



Fostering biodiversity and habitat corridors Ursula de Jong

Bridgewater Bay (Blairgowrie) Habitat Corridors Mapping
Prepared for the NCG January 2022 by Sundew Ecological Services

Bridgewater Bay, Blairgowrie

Aerial image – location of study site

Figure 1 from report

The approximately 61.2-hectare study area is bound by Kirwood Street to the north-west, Melbourne Road to the north-east, Royadie Road to the south-east and the Mornington Peninsula National Park to the south and south-west. The study area is known as the Bridgewater Bay precinct.

Bridgewater Bay is a distinct existing unmade roads precinct, with a designated 'neighbourhood character'. The study area is characterised by unmade roads, a proximity to the ocean and a treed canopy consisting of a mixture of indigenous, planted native and exotic species. Whilst the area is dominated by smaller blocks, there are some larger blocks that abut the National Park.

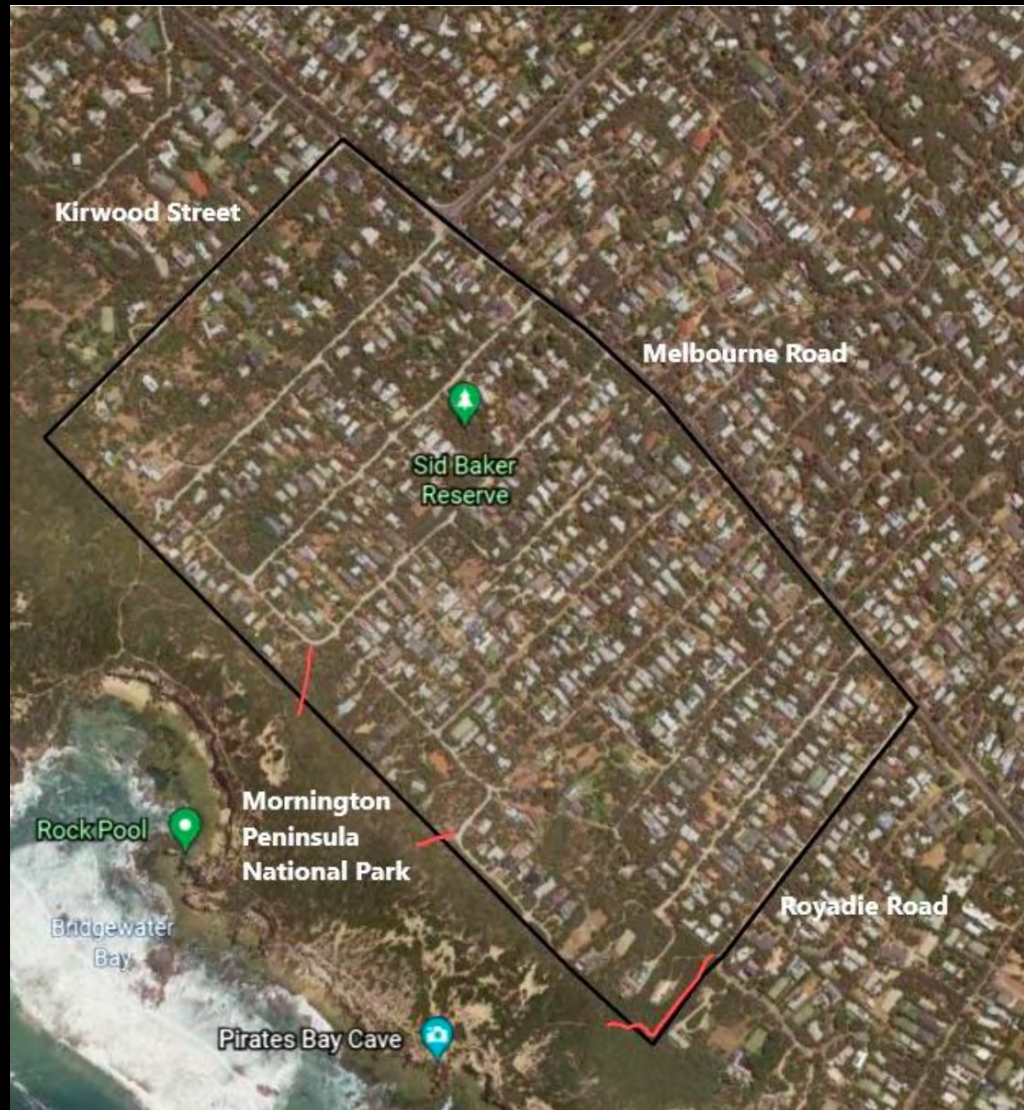


Table 1. Indigenous Vegetation Cover Mapping Categories

Colour	Indigenous Vegetation Cover
Red	<p>Sites with NO (or very minimal) indigenous vegetation cover remaining</p> <ul style="list-style-type: none"> • This included sites that had been recently bulldozed of all vegetation cover • Sites that were dominated by exotic gardens/vegetation • Sites that had hard surfaces or were gravelled • Areas of road reserve with no or only exotic vegetation • Sites with only a few remnant trees remaining (ie: less than five remnant trees)
Orange	<p>Sites with Indigenous Trees and Shrubs Present (exotic groundstorey)</p> <ul style="list-style-type: none"> • If a site contained over five indigenous tree and/or shrub species it was automatically mapped as orange • Trees could occur in patches or were scattered across the site • The understorey beneath the trees varied from exotic grasses to landscaped gardens with a mixture of planted native and exotic species • This category sometimes also contained 'indigenous bushland' gardens where they had been recently landscaped, and the gardens had been designed for aesthetic rather than habitat purposes- for example bush gardens in a gravelled setting
