are to be maintained; b) current vegetation areas, which are to be quarantined to ensure wildlife corridor connectivity; (refer maps below)</i></b></p> <p><b><i>2 For areas that are identified as vegetation, ensure that trees, including banksias and melaleucas remain untouched, while all other vegetation types are open to be revegetated and replaced with low growth native plants as the area is maintained and current plants reach their end of life.</i></b></p>	<ul style="list-style-type: none"> <li>• Assess infestations for extent and requirement for rehabilitation post control</li> <li>• Source or grow local provenance native species to replant the area if required</li> <li>• Engage bush regeneration contractor to undertake/supervise control works</li> </ul>	1

Number	Item	Task	Key actions	Priority
7	Weed control	Control key weed infestations as identified by consultant botanist (refer to Attachment G)	<ul style="list-style-type: none"> <li>Identify suitable program to progressively implement</li> </ul>	2
8	APZ delineation	Install native plantings to delineate the asset protection zone.	<ul style="list-style-type: none"> <li>Engage contractor or utilise volunteers to plant appropriate native species.</li> </ul>	2
9	Restoration plantings	Plant appropriate native species (refer to Attachment F and Attachment H) to replace controlled weeds, replace dead vegetation increase amenity of tracks and increase species diversity.	<ul style="list-style-type: none"> <li>Engage contractor to plant and maintain appropriate native species.</li> </ul>	2
10	Walking tracks (Track class 3)	Formalise walking track from Dolphin Cove pump station to the start of the Class 2 all access track (action number 2 above)	<ul style="list-style-type: none"> <li>Due diligence archaeological assessment</li> <li>Engage contractor</li> </ul>	2
11	Car park	Identify possible disabled car park at The Point pump station	<ul style="list-style-type: none"> <li>Identify site and design carpark to allow for disabled parking in consultation with adjoining residents</li> </ul>	3

Number	Item	Task	Key actions	Priority
12	Walking tracks (Track class 3)	Formalise a track along the edge of the APZ, to create a loop walk, adjacent to The Point.	<ul style="list-style-type: none"> <li>• Determine exact track alignment</li> <li>• Plant attractive native grasses and native low growing shrubs to define track</li> <li>• Maintain mown track</li> </ul>	3
13	<b>Update</b> Signage	<p><b><i>Council Resolution 21/11/2018 Item 13 – amended to read “Update signage” (no change)</i></b></p> <p>Design and install interpretive signage for reserve entry and/or at the top of the stairs on both The Point and Dolphin Cove viewing platforms</p>	<ul style="list-style-type: none"> <li>• Consult stakeholder groups regarding sign information</li> <li>• Engage interpretive signage consultant to develop signs</li> <li>• Fabricate and install signs</li> </ul>	3

**\*these works are outside the SMP area however they are included as they mitigate on site impacts**

***Amendments from Council Resolution 21/11/2018 & July 2019 site meetings in bold italics as noted.***

## Attachment B – Site Operations and Maintenance – Summary of Tasks

Item	Task	Operational Service Level	Operational Service Frequency	Services / Year	Service Delivery By
1. Mowing (tracks and picnic areas)	Mowing (summer)	BVSC Specification - Vegetation	Fortnightly (indicative)	13	BVSC
	Mowing (winter)	BVSC Specification - Vegetation	Monthly (indicative)	6	BVSC
2. Vegetation	<i>Defining Areas and Offsetting - Mown areas and vegetation areas. Principles of offsets.</i>	<i>Have mown area in preferred area (next to lagoon), vegetation area where most benefit for wildlife corridor, reduce edge area, work within legislation, work to balance increase in m2 mown areas against increase in vegetation areas to be planted. Refer maps below.</i>  <i>All vegetation replanting - the mature height is not to exceed 1.5m. Transitional planting from low to high to be instigated along vegetation boundaries.</i>	<i>Bi-annual</i>	<i>2</i>	<i>BVSC / Volunteers</i>
	<i>Edges and edge treatments (Inclusion post July 2019 site meetings.)</i>	<i>Key task to define areas. Provide clear boundaries to work to and define required tasks to manage within those areas. Define tasks for area purpose and interests and to monitor areas and works.</i>  <i>Intention is as simple and as cost effective as possible to achieve purpose. Typically, sprayed / mulched edge with edge planting. If encroachments occur SMP and controls to be reviewed by Council. No edge treatments to border open space edges of paths. Refer maps below.</i>	<i>Bi-annual</i>	<i>2</i>	<i>BVSC</i>

