

Tilligerry Habitat Reserve

R 170175

Land Manager Plan of Management

Tilligerry Habitat Association Inc

May 2021

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Plan overview

This Plan of Management sets a framework for prioritising activity including the identified risks and hazards which are linked to the running of the Tilligerry Habitat Reserve, and in doing so provide a framework for the implementation of improvements and ongoing management.

This Plan conforms with plans of management for Crown reserves, under Division 3.6 part 3 of the *Crown Land Act Management Act 2016* (the Act), in consultation with the community.

Purpose

The purpose of this Plan of Management is to establish objectives, performance targets and the means that the Reserve Land Manager will employ to guide the future use, management and development of the Reserve.

The aim is for the Plan of Management to be formally adopted by the Reserve Land Manager and in doing so provide a framework for the development and management of the Reserve for the next five to ten years.

Location – status, purpose and zoning

The Reserve is Crown Land located on land on the foreshore of Port Stephens between Tanilba Bay and Mallabula in the Port Stephens Council area. The Reserve is defined by part of Lot 289 of DP 41306. The total area of the reserve is approximately nine hectares.

It comes under the *Crown Land Management Act 2016* and Regulation 2018.

The Reserve (R 170175) was approved by the Minister on 5 July 1996 for the purposes of Public Recreation and Coastal Environmental Protection. At the same time, the *Tilligerry Habitat Association Incorporated* (the Association) was appointed as the land manager under the Act (previously the *Crown Land Act 1989*).

It has been used as the centre of environmental conservation and educational activities across the Tilligerry Peninsula since that time.

The Reserve was rezoned in 1993 for environmental protection of coastal lands and wildlife refuge.

Figure 1 provides a site layout. The site can be divided into a series of Domains as follows:

- Environment centre and office
- Nursery
- Bush comprising vegetation communities listed below.

Vegetation communities

The following vegetation communities were identified in 2006.

Freshwater wetland – swamp mahogany forest

Dominant trees are *Eucalyptus robusta* and *Melaleuca quinquenervia* with an understory of ferns and grasses.

Coastal dune and paperbark forest

Dominant tree is *Melaleuca quinquenervia* and understory plants.

Heathland

A variety of shrubs, the tallest are usually less than 2m high and include *Leucopogon Banksia*, *Leptosperm* and *Callistemon* species. Orchids can be found.

Swamp/stream (fresh water slow movement)

At the Eastern end of the reserve, near Malabulla there are springs and runoff from Gula park providing moist soils and swamp. Characteristic families are ferns, rushes, sedges, moss and club moss. Dominant species are *Gahnia sieberiana*, *Resisto tetraphyllus* and *Phragmites australis*, with an understory of ferns – *Gleichenia dicarpa* and *Blechnum indicum*. There are several species of frog including the Wallum froglet.

Dry sclerophyll forest

Dominated by dry leaved gums *Angophora costata*, *Eucalyptus pilularis*, *Eucalyptus racemosa* and ***Banksia serrata***.

Saltwater wetland – on lot 290 controlled by PS Council at the creek mouth.