Blue	<p>Sites with Indigenous Trees and Shrubs Present and some Indigenous Groundstorey Species (less than 50% indigenous groundstorey cover)</p> <ul style="list-style-type: none"> • If a site contained indigenous trees and shrubs and groundstorey vegetation it was automatically mapped as blue or green; depending on the extent of indigenous groundstorey vegetation present • Sites in this category were predominantly road reserves with a mixture of indigenous groundstorey and weeds • Sites also included vacant blocks that were mown with 'islands' of indigenous vegetation, or blocks with older holiday houses/beach shacks
Green	<p>Greater than 75% indigenous vegetation cover</p> <ul style="list-style-type: none"> • These were the most ecologically intact sites across the study area • They contained indigenous trees, shrubs and groundstorey species and had few weed species (including any planted vegetation) • These sites were limited to the two well- managed bushland reserves (E.G. Ritchie and Sid Baker Reserves), a few areas of road reserve (including the St Johns Wood Road linear strip), undeveloped larger blocks or the larger blocks that abut the National Park • These blocks had the highest diversity and level of structural integrity in the study area

5.3 Photographs of the Vegetation Mapping Categories

The images over the next pages provide examples of the different mapping categories/ indigenous vegetation condition observed across the study area:



Green- all three indigenous vegetation layers present (Kirwood Street)



Kirwood Street Road Reserve (blue)- less than 50% indigenous groundstorey cover



**Orange- remnant trees over exotic grasses
(Kirwood Street)**



**Green- St Johns Wood Road linear road
reserve**



**Red- recently developed/remnant vegetation
absent (St. Johns Wood Rd)**



**Blue- Drainage Reserve (corner of Sinclair &
Summer Streets)**



Blue- indigenous groundstorey vegetation in the lawn (Sinclair Street)



Orange- recently developed property with remnant trees and indigenous coastal landscaped garden (Dana Street)



Orange/blue- Drainage Reserve (Summoner Street)



Orange- Melbourne Road road reserve



Red- corner of Arnold & Champion Streets



Blue- opposite corner of Arnold & Champion Streets



Blue- indigenous front yard with managed remnant trees, shrubs & groundstorey vegetation (Arnold Street)



Blue- vacant block (corner Ritchie Street)