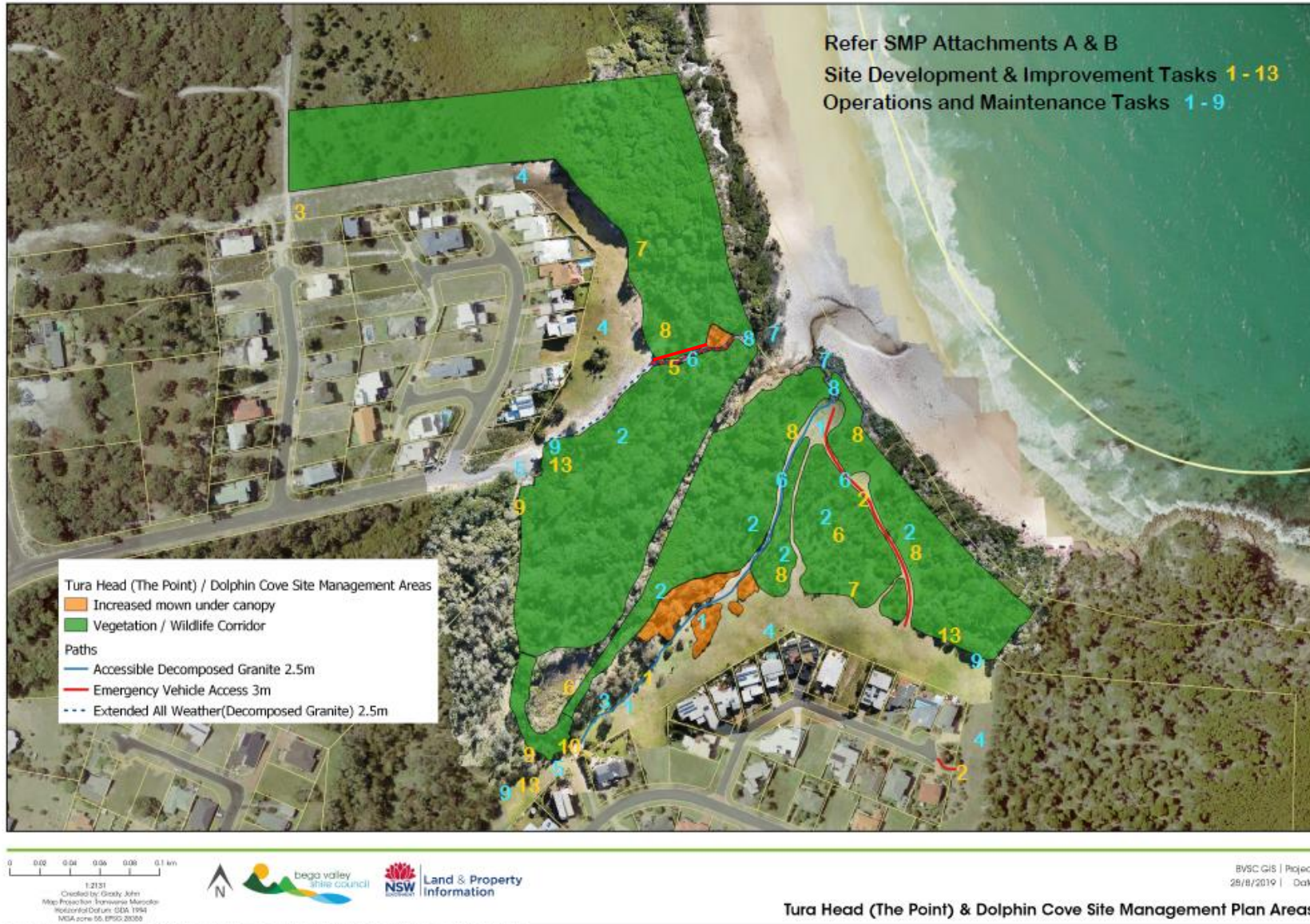


Vegetation Cont.	Weeding	Remove weeds and manage native species as required (refer to Attachment F, Attachment G and Attachment H)	Bi-monthly	6	BVSC / Volunteers
	Dead wood removal	Remove larger dead shrubs from beside formalised tracks (unless identified as wildlife habitat) and replant site, if required, to minimise chances of weed infestation	Annual	1	BVSC
	<b>Deadwood Removal (Inclusion post July 2019 site meetings.)</b>	<i>It is acknowledged a primary purpose of the vegetation areas is a wide-life and habitat corridor. Deadwood is part of the ecology of areas perform that function. It can provide food and shelter for a range of animals. This needs to be balanced with a desire to keep the area looking tidier. This will require some deadwood removal in areas that are most visible. To achieve a balanced outcome deadwood can be removed along edges. Indicative distance of 2m from vegetation edges will be used noting this will vary depending on how dead wood is impacting on appearance. Council staff will provide direction in application of the 2m guide to achieve a balance between managing the habitat purpose and improving visual amenity. In some cases where dead wood is not visible distance off edges may be less than 2m, in other cases where dead wood is visible further in from edges distance may exceed 2m.</i>	<b>Bi-annual</b>	<b>2</b>	<b>BVSC / Volunteers</b>
	Maintenance of plantings	Water new plantings until establishment and ensure weed competition is minimised	as required until establishment	6	BVSC / Volunteers
<b>3. Trees</b>	Undertake inspection of Banksias near pump station and program works as required	BVSC Specification - Vegetation	Annual	1	BVSC