Figure 1 – Tilligerry Habitat Reserve – Site Layout

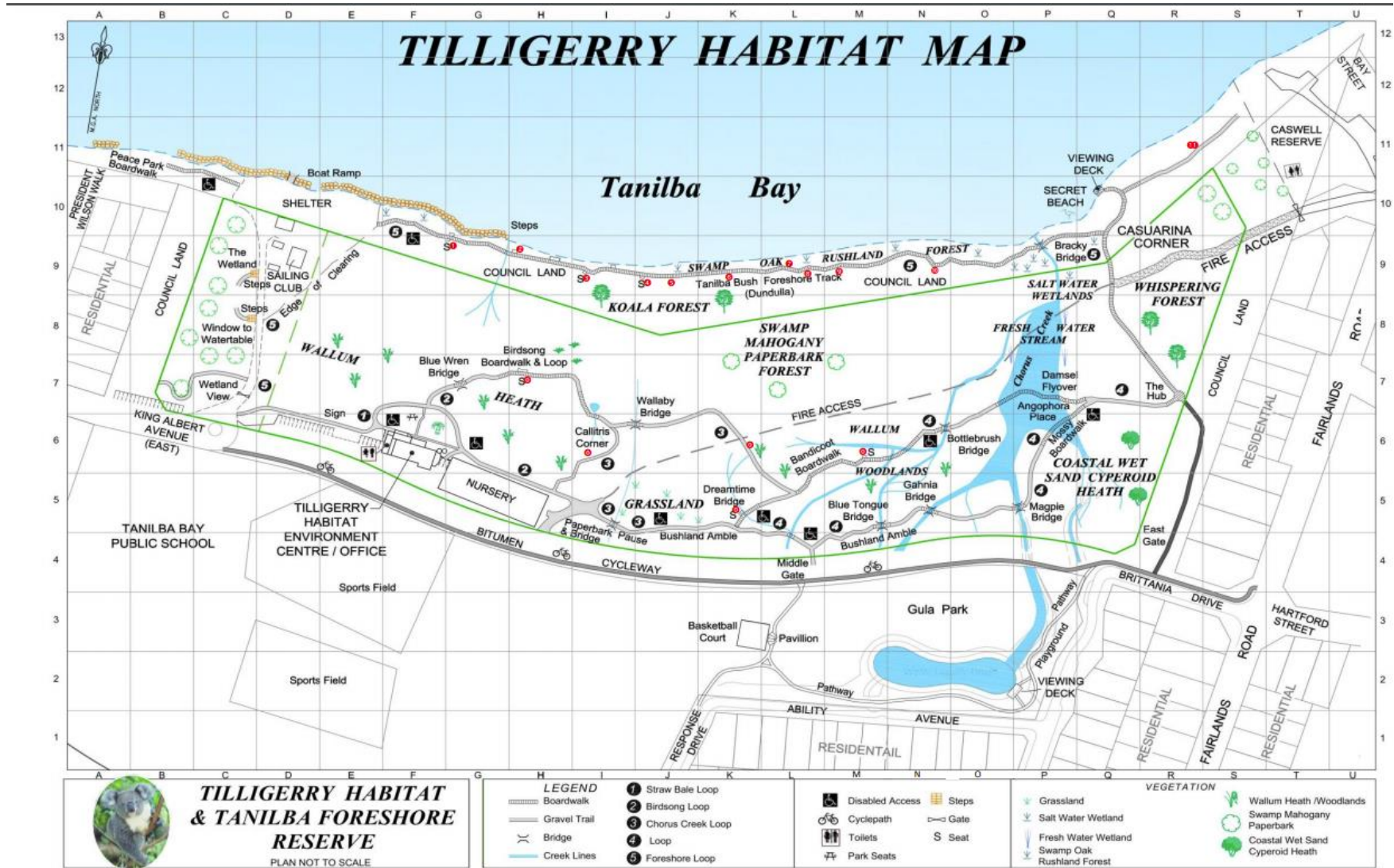
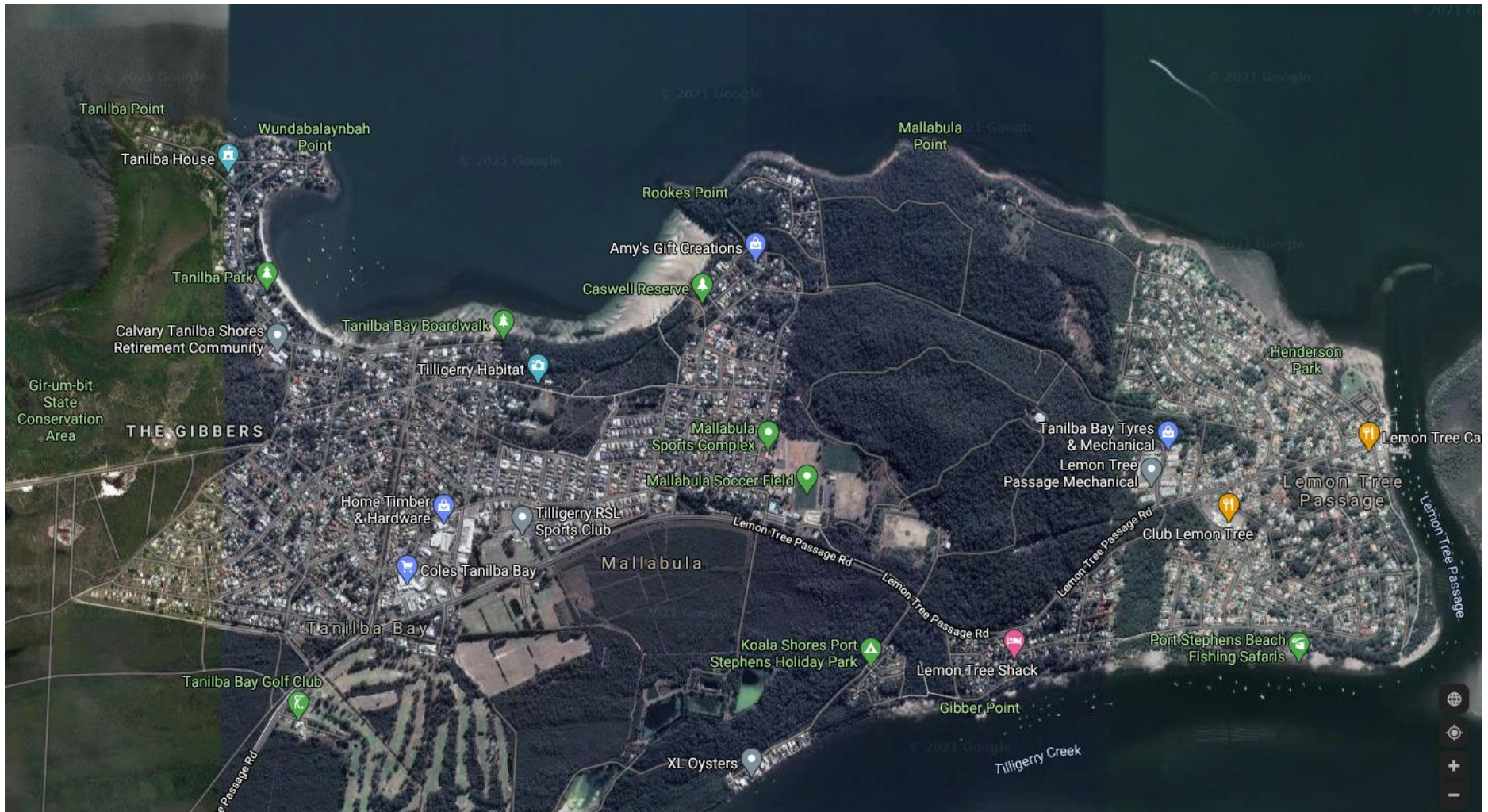


Figure 2 – Reserve showing surrounding land use



Management Principles

The management strategies in the Plan are based on:

- An analysis and assessment of the site's physical, cultural, environmental, historical, recreational and economic values in relation to current and future uses;
- Community feedback on suitable land uses for the Tilligerry Habitat Reserve; and
- The principles of Crown land management.