Red- only one remnant tree remaining (Ridley Street)



Orange- remnant trees and landscaped garden (Ridley Street)



Blue- older beach house with remnant trees, shrubs & groundstorey (Knox Rd)



Blue- vacant block (Royadie Road)

Bridgewater Bay, Blairgowrie

Indigenous vegetation Cover
Mapping across the study area
Figure 2 from report



6. RESULTS- EVC MAPPING

According to the Department of Environment, Water, Land and Planning (DELWP) EVC mapping databases (NVIM and NatureKit) the entire study area is mapped as EVC 858: Coastal Alkaline Scrub. The study area is also mapped as EVC 858: Coastal Alkaline Scrub in the Mornington Peninsula Shire Councils' vegetation mapping database.

The EVC benchmark description for EVC 858: Coastal Alkaline Scrub (as defined by DELWP) is provided in Table 1 below. The study area is located in the Gippsland Plain bioregion.

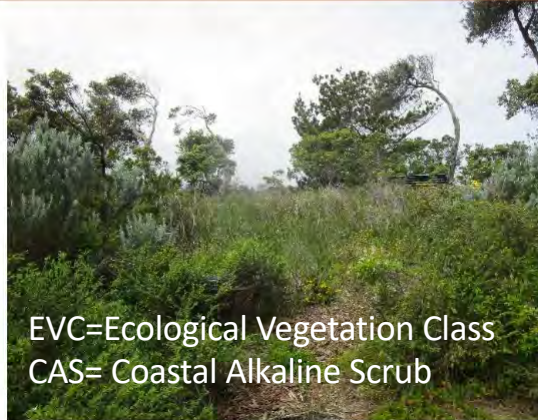
Table 1. EVC Benchmark Description/s

EVC Number	Bioregional Conservation Status	EVC Name	Benchmark Description
858	Vulnerable	Coastal Alkaline Scrub	Near-coastal, deep calcareous (alkaline) and largely stable sand dunes and swales commonly dominated by Moonah <i>Melaleuca lanceolata ssp. lanceolata</i> . It occurs at low elevations of 20-60 m above sea level, average annual rainfall is approximately 550- 950 mm, and it occurs on a variety of geologies and soil types. Low woodland or tall shrubland to 8 m tall, typically with a medium shrub layer, small shrub layer and sedges, grasses and herbs in the ground layer. (DSE 2004).

EVC=Ecological Vegetation Class
CAS= Coastal Alkaline Scrub

6.3 Photographs of the EVC Mapping Categories

The images below provide examples of the different EVCs/floristic communities mapped across the study area:



EVC=Ecological Vegetation Class
CAS= Coastal Alkaline Scrub

**Patch of EVC A309: Calcareous Swale
'Grassland' (25-27 Kirwood Street)**



**Patch of Coastal Moonah Woodland Kirwood
Street Road Reserve**



**CAS- Stages 1 & 2 (St Johns Wood Road
linear road reserve)**



**CAS- Stage 2 (St Johns Wood Road linear
road reserve)**



CAS- Stage 1 (Melbourne Road road reserve)



CAS- Stage 2 (showing collapse/climax into EVC A309 (Melbourne Road road reserve))

EVC=Ecological Vegetation Class
CAS= Coastal Alkaline Scrub



Coastal Moonah Woodland (10 Champion Street)



EVC=Ecological Vegetation Class
CAS= Coastal Alkaline Scrub

Coastal Moonah Woodland in low-lying 'bowl' (corner of Hilltop Ave & Champion Street)



Spring/potential patch of EVC 12 (35 Ritchie Avenue)



Patch of EVC A309 in road reserve & property (37 Ritchie Avenue)



EVC A309: Calcareous Swale 'Grassland' (37 Ritchie Avenue)



CAS- Disturbed (7-9 Cowper Street)

EVC=Ecological Vegetation Class
CAS= Coastal Alkaline Scrub



CAS- Disturbed (14 Sinclair Street)



