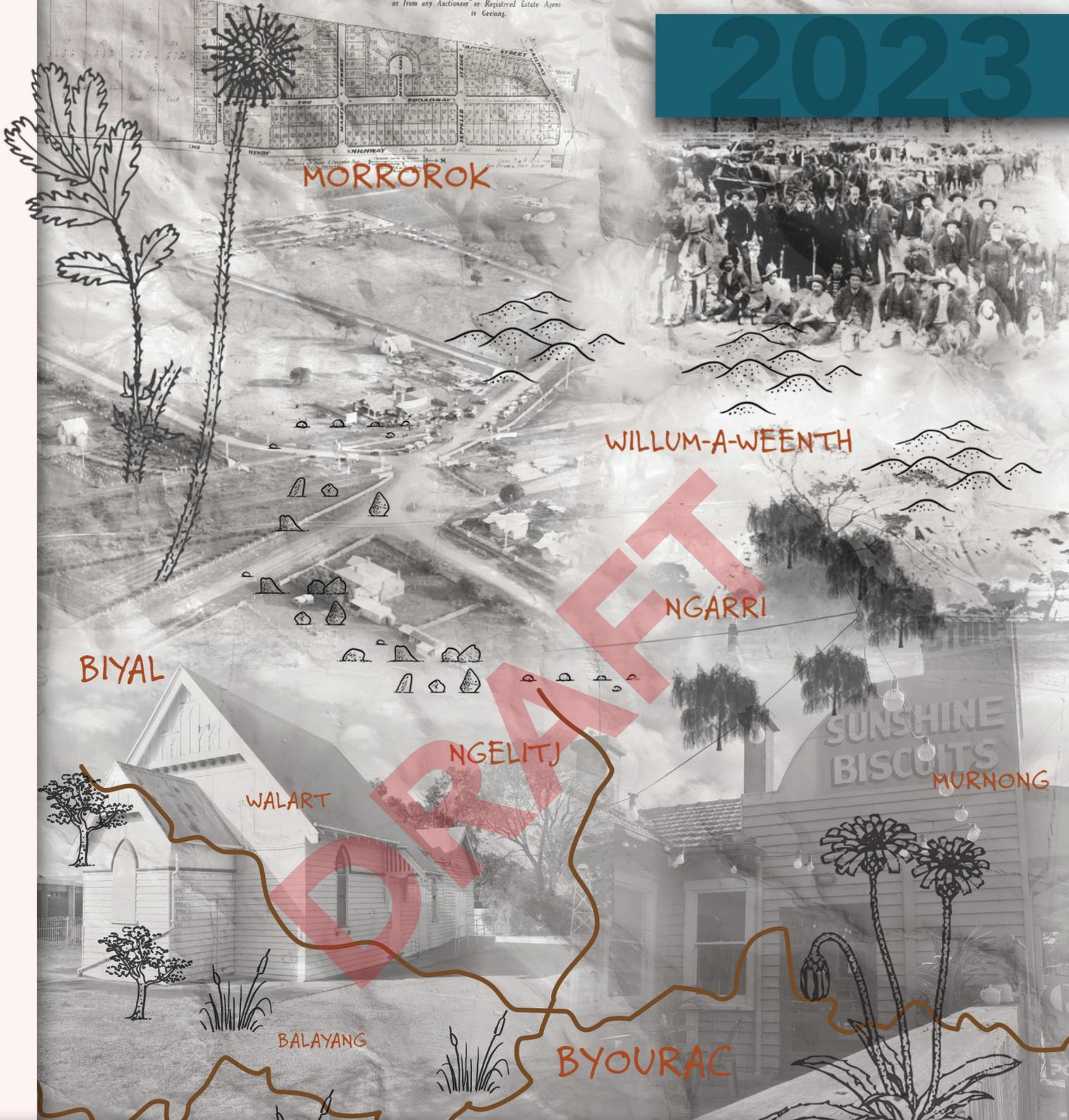


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2023



DRAFT MORIAC STRUCTURE PLAN



MORIAN STRUCTURE PLAN 2023

TRADITIONAL OWNER ACKNOWLEDGEMENT

Surf Coast Shire Council Acknowledges the Wadawurrung People as the Traditional Owners of the Moriac region.

We pay our respects to their Elders past, present and future.

We acknowledge their care and custodianship for more than 60,000 years, which continues today. We walk with them as we respectfully care for and tread lightly on these lands.

We also extend that respect to all First Nations people who are part of the Moriac community.

COMMUNITY RECOGNITION

Surf Coast Shire Council would like to thank all residents and community groups for their input into the various engagement forums that have informed the drafting of the Moriac Structure Plan. The project team acknowledges the broad range of views on many matters raised throughout the process. The exhibition of the draft Moriac Structure Plan will provide further opportunities for community participation.

DISCLAIMER

Surf Coast Shire Council and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence which may arise from you relying on any information in this publication.



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mesh

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WADAWURRUNG LANGUAGE LIST

The following is a list of Wadawurrung words and their meanings used (and referenced) throughout this text:

WORD	MEANING
Barre-Warre-N-Yalock	Barwon River
Bawain	Mana Gum
Biyal	River Red Gum
Bell blaam	Cossid Moth
Ber-buk	Hunger Belt
Bundjil	All-powerful ancestral deity in the form of a wedge-tail eagle
Bunyia	Eel
Bunyip	Amphibious being with supernatural powers
Burruk	Kangaroo rat
Byerr	Meeting of four Wadawurrung clans
Byourac	Meeting of the four branches of Thompson Creek at Moriac
Goim	Kangaroo
Kar-wer	Emu
Ko-e-lern	Wallaby
Kurrak	Sandy
Leange-walert	Tool made from the lower jaw of the possum – used to ornament wooden shields
Marpiang	Ancestral heroine deity that takes the form of the head of an ant or termite in the night sky.
Moodewarr	Musk Duck (the name of Lake Modewarre is derived from Moodewarr given the large numbers of musk ducks that flock there)
Moolaa	Bracken fern
Moriac	Derived from Morroyok meaning bramble (bidgee-widgee) and native raspberry.
Mur-ri-kle	Male pubic apron
Murnong	Yam daisy
Ngar-murrk	Drooping Sheoak (<i>Allocasuarina verticillata</i>)
Ngelitj	Black Wattle tree (<i>Acacia mearnsii</i>)
Ngeltij	Silver Wattle tree (<i>Acacia dealbata</i>)
Ngubitj	Water
Rak/Ruk/Rum	Arm or branch
Waa	Ancestral deity in the form of a crow.
Warri	The sea
Wiyin	Fire
Willum-a-weenth	Place (or home) of the fire
Walart	Possum
Walert Walert	Possum cloak or rug
Woo-loitj	Kangaroo Grass
Wurdee Boluc	Inference to the Wurdee Boluc swamp and Lake Modewarre comprising parts of the river beds of the Leigh and Barwon River systems prior to the volcanic eruptions 2 million years ago (wurdi – meaning large; bulad – two; and yuluk – river).
Yaluk	River - Creek
Yowang	Big Hill

ABBREVIATIONS AND ACRONYMS

GENERAL

Act	Planning and Environment Act 1987
Council	Surf Coast Shire Council
DEECA	Department of Energy, Environment and Climate Action
DTP	Department of Transport and Planning
DAL	Distinctive Areas and Landscapes
G21	G21 Geelong Region Alliance
MCN	Moriac Community Network
MSP 2010	Moriac Structure Plan 2010
Planning Scheme	Surf Coast Planning Scheme
PPV	Planning Panels Victoria
RAP	Registered Aboriginal Party
MSP 2023	Moriac Structure Plan 2023
SSC	State Suburb Collection (ABS)
VCAT	Victorian Civil and Administrative Tribunal
VPPs	Victoria Planning Provisions

ZONES

FZ	Farming Zone
LDRZ	Low Density Residential Zone
TZ	Township Zone
PPRZ	Public Park and Recreation Zone
PUZ	Public Use Zone
TRZ	Transport Zone

OVERLAYS

ESO	Environmental Significance Overlay
LSIO	Land Subject to Inundation Overlay
SMO	Salinity Management Overlay
VPO	Vegetation Protection Overlay

EXECUTIVE SUMMARY

The Moriac Structure Plan (The Plan) will provide a strategic framework to guide land use and development decisions for the next 10 years. The Plan will ensure that future incremental growth is responsive to the constraints of the landscape and respectful of the rural character of the town.

THE DRAFT MORIAC STRUCTURE PLAN:

Acknowledges the Wadawurrung Traditional Owners as the first custodians of Moriac and the surrounding district, and encourages the consideration of Traditional Owner knowledge and culture in future decision making;

- Identifies what is unique and valued about Moriac and clarifies both the current and future role of the town in the region;
- Presents a history of the landscape, describing the significant transformations which have occurred since European arrival;
- Establishes a vision and guiding principles to guide future land use planning decisions;
- Responds to the key issues and influences identified in the MSP Background Report in developing a preferred growth framework;
- Considers the future servicing needs of residents and presents options for building upon the existing strengths of the compact urban form;
- Identifies a preferred location for future growth;
- Presents an implementation plan outlining future actions and responsibilities.

THE MORIAC STRUCTURE PLAN IS SUPPORTED BY THE FOLLOWING TECHNICAL REPORTS:

- Moriac Structure Plan 2022 – Background Report – Understanding Moriac - January 2022
- Moriac Structure Plan 2022 – Community Engagement Summary Report – May 2022
- A History of Moriac – Background for the Moriac Structure Plan – October 2022
- Bushfire assessment to inform Moriac Structure Plan – September 2022
- Moriac Septic Study Report – Published March 2021
- Mesh - GAMA Assessment of Investigation Areas – May 2023

STRATEGIC FRAMEWORK PLAN

THE STRATEGIC FRAMEWORK PLAN PROVIDES THE FOLLOWING LAND USE DIRECTIONS:

- Avoid impacts on the Byourac Junction of the Thompson and Raven Creeks.
- Support the rezoning of Farming Zone land south of the Hinterland Estate for future Low Density Residential Zone development;
- Support the consolidation of commercial land use and development within central Moriac.
- Upgrade the Lions Park in central Moriac;
- Investigate opportunities to upgrade existing town entry signage;
- Investigate the development potential of land located to the east of the Hendy Main Road fronting the Thompson Creek;
- Provide additional pedestrian crossings on the Hendy Main Road;
- Retain existing tree clusters and plantations rows on land identified for future development;
- Ensure that the zoning of public land assets reflects the current and intended use of the land.

DRAWING KEY

-  Study Area
-  Proposed Settlement Boundary
-  Proximity to Town Centre

LAND USES

-  Township Zone (TZ)
-  Low Density Residential Zone (LDRZ)
-  Transport Road Zone (TRZ1)
-  Primary School
-  Drainage Reserve
-  Water Pipe Corridor
-  Public Open Space
-  Private Open Space
-  Future Low Density Development Area
-  Rezone to Farming Zone (FZ)
-  Rezone to Public Park and Recreation Zone (PPRZ)
-  Thompson Creek Reserve Corridor
-  Investigation Area for balance of Area 2A to the south
-  Investigate Commercial / Community Uses
-  Support Consolidation of Existing Township Commercial Development
-  Stormwater Upgrade Improvement Works
-  Provide Separation from Future Development associated with CORA

MOVEMENT

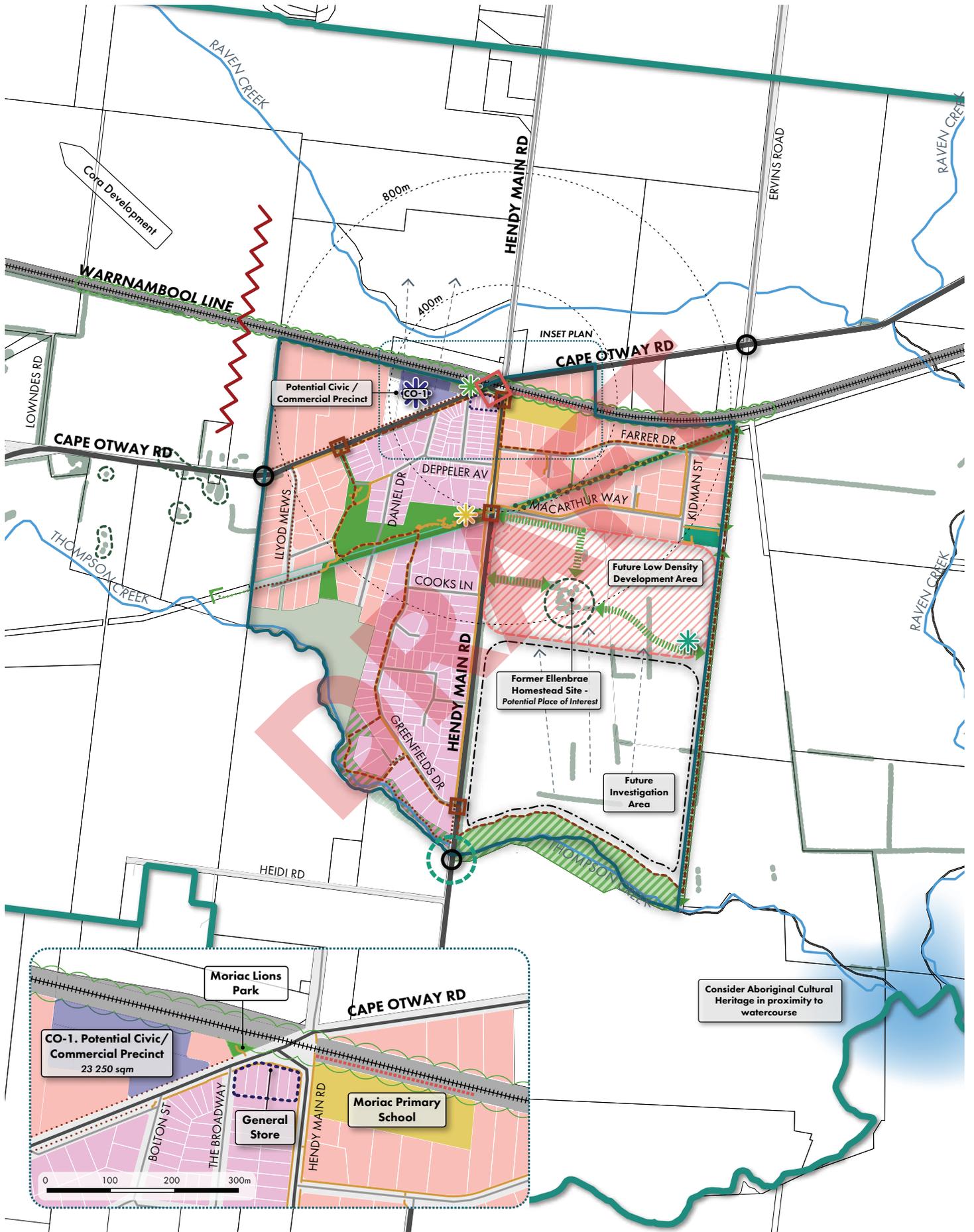
-  Rail Line
-  Sub-Arterial Road
-  Local Road
-  Unmade Road
-  Existing Pathway Network
-  Opportunity to Formalise Entry Gateway
-  Improve Intersection Safety
-  Potential Formalised Pedestrian Crossing
-  Provide Safety Buffer Treatment to Railway Line Bordering Primary School
-  Potential Extension of Pathway Network / Missing Links in Network
-  Potential Outer Town Trail Loop (approx 6.5km)
-  Investigate Extension of paths along Thompson Creek
-  Neighbourhood Safer Place Location
Consider vegetation management requirements