The following principles establish the direction the Land Manager will follow in implementing specific strategies to achieve the vision:

- Permit recreational opportunities compatible with the natural/physical, scenic and cultural features of the Reserve, in response to community needs;
- Recognise, protect and enhance the understanding, protection and restoration of the natural landscape and ecological values of the Reserve, in accordance with its zoning for environmental protection;
- Recognise, protect, appropriately interpret and promote the cultural heritage values relating to the Reserve and the local area, including Aboriginal and European heritage values;
- Encourage and promote public use by providing a range of high quality, safe, accessible and enjoyable recreational and leisure facilities catering for the community and local residents;
- Protect and enhance the visual and social values of the Reserve;
- Establish and maintain a source of funding that will improve and sustain recreational facilities and other infrastructure, and work towards achieving self-sufficiency in carrying out land management responsibilities;
- Encourage active participation of locals and visitors in the development, care and long-term management and stewardship of the Reserve;
- Implement a management system which ensures long-term economic viability, informed decision making and is responsive to legal, social, technological and environmental change; and
- Provide an effective management framework and guidelines under which the following activities can be lawfully performed on the Reserve.

Land management and conservation

- Land rehabilitation including planting and maintenance of plant species endemic to the area;
- Rehabilitation of areas historically impacted by mineral sand mining;
- Nature conservation and environmental protection (including threatened species);
- European heritage protection and conservation with particular reference to mineral sand mining;
- Bushfire control;
- Noxious weed and feral animal control;
- Soil conservation.

Recreation

- Passive recreation, including walking, bird watching, cycling and picnicking.

Tourism, education, community purposes, access, infrastructure and services

- Access through the Reserve, including donation based access by visitors;
- Community purposes including provision of facilities for meetings and activities;

- Plant propagation and sales via the nursery;
- Providing an environmental and community-based hub for a wide cross section of volunteers;
- Tourism linked to koala viewings;
- Educational and scientific studies;
- Fire trail access and three hydrants; and
- Services, infrastructure and utilities.

Land uses

The Reserve has the following land uses:

- Recreational activities bush walking, bird watching;
- Plant nursery;
- Environmental and education centre.

Prohibited use/activities

Restricted activities are listed in Appendix 3.

Improvements

The following improvements exist on site and are shown on Figure 1:

- Office and education hub constructed from straw bales -including an office and kitchen.
- Toilet block.
- Perimeter fencing.
- Nursery, including a shade house, green house, potting shed and storage.
- Gravel paths
- Boardwalks.
- Car park

Adjoining land use

The following land uses adjoin the Reserve as shown on Figure 1.

- Residential suburbs of Tanilba Bay and Mallabula
- Foreshore of Port Stephens
- On three sides by Lot 290; a reserve controlled by Port Stephens Council
- Part of lot 289; a reserve controlled by PS Council, with the Sailing Club having license
- Tanilba Bay Public school
- Bike path on a road reserve.

Natural Resources

The vegetation associations found across the Reserve are shown on Figure 1. The Reserve provides a corridor of key koala habitat.

Maintenance, funding, fee and charges

Maintenance

Generally, the maintenance of the Tilligerry Habitat Reserve will be carried out by volunteers under direction of the Association's Committee.

Volunteers are often engaged under agreements for mutual obligation requirements for government benefits. Work-for-the-dole service providers also provide workers for projects.

Members of the general public also have a duty of care in their use of the Reserve.

Funding

Funding arrangements address recurrent costs of management and maintenance, together with capital costs for upgrading works. The maintenance of the Reserve is to be managed by the Land Manager, with identified sources of funding for work under this Plan including:

- Donations from site visitors
- Sales of plants from the nursery
- Other sources of funds, including contributions or sponsorship from the private sector, and donations or bequests
- From other funding obtained from or granted by Government Authorities, including:
 - Public Reserve Management Fund (administered by the Department of Lands). Funding is limited and provided either by way of a loan or cash grant
 - Specialised funding and grants from both Local, State and Commonwealth Governments

Fee and charges

There are no fees and charges for use of the Reserve.

Risk management

The Reserve Land Manager has an obligation under the Code of Conduct (under the *Crown Land Management Act 2016*) to consider the issues of risk management on the Reserve and a duty of care in terms of public safety issues on the Reserve. The Association is not a duty holder under the *NSW Work Health and Safety Act 2011*.

However, the Association is obliged by providers, such as work-for-the-dole programs and community service (Justice programs) to adopt risk assessment and control practices consistent with the legislation.

Details are provided in appendix 1 risk assessment.

Risks to the public

Natural areas, by definition, contain risks that are inextricably linked to the 'untamed' values that attract visitors. Reflecting this, the *Civil Liability Amendment (Personal Responsibilities) Act 2002* limits liability for obvious or inherent risks which are commonly understood by the community to be risky. Nonetheless, where a foreseeable but not commonly understood danger occurs in association with sites which visitors are encouraged to visit, the natural areas manager is advised to:

- Avert risks associated with structures or facilities; and/or
- Provide appropriate warning information where a natural risk exists and the risk is not obvious or commonly understood (e.g., falling limbs from trees, especially from Eucalypt species).