Item	Task	Operational Service Level	Operational Service Frequency	Services / Year	Service Delivery By
<b>4. Asset Protection Zone</b>	Slashing	Planning for Bushfire Protection (2006)	Bi-annual	2	BVSC / Volunteers
<b>5. Carparks</b>	Inspect and maintain carparks in accordance with Council's standard	Inspect and maintain carparks and road network in a fit for purpose state.	Annual	1	BVSC
<b>6. Paths and Trails</b>	Inspect for defects in the pathway network such as erosion, trip hazards etc.	Remove debris/rubbish that would impede movement along the pathway Prune vegetation back to edge of pathway with appropriate clearances. Control weeds along and adjacent to the pathway.	6 monthly	2	BVSC/ Volunteers
<b>7. Beach Access stairs, viewing platforms and Park Furniture</b>	Inspect stairs, viewing platforms and associated seats for defects and signs of wear and tear. Undertake maintenance as required.	BVSC Specification – Paths and Trails	6 monthly	2	BVSC
<b>8. Beach Access stairs, viewing platforms</b>	Inspect and maintain vegetation adjacent to the stairs and viewing platforms to ensure access to views and unrestricted path down stairs. Maintain vegetation clearances around stairs.	BVSC Specification - Vegetation	6 monthly	2	BVSC/ Volunteers

Item	Task	Operational Service Level	Operational Service Frequency	Services / Year	Service Delivery By
9. Signage	Inspect and maintain signage to ensure that these are visible and informative	Statewide Best Practice Manual – Signs as Remote Supervision AS/NZS 2416.1:2010 Water safety signs and beach safety flags	Annually	1	BVSC