LANDSCAPE FEATURES

-  Waterway
-  Existing Key Views
-  Potential Open Space and Integrated Water Management Corridor
-  Biodiversity Corridor and Weed Management
-  Potential Tree Planting in Pipe Corridor
-  Protect Tree Cluster
-  Potential Retention of Existing Tree Clusters/Rows
-  Upgrade / Investigate Expansion of Local Town Park
-  Investigate Stormwater Management Infrastructure
-  Aboriginal Cultural Significance - Byourac

Figure 0.1 – Moriac Draft Strategic Framework Plan

Source: Mesh Urban Planning



DOCUMENT STRUCTURE

The draft Moriac Structure Plan is presented in three parts.

PART A

Part A introduces a brief history of Wadawurrung Country and explains the significance of the landscape surrounding Moriac. Part A describes the arrival of Europeans and the subsequent impacts on Wadawurrung people and the landscape. In linking the past to the challenges of the future Part A describes the development of the town from the establishment of the first pastoral estates to the most recent residential subdivisions.

PART B

Part B presents a vision for the future and establishes guiding principles for responding to key land use planning issues and opportunities. Part B addresses the guiding principles by planning theme, and introduces strategies and actions to inform land use planning outcomes over the next 10 year period.

PART C

Part C presents the following information:

- Boundary analysis - identifying constraints to the future growth of Moriac;
- A summary of landscape level Bushfire Risk Assessment findings;
- A review of investigations areas for future growth;
- The identification of a preferred location for future growth.

Part C introduces a new Strategic Framework Plan for Moriac detailing key land use planning directions for the next 10 year period.

Part C details an Implementation Plan with requirements for the monitoring and review of actions.



INTRODUCTION

01

1.0 INTRODUCTION

Located on Wadawurrung Country, Moriac is a compact, pedestrian friendly town with quiet residential streetscapes and an abundance of green open space. With a population of 852 residents, Moriac represents a unique and readily distinguishable community in a region that is experiencing unprecedented population growth.

Across Geelong and the Surf Coast, land use changes are occurring at a rapid pace with large areas of farmland transitioning to residential use. The pace of construction in Moriac's newest estate reflects the popularity of the town as a destination for families seeking to build a new home. However, Moriac has a very limited supply of land designated for residential growth. With increasing demand and very little in the way of housing diversity a number of issues are emerging.

The Moriac community has expressed a desire that future development should be more sustainable

and avoid impacts on natural environments. The development of a new structure plan provides an opportunity to decide how this can be best achieved. Careful consideration needs to be given to the scale and servicing requirements of any future development within the study area.

In responding to emerging challenges the Moriac Structure Plan has adopted a project methodology that befits the unique characteristics of the town. The Plan embraces a principle that in planning for the future it is important to consider learnings from the past. Central to this approach is a focus on land use planning directions that are responsive to the key features of the landscape & cultural heritage values.

A contemporary land use planning framework will ensure that Council is well prepared to respond to growth pressures in accordance with a clear vision that is supported by the Moriac community.

1.1 BACKGROUND

The development of a new Moriac Structure Plan commenced in 2021. Key factors driving the preparation of a new plan include:

- State and regional planning policy reforms over the past ten years.
- The rezoning of the last remaining area of land identified for housing development in the Moriac Structure Plan 2010 (MSP2010), and therefore the need to consider future housing needs for Moriac.
- Community interest in a review of public infrastructure including open space areas, footpaths and trails, community buildings and service infrastructure (i.e. electricity, water, wastewater) to determine future needs.
- The need to consider the implications of the growth in visitors to the rural hinterland for Moriac given its strategic location at the intersection of two main roads.
- The need to develop a Structure Plan that supports and complements current community aspirations.
- An opportunity to consider land use planning implications associated with the State Government's approval of CORA – a major global sports, tourism and accommodation development in Modewarre.

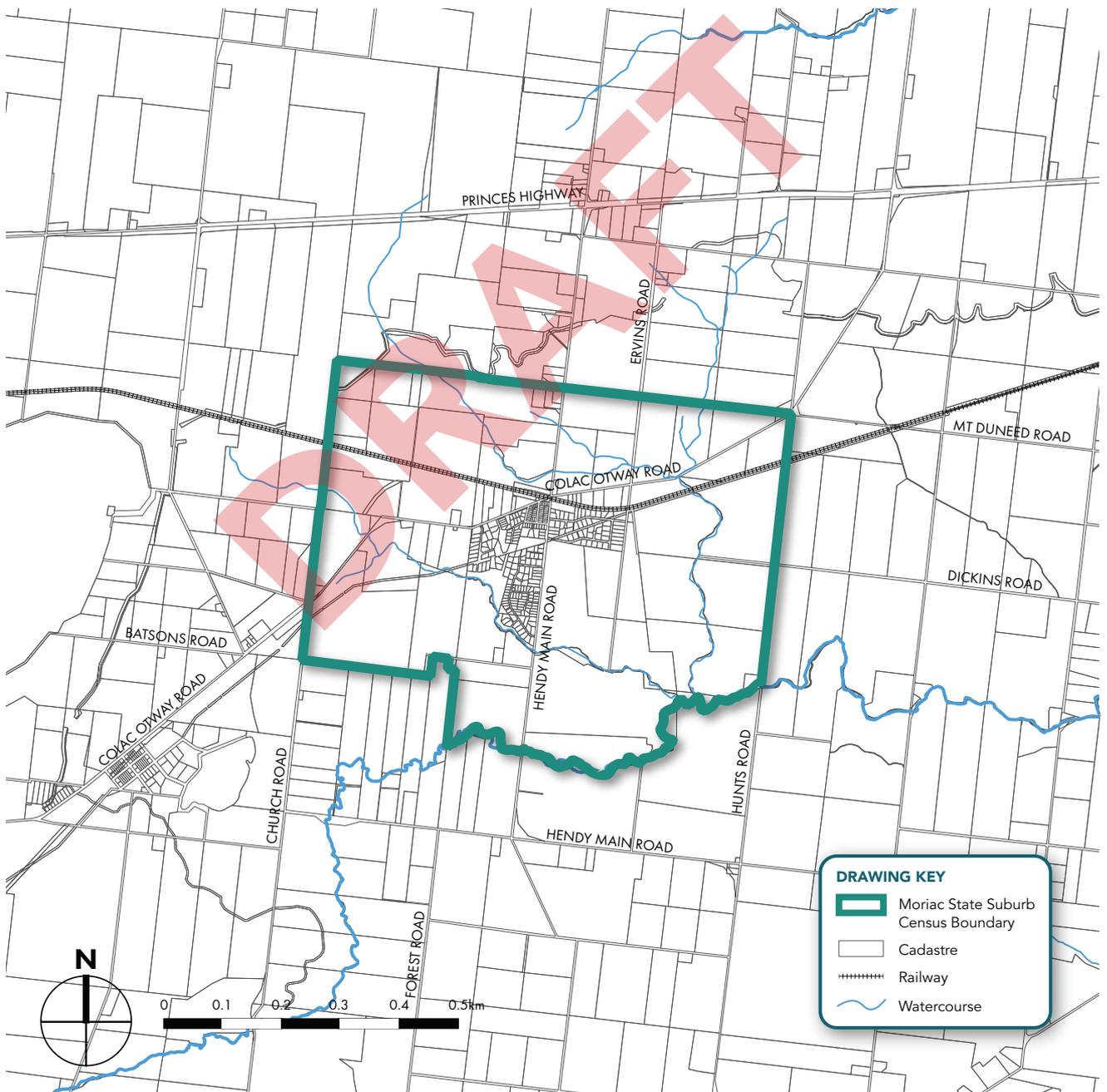
1.2 CONTEXT

1.2.1 STUDY AREA

The study area is shown in Figure 1.1 and includes the township of Moriac and the immediate surrounding rural hinterland. The study area contains approximately 1,790 hectares and is based on the Australian Bureau of Statistic's Moriac State Suburb Census (SSC) collection boundary, allowing for the consideration of rural interface related issues.

Figure 1.1 – Moriac Structure Plan Study Area

Source: Mesh Urban Planning



1.2.2 A SNAPSHOT OF MORIAC

Moriac township is located at the intersection of Hendy Main Road and Cape Otway Road, a distance of 23km south-west from the Geelong CBD and approximately 20km east of Winchelsea. The Geelong-Warrnambool railway line provides a physical barrier along much of the northern boundary of the township, and Thompson Creek forms a natural boundary to the south of the town and the wider study area. The town is surrounded by farmland, which supports grazing and cropping activities.

The Moriac General Store, which includes the post office, is located on Cape Otway Road and represents the social centre of the town. The primary school is located directly opposite the General Store on the eastern side of Hendy Main Road.

The character of Moriac is largely defined by the dominance of single storey houses that are generally well setback from title boundaries. The majority of residential parcels are at least one acre (4,000 square metres) in area, allowing for the establishment of landscaping. The development pattern is reflective of the town not having a reticulated sewer system.

Moriac has experienced a steady increase in new home construction placing increasing demands on services and infrastructure. Alongside rising demand, Moriac is faced with a limited supply of land zoned or designated for future residential growth.

At the 2021 census there were 294 dwellings in Moriac (an increase of 37 new homes since 2016). Between the 2016 and 2021 Census collections the population of Moriac grew by 70 residents.

POPULATION	852
MEDIAN AGE	38
NUMBER OF DWELLINGS	294
AVERAGE NUMBER OF PEOPLE PER HOUSEHOLD	3.1
MEDIAN WEEKLY HOUSEHOLD INCOME	\$2,486
UNOCCUPIED DWELLINGS	17 (6%)

Figure 1.2 - A Snapshot of Moriac

Source: Australian Bureau of Statistics (ABS) 2021 Census Quickstats

1.2.3 REGIONAL PLANNING CONTEXT

Moriac is categorised as a 'small town' located within the peri-urban region of Melbourne (i.e. within 100km of central Melbourne). The Australian Bureau of Statistics (ABS) defines a small town as having a population of less than 10,000 people.

Surf Coast Shire is located within the G21 region, and Moriac is identified within the G21 Regional Growth Plan (RGP) in the 'town, village, hamlet' classification. The G21 RGP seeks to accommodate a population of 500,000 residents across the region by 2050, whilst acknowledging that the region's smaller rural settlements will continue to experience minimal growth. In summary Moriac is not identified as a location to accommodate targeted population growth.

The G21 RGP also recognises the importance of protecting settlement breaks between major

growth areas. This aspiration is reflected in the City of Greater Geelong Housing Framework Plan - 2036 which identifies a 'non-urban break' to be maintained along the southern municipal boundary, providing a physical separation between Armstrong Creek and Moriac.

Approximately 14 kilometres east of Moriac is the locality of Mount Duneed in the City of Greater Geelong. Mount Duneed demarcates the edge of the Armstrong Creek Growth Area. Armstrong Creek represents one of the largest 'greenfield' growth areas in Victoria, with a target population of between 55,000 and 65,000 residents. The 2020 estimated resident population for the Armstrong Creek – Mount Duneed corridor was 11,793 people¹.

¹ City of Greater Geelong Community Profile, idcommunity - <https://profile.id.com.au/geelong>

Figure 1.3 - Regional Context Plan
Source: Mesh Urban Planning



1.2.4 LOCAL PLANNING CONTEXT

At a local level, the Surf Coast Planning Scheme designates Torquay-Jan Juc and Winchelsea as the major urban growth centres for the Surf Coast Shire, and seeks to contain smaller rural towns within designated settlement boundaries to protect rural land and biodiversity assets from urban development. The individual role of each rural town is to be strengthened to maintain the Shire's diverse offering of experiences and opportunities.