There are known risk areas on the Tilligerry Habitat Reserve.

While these areas were not established by the Department of Lands or the Reserve Land Manager, they are likely to be frequented by visitors to the Reserve.

Insurance and indemnity for risks to land managers, the public and volunteers

The NSW Department of Industry - Crown Lands, holds public liability cover for voluntary Community Land Managers for low-risk activities and non-commercial operations. The Department maintains personal accident cover for voluntary workers which include both Land Manager members, and volunteer workers other than Land Manager members.

Risks for the land manager

The Association faces a number of risks relating to loss of property or business, ranging from bush fires to lack of income from tourists due to travel restrictions. If the building was burnt down or the nursery damaged there would be a loss of income and expenses for a period (despite being covered by insurance).

Current and Future Solutions

The Association has undertaken an assessment of risks including the need, if any, for warning information and/or signage (e.g., at the entrance to the Reserve) about any hazards that may occur on site.

The following policies and rules have been adopted to assist the Association in observing the requirements under the *NSW Work Health and Safety Act 2011* in relation to any volunteer:

- Ensure appropriate workplace arrangements are put in place, including appropriate supervision arrangements and proper workplace compliance (particularly in relation to such activities as chemical handling, and the use of machinery- e.g., chainsaws or power tools);
- Undertake a risk management assessment and produce a comprehensive risk management plan as part of this Plan.

Appendix 1 - Risk Assessment

Risks to volunteers

Hazard	Risks	Probability	Consequence	Risk rating	MANAGEMENT Control measures
Working in heat	Sunburn				<ul style="list-style-type: none"> • Have sunscreen available • Make use of available shade • Wear hats and long sleeves, long pants/skirts
	Dehydration				<ul style="list-style-type: none"> • Drinking water provided • Take rest breaks or work in shade • Avoid working in the hottest part of the day
Manual handling	Back injury				<ul style="list-style-type: none"> • Use proper lifting and carrying techniques • Ensure 2 or more people lift heavy loads
Machinery and engines	Physical injury to user				<ul style="list-style-type: none"> • Work 3 metres apart when swinging tools • Use Personal Protective Equipment (PPE) • Only trained personnel to use chainsaws and other hand-held machinery • Angle grinders to have guards • Ensure all guards are in place • Undertake WH & S training
Noise	Hearing Injuries				<ul style="list-style-type: none"> • Use ear muffs • Use only serviced and maintained equipment

Hazard	Risks	Probability	Consequence	Risk rating	MANAGEMENT Control measures
Pesticide Usage	Contamination of environment				<ul style="list-style-type: none"> Undertake WH & S and Chemical Accreditation training Read label carefully Label any small containers used for herbicide application and add food dye to the mixture
	Contamination of volunteers or the public				<ul style="list-style-type: none"> Use PPE. (gloves, eye protection)
Wildlife and hazardous plants- snakes, ticks, ants, spiders, mosquitoes etc	Poisoning				<ul style="list-style-type: none"> Tread loudly to scare off snakes Wear gloves Wear sturdy footwear, long pants, long sleeved shirt
	Allergic reaction				<ul style="list-style-type: none"> Apply insecticide for control of ticks and mosquitoes Wear sturdy footwear, long pants, long sleeved shirt
Steep and uneven land	Trips slips and falls				<ul style="list-style-type: none"> Maintain boardwalks Encourage caution in these areas Flag off danger zones Create and use safe access trails
Physical hazards. poor housekeeping and sharps					<ul style="list-style-type: none"> Keep the site tidy and don't leave tools in walk ways Put tools in one spot when finished Use tongs and suitable sharps containers
Electrical hazards	Electrocution				<ul style="list-style-type: none"> All work undertaken by a licensed person Check electrical equipment for worn or cut cables

Hazard	Risks	Probability	Consequence	Risk rating	MANAGEMENT Control measures
					<ul style="list-style-type: none"> Place electrical equipment to avoid contact with water Earth leakage circuit breakers must be used in all outdoor workplaces
Working near water	Drowning				<ul style="list-style-type: none"> Signage at office warning of proximity to water of various depths
	Slippery surfaces				<ul style="list-style-type: none"> Signage Maintain surfaces Remove leaf debris
Fires					Maintain fire equipment in accordance with the statutory <i>Fire Safety Schedule</i> .
Bush fires					Maintain clearances around fire hydrants and along fire trail to allow access.
Rotting timbers in boardwalks	Leg and other injuries	high			Continuous inspection and replacement of boards.

Risks to the public and reserve

Hazard	Risks	Management
Fires	Destruction of buildings	Maintain fire equipment and signs in accordance with the statutory <i>Fire Safety Schedule</i> .
Bush fires	Destruction of board walks	Maintain clearances around fire hydrants and along fire trail to allow access for fire fighting.
Rotting timbers in boardwalks	Physical injury	<ol style="list-style-type: none"> Regular inspection and repair. Replacement program
Corona virus (COVID)	COVID infection	COVID safety plan

Appendix 2 - Assets

Assets include those held by the Association and those incorporated into the Reserve itself.