Modified example of EVC A309 (St Johns Wood Road linear road reserve)

EVC=Ecological Vegetation Class
CAS= Coastal Alkaline Scrub
EVC A309= Calcareous Swale Graassland

Bridgewater Bay, Blairgowrie

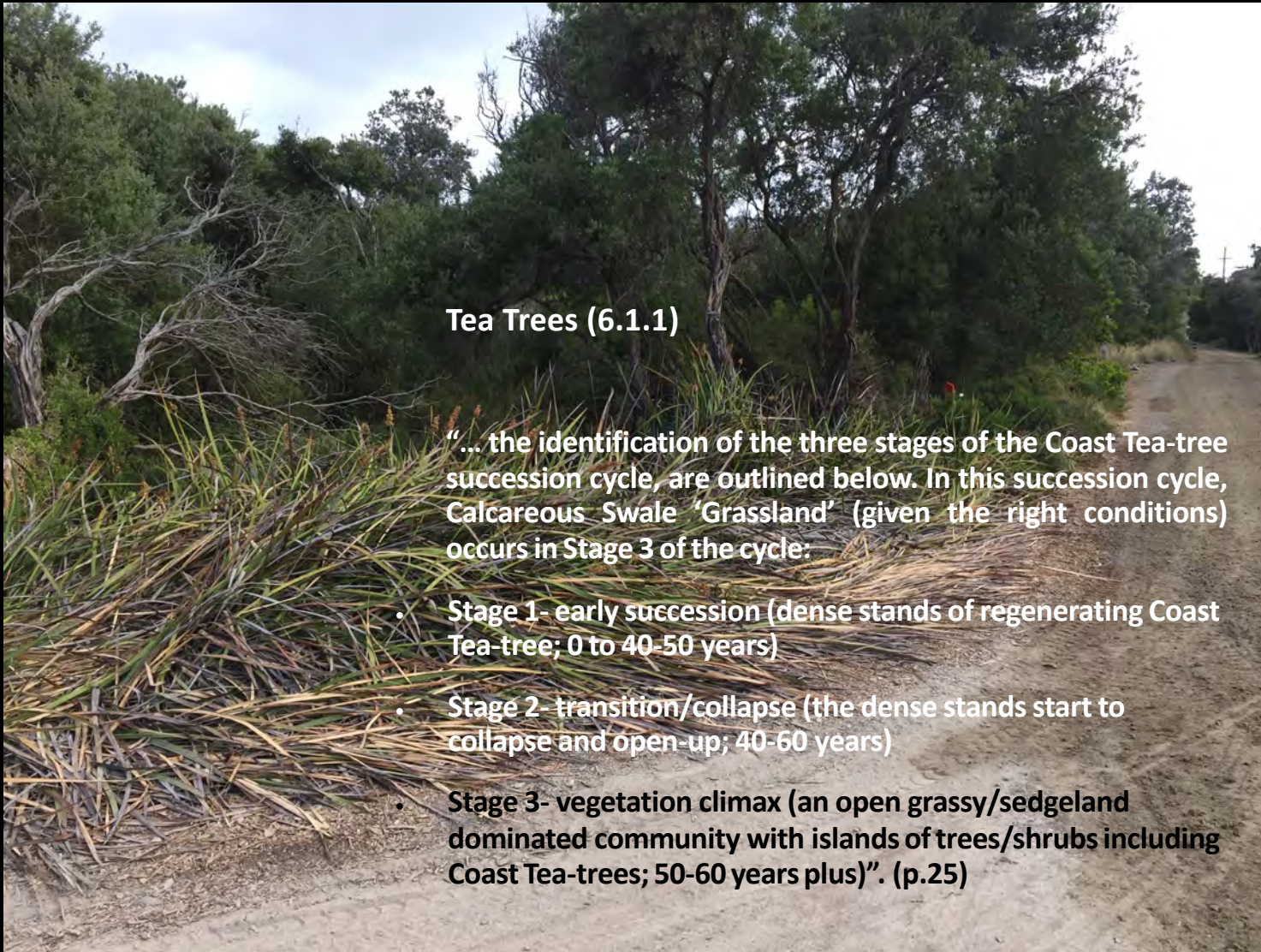
EVC Ecological Vegetation Class

Mapping of the study area

Figure 7 from report



Legend			
CAS	Coastal Alkaline Scrub- Disturbed	CAS	Coastal Alkaline Scrub- Stage 1
CAS	Coastal Alkaline Scrub- Stage 2	CAS	Coastal Alkaline Scrub- Stages 1 & 2
CSG	Calcareous Swale 'Grassland'	CMW	Coastal Moonah Woodland