Winchelsea is located 16 kilometres to the west of Moriac and is the closest neighbouring town within the Surf Coast Shire. With a population of 2456 residents in 2021 (up 20% from 2016), Winchelsea is currently growing at a moderate rate however planning has been undertaken to accommodate a potential population of 10,000 residents by 2050. The Winchelsea Framework Plan guides future growth of the town and provides opportunities for new residential development in multiple locations.¹

Moriac is described as being part of a Mixed Farming landscape within the Surf Coast Planning Scheme (Clause 02.03-2). In this landscape Council seeks to:

- Protect and enhance the landscape values of the rural precincts.
- Encourage land use and development that is complementary to the rural landscape character.
- Protect the view sheds of the region.

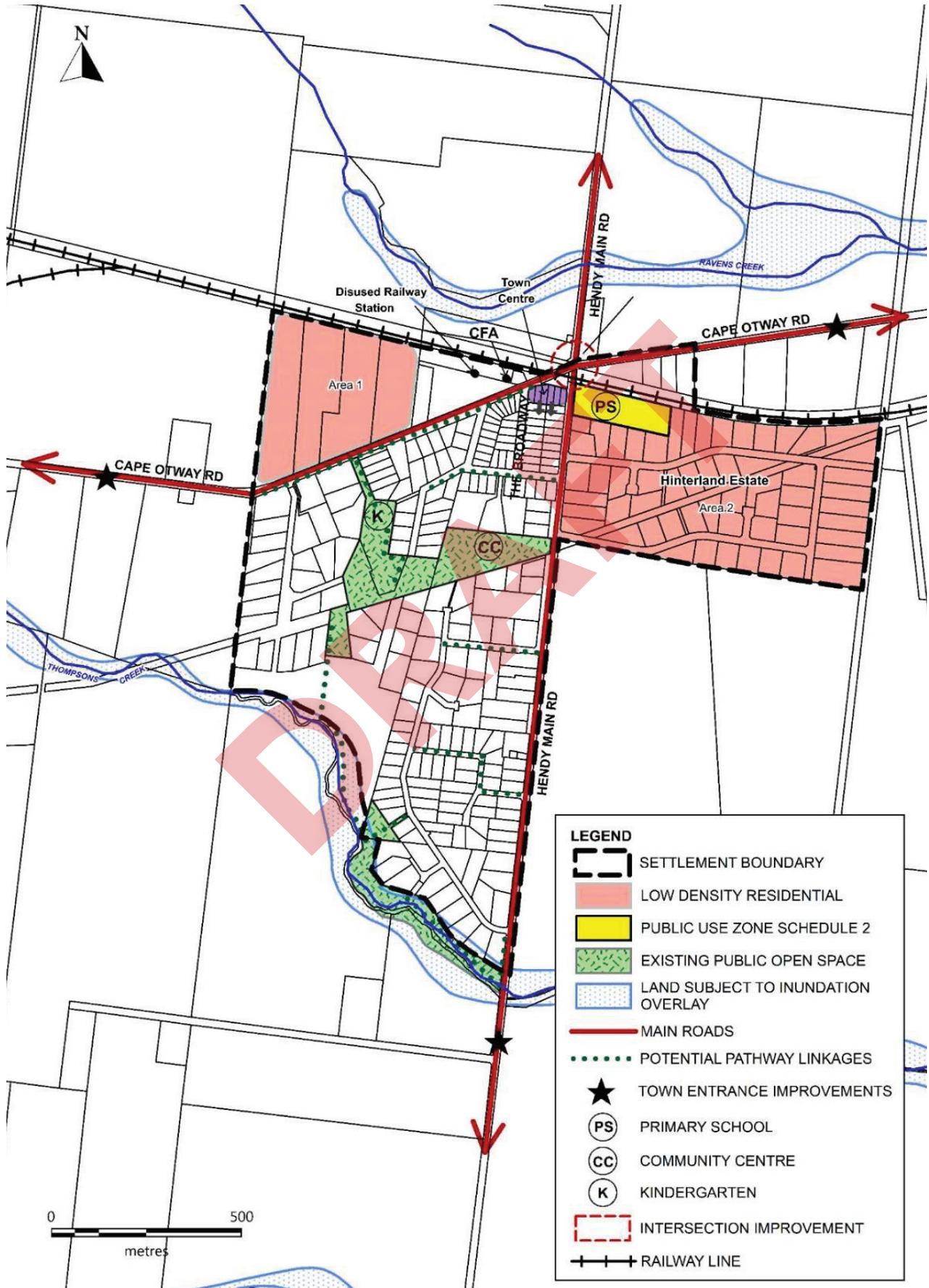
Existing local planning policy for Moriac is based on the MSP 2010 and reflects its position that Moriac has limited growth opportunities due to a lack of services and reticulated sewerage. The priority is to protect the rural character of Moriac within its rural setting and to confine residential development to the defined urban boundaries as shown in the Moriac Framework Plan at Clause 02.04-8. Land within the Hinterland Estate on Hendy Main Road shown as Area 2 on the Moriac Framework Plan (See figure 1.4) has now largely been developed and land in the north-west on Cape Otway Road designated for low density residential development has recently been rezoned for this purpose.

The MSP 2010 was written to provide policy directions for a ten year planning horizon, it is therefore appropriate to adopt a new plan.

¹ Winchelsea Framework Plan, Clause 02.04-4, Surf Coast Planning Scheme

Figure 1.4 - Moriac Framework Plan 2010 - Clause 02.04-8

Source: Surf Coast Planning Scheme - Clause 02.04



1.3 COMMUNITY ENGAGEMENT

The Moriac community has played an important role in contributing to the development of the draft Moriac Structure Plan. Community engagement followed the publication of the Background Report in June 2022. A summary of engagement activities is described in the table below:

ENGAGEMENT ACTIVITY	OVERVIEW
COUNCIL'S WEBSITE	The Moriac Structure Plan process was promoted on Council's website with a link to the Background Report and other relevant background documentation.
NEWSPAPER ADVERTISEMENTS	The Moriac Structure Plan 'drop in' sessions were promoted in advertisements published in both the Winchelsea Star and the Surf Coast Times.
ONLINE SURVEY	An online survey sought to gauge community reactions to key facts and findings. The survey presented five draft guiding principles for review and comment. Council received more than 100 completed surveys.
TARGETED SOCIAL MEDIA	Targeted social media posts for residents of Moriac and district (who currently follow the Surf Coast Shire) were employed to broaden the reach of the project survey link.
DIRECT MAIL	A direct email invitation was sent to a group of 238 Moriac and district residents who had previously recorded email contact details with Council for engagement purposes.
DROP-IN SESSIONS	Drop in sessions were held at the Newling Reserve Community Centre in April 2022. There were 41 attendees at the two sessions
COMMUNICATIONS WITH EXTERNAL KEY STAKEHOLDERS	The Background Report was distributed to key stakeholders including Barwon Water and the Department of Environment, Land, Water and Planning.
COMMUNICATIONS WITH THE MORIAC COMMUNITY NETWORK (MCN)	Council has maintained regular communications with the Moriac Community Network (MCN) since the commencement of the project. Officers attended a regular MCN meeting to present the key findings of the Background Report on the 27 April 2022.

Figure 1.5 - Summary of Community Engagement activities

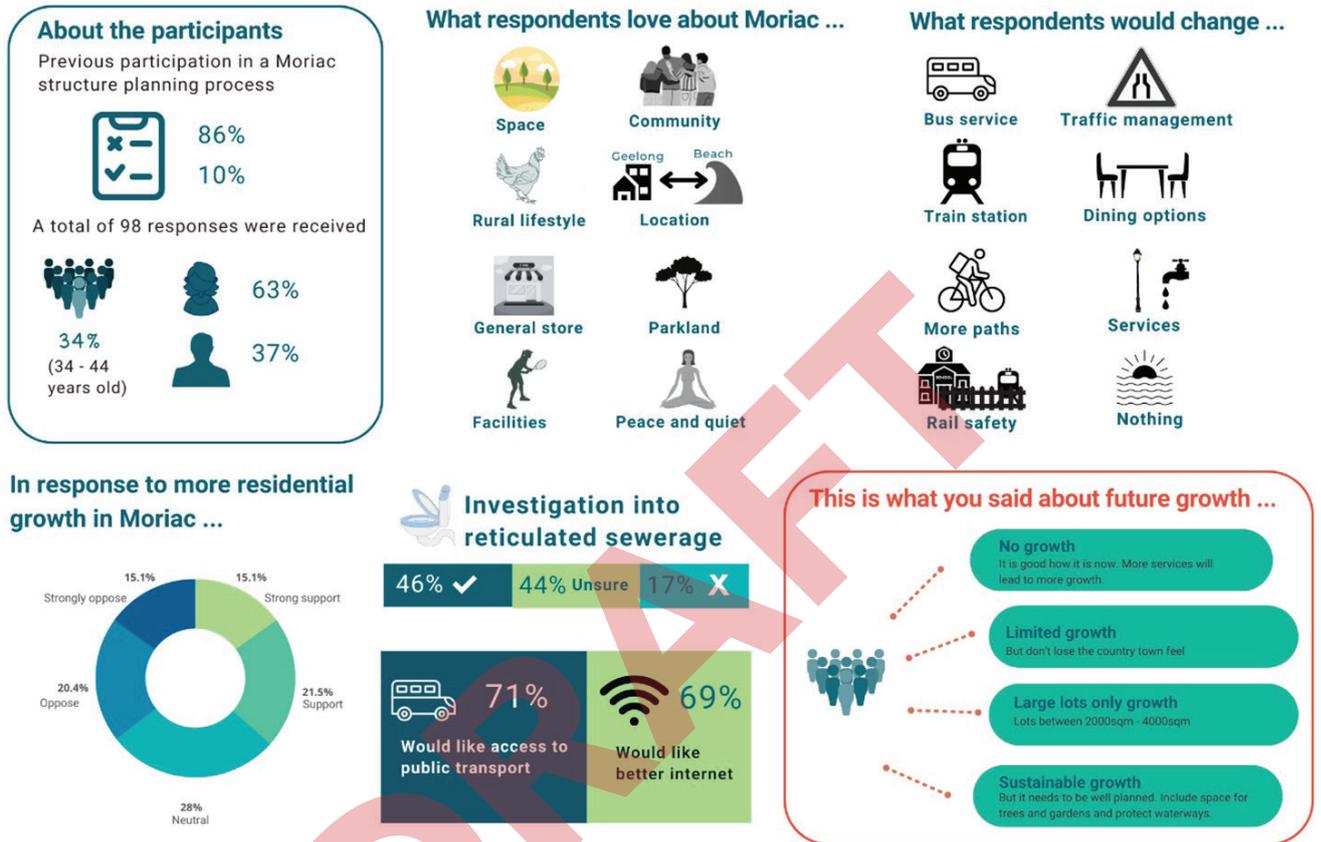
A summary of engagement findings as detailed in the Community Engagement Findings Report is as follows:

- Members of the Moriac community have expressed a range of opinions about future growth. However, the vast majority of engagement participants agree that the small-scale nature of the town and its role in the region should not be altered by future land use planning decisions.
- There is a prevailing community view that whilst a degree of incremental residential growth is expected, it should not come at the cost of impacts on the small-town rural character of Moriac, nor should it impact the natural environment.
- The Moriac community would like to see further investment in the construction of new footpaths and trails throughout the town. New paths could potentially improve connections between recreation facilities and the primary school, and provide safer ways to cross Hendy Main Road and the Cape Otway Road.
- Investment in public transport services is something the Moriac community aspires to secure in order to benefit older and younger residents.
- The current capacity of the Kindergarten has been identified as a concern for many young families.
- Road safety concerns continue to feature strongly in conversations and in survey responses. Concerns have been expressed about the design of the intersection of Cape Otway Road, Hendy Main Road and the Warrnambool-Geelong railway line and speed limits on the Cape Otway Road within the township boundary.
- A number of locations on the edge of town have been put forward as potential places to be considered for future long-term growth.
- Waste water infrastructure represents the biggest constraint to further residential growth, however community members have expressed differing opinions regarding the need for reticulated sewerage infrastructure.