# Attachment A1. Site Map – Management Areas & Tasks



# Attachment B1. Site Map – Vegetation Areas Offset. Increased Mown Areas / Revegetation – Overlay Existing Vegetation



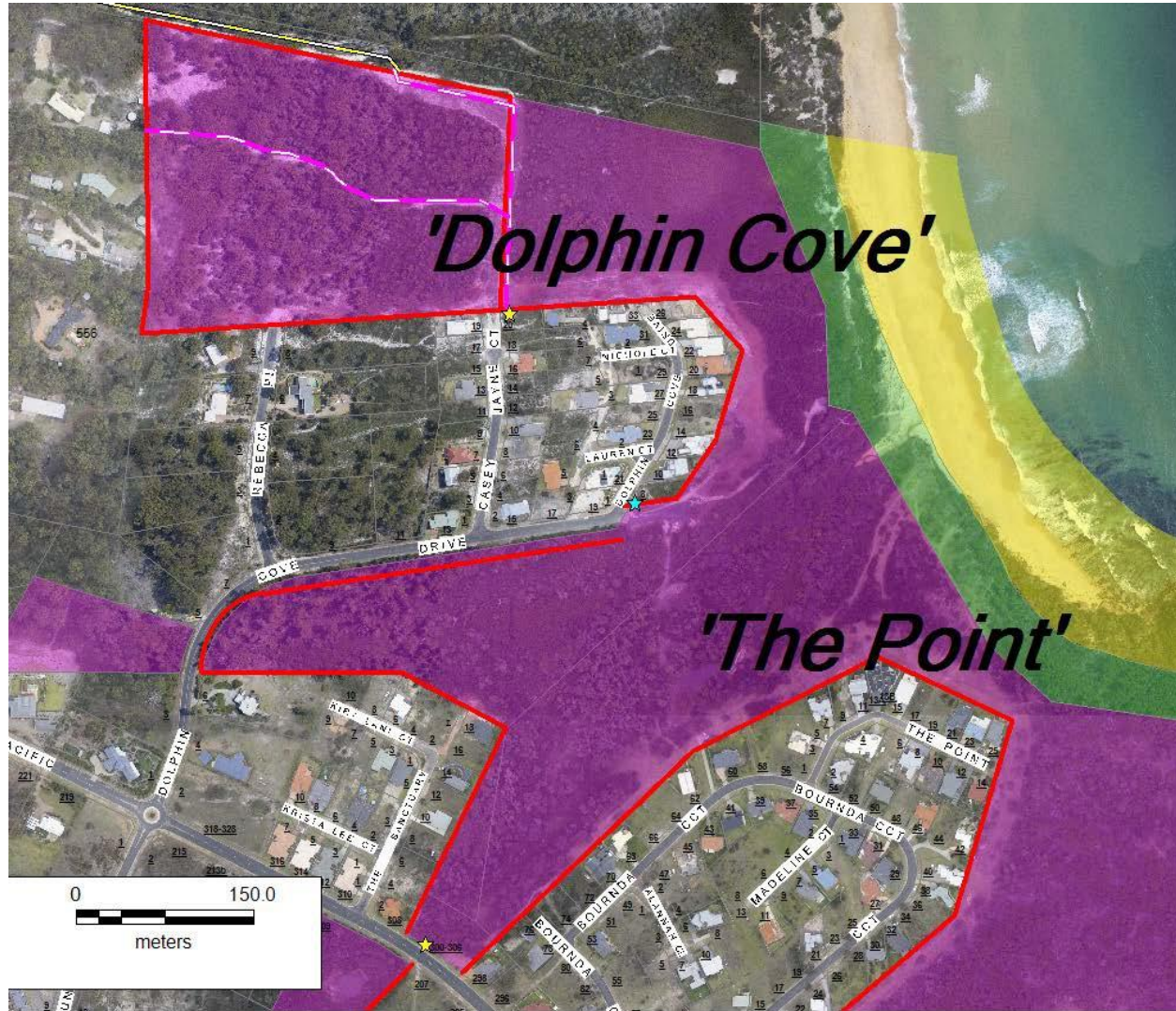
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 Map Projection: Transverse Mercator  
 Horizontal Datum: GDA 1994  
 MGA zone 55, EPSG:28305

BVSC GIS | Project  
 5/9/2019 | Date

## Tura Head (The Point) & Dolphin Cove Site Management Plan Areas

Disclaimer: This map is a representation of the information currently held by Bega Valley Shire Council. It does not constitute an offer of any financial product or service. Council is not responsible for any errors or omissions.