WSH	Wet Swale Herbland	Red Points	Large old remnant Coast Banksias
Black Polygons/Lines	Reserves managed by the Nepean Conservation Group or Public Linear Access Tracks	?	Land tenure unclear (shown as reserves on Google Maps)



Tea Trees (6.1.1)

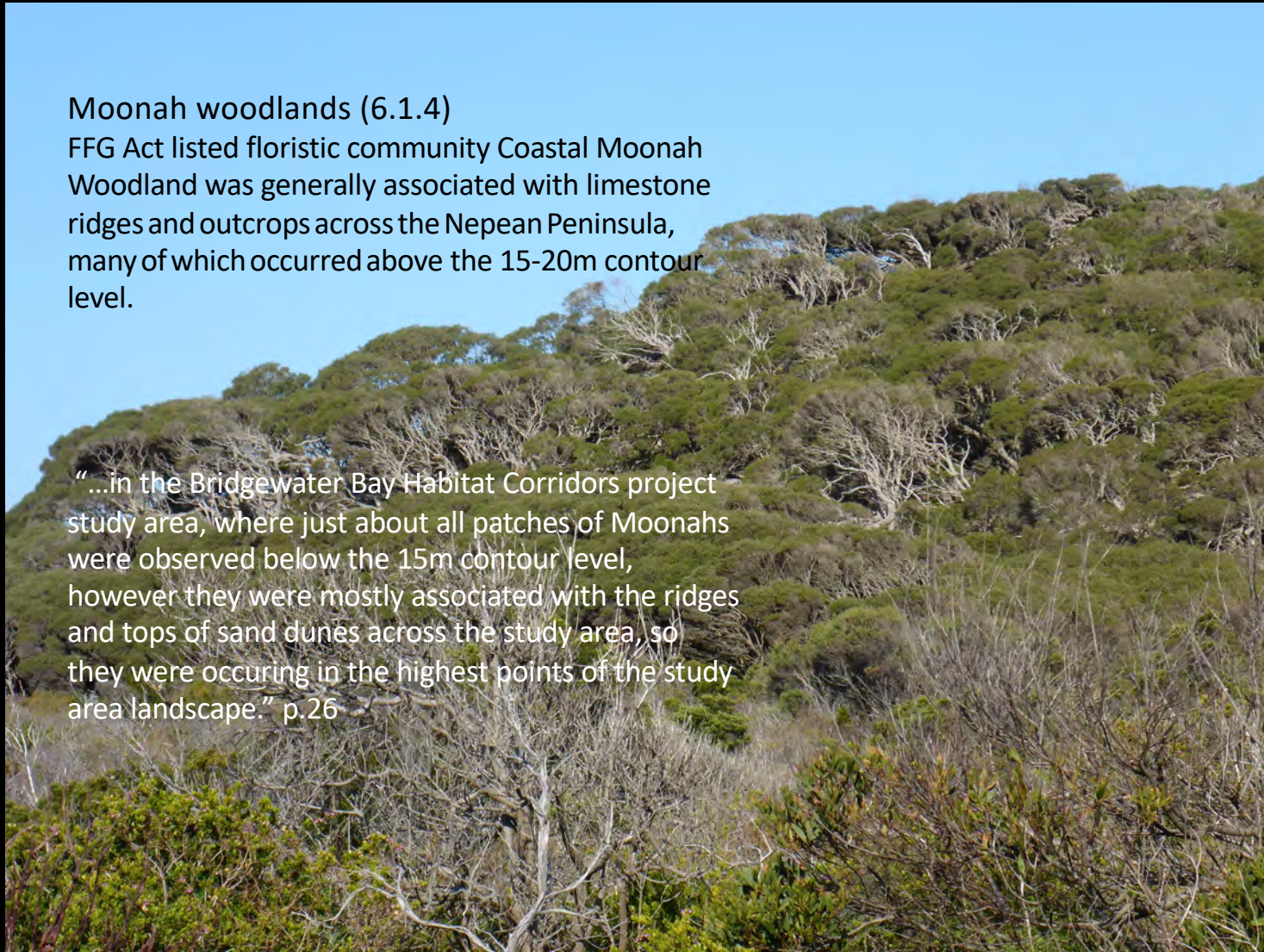
“... the identification of the three stages of the Coast Tea-tree succession cycle, are outlined below. In this succession cycle, Calcareous Swale “Grassland” (given the right conditions) occurs in Stage 3 of the cycle:

- Stage 1- early succession (dense stands of regenerating Coast Tea-tree; 0 to 40-50 years)
- Stage 2- transition/collapse (the dense stands start to collapse and open-up; 40-60 years)
- Stage 3- vegetation climax (an open grassy/sedgeland dominated community with islands of trees/shrubs including Coast Tea-trees; 50-60 years plus)”. (p.25)

Moonah woodlands (6.1.4)

FFG Act listed floristic community Coastal Moonah Woodland was generally associated with limestone ridges and outcrops across the Nepean Peninsula, many of which occurred above the 15-20m contour level.

“...in the Bridgewater Bay Habitat Corridors project study area, where just about all patches of Moonahs were observed below the 15m contour level, however they were mostly associated with the ridges and tops of sand dunes across the study area, so they were occurring in the highest points of the study area landscape.” p.26



6.1.5 Coast Banksias across the Landscape

The location of large old remnant Coast Banksias were mapped as part of the Calcareous Swale 'Grassland' project undertaken for the MPSC to test a hypothesis from previous vegetation mapping work in the Peninsula (*The vegetation of the Nepean Peninsula, Victoria – an historical perspective*; Moxham et al, 2009); that Coast Banksias are an indicator species of the former presence of Calcareous Swale 'Grassland' across the Nepean Peninsula

To complement the large old remnant Coast Banksia mapping undertaken as part of the Calcareous Swale 'Grassland' project, they were also mapped for the Bridgewater Bay Habitat Corridors (BBHC) project when observed.

All these large old remnant Coast Banksias are significant species within the study area, that should be protected if possible.