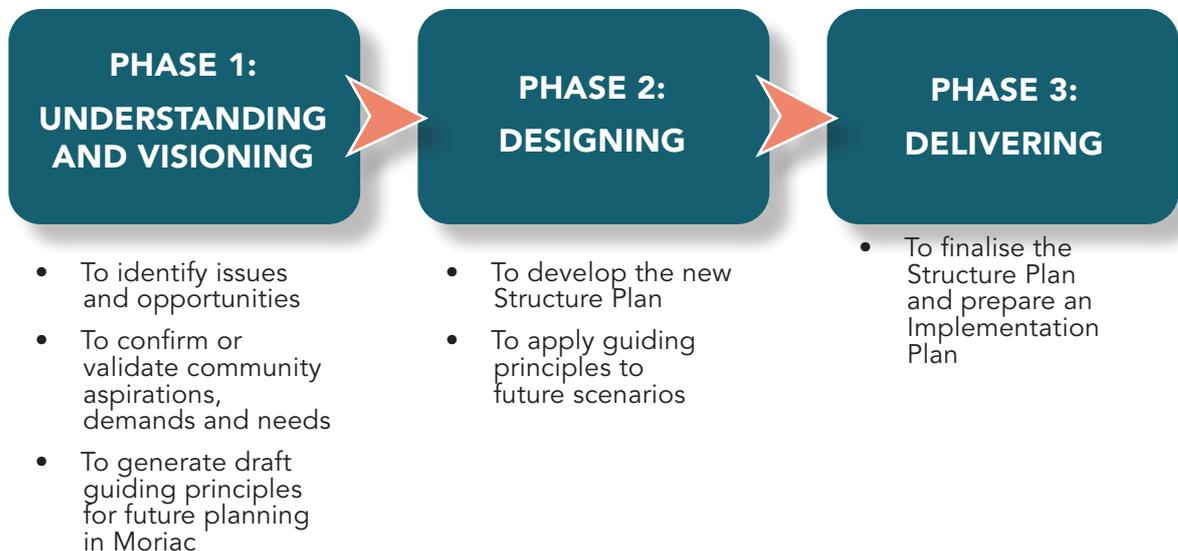
MORIANC STRUCTURE PLAN COMMUNITY SURVEY 2021

Figure 1.6 - Moriac Structure Plan Community Survey 2021

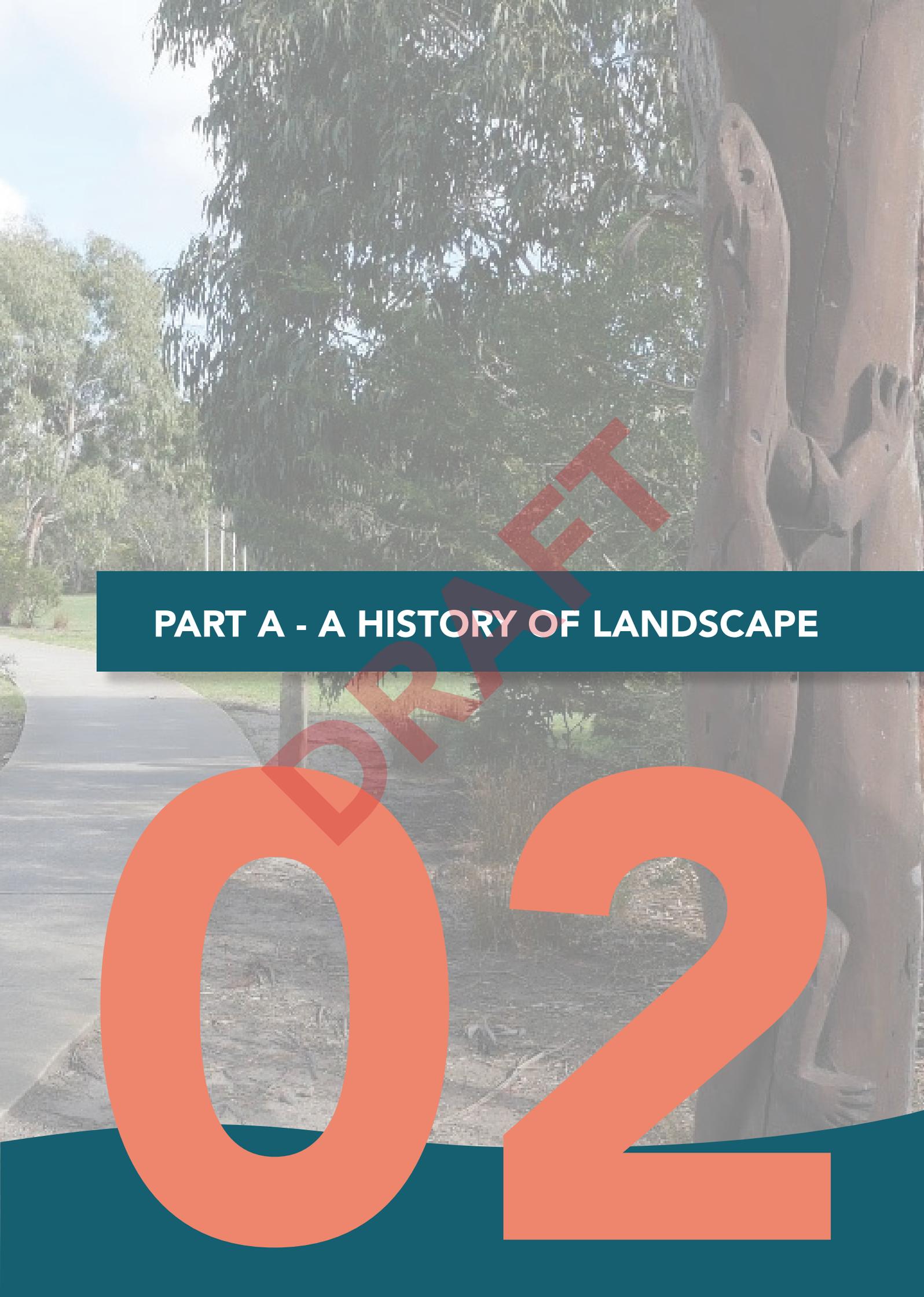


PROJECT PHASES AND TIMELINES

Figure 1.7 - MSP 2022 Project Phases and Timelines



The publication of the draft Structure Plan marks the end of project Phase 2 'Designing'.



PART A - A HISTORY OF LANDSCAPE

02

2.0 A HISTORY OF LANDSCAPE

Understanding and describing the importance of the landscape surrounding Moriac forms a key component of the Moriac Structure Plan. The following chapters provide an insight into the long and continuous relationship between Wadawurrung

Traditional Owners and the landscapes of the Moriac and Modewarr region. A summary of the European history of the region charts the transformation of natural landscapes and explains how the urban area of Moriac came to be.

2.1 WADAWURRUNG COUNTRY

2.1.1 MORIAC AND DISTRICT

The rural area of Moriac is part of Wadawurrung Country. The name for the First People, Wadawurrung, traditionally means 'the people who belong to the water' in reference to the rivers, creeks, lagoons and coastal waters within Wadawurrung Country. The Wadawurrung People are part of the Kulin Nation of five communities in central and southern Victoria who speak a related language and share the same belief system in that they were created by the all-powerful Bundjil spirit (wedge-tailed eagle) with another ancestral deity being Waa (the crow).

Moriac comprises part of the Estate of the Wadawurrung Balug clan whose moiety was Bundjil. The territory of the clan was extensive: most likely taking in the coastal lowlands and marshlands between Barwon Heads and Spring Creek (at Torquay), and the Barrabool Hills. Neighbouring the territory of the Wadawurrung Balug to the west of Lake Modewarre was the Country of the Tjuraaltja clan of the Wadawurrung People.

2.1.2 MORIAC AND THE VOLCANIC PLAINS

The Moriac region is defined by a grassy and treed landscape of rises and flats at the southern foothill of Mount Moriac and forms part of the volcanic plains of south-western Victoria that extends over 400 kilometres from Melbourne to Mount Gambier. It includes over 400 volcanoes. Mount Moriac forms the principal landmark in the Moriac locality. This low, weathered Basalt cone has shaped and influenced the landscape, its eruption and lava flows approximately two million years ago altering

the course for the Barwon River to the north and north-west. The Barwon River is known to the Wadawurrung as Barri-Warri-Yaluk: the great river (Yuluk) that runs from the Otway Ranges (Barri – mountains) in Gunditjmara (Eastern Maar) Country into Wadawurrung Country and enters the sea (Warri) at Barwon Heads (the place where the salt and fresh waters mingle). The Leigh River is thought to have joined with the Barwon River to pass through the gap at Lake Modewarre, with the basins of lakes Modewarre and Wurdee Boluc forming part of the river beds of these earlier river systems. This left Lake Modewarre largely land-locked.

Mount Moriac is of cultural significance to the Wadawurrung as well as having functional importance. The name Moriac appears to have originated from the foliage possibly grown near it. Moriac may be a derivation of Morrrok, meaning 'bramble' or Bidgee Widgee.

As an extinct volcano, Mount Moriac is a geological and cultural legacy as a 'home of fire' known as Willum-a-weenth. Fire is central to the ongoing physical and spiritual sustenance of the Wadawurrung People: for cooking, creating smoke for Smoking Ceremonies and caring for country. It also forms a basis for some Creation Stories.

Mount Moriac is a place of importance to the Wadawurrung as a viewing point and navigation station. From this location, the Wadawurrung Balug were able to keep surveillance of territory from all directions. The first European surveyors to pass through the Moriac region described the presence of surface rock on the southern slopes of Mount Moriac. Historical records indicate that a vast majority of the exposed basalt was collected into piles during the 20th century.

2.1.3 THE MORIAC LANDSCAPE

The appearance of the Arcturus star over the horizon to the north in the night sky from August each year triggered the time for the eating the mature larvae (wood grub) of the cossid moths (Bell-Blaam) (*Agrotis infusa*), important winter protein. The Arcturus star takes the form of the head of the ante or termite known to the Wadawurrung as Marpiang, a Dreamtime Heroine. The wooded areas of Stringybark Messmate (Wangnarri) (*Eucalyptus obliqua*), Manna Gum (Bawain) (*Eucalyptus viminalis*) and River Red Gum (Biyal) (*Eucalyptus camaldulensis*) of the Moriac district were likely habitat for the Marpiang wood grub. The landscape also included Drooping Sheoaks (Ngarri) (*Casuarina stricta*), Blackwood Silver Wattles (Ngeltij) (*Acacia melanoxylon*), with more thickly wooded areas of Gums and bracken fern (Moolaa) (*Pteridium esculentum*) prevailing south of Thompson Creek. The more open damp parts near the marshes sand swamps by Lake Modewarre was the place of Murnong (Yam Daisy, *Microseris scapigera*), an important staple carbohydrate food source. This landscape held nutritional, medicinal and functional benefits and cultural significance to the Wadawurrung.

2.1.4 ANIMAL SUSTENANCE

Moriac was a winter destination for hunting brush-tailed possums (walart), known for their great abundance. Possum furs (pelts) were used to make cloaks and rugs (walart, walart). The locality is also referenced in a corruption of the Moriac nomenclature, mur-r-ikle, meaning a male pubic apron made from strips of possum skins that was suspended from the ber-buk (hunger belt around the stomach). Twine was made from possum fur while the lower jaw of the possum was used to make leange-wollard (the tool used to ornament wooden shields). Other food sources included the kangaroo (goim), wallaby (go-yin), kangaroo rat (goim-warrarm) and wild fowls and marine life.



Figure 2.1: G.A. Gilbert, *Lake Modewarre, near Geelong, Victoria, Australia, 1856*, watercolour, pencil and white highlight.

Source: accession 2011.63, Geelong Gallery collection, purchased with funds generously provided by the Gallery Grasshoppers, 2011.

2.1.5 THE WATERWAYS

BYOURAC: MEETING OF THOMPSON AND RAVEN CREEKS

The south-eastern portion of Moriac includes the junction of the 'branches' of the Thompson and Raven Creeks. It is at this junction where saline and fresh water meet. This junction is known to the Wadawurrung as 'byourac', being derived from the four branches of the creek (from by-err, meaning the meeting of four clans; and rac, meaning an arm or branch) – therefore the meeting of the four branches of the creek). The estuarine vegetation provided additional food sources and functional values to everyday life. In particular, the creeks provided a conduit for the Common galaxias (*Galaxias maculatus* – minnow) and Short-finned eels (*Bunyias*) (*Anguilla australis*) having left their habitat in Lake Modewarre during annual winter floods.

LAKE MODEWARRE CATCHMENT

Lake Modewarre is the largest of the water basins as part of the catchment to the west of the Moriac township, comprising an oval form and an area of 414 hectares. An outlet to the south-east traditionally gave access to floodwater to an elongated marsh, with Brown's Swamp to the south-east, Lake Gherang to the west and the Wurdee Boluc swamp (now a water basin) to the south-west. The traditional name for Lake Modewarre is Moodewarr, meaning Musk Duck (*Biziura lobata*) which flocked to it (and the surrounding swamps and marshes) in great numbers. It was also the location of the emu (*kawirr*), with the laying of its eggs from late autumn until September providing another protein source for the Wadawurrung (See figure 2.2). The lake and surrounding marshes and swamps provided important marine vegetation and marine life enjoyed by the Traditional Owners. The lake was regarded with respect as it held significance as it was known to be the place of the Bunyip: an amphibious being with supernatural powers who caused 'great dread' in occasioning death, sickness and misfortune, and it also tore tree outs by the roots.

WADAWURRUNG COUNTRY

Part of the estate of the Wadawurrung Balug

KEY

- 'WORD'** WADAWURRUNG WORD
- SWAMPLAND/ EPHEMERAL WETLAND
- LAKE/WATER BODY
- GRASSLAND AREA
- WOODED AREA
- SURVEYOR'S NOTE FROM 1839 (H.W.H SMYTHE)
- Text** WADAWURRUNG WORD WITH ENGLISH TRANSLATION



Figure 2.2: Wadawurrung Country – Part of the Estate of the Wadawurrung Balug Clan

2.2 EUROPEAN ARRIVAL AND THE IMPACT OF SETTLEMENT

2.2.1 INITIAL EXPEDITIONS

The earliest European exploration of the nearby Greater Geelong area was by Lieutenant John Murray, who charted part of Indented Heads in 1802. It was followed in the same year with an expedition by Captain Matthew Flinders, who found the area was well suited to cattle 'though better calculated for sheep.'

The arrival of John Batman and his expedition party in 1835 brought about the most significant transformation of Wadawurrung way of life and Country. A so-called 'treaty' with the First Nations People was reputedly made to purchase 500,000 acres (202,343 hectares) around Melbourne and 100,000 acres (40,469 hectares) near Geelong. Acting for the Port Phillip Association (a group of men from Tasmania in search of cattle and sheep grazing land), Batman's claim to the 'Title' of Traditional Owners' country was flawed. The named clan heads did not include Wadawurrung People. Country was soon taken over by European graziers and pastoralists.

2.2.2 CHANGES TO THE LANDSCAPE: WADAWURRUNG IMPACTS

The clearing of the land for grazing and harvesting not only changed the landscape but it removed vegetation of cultural and functional importance to the Wadawurrung. Hooved livestock brought with it the disappearance of indigenous herbaceous plants and caused landslips by creeks. The introduction of other exotic animals, including the rabbit and the fox, played havoc with the landscape. Bird hunting at Lake Modewarre and the other swamps caused a decline in native wild fowl.