Attachment C – BVSC Tura North APZ map



Tura North  
**13**

Aboriginal Land Council	
BVSC Managed Crown	
BVSC Properties	
Dept of Lands Vacant Crown	
Dept of Lands Managed	
Cadastre	
Dept Land Fire trail	
BVSC Fire Trail	
Lands APZ slash	
Lands APZ hand clear/mulch	
Council APZ slash	
Council APZ hand clear/mulch	
★ Access - no gate	
★ Access - gate (RFS key)	

9/9/15

Note: This map has been prepared by BVSC using a range of data sources. The accuracy of the map cannot be guaranteed. Data depicted on the map is live and may have been updated since this map was produced. Contact BVSC to confirm if the data on this map is current.

## Attachment D – OEH Vegetation management of long-nosed Potoroo habitat at the Point, Tura Beach



Office of  
Environment  
& Heritage

Mr Andrew Morrison  
Natural Assets Officer  
Bega Valley Shire Council  
Zingel Place  
Bega NSW 2550  
amorrison@begavalley.nsw.gov.au

Attention: Andrew Morrison

Dear Mr Morrison

### Vegetation management of Long-nosed Potoroo habitat at The Point Reserve, Tura Beach

I write to you regarding the future management of native vegetation in the area of The Point, Tura Beach, and potential implications for the conservation of long-nosed potoroos *Potorous tridactylus*, listed as vulnerable under the *Biodiversity Conservation Act 2016*. There are numerous records of long-nosed potoroos in the vicinity of The Point, and regular potoroo sightings are reported by community members in the area.

As you would be aware, there has been substantial residential development at Tura Beach over the last few decades, which has resulted in the loss and fragmentation of a substantial area of potoroo habitat. OEH understands that some community members have requested that further vegetation clearing on Council land at The Point be undertaken, including removal of trees to afford ocean views. The Point, and the potoroo habitat within it, is already relatively isolated, with only tenuous connections to more extensive surrounding habitat. Any further reduction in connectivity and habitat availability is likely to have a detrimental impact on the local population, which is unlikely to persist in the event that it becomes isolated. As potoroos are associated with structurally complex habitats with a dense understorey, habitat simplification will have a similarly negative effect.

In addition, the creation of cleared or simplified thoroughfares in currently continuous habitat is likely to facilitate the incursion of domestic and feral predators, one of the primary threats (along with habitat loss and fragmentation) to this species. Such areas are also likely to facilitate the incursion of weeds, potentially reducing habitat quality and foraging opportunities for potoroos.

To increase the likelihood of the persistence of the long-nosed potoroo population at The Point, OEH recommends that Council should maximise the retention of native vegetation in the area, and to maximise its continuity and structural complexity. OEH supports any efforts made by Council and the local community to restore the condition and increase extent of potoroo habitat at The Point and is happy to continue working and supporting Council on this important conservation issue. Please do not hesitate to contact Dr Joss Bentley, Senior Threatened Species Officer on 6229 7115 for further information.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Damon Oliver', followed by the date '19 February 2018' written in a cursive style.

**DR DAMON OLIVER**  
Senior Team Leader  
Ecosystems and Threatened Species South East

## Attachment E - Vegetation Issues to be addressed (from consultant's vegetation report)

While the consultant has not been asked to prepare a detailed vegetation management plan for the reserves, the vegetation survey has raised various issues which will need to be taken into account in developing such a plan.

Firstly it is necessary to consider the longer-term processes affecting the vegetation there.