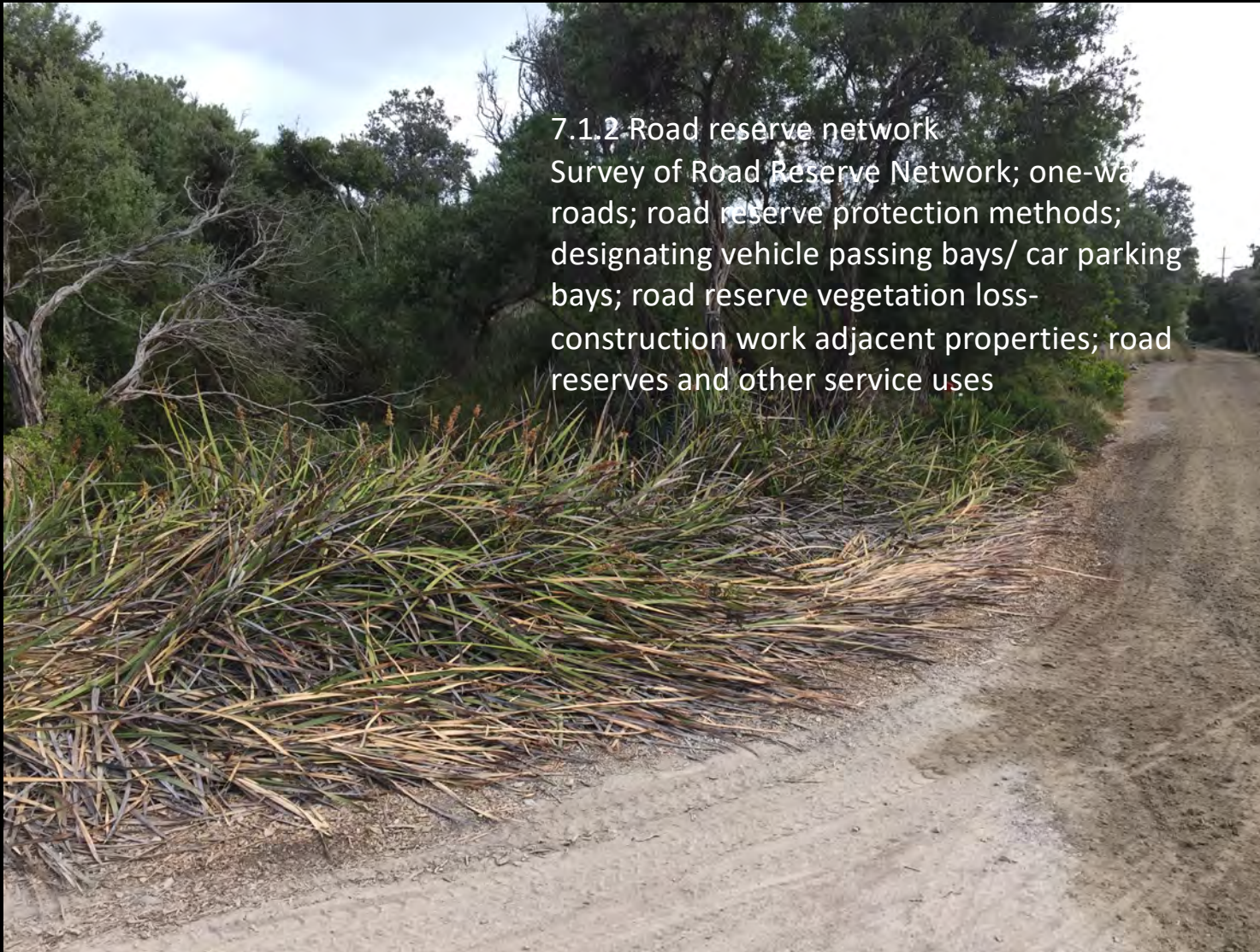


7. The Bridgewater Bay
Habitat Corridors project
observations and discussion
and some recommendations

Figure 10 report

7.1.1 Land Tenure across the
study area





7.1.2-Road reserve network
Survey of Road Reserve Network; one-way roads; road reserve protection methods; designating vehicle passing bays/ car parking bays; road reserve vegetation loss-construction work adjacent properties; road reserves and other service uses

7.1.3 Incremental vegetation /habitat loss

7.1.4 habitat corridors and indigenous vegetation mapping

7.1.5 Bushfire management

7.1.6 Flora and fauna data

7.1.7 Vacant Blocks/blue blocks – plant salvage/ rescue prior to development

7.1.8 Large old remnant banksias

7.1.9 EVCs/Decline of coast tea trees and the future study area



A photograph of a natural landscape, likely a park or reserve. In the foreground, there's a path or clearing with some low-lying plants and a large, gnarled tree trunk. The background is filled with dense green foliage and trees. The lighting suggests it's daytime, with some shadows on the ground.

The NCG looks forward to working with our community, Friends Groups and volunteers and the MPS to foster biodiversity and habitat corridors on the Nepean Peninsula.

Next steps

- A. Write all residents in the BB area
- B. Organise a Biodiversity workshop with the MPS for the Nepean Peninsula community.

Thank you.