Reserve assets

Gravel car park	\$10,000
Gravel paths	\$50,000
Boardwalks	\$200,000
Signage	\$5,000

Fixed assets (of the Association)

Item	Replacement value
Straw bale building	\$300,000
Amenities block	\$100,000
Nursery potting shed	\$50,000
Shipping container store	\$3,500
Shade structures	\$3,000
Benches	\$8,000
Masonry soil bins	\$2,000
Irrigation system	\$8,000
Water Tanks	\$15,000

Improvements (Assets held by the Association)

Tools	\$10,000
Frig, stove, coffee machine and dishwasher	\$10,000
Computers, etc	\$4,000
Desks and cupboards	\$5,000
Chairs and tables	\$2,000

Appendix 3 – Rules for Site Users

Reserve sign, prohibitions

Signs were erected at path entrances, consistent with the signage on the adjacent council controlled areas, with the following colours and wording:

White background. Green lettering, black symbols and red prohibition circles.

Tilligerry Habitat Reserve Rules

No fires	No camping or caravans	No alcohol between 9pm and 8am
Dogs permitted on leads	No horses	No bicycles, motor bikes or quad bikes
No golf or archery	No littering or dumping	No damage to reserve facilities

No removal of plants or animals Dogs must be on leads No glass

Appendix 4

Objects and Principles of the Crown Land Management Act 2016

The Department of Lands, through the Crown Lands Division, has a fundamental role in enabling the people of NSW to build harmonious communities, facilitating prosperous business growth, enhancing an environment for living, and developing and delivering better public services.

Objects

One of the safeguards to make sure Crown land is managed and used for the benefit of the people of NSW are the objects of the Act. They set out the underlying purpose that guide decision making and every decision under the legislation must be consistent with the objects.

The objects are to:

- provide for the ownership, use and management of the Crown land of NSW
- provide clarity concerning the law applicable to Crown land
- require environmental, social, cultural heritage and economic considerations to be taken into account in decision-making about Crown land
- provide for the consistent, efficient, fair and transparent management of Crown land for the benefit of the people of NSW
- facilitate the use of Crown land by the Aboriginal people of NSW because of the spiritual, social, cultural and economic importance of land to Aboriginal people and, where appropriate, to enable the co management of dedicated or reserved Crown land
- provide for the management of Crown land having regard to the principles of Crown land management.

Principles

Crown land must be managed in accordance with the following principles defined in the *Crown Land Management Act 2016*, referenced in the objects:

- Environmental protection principles be observed in relation to the management and administration of Crown land;
- The natural resources of Crown land (including water, soil, flora, fauna and scenic quality) be conserved wherever possible;
- Public use and enjoyment of appropriate Crown land be encouraged;
- Where appropriate, multiple use of Crown land be encouraged;
- Where appropriate, Crown land should be used and managed in such a way that both the land and its resources are sustained in perpetuity; and
- Crown land be occupied, used, sold, leased, licensed or otherwise dealt with in the best interests of the State consistent with the above principles.

Other key features, which are relevant to the Tilligerry Habitat Reserve, associated with the changes in legislation are:

- From 1 July the following Acts were wholly repealed and are no longer in force:
 - *Crown Lands Act 1989*
 - *Crown Lands (Continued Tenures) Act 1989*
 - *Public Reserves Management Fund Act 1987*

- Crown Land Commissioner - A Crown Land Commissioner is appointed with broad advisory and inquiry functions. They will play a key role in maintaining transparency and open communication regarding the management of Crown land.
- Stronger community engagement - The *Community Engagement Strategy* which outlines requirements for engagement on key Crown land dealings will come into effect. This is a new approach to engaging about Crown land in NSW. The most relevant section of the Strategy as applies to the Reserve is that relating to the compilation of this PoM. A copy of this document can be found online at https://www.industry.nsw.gov.au/_data/assets/pdf_file/0019/143074/Community-Engagement-Strategy.pdf
- Reserve managers - Managers of Crown reserves under previous legislation were automatically appointed as Crown land managers under the new Act and will continue to manage their reserves.
- New regulations to support the Act (*Crown Land Management Regulation 2018*) - The regulations provide clarity and certainty for Crown land managers, tenure holders, and users of Crown land, and information about how parts of the Act are to be implemented.
- Delegations - Delegations support the operation of the Act by enabling departmental staff to carry out functions on behalf of the Minister for Lands and Forestry.

Further details on these changes are provided on line at

<https://www.industry.nsw.gov.au/lands/what-we-do/legislation-policies> (30 June 2019).

Appendix 5 Objectives and mission of the Association

Mission of the Tilligerry Habitat Association Incorporated

Support the protection and rehabilitation of the natural environment of the Reserve, and other areas; as a resource for the local community and visitors, in a sustainable manner.

Objects

The objects of the *Tilligerry Habitat Association Incorporated* are to operate the Association as a not-for-profit organisation and registered charity, to fund and carry out the following activities:

1. Manage the Tilligerry Habitat Reserve in accordance with the appointment as Reserve Manager;
2. Conserve and rehabilitate the Reserve in accordance with its zoning for environmental protection and its purpose for public recreation and environmental coastal protection;
3. Present environmental education and information to the local community and visitors;
4. Operate the Reserve and the environment centre as a site for the participation of members, volunteers, local community and tourists;
5. Operate a nursery as a resource for plants of Tilligerry Peninsular provenance, taking climate change adaptation into account;
6. Assist in the environmental rehabilitation and conservation of other areas.