These comprise;

1. Recolonisation by native species, which, if uninterrupted/unimpeded by other processes would eventually re-establish a form of tall heath (South Coast Headland Scrub) across the site, most probably dominated by relatively tall *Banksia integrifolia* and *Melaleuca armillaris*, with diverse lower shrubs and a sparse understorey.
2. Retardation and disruption of the recolonisation processes by ongoing maintenance of the APZ and by illegal lopping and clearing beyond it.
3. Displacement/exclusion of local native species by invasive species, including garden escapes and those establishing through dumping into reserves, a process that could eventually leave the site wholly weed-dominated, reduce its amenity and increase wildfire risk.

Along with determining responses to and arriving at some reconciliation of these conflicting processes a management plan needs take account of such issues as

4. Provision of safe access to the beach,
5. Asset protection,
6. Aesthetic considerations concerning both the outlook from houses and the view back towards them from the beach.
7. Minimisation as far as possible of the cost and effort required to maintain the vegetation in the reserve over the long term.
8. Of particularly great significance is **the role of the reserve in maintaining connectivity**. Habitat connectivity is considered to be one of the most important factors in maintaining biological diversity. Maintaining gene flow is essential for genetic fitness and allows for adaptation to environmental changes. Small isolated populations are much more vulnerable to extinction and to stochastic events such as wildfires. 'The Point' constitutes a veritable choke point for connectivity along the coastal fringe. As is readily apparent from aerial imagery, it is essentially the only break in many kms of continuous coastal vegetation extending from Tathra to Short Point, a bridge between the very extensive area of natural vegetation to the north and the reserves on Tura head and around Back Lake. The less vegetative cover present at 'The Point' the more vulnerable native species moving through the area will be to predation, particularly by residents' domestic animals. To maintain connectivity the vegetation needs to be maintained so as to afford maximum vegetative cover and ecospace consistent with access and asset protection requirements.



## Attachment F – Species selection for revegetation (from consultant’s vegetation report)

In order to take account of the various issues outlined above Council might undertake to attempt to restore a somewhat modified form of South Coast Headland Scrub at ‘The Point’. This would involve reinforcing and taking advantage of the natural regeneration process while limiting full canopy development by *Banksia integrifolia* and *Melaleuca armillaris* to some extent, and reducing the proportion of short-lived species such as *Acacia sophorae*. Some lower-growing species in this community, such as *Alyxia buxifolia* (sea box), *Leucopogon juniperinus* (prickly beard-heath), *Melaleuca hypericifolia* (hillock bush), *Myoporum acuminatum* (boobiella), *Westringia fruticosa* (coastal rosemary) are relatively long-lived, will provide good cover for fauna and are already growing well on the site. The more diverse the species mix the more resilient the vegetation will be, with much less likelihood of large numbers of individuals of a single species senescing at about the same time, as is currently happening with the Acacia.

Once African love grass and Kikuyu have been controlled, the margins of vegetation clumps along the access tracks could be planted with *Lomandra longifolia* (spiny-head mat rush) and the handsome native grass *Poa poiformis* (coastal tussock grass) which is already growing well along the creek line.

It has been proposed that some species present north of the creek line - *Banksia serrata* (old man banksia), *Callistemon citrinus* (crimson bottlebrush) - might be introduced, but the differing soils to the south may not be favourable for these species. However the bottlebrush might be suitable in the small soak.

The consultant does not consider that it would be feasible to create an artificial community purely of native grasses on the site. Given its situation between areas of native coastal vegetation and lawns of exotic and often invasive grasses, woody shrubs and exotic grasses would exert considerable ongoing recolonisation pressure, requiring intensive management in perpetuity to exclude them. Moreover the most suitable native grass, *Themeda australis* (kangaroo grass) would need to be first planted extensively then maintained long term, most probably requiring a regular burning regime. An open expanse of grasses would be even more disruptive of habitat connectivity along the coast than the current vegetation pattern.