The subdivision of the land around Lake Modewarre in 1839 also led to further significant changes to the Wadawurrung landscape. The winter flooding of the lake inundated and submerged the newly-created farmland. In 1867, an underground tunnel

and open drain was constructed from the south-east of Lake Modewarre, connecting with Brown's Swamp to the south-east. An open drain was also constructed from the north-east side of lake to connect with Thompson Creek further east.

2.2.3 LOSS OF A CULTURE AND DISPOSSESSION FROM COUNTRY

European control of Wadawurrung Country brought about the demise of culture and People. The land was re-visioned for cattle, sheep and exotic pastures. The introduction of European diseases (such as influenza in 1839), brought about a significant decline, initially of the female Wadawurrung population. From Mount Moriac in 1835, the 'beautiful prospects' for European pastoralists and others were confirmed. Their arrival and take up of land brought about the demise of the Wadawurrung People to the Moriac area. In 1885, Willem Baa Nip, last of the Wadawurrung Balug clan died, just 50 years following the arrival of Batman's party.

2.2.4 INITIAL EUROPEAN PASTORAL DEVELOPMENT AT MORIAC

In 1842, John Raven (1803-1863) had approved a depasturing licence for 149 acres on Thompson Creek. A homestead was built in 1849 (now addressed as 865 Hendy Main Road). Initially, the property was known as Duneed Station but it was soon changed to Ravenwood. This began sheep grazing in the Moriac district. To the south of Ravenwood, in 1844, William Hindhaugh (1814-1882) took up 18 square kilometres at Paraparap. His run was initially named Balla-garra-gap (the resting place of the kangaroo).

2.2.5 FURTHER TRANSFORMATION OF THE LANDSCAPE

In 1906 and 1908 respectively, the sale and subdivision of the major sheep stations, Forest Station (then known as Grassdale) and Ravenwood was impetus for the substantial change in the Moriac landscape, the most substantial since European colonisation. Between 1906 and 1909, thousands of hectares of land south of the railway line at Moriac were cleared, with a new 'artificial' northern boundary being established for the Otway Forest. The trees were either ring-barked or felled for firewood; the more inventive method being the use of the 'Bunyip Forest Devil' tree grubbing machine. Gelignite was also an important new method 'in ridding the ground of trees and stumps.' The land was subsequently ploughed, with large-scale sheep grazing replaced for mixed farming including cultivation, dairies, and the grazing of a reduced number of fat lambs as well as pigs of quality stock. Marl was spread from local pits in order to provide better crops, some of which were experimental, including subterranean clover (that revolutionised pasture improvement) and plots of rape and maize at Ravenwood that were planted under the direction of Victorian Department of Agriculture.

Ravenwood had been taken up by the Deppeler Brothers (Henry John, Frederick Albert, Alfred Ernest and Percy Edward) in 1908. They created 10 cleared paddocks for cultivation, a horse paddock, grass paddock and an orchard. A Federation styled timber dwelling (later named 'Ellenbrae') was also built on the Ravenwood Estate (865 Hendy Main Road) as the marital home of Percy and Verna Deppeler (this dwelling has subsequently been destroyed).

2.2.6 PARAPARAP AND PETTAVEL PROGRESS ASSOCIATION

Influential in the significant changes made to the Moriac landscape and the transformation of the early pastoral properties was the Paraparap and Pettavel Progress Association established in 1909. Its objects were: the improvement of roads and bridges to provide easier and safer access to the Moriac Railway Station; securing the extension of the telephone to those residents requiring it; establishment of a state school for the district; and the dissemination of knowledge 'as to the most suitable kinds of seed, wheat and oats for the district, and other matters of general interest to farmers'. Ebenezer Edward Hendy (1870-1936) had the most profound impact on the progress of the Association and on agricultural and community life at Moriac, advocating for all of the objects of the newly-formed community group. The Paraparap and Pettavel Progress Association helped to fund the construction of Moriac State School in Hendy Main Road in 1922.

The earliest roads following European Colonisation were tracks to the north and south of Lake Modewarre: the Colac Road (Princes Highway) and the road to Buntingdale Aboriginal Mission Station at Birregurra (now the Cape Otway Road) respectively. These tracks were shown on a map in 1845. The 'black line' route for a railway line between Geelong and Colac was considered as early as 1867, however it was not until 1876 when the line as far as Winchelsea had been constructed and was opened. Moriac became a strategic station for the transport of agricultural products from the local area and raw materials (such as timber) from the nearby Otway Forest. A bluestone platform and gabled station building were constructed in 1877. A Post Office opened at the railway station in 1909 and this operated until a new post office was built in the Moriac Township in 1925.

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Figure 2.3: A Chronology of European settlement

A comprehensive history of Moriac is presented in 'A History of Moriac – Background for the Moriac Structure Plan'. This document was authored by Dr David Rowe of Authentic Heritage Services and represents an important output from the Moriac Structure Plan development process. A link to the document is available on Council's website. *(To insert link if/when document is made available for public access.)*

A chronology of european settlement – documenting the transformation of a landscape



J.H Wedge survey sketch circa 1835.

Lieutenant John Murray enters Port Phillip Bay and prepares charts for land near Indented Head. Murray's visit is followed later in the same year by Captain Matthew Flinders who crosses Corio Bay and climbs the You Yangs. Flinders described the land as being well suited to cattle 'though better calculated for sheep'.

'Ploughing match' to clear heavily treed landscape near Lake Modewarre circa 1861



1864

Lake Modewarre was observed to have doubled in size as a result of land clearing and the construction of road and rail embankments.

1868

Overflow drains constructed connecting Lake Modewarre with Brown Swamp and the Thompson Creek.



1921

Moriac State School (No. 4117) constructed on the Deppeler family's land.

1924

E.E. Hendry prepares an ambitious plan for an agricultural township to the south of the railway line. Hendry engages surveyors Urbahns, Jacobs and Urbahns to design the town grid and architect Fredrick Purnell to design some of the earliest buildings.



1926

The general store and post office building is opened with J.W.G Harvey and Co being the first proprietors.

1802

May 1835

John Batman and his expedition party arrive on the Bellarine Peninsula from Tasmania.

August 1835

Surveyor John Wedge travels through the lands of the Wadawurrung Balug and visits Lake Modewarre.

1835-1840

Hooved livestock are introduced to the lands of the Wadawurrung Balug. Cattle and sheep devastate native flora communities and cause widespread erosion. In a very short period of time the Murnong (Yam Daisy), a staple food source of the Wadawurrung people all but disappears from the landscape.



1841

1830's

1860's

1850's

1850

Vineyards established by the Minter family on the lower slopes (eastern aspect) of Mount Moriac.

1856

Landscape painting of Lake Modewarre by G.A Gilbert. Emus are depicted in the foreground.

1859

Wild rabbits introduced by Thomas Austin at his property in Winchelsea.



Landscape painted by M.Minter. 1850

1893

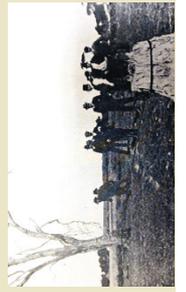
1900's

The 3000 acre Ravenswood Estate was offered for sale in 19 allotments.



1906 - 1909

The subdivision of the Ravenswood and Grassdale Estates precedes the clearing of thousands of hectares of land to the south of the Geelong - Colac Railway Line.

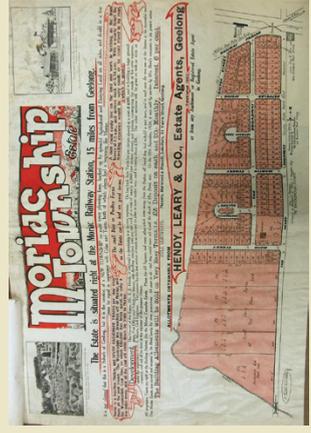


Tree stump being blown / ripped out of the ground circa 1909.

1920's

1969

Schedule 1 of the Barrabool Planning Scheme approved. Schedule 1 confined residential development to the original Moriac township area bound by Hendy Main Road, Cape Otway Road and the land south of Deppeler.



2.3 DEVELOPMENT OF THE MORIAC TOWNSHIP

Townships were first created in the Moriac area at Mount Moriac (from the late 1840s) and Layard/Modewarre (laid out in 1855 and gazetted in 1861). While the Mount Moriac township became the location for the local churches, Barrabool Shire offices, hotel, blacksmith's shop and school, it was notably distant from the railway station.

E.E. Hendy's most ambitious scheme as part of the progress of Moriac in 1924 was the funding of a new, purposely-laid out agricultural township to the south of the rail line. He had purchased the Bond family's Longfield farm and engaged the surveyors, Urbahns, Jacobs and Urbahns to lay out the township on 'modern town planning lines'. Fred Purnell was appointed architect for the construction of the earliest buildings at Hendy's expense. He also funded the construction of sale yards to the south-west of the township in 1924. Beautification of the township was also an initial consideration, with a 'garden feature' with a rockery border laid out near the road and railway line intersection, the plan being prepared by a Mr Allan, chief landscape gardener of the Victorian Railways Department.

A post office and store building (with attached dwelling) was built in 1924-25 (to Fred Purnell's design) fronting the Cape Otway Road. It was first occupied by John (Jack) William Grant Harvey (1893-1969) and his wife, Harriet Seline Harvey. Neighbouring the Post Office and store to the west and fronting Cape Otway Road, a butcher's shop and dwelling were built in 1925, also to Fred Purnell's design.

While Hendy's vision for a thriving Moriac township was not to be realised due to the Depression in the 1930s, a local Methodist Church was established in Hendy Main Road in 1934. The Moriac township and surrounding area remained a rural locality

throughout most of the 20th century. The first comprehensive Structure Plan for the township was developed and adopted in 1979. The plan recommended both consolidated township growth and rural residential growth in a south-westerly direction from the town centre. In 1979 Moriac contained 36 dwellings. Between 1979 and 1991 there were 65 new dwellings constructed in Moriac.

The 1992 Structure Plan contained a number of important strategies many of which remain relevant today, they include the following:

- Maintain a compact township within a single drainage catchment so as to enable the economical provision of services;
- Re-vegetate the Thompson Creek environs;
- Protect land directly north of the Thompson Creek for an open space reserve;
- Avoid urban development north of the railway;
- Encourage footpath and cycle path linkages;
- Consider the need for a future sewerage treatment plant to the south-east of the town if required.

The most recent Moriac Structure Plan (MSP2010) was adopted in 2010, and reinforced the role of Moriac as a 'largely dormitory settlement with a majority of residents who commute to Geelong and beyond for employment opportunities, but who choose to live in Moriac for its rural atmosphere and rural residential lifestyle'.

Figure 2.5 charts the expansion of the Moriac town from 1924 to the present. Of particular note is the extent of Low Density Residential growth which has occurred since the early 1980's.

Figure 2.4 Plan of Moriac Township Estate, 1925, prepared by Urbahns, Jacobs and Urbahns.

Source: Authentic heritage Services Pty Ltd collection.