Adopted at AGM 1/10/2020

Appendix 6 Site management plan

**Tilligerry Habitat Association Incorporated
Manager of the Tilligerry Habitat Reserve**

Environmental Management Plan 2021for the Reserve

Scope

This plan covers the practical application of conservation and environmental protection to the Reserve (part lot 289 of DP 41306, Reserve number 170175), and adjacent areas of lot 289 and lot 290 (controlled by Port Stephens Council).

It is not a plan for wider aspects of the Associations role as Reserve manager. Aspects such as tourism, risk assessments, nursery management and buildings are not included.

Use of this plan

The purpose of this plan is to provide the Association and volunteers guidance on future work on the Reserve in order to ensure ongoing rehabilitation and conservation of flora and fauna.

The State Government appointed the Association as the land manager under the Crown Land Management Act in the late 1990s. One of the Association's objectives is to conserve and rehabilitate the Reserve in accordance with its zoning for environmental protection and its purpose for public recreation and environmental coastal protection.

The reserve was a mine site in the 1960s resulting in removal of vegetation, with the exception of the coastal strip (*Eucalyptus robusta* and paperbark swamp forest on Lot 290). Since the late 1990s the Association rehabilitated the site with plantings, and enhanced tourist possibilities through gravel paths and boardwalks.

This intervention was an attempt over 20 years to restore bushland to a condition that would have originally taken thousands of years to develop. Ongoing rehabilitation (including revegetation) is an important objective for the Association.

Soils, nutrients and intervention

The soil is sandy. Dry sand tends to repel water. Surface material (mulch) from fallen leaves etc helps water to penetrate. Moisture penetration moves nutrients lower into the soil where they are broken down by micro-organisms. On the surface, there are fewer nutrients compared to the accumulation of organic matter on top of clay soils. Fallen organic material disperses deeper into the sand (about 400mm). However, this does not mean there is no mulch present – the continual falling of leaves, branches and dead trees over a long period means that mulch material is always present in undisturbed bush.

The overturning of the original top soil by mining destroyed the soil profile. Essentially the soil is sand low in nutrients. Soil testing showed that the level of nutrients is about half that

of nearby undisturbed soil. The soil is acidic (repeated testing shows a pH range of 5.5 to 5). The soil test data is in the folder *Tilligerry Habitat Site Management Plan* folder, but interpretation is uncertain given that only one sample was taken at each site, which were the reserve and the undisturbed area behind the school.

In the late 1990s, native mulch was added to encourage recovery, by stabilising the soil and adding nutrients to stimulate micro-organism activity and to improve moisture retention. Micro-organisms break down organic matter and are essential for plant growth, particularly the root penetration of fungi and large trees to establish a forest.

Planting of local native species was undertaken and some natural regeneration also occurred. This revegetation is an intervention attempting to recreate, in a short period, bush and forest that originally formed over thousands of years.

The coastal strip of lot 290 is swamp mahogany forest (*E. Robusta*) with peat underneath. Peat is formed in damp soil from fallen material and provides nutrients.

Hydrology

Since the construction of the “Koala Bay” housing estate and related drainage, ground water for the reserve has been reduced towards the Western end. The Eastern end still receives water, via a creek from the pond at Gula Park, springs or pooling. Generally, at the Eastern end the moisture levels are higher and the water table can be close to the surface, unlike the Western end.

Vegetation

Maintaining vegetation and further planting is an important role for the Association as site manager, including threatened and endangered species. This is an important role for the nursery in addition to supplying plants for other areas. The use of local seed helps to ensure the provenance of species. A variety of collection points is important to ensure some genetic variation. Natural regeneration should also be encouraged; however, intervention is necessary to propagate endangered species.

It is important to ensure a diversity of species is planted – for example, three species of a genus in an area, not just one.

Weeds and other invasive species

Ongoing weeding is an important aspect of reserve maintenance since many exotic weeds come into the area by bird droppings, wind or on people’s shoes. Correct weed identification is essential and regular inspections should be undertaken.

Planting fast growing species in order to shade out weeds is an aspect of this, such as pioneering species (e.g., wattles).

The definition of a weed as “a plant in the wrong place” should be avoided since this relies on a subjective judgement and leads to arguments as to what plants are indigenous to this peninsular. There are official lists of weeds available at government web sites. More

information on weed identification and control can be found on the Port Stephens Council's web site, or *Weeds Australia* (weeds.org.au).

There are other threats such as viruses (eg Myrtle rust), insects (e.g., gall wasp) and fungi.

Vines

Some climbing vines cover and strangle shrubs and saplings, and so need to be cut or removed in order to allow tree growth.

Koalas and other wildlife

Maintaining habitat for all wildlife is an essential role for the Association. Dead trees and fallen branches should not be removed since they provide habitat for a variety of animals and insects.

Trees for koalas

Eucalyptus robusta (swamp mahogany) is common on the suite, but needs water. Other suitable feed trees include *E. Haemastoma*, *E. Parramatensis* and *E. Pilularis*, noting that plantings should include a mix of at least three eucalypt species in any one location. Koalas also locate in *Melaleuca quinquenervia*, *Melaleuca styheloides*, *Casuarina glauca* and *Angophora Costata*.

See appendix for the NSW Government's list of koala use trees.