## Attachment G – Invasive species requiring management (from consultant’s vegetation report)

Invasive exotic grasses pose the greatest threat to native vegetation on the site.

*Eragrostis curvula* (African love grass) and *Pennisetum clandestinum* (Kikuyu) are very well established and while possibly ineradicable will need to be controlled wherever it is desired to plant or to allow native vegetation to re-establish. African lovegrass is likely to increase the risk of wildfire. *Stenotaphrum secundatum* (buffalo grass) is less prominent but poses a comparable threat to Kikuyu in smothering and displacing native plants.

*Sporobolus africanus* (rat’s tail grass) is largely restricted to vehicle tracks and since it is resistant to traffic may perhaps be usefully retained there.

A large colony of *Zantedeschia aethiopica* (arums) is established by the pond, with scattered plants along the creek line. This plant is capable of establishing dense monocultures in moister areas and its control deserves a high priority. Numerous seedlings of *Ailanthus altissima* (tree of heaven) are present toward the seaward end of the creek and are also capable of developing into a dense infestation.

Several clumps of a *Dietes* species (wild iris) has been planted beside the pond. This genus is highly invasive. A clump of *Tagetes lemmonii* (Lemmon’s marigold) in the same area has most probably arisen from dumped garden waste, illustrating a key threat to the integrity of the reserve. It is recommended that residents be cautioned against dumping garden waste into reserves, which, across the Shire, is one of the principal causes of their degradation by invasive species.

A blue-foliaged *Eucalyptus neglecta* (Omeo gum) has evidently been planted in the reserve near the creek line (southern side). It is remote from its natural range in upland Victoria. An exotic *Cordyline* is growing near the APZ margin on the southern side.

In the APZ on the northern side of the creek there are clumps of *Agapanthus praecox* (agapanthus) and *Crocasmia* sp (montbretia) near the houses and a patch of the highly invasive *Osteospermum ecklonis* (African daisy) on the margin of the native vegetation. Some highly invasive species are present in gardens there, notably the vine *Lonicera japonica* (Japanese honeysuckle) which is growing on a garden fence.

## Attachment H – Species List

Species recorded by consultant botanist Stuart Cameron 29 January 2018

The species are coded to indicate where each occurs predominantly on the site:

(c) - along the cliff face and crest;

(cl) - along southern margin of the creek line;

(n) - in and along the edge of the APZ east of the developed zone north of the creek line. Uncoded species are widespread across the site.

(\*) indicates an exotic invasive species.

Scientific name	Common name	Location
<b>Trees and shrubs</b>		
<i>Acacia sophorae</i>	coast wattle	
<i>Acacia mearnsii</i>	black wattle	cl
* <i>Ailanthus altissima</i>	tree of heaven	cl
<i>Allocasuarina littoralis</i>	black sheoak	n
<i>Alyxia buxifolia</i>	sea box	c
<i>Banksia integrifolia</i>	coast banksia	
<i>Banksia serrata</i>	old man banksia	n
<i>Boronia anemonifolia</i>	narrow-leaved boronia	n
<i>Callistemon citrinus</i>	crimson bottlebrush	n
<i>Cassinia longifolia</i>	shiny cassinia	
* <i>Cordyline sp</i>	cabbage tree	
<i>Corymbia gummifera</i>	red bloodwood	n
<i>Cyathea australis</i>	hard tree fern	cl
* <i>Eucalyptus neglecta</i>	Omeo gum	cl - planted
<i>Homolanthus populifolius</i>	bleeding heart	cl
<i>Kunzea ambigua</i>	burgan	
<i>Leptospermum laevigatum</i>	coastal tea tree	n - possibly planted?
<i>Leucopogon juniperinus</i>	prickly beard-heath	
<i>Melaleuca squarrosa</i>	scented paperbark	n
<i>Monotoca elliptica</i>	tree broom heath	
<i>Myoporum acuminatum</i>	boobialla	
<i>Myoporum boninense</i>		c
<i>Myrsine howitteana</i>	muttonwood	cl