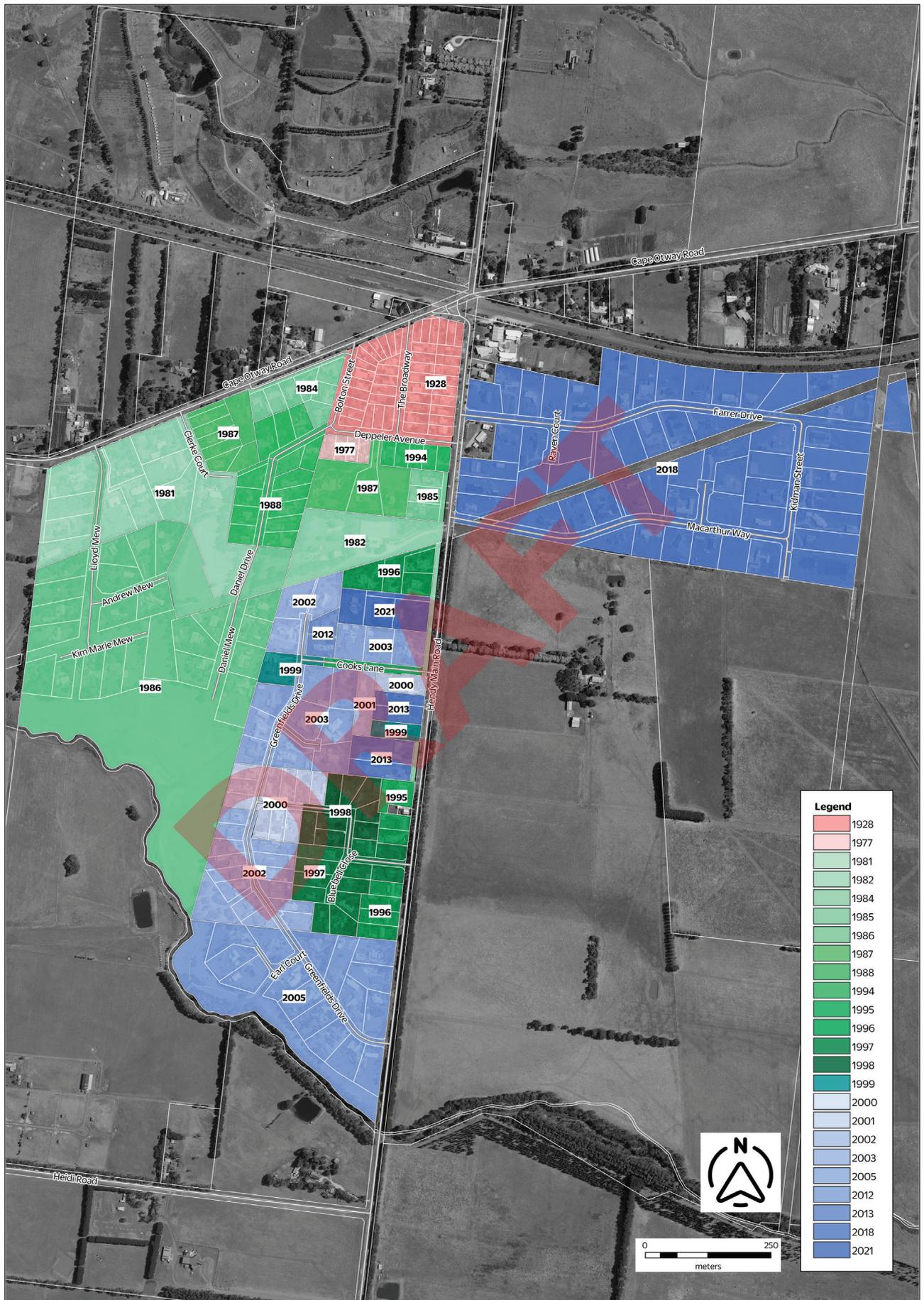
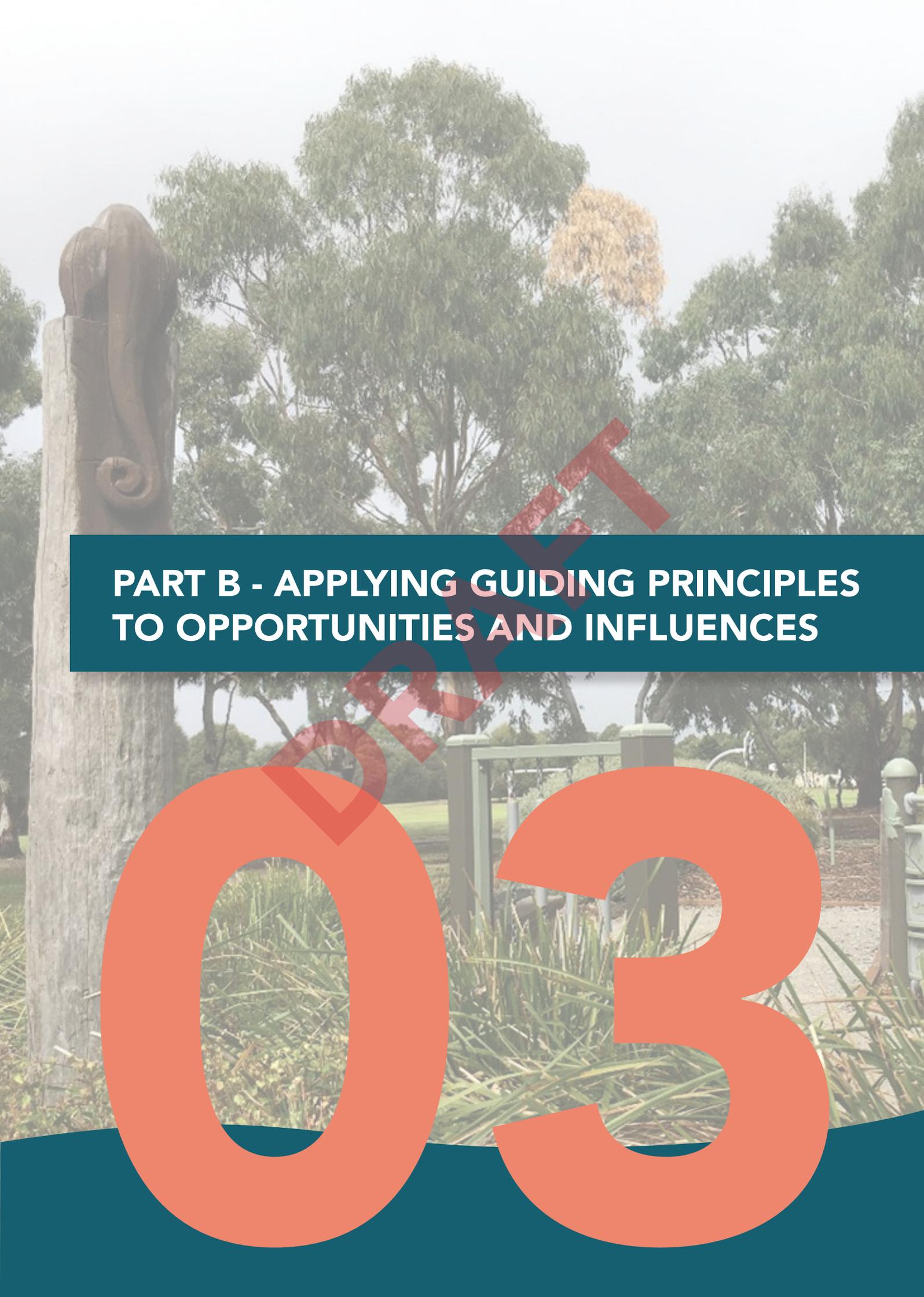


Figure 2.5 – Historic Moriac subdivision identified by approval date
 Source: Surf Coast Shire, 2022

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The background of the slide is a photograph of a park. On the left, there is a tall, weathered stone pillar with a decorative, rounded top. In the center and right, there are several large, leafy trees. In the foreground, there are green plants and a paved path. A large, semi-transparent red watermark with the word 'DRAFT' is oriented diagonally across the center of the image.

PART B - APPLYING GUIDING PRINCIPLES TO OPPORTUNITIES AND INFLUENCES

03

3.1 SUMMARY OF OPPORTUNITIES AND INFLUENCES

Key opportunities and influences specifically relevant to land use planning in Moriac were identified through research undertaken in the preparation of the Background Report and in subsequent community engagement forums. The following table provides a summary of opportunities and influences by planning theme.

Figure 3.1 - Planning Themes, Opportunities and Influences

PLANNING THEME	OPPORTUNITIES AND INFLUENCES
<p>ENVIRONMENT & CULTURE</p> 	<ul style="list-style-type: none"> • Moriac is a small town located in Wadawurrung Country. Traditional Owners have a cultural, ancestral, spiritual and historical connection to country. • The natural environments of Moriac have been significantly impacted by the clearing of vegetation and the introduction of pest animals and plants. • Bushfire planning regulations have been significantly strengthened since the MSP 2010 and it is State policy to prioritise the protection of human life over all other policy considerations. • The Council Plan identifies climate change as a key challenge facing Surf Coast Shire communities. • The Rural Hinterland Futures Strategy 2019 identifies the Moriac district as within an agricultural soil quality hot spot, which elevates the significance of protecting agricultural land in this region.
<p>HOUSING</p> 	<ul style="list-style-type: none"> • The population of the Deans Marsh and Moriac Districts is expected to grow by 348 people to the year 2036, with significant growth in the number of retirement aged residents. The lack of reticulated sewerage infrastructure is a major constraint to future growth of the town. • Demand for housing in Moriac is high and supply is very limited and will not meet longer term demand. • Regional and local planning policy supports Moriac's role as a small town with limited growth. Moriac has very little housing diversity, and this limits the potential for the town to accommodate a range of household types, particularly elderly people with different housing needs.
<p>OPEN SPACE</p> 	<ul style="list-style-type: none"> • Moriac residents greatly value existing open space assets and aspire to secure future open space areas to connect existing paths, trails and places of interest. • Council is working with the community on a range of projects to deliver additional community facilities. • There is a need to ensure the needs of an ageing population are considered in the provision of future community infrastructure.

PLANNING THEME

OPPORTUNITIES AND INFLUENCES

MOVEMENT



- Road safety is a major concern for Moriac residents. There are specific concerns related to heavy vehicle traffic on the Cape Otway Road and the Hendy Main Road.
- The absence of public transport in Moriac is a significant disadvantage for the town, particularly for older people, teens and non-drivers.
- Moriac has a good network of footpaths that are well utilised by residents and visitors.

INFRASTRUCTURE



- Moriac's potable water supply is close to capacity and upgrades would be required for any future subdivision of scale.
- Stormwater issues in Moriac have occurred both through the failure of septic systems and as a result of flooding. The Moriac Septic Report has made a number of recommendations to address existing problems.
- Telecommunications services will become more important to Moriac as lifestyles and working arrangements change over time.

LOCAL ECONOMY



- The Moriac District is recognised as being well suited to agribusiness, commercial farming and tourism.
- Little commercial development or industrial development has occurred in Moriac since 2010.
- Council's Economic Development Strategy 2021-2031 facilitates a new approach to economic prosperity that recognises the importance of health, wellbeing and sustainability in creating prosperous places.

Figure 3.1 provides a spatial summary of opportunities and constraints identified across the study area. Figure 3.1 identifies the following:

- Moriac has a relatively compact footprint with contiguous residential development extending outward from the town centre. Future growth to the north and south of Moriac is constrained by the railway line and Thompson Creek.
- Moriac is located in a landscape shaped by volcanic activity. Features of the landscape have significance for the Wadawurrung Traditional Owners. Not all significant features are protected by planning controls (e.g. Salt Creek tributary of the Thompson Creek).
- The topography of the study area facilitates long range views to and from important landscape features including Mount Moriac and the Byourac junction.
- Moriac is located at the intersection of two important regional roads. The Cape Otway Road and Hendy Main Road bisect established residential streets, presenting road safety challenges for many residents.
- The majority of Moriac residents live within 1 kilometre of the town centre and have access to an established network of footpaths and public open space areas.
- The Thompson Creek provides a physical barrier to growth in the south and an important corridor for flora and fauna. Access along the Thompson Creek is restricted by private land tenure.
- The land immediate surrounding the urban footprint of Moriac supports important agricultural activity, predominately associated with livestock grazing and cropping.

DRAWING KEY

	Study Area
EXISTING CONDITIONS	
	Proximity to Town Centre
	Primary School
	Drainage Reserve
	Public Open Space
	Private Open Space
	Waterway
	Rail Line
	Existing 60km/hr Zone
	Existing Pathway Network
	Existing Key Views
OPPORTUNITIES	
	Opportunity to Formalise Entry Gateway
	Improve Intersection Safety
	Potential Formalised Pedestrian Crossing
	Provide Safety Buffer Treatment to Railway Line Boarding Primary School
	Commercial / Community Opportunities
	Upgrade / Investigate Expansion of Local Town Park
	Possible Extension of Public Open Space
	Release Thompson Creek Reserve Corridor
	Potential Open Space Corridor Extensions
	Biodiversity Corridor and Weed Management
	Potential Tree Planting in Pipe Corridor
	Protect Tree Cluster
	Potential Retention of Existing Tree Clusters/Rows
	Indicative Minimum Recycling & Resource Recovery Use Buffer
	Investigate Buffer Treatment to Industrial Operations
	Investigate Stormwater Management Infrastructure
	Potential Extension of Pathway Network / Missing Links in Network
	Potential Outer Town Trail Loop (approx 6.5km)
	Investigate Extension of paths along Thompson Creek
	Aboriginal Cultural Significance - Byourac

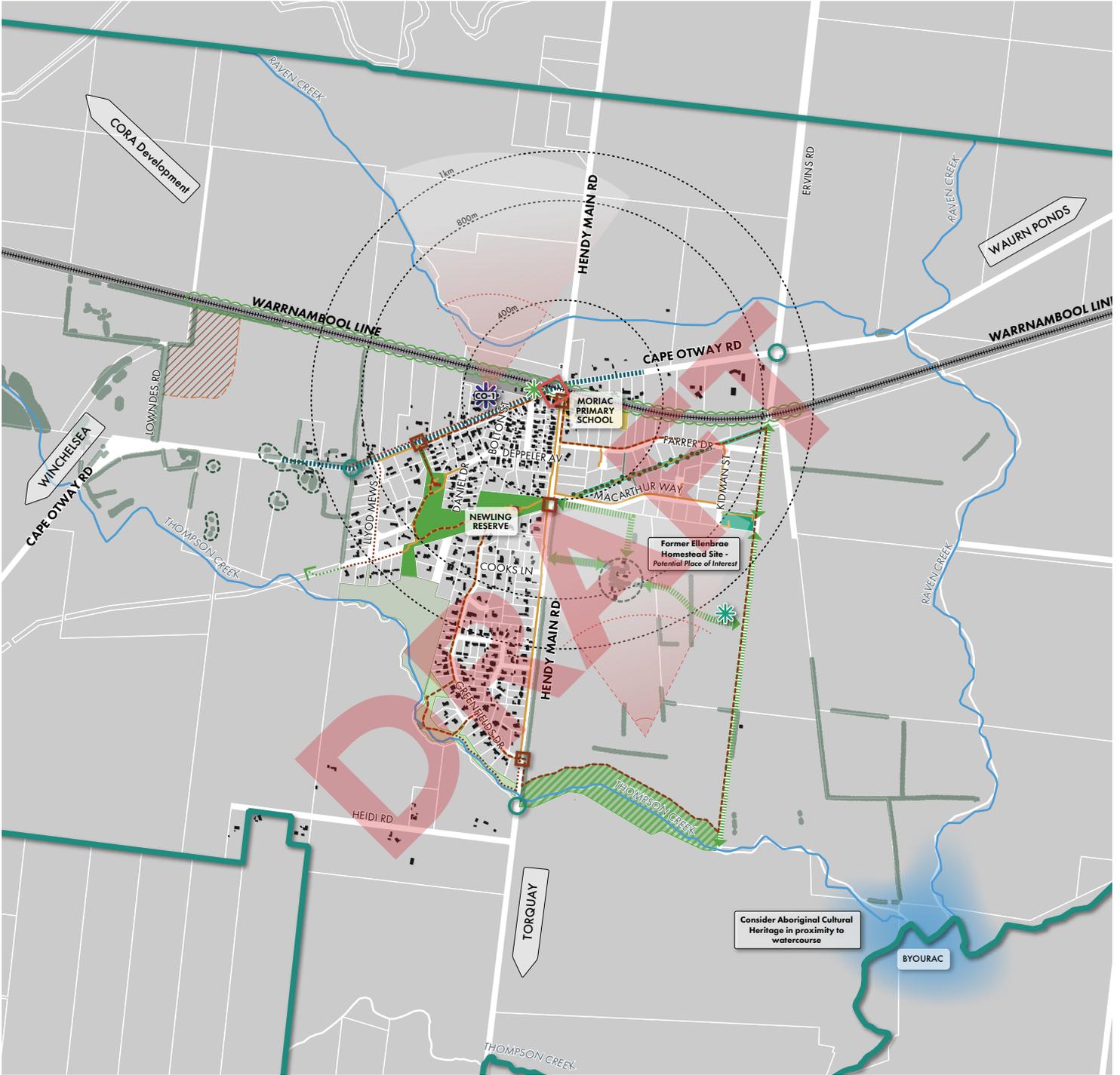


Figure 3.2: Opportunities Plan
 Source: Mesh Urban Planning

3.2 VISION AND GUIDING PRINCIPLES

The Vision and Guiding Principles were developed and refined with direct inputs from the Moriac community. They respond to the key opportunities and influences described in Section 3.1. The Vision and Guiding Principles provide the basis for the development of the Structure Plan.