Tree and branch removal

Occasionally it will be necessary to trim or remove trees, for example if unsafe, dropping branches in the car park or too close to structures. Permission from Port Stephens Council should be sort, under their *Development Control Plan 2014*. Reasons for the removal need to be provided and possibly an arborist's report required.

Otherwise, fallen branches and trees should be left in place to provide habitat.

Bushfire management

The three fire hydrants should be checked annually to ensure they are free of vegetation and that easy access is provided. Signage should be maintained – red marking on white pole at the hydrant and blue post at the side of the path. The two hydrants are along the path of the water pipe easement, roughly parallel to the fire trail (the former power line easement), and one is next to the nursery (fenced on three sides, with a marker on the road reserve).

The fire trail should be maintained with 3m width kept clear of vegetation and low vegetation for another 2m either side.

Low temperature mosaic burning should be considered as a hazard reduction measure. Factors to consider in the timing of burning include the breeding cycle of animals and flowering of plants to avoid hindering reproduction.

Paths, boardwalks and bridges

Maintaining paths and boardwalks is an important role for the Association, to ensure visitor safety. Established paths also help to minimise environmental damage by controlling access to the bush.

The “Site Management Plan” folder contains a specification for constructing bridges and boardwalks in wet areas.

Projects

Continued planting is important to ensure a display of local natives, such as the small flowering shrubs near the carpark and building, and to infill sparse areas with larger shrubs or trees.

One area in need of monitoring is the fire trail (previously the power line easement). This should be kept free of plants to a width of 3m with small plants only for a further 1m either side.

Maintenance is also needed for the sensory trail and the edible plants pathway.

There is a separate entrance vegetation plan.

Appendix 7 – Koala tree species

The following species are those listed for Port Stephens council area, in schedule 2 of the *State environmental Planning Policy (Koala Habitat Protection) 2019*, as koala use tree species, in areas where they occur:

Central Coast koala management area

Scientific name	Common name(s)
<i>Allocasuarina littoralis</i>	Black She-oak
<i>Allocasuarina torulosa</i>	Forest Oak
<i>Angophora bakeri</i>	Narrow-leaved Apple
<i>Angophora costata</i>	Smooth-barked Apple
<i>Angophora floribunda</i>	Rough-barked Apple
<i>Casuarina glauca</i>	Swamp Oak
<i>Corymbia eximia</i>	Yellow Bloodwood
<i>Corymbia gummifera</i>	Red Bloodwood
<i>Corymbia maculata</i>	Spotted Gum
<i>Eucalyptus acmenoides</i>	White Mahogany
<i>Eucalyptus agglomerata</i>	Blue-leaved Stringybark
<i>Eucalyptus albens</i>	White Box
<i>Eucalyptus amplifolia</i>	Cabbage Gum
<i>Eucalyptus beyeriana</i>	Beyer's Ironbark
<i>Eucalyptus blakelyi</i>	Blakely's Red Gum
<i>Eucalyptus bosistoana</i>	Coast Grey Box
<i>Eucalyptus botryoides</i>	Bangalay
<i>Eucalyptus camaldulensis</i>	River Red Gum
<i>Eucalyptus camfieldii</i>	Camfield's Stringybark
<i>Eucalyptus canaliculata</i>	Large-fruited Grey Gum
<i>Eucalyptus capitellata</i>	Brown Stringybark
<i>Eucalyptus carnea</i>	Thick-leaved Mahogany
<i>Eucalyptus consideriana</i>	Yertchuk
<i>Eucalyptus crebra</i>	Narrow-leaved Ironbark
<i>Eucalyptus cypellocarpa</i>	Monkey Gum
<i>Eucalyptus deanei</i>	Mountain Blue Gum
<i>Eucalyptus eugenioides</i>	Narrow-leaved Stringybark
<i>Eucalyptus fibrosa</i>	Broad-leaved Red Ironbark
<i>Eucalyptus glaucina</i>	Slaty Red Gum
<i>Eucalyptus globoidea</i>	White Stringybark
<i>Eucalyptus grandis</i>	Flooded Gum

<i>Eucalyptus haemastoma</i>	Broad-leaved Scribbly Gum
<i>Eucalyptus imitans</i>	Eucalyptus imitans
<i>Eucalyptus largeana</i>	Craven Grey Box
<i>Eucalyptus longifolia</i>	Woollybutt
<i>Eucalyptus macrorhyncha</i>	Red Stringybark
<i>Eucalyptus melliodora</i>	Yellow Box
<i>Eucalyptus michaeliana</i>	Brittle Gum
<i>Eucalyptus microcorys</i>	Tallowwood
<i>Eucalyptus moluccana</i>	Grey Box
<i>Eucalyptus oblonga</i>	Stringybark
<i>Eucalyptus paniculata</i>	Grey Ironbark
<i>Eucalyptus parramattensis</i>	Parramatta Red Gum
<i>Eucalyptus pilularis</i>	Blackbutt
<i>Eucalyptus piperita</i>	Sydney Peppermint
<i>Eucalyptus propinqua</i>	Small-fruited Grey Gum
<i>Eucalyptus punctata</i>	Grey Gum
<i>Eucalyptus quadrangulata</i>	White-topped Box
<i>Eucalyptus racemosa</i>	Narrow-leaved Scribbly Gum
<i>Eucalyptus resinifera</i>	Red Mahogany
<i>Eucalyptus robusta</i>	Swamp Mahogany
<i>Eucalyptus saligna</i>	Sydney Blue Gum
<i>Eucalyptus scias</i>	Large-fruited Red Mahogany
<i>Eucalyptus sclerophylla</i>	Hard-leaved Scribbly Gum
<i>Eucalyptus siderophloia</i>	Grey Ironbark
<i>Eucalyptus sideroxylon</i>	Mugga Ironbark
<i>Eucalyptus sieberi</i>	Silvertop Ash
<i>Eucalyptus signata</i>	Scribbly Gum
<i>Eucalyptus sparsifolia</i>	Narrow-leaved Stringybark
<i>Eucalyptus squamosa</i>	Scaly Bark
<i>Eucalyptus tereticornis</i>	Forest Red Gum
<i>Eucalyptus umbra</i>	Bastard White Mahogany
<i>Eucalyptus viminalis</i>	Ribbon Gum
<i>Melaleuca quinquenervia</i>	Broad-leaved Paperbark
<i>Syncarpia glomulifera</i>	Turpentine