Scientific name	Common name	Location
<i>Pittosporum undulatum</i>	sweet pittosporum	cl
<i>Rhagodea candolleana</i>	sea berry saltbush	
<i>Trema tomentosa</i>	poison peach	cl
<i>Westringia fruticosa</i>	coastal rosemary	c
<b>Climbers</b>		
<i>Kennedia rubicunda</i>	dusky coral pea	
<i>Marsdenia rostrata</i>	milk vine	
<i>Muehlenbeckia adpressa</i>	climbing lignum	c
<i>Stephania japonica</i>	snake vine	
<b>Forbs</b>		
* <i>Agapanthus praecox</i>	agapanthus	n
* <i>Cirsium vulgare</i>	spear thistle	cl
<i>Commelina cyanea</i>	scurvy weed	
* <i>Conyza albida</i>	fleabane	
* <i>Crocosmia</i> sp	montbretia	n
<i>Dichondra repens</i>	kidney weed	
* <i>Dietes</i> sp	wild iris	cl
<i>Glycine clandestina</i>	lover's twine	
<i>Hydrocotyle tricarpa</i>	penny wort	cl
* <i>Osteospermum ecklonis</i>	African daisy	n
<i>Oxalis perennans</i>	woody root oxalis	
<i>Persicaria decipiens</i>	slender knotweed	cl
<i>Polymeria calycina</i>	slender bindweed	
<i>Pratia purpurescens</i>	white root	
<i>Pteridium esculentum</i>	bracken	
<i>Senecio linearifolius</i>	fireweed groundsel	
* <i>Solanum americanum</i>	American black nightshade	
<i>Solanum aviculare</i>	kangaroo apple	cl
<i>Solanum brownii</i>		
* <i>Tagetes lemmonii</i>	Lemmon's marigold	cl
<i>Tetragonia tetragonioides</i>	New Zealand spinach	
<i>Trachymene composita</i> var <i>robertsonii</i>		n

Scientific name	Common name	Location
<i>Urtica incisa</i>	stinging nettle	cl
* <i>Zantedeschia aethiopica</i>	arum	cl
<b>Graminoids</b>		
<i>Austrostipa</i> sp.		
* <i>Ehrharta erecta</i>	panic veld grass	n
<i>Echinopogon ovatus</i>	hedgehog grass	
* <i>Eragrostis curvula</i>	African love grass	
<i>Eragrostis leptostachya</i>	paddock grass	
<i>Gahnia aspera</i>	rough saw sedge	cl
<i>Gahnia melanocarpa</i>	black fruit saw sedge	cl
<i>Gahnia sieberiana</i>	red fruit saw sedge	
<i>Imperata cylindrica</i>	blady grass	c
<i>Lepidospermum laterale</i>	variable sword sedge	
<i>Lepidospermum sieberi</i>	formerly concavum	n
<i>Lomandra longifolia</i>	spiny-head mat rush	
<i>Microlaena stipoides</i>	weeping grass	
<i>Oplismenus imbecillis</i>	basket grass	cl
* <i>Pennesetum clandestinum</i>	Kikuyu	
<i>Poa poiformis</i>	coastal tussock grass	cl
* <i>Sporobolus africanus</i>	rat's tail grass	
* <i>Stenotaphrum secundatum</i>	buffalo grass	cl

## Species NOT recorded

Several species which might have been expected on the site were not observed. No Eucalyptus species are present on the southern side of the creek apart from one exotic *Eucalyptus neglecta* (Omeo gum) which must have been planted there. *Astrotricha* sp. Wallagaraugh (Merimbula star hair), a rare plant of very restricted distribution which is widespread around Tura, was not observed. Neither was *Actinotus helianthi* (flannel flower) of which a small population was once present at the top of the northern stairway and which does still occur a little further north. Nor does *Themeda australis* (kangaroo grass) appear to be present. This species is a key indicator of naturally grassy headlands, which it tends to dominate.