VISION STATEMENT

'Moriac will continue to thrive as a compact rural town, surrounded by protected farmland and healthy waterways. The character of the town will be defined by residential streetscapes, green open spaces, and a network of paths and trails. Infrastructure investment will support planned growth and allow Moriac residents to work effectively from home'.

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GUIDING PRINCIPLES FOR THE MORIAC STRUCTURE PLAN 2023

3.3 ENVIRONMENT & CULTURE



1

Preserve and enhance the natural environments of Moriac and the surrounding rural hinterland.

2

Protect rural areas from impacts associated with housing developments.

3.4 HOUSING



3

Future residential growth will be incremental in scale and incorporate elements of Environmentally Sustainable Design.

4

Land use planning decisions should consider the housing and transport needs of an age diverse population.

3.5 OPEN SPACE



5

Open space areas will continue to play an important role in defining the character and liveability of the Moriac township.

3.6 MOVEMENT



6

Future land use and development decisions will prioritise the needs of pedestrians and cyclists to create a safer built environment through improved accessibility and connectivity.

3.7 INFRASTRUCTURE



7

Future growth must consider impacts on service infrastructure and where required contribute to infrastructure improvements.

3.8 LOCAL ECONOMY



8

Moriac will support a prosperous economy, providing new opportunities to foster home based employment and enhance the visitor experience.

Figure 3.3: Guiding Principles for the Moriac Structure Plan 2022

The following chapters consider key opportunities and influences within the context of the Guiding Principles. Strategies and actions have been developed to ensure that the Vision and Guiding Principles will be achieved through the implementation of the Structure Plan.



3.3.1 PRESERVE AND ENHANCE THE NATURAL ENVIRONMENTS OF MORIAC AND THE SURROUNDING RURAL HINTERLAND

Moriac residents have identified the preservation and enhancement of the natural environment as the most important shared community aspiration.

Part A details the extent to which natural environments have been impacted by agriculture and urban development. In spite of the significant loss of habitat, there are highly valued locations within the study area where indigenous flora and fauna communities continues to thrive.

Figure 3.1 identifies key features of the Moriac environment and highlights opportunities for future enhancement. Figure 3.1 demonstrates the importance of the Thompson and Raven Creeks,

which serve as biodiversity corridors and play an integral role in supporting the health of ecosystems in the Moriac region. Watercourses are also recognised as areas of Aboriginal Cultural Heritage Sensitivity.

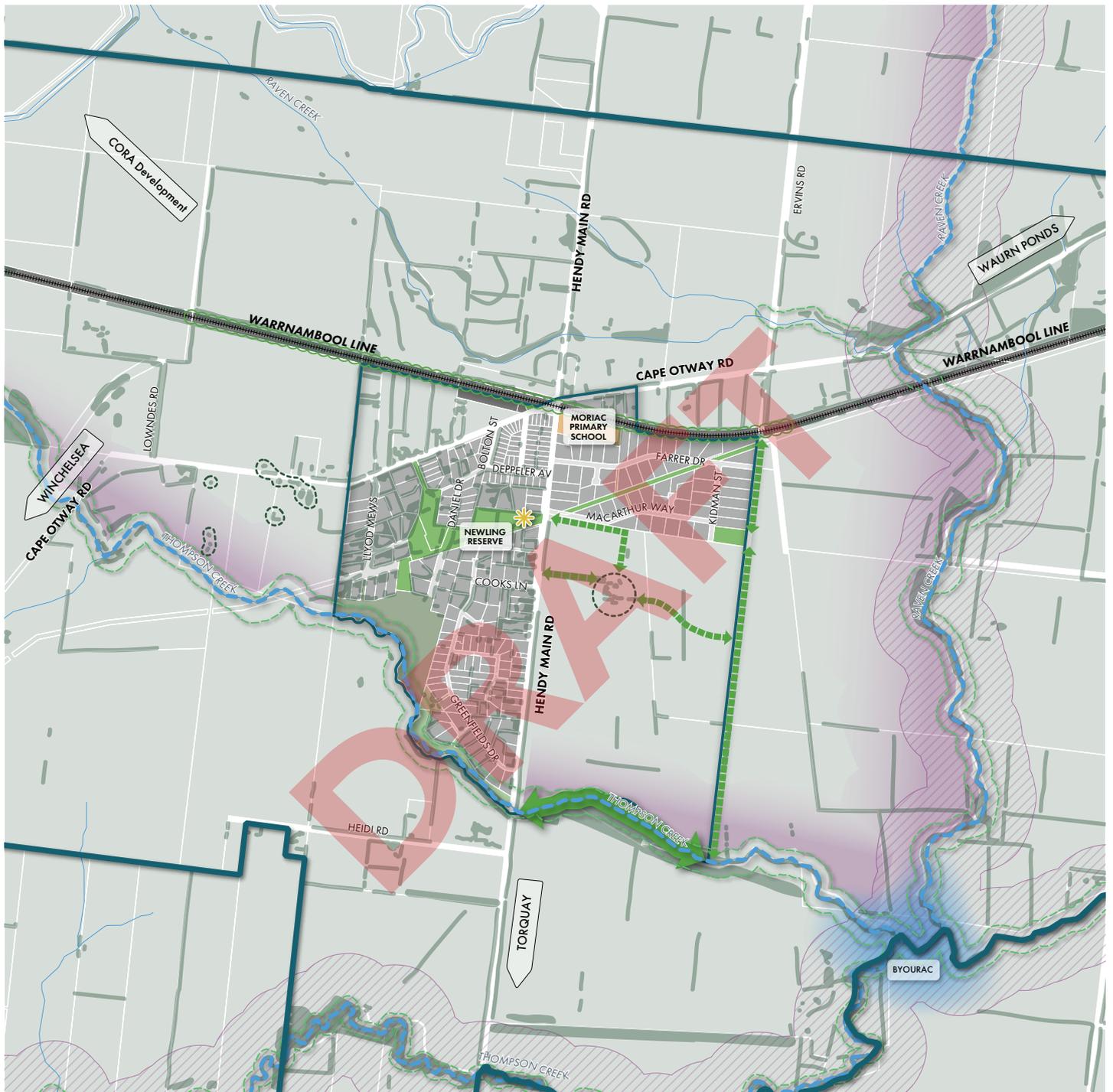
Figure 3.1 indicates that the majority of large old trees in the study area are located on private land or within road reserves. Mature trees and landscape plantings within the Moriac urban footprint provide an important habitat for native birds and other fauna, however they also increase the bushfire threat at a landscape level.

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Figure 3.4 – Moriac Structure Plan: Environment & Culture

Source: Mesh Urban Planning



DRAWING KEY

- Study Area
- Proposed Settlement Boundary

LAND USES

- Existing Residential
- Low Density Residential Zone
- Public Open Space
- Possible Extension of Public Open Space
- Private Open Space
- Transport Road Zone (TRZ1)

MOVEMENT

- Railway

LANDSCAPE FEATURES

- Farm Land
- Extension of Thompson Creek Reserve Corridor
- Potential Open Space Corridor Extensions
- Biodiversity Corridor and Weed Management Area
- Protect Tree Cluster
- Potential Retention of Existing Tree Clusters/Rows
- Protection of High Value Watercourses
- Other Watercourses

OVERLAYS

- Environmental Significance Overlay (ESO1)

CULTURAL VALUES

- Aboriginal Sensitivity Area
- Potential Setback Buffer from High Value Natural Features
- Aboriginal Cultural Significance - Byourac

KEY LOCATIONS

- Neighbourhood Safer Place Location
Consider vegetation management requirements

CONSIDERING TRADITIONAL OWNER KNOWLEDGE OF COUNTRY



For many generations the Wadawurrung have cared for the country that incorporates Moriac and the surrounding district. The report, 'An Interpretive History of Moriac', prepared in 2022 provides valuable insights into Wadawurrung life prior to the arrival of Europeans. The report highlights the importance of the Moriac locality to the Wadawurrung Traditional Owners (a place with an abundance of possums / 'Walart'), with a focus on significant landscape features, animals and plants.

The Surf Coast Shire Planning Scheme contains important State Planning Policy addressing Aboriginal Cultural Heritage. Importantly, both the Thompson and Raven Creek corridors are identified and mapped as areas of Aboriginal Cultural Heritage Sensitivity. One area that is not covered by the Cultural Heritage Sensitivity Area mapping is the Salt Creek tributary of the Thompson Creek (See figure 3.5). The report, 'An Interpretive History of Moriac', documents the connection between the Salt Creek tributary and Lake Modewarre (Moodewarr), an important habitat for Musk Duck (Moodewarr) and the migratory Short-finned Eel (Bunyias). Further investigation is required to determine whether or not this watercourse should be afforded the same protection that applies to nearby watercourses.

Whilst statutory controls play an important role in ensuring that land use and development proposals avoid impacts on culturally sensitive locations, a narrow focus on application requirements can

detract from a more holistic approach to the consideration of Aboriginal Culture and knowledge. In telling the story of a rapidly changing landscape and the resulting impacts on the Wadawurrung people, the report, 'An interpretive History of Moriac' serves as an important reminder about the broad ranging impacts associated with the spread of urban development. The report illuminates the importance of places such as Lake Modewarre, and the 'Byourac' junction (Byourac meaning the meeting of four clans / branches). Whilst both locations are protected under the Cultural Heritage Sensitivity Overlay, their significance is not widely known.

The Wadawurrung culture is an oral culture and Traditional Owners should be afforded appropriate opportunities to consider and share information about significant features of the landscape where culturally appropriate. The Moriac Structure Plan proposes a respectful and proactive approach to future decision making, encouraging the consideration of Traditional Owner knowledge throughout the strategic land use planning process.

Through community engagement Moriac residents have expressed a strong desire to enhance remnant natural environments. Council will seek to incorporate Traditional Owner knowledge into future land management decisions and practices through the implementation of the following strategies:

STRATEGIES

S3.1

Facilitate opportunities for Traditional Owners to consider and inform land use planning decisions.

S3.2

Where supported by Traditional Owners, future place making projects in Moriac should seek to incorporate Wadawurrung language on signage and on interpretation boards explaining key features of the landscape.

ACTIONS

A3.1

Advocate to the Department of Energy, Environment and Climate Action for a review of Cultural Heritage Sensitivity Area mapping applying to land in the Moriac Structure Plan study area, including the Salt Creek tributary.

A3.2

In undertaking preliminary investigations to support a rezoning or subdivision of land, encourage applicants to engage with Traditional Owners prior to the drafting of detailed plans or designs.

A3.3

Develop a checklist for Moriac rezoning and subdivision proposals to record details of pre-application engagement with Traditional Owners



Figure 3.5
Aboriginal Cultural
Heritage Mapping
– Moriac district

Source: <https://achris.vic.gov.au/#/onlinemap>

PROTECT AND ENHANCE BIODIVERSITY ASSETS

Whilst the Moriac landscape has been significantly impacted by the clearing of native vegetation and the introduction of pest animals and plants, the Thompson and Raven Creeks continue to provide an important habitat for a range of indigenous flora and fauna species.

Large river red gums (Beal) represent significant biodiversity islands in areas of largely monocultural pasture land. Many of the best examples feature

nesting hollows providing an important habitat for birds and small mammals. Without a concerted effort by landowners to undertake and maintain succession plantings there is a risk that large old trees will disappear from the landscape to the detriment of future generations. Where assets can be identified through the planning process Council will ensure that efforts are made to protect and enhance surviving habitat.

STRATEGIES

S3.3

Support landowners and land care groups to identify opportunities to expand and link native vegetation corridors.

S3.4

Encourage succession planting of large trees to provide habitat for indigenous species.

S3.5

Ensure that future flora and fauna assessments address opportunities to provide for succession planting.

ACTIONS

A3.4

Identify opportunities to create biodiversity corridors in the Strategic Framework Plan.

A3.5

Require building envelopes on new lots created by subdivision to protect vegetation on lots that contain significant trees.

A3.6

Require future flora and fauna assessments to include opportunities to provide for succession planting.