Appendix 8 - Volunteer induction and risk management

Health, Safety and Environment

Thank you for completing the personal Information form noting any specific medical condition, including allergies of which the THA management needs to be aware.

- The health and safety of people on site takes precedence over all other considerations.
- Help us preserve a friendly atmosphere by dealing with all fairly. We are committed to anti-discrimination, treating all volunteers equally.
- No alcohol or other drugs are to be consumed on site in working hours.
- Smoking is not permitted on site.
- Volunteers are expected to advise their supervisor of any safety hazard and take care not to place yourself or others at risk of injury or illness.
- You are required to cooperate with this health and safety policy and help assure the safety of all on site, including visitors.
- Prepared risk assessments address the identified WHS risks on the reserve.

It is the responsibility of all to:

- Identify and report hazards such as snakes etc,
- Help maintain amenities and first aid equipment.
- Dress suitably for work tasks (see below).

Committee Health and Safety Role:

To support volunteers, the **THA committee** has the following role:

- Update risk assessments as needed.
- Carry out inductions and tool box meetings.
- Discuss WHS issues at each meeting, refer and follow-up with remediation
- Provide training in WHS for volunteers and committee members
- Develop and maintain a fire plan that includes emergency evacuation procedures, fire extinguisher maintenance inspections and maintenance of fire access trails.
- Repair equipment annually or after it is reported as defective
- Provide personal protective equipment (PPE) to volunteers
- Ensure hazardous chemicals and fuels are stored in a locked area and Safety Data Sheets for same are kept up to date.
- WHS incidents are documented in the minutes of monthly meetings

Work Clothes and Personal Protective Equipment (PPE)

You are required to dress for safety in a manner suitable for work tasks and for the general work environment, including risk from sun exposure.

- Closed toe shoes
- Use PPE provided – gloves, mask, glasses, sunscreen, insect repellent, ear muffs
- Masks when mixing soil (provided)
- Long hair to be tied back or a net worn when using machinery
- Suitable wet weather gear when needed

Grievance Policy

If you have a problem, try to remedy the issue with the person most concerned. If this is unsuccessful, or you feel unable to do so, please speak with a committee member.

General Cleanliness

- Do all you can to keep the site clean.
- Treat the Centre as if it were your home. Keeping it clean as is practical.
- Recycle as much as possible.
- Assist in the cleaning and maintenance of the Environment Centre and grounds
- There is a **Maintenance & Cleaning Schedule** on the front desk for the various sections eg: The Display Room & Nursery.

Work Methods

- Minimise personal mobile phone use if you are at the front desk.
- Work in a team, or in twos. Be alert for dangers.
- Take care, vary tasks, help one another
- Ensure you do not become dehydrated, drink water regularly throughout day
- Snakes, ticks and mosquitoes are around. Be alert and avoid problems.
- Machinery, such as mowers or bench saw, can only be used under direct instruction of manager/team leader, who will follow the health and safety instructions of the manufacturer.
- Chainsaws and similar machines as well as poisons cannot be used by volunteers.

Environmental risks

Standard Operating Procedures and training will be provided to help you protect the environment.

All environmental incidents – or near misses - (e.g. chemical or fuel spills) must be reported and incident form must be completed by the person involved so that the incident can be investigated and action taken to prevent recurrence.

Emergencies

Emergency phone numbers and procedures are located on the wall near the blue front door.

Emergency Procedures **Flip charts** are located in every room of the visitor centre and the potting shed

Treat small scratches as they happen – first aid kit is near office door. If expecting to be away from the Centre for a protracted period – take the portable **First Aid Kit** and **Snake Bite Kit** with you.

Check regularly for **ticks**. They are to be removed with fine pointed tweezers close to the head without squeezing the tick body. Once the tick is removed, apply antiseptic to the bite.

Maintaining the environment

- Regrowth is our best resource. Protect all native vegetation - most can't be grown from seed.
- If you don't know it is a weed, leave it and ask
- All fertilisers, sprays and machinery should only be used under direct instruction of supervisors

- Walk only on gravel paths where possible; keep off the bush and mulch to preserve the small native regrowth on path edges. Your feet do the damage!

Activities that you could be asked to be involved in:

- Assist in bush regeneration and other projects as determined by the Management Committee
- Remove weeds, mulch in designated areas
- Rubbish and litter removal
- Propagate plants for sale
- General maintenance, minor building works, renovations and repairs to boardwalks
- Site reports
- Complete normal maintenance as needed