RESPONDING TO CLIMATE CHANGE

In 2019 Surf Coast Shire Council declared a climate emergency. Among other things, the declaration committed Council to consider climate change in future reviews of the Council Plan. At the State Government level the Department of Transport and Planning has commenced the process of developing a 'Built Environment Climate Change Adaptation Action Plan'. The draft plan foreshadows the adoption of new planning scheme provisions 'to respond to climate change based on the most current advice from relevant natural resource and emergency management authorities'. In spite of an absence of prescriptive policy guidance, planning for climate change is an increasingly common feature of contemporary structure plans.

Within the life of the Structure Plan Moriac residents may experience some of the following effects of climate change:

- Temperature increase (a forecast 1.5 degree increase in average daily temperature by 2030);
- Bushfires – more severe fire weather and longer fire seasons;
- Heatwaves – increased frequency and intensity;
- Water scarcity
- Ecosystem and biodiversity impacts – namely impacts on plants and animals due to severity of weather events;
- Health and wellbeing impacts – including heat related illnesses.

STRATEGIES

S3.6

Seek opportunities to reduce and mitigate negative effects from climate change through land use planning decision making.

Land use planning can prepare for climate change at both a strategic level (e.g. structure planning) and at the development approvals stage. In developing this Structure Plan, potential climate effects were considered and the growth framework developed has a climate action lens. In particular, a Bushfire Planning Assessment was undertaken for Moriac and is discussed further in Chapter 4.3.

In assessing future rezoning and subdivision proposals Council has the opportunity to consider and apply more stringent design requirements responding to the above mentioned impacts. The 'greening' of streetscapes and the implementation of water sensitive urban design features are two practical examples of how development in Moriac could mitigate climate effects associated with urban heat islands and water scarcity. Improvements in active and public transport access are further examples of how development can help to address climate change by reducing dependence on car travel. These opportunities are addressed further in the Structure Plan.

For new homes there are a range of policy requirements for construction in Victoria that will assist buildings to be more sustainable. These are enforced through both planning controls (Rescode) and the building regulations.

In responding to climate change related impacts Council will implement the following strategies:

ACTIONS

A3.7

Through the assessment of residential subdivision proposals encourage landscape and design responses to provide additional shade in Moriac.

A3.8

Develop a standard planning permit condition for residential subdivision approvals requiring proponents to provide canopy trees for shade on public land (including nature strips).



3.3.2 PROTECT RURAL AREAS FROM IMPACTS ASSOCIATED WITH HOUSING DEVELOPMENTS

Residential growth in Moriac is constrained by a lack of sewerage infrastructure and limited opportunities for infill development. Future residential growth is therefore likely to occur in a greenfield context on land currently utilised for farming purposes. In recent years State planning policy regarding the protection

of agricultural land has been strengthened in the interests of preserving opportunities for future food production. Moriac is largely bordered by agricultural land and farming has played an important role in shaping the lives of many Moriac residents.

PROTECTING AGRICULTURAL LAND

The Rural Hinterland Futures Strategy 2019 identifies the study area as being located within an agricultural soil quality 'hot spot'. This finding reinforces existing policies which limit the outward expansion of the Moriac urban environment. The land around Moriac has been rated as being of high-average agricultural quality (2 - 3) as shown in Figure 3.6 below. Land located west of Hendy Main Road is rated higher quality than land located to the east. These classifications suggest that development of land around Moriac for non-agricultural purposes is generally discouraged by State and local policy. It should be noted however that the classifications

are broad and not based on detailed land capability analysis. Individual site analysis may reveal different results.

Future greenfield development on the periphery of the Moriac township is likely to have a tangible impact on land currently utilised for agriculture. Future land use decisions will need to account for the loss of viable farming land in determining whether or not residential development should be supported in a particular location. To avoid the loss of productive agricultural land Council will implement the following strategies:

STRATEGIES

S3.7

Contain future development within the defined settlement boundary identified on the Strategic Framework Plan.

ACTIONS

A3.9

Require detailed land capability assessments for rezoning proposals impacting Farming Zone land located within the Moriac settlement boundary.

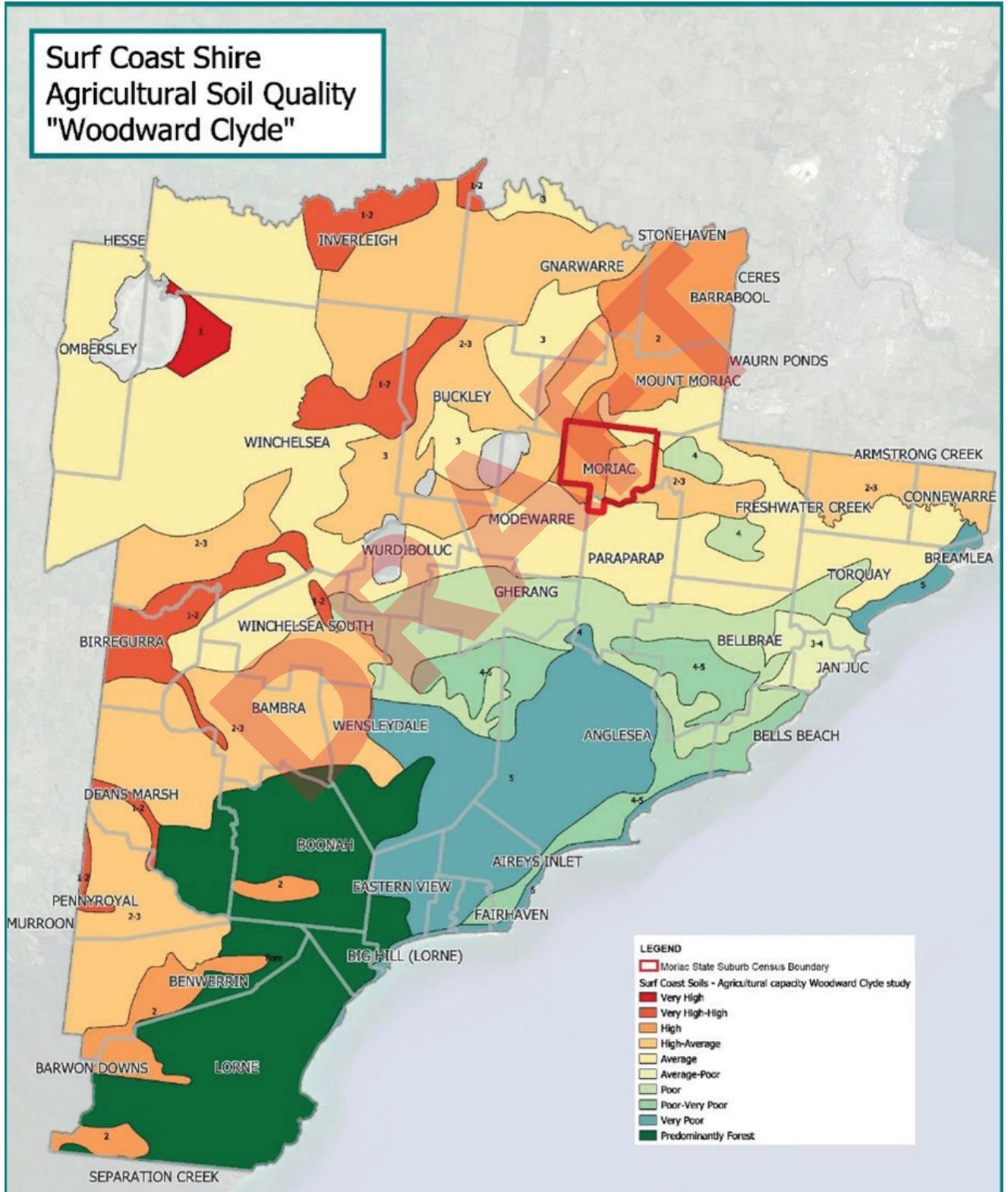


Figure 3.6 Agricultural Soil Quality
Source: Surf Coast Shire – Soil mapping



LIGHT POLLUTION

Street lighting concerns were raised throughout the engagement phase. A review of survey responses reveals a number of Moriac residents have experienced impacts associated with light spill from residential subdivision, whilst other respondents sought additional street lighting around town. In designing future subdivisions developers should consider the delicate balance between improved road and path safety and the protection of residential amenity and dark rural skies.

STRATEGIES

S3.8

Ensure future street lighting is only used where it improves safety for residents and avoids light spill onto private land or significant habitat corridors.

ACTIONS

A3.10

Require an assessment of potential light spill and its associated impacts in support of greenfield subdivision proposals.



3.4.1 FUTURE RESIDENTIAL GROWTH WILL BE INCREMENTAL IN SCALE AND INCORPORATE ELEMENTS OF ENVIRONMENTALLY SUSTAINABLE DESIGN.

The Moriac community has expressed a range of views on the topic of future residential growth. The vast majority of engagement participants agree that the small-scale nature of the town and its role in the region should not be altered by future land use planning decisions. The background report found that the demand for new housing opportunities is high and growing, and supply is limited.

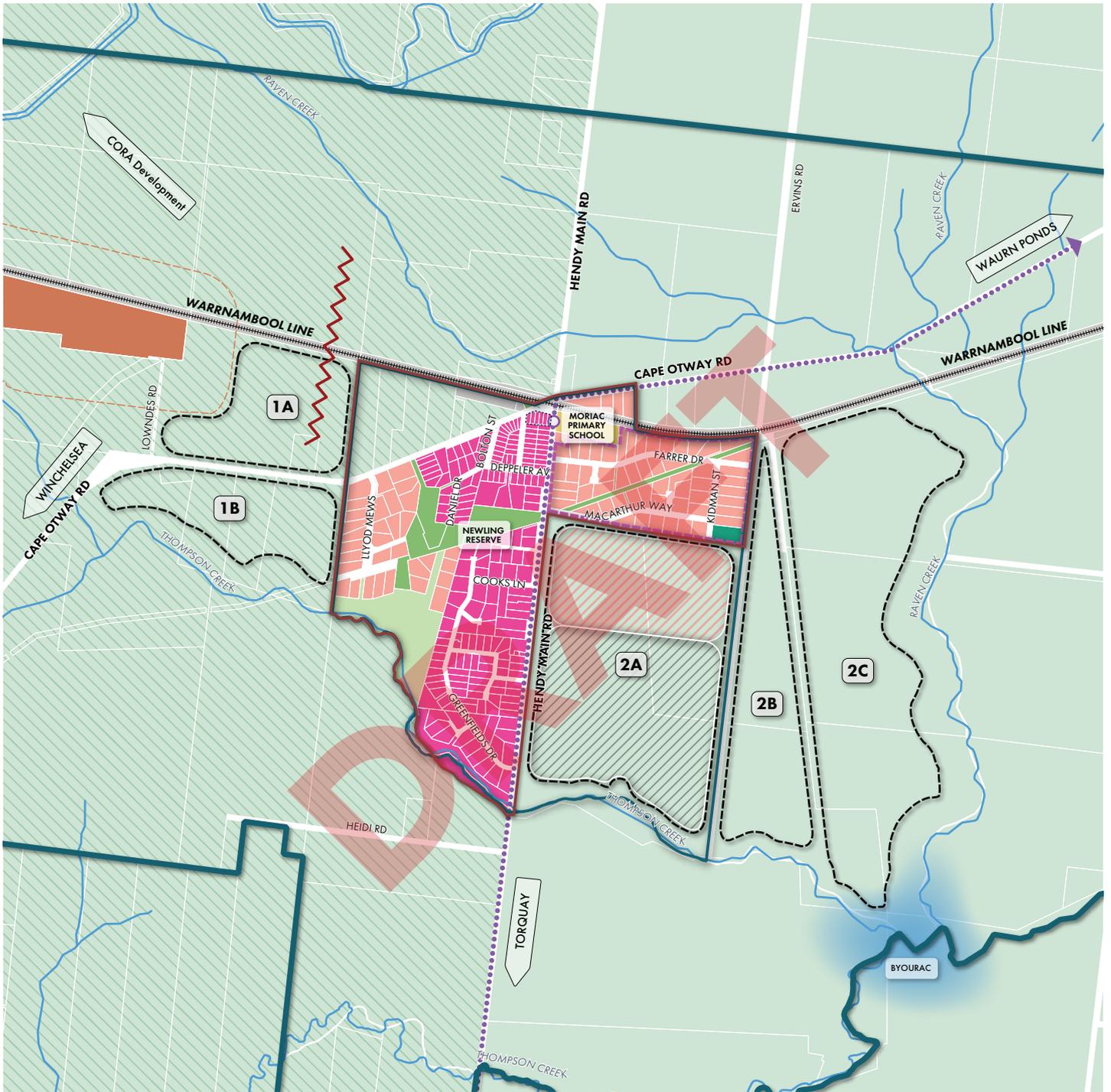
Community engagement has identified strong support for incremental growth, however the scale of incremental growth is currently undefined. The following sub-sections consider issues associated with future growth models to assist in determining the appropriate scale of 'incremental growth' for Moriac.

DRAFT



Figure 3.7 – Moriac Structure Plan: Housing

Source: Mesh Urban Planning



DRAWING KEY

- Study Area
- Existing Settlement Boundary
- Proposed Settlement Boundary
- Investigation Areas (refer to Part C)
- Future Low Density Development Area
- Future Investigation Area
- OVERLAYS**
- Development Plan Overlay (DPO14)
- LANDSCAPE FEATURES**
- Watercourse

LAND USE / ZONING

- Township Zone (TZ)
- Low Density Residential Zone (LDRZ)
- Farming Zone (FZ) - High Quality Agricultural Land
- Farming Zone (FZ) - High-Average Quality Agricultural Land
- Public Use Zone (PUZ2)
- Public Open Space
- Common Property Open Space
- Drainage Reserve
- Transport Road Zone (TRZ1)
- Digga Demolition & Excavations

LAND USE / ZONING (CONT.)

- Opportunity for Commercial Consolidation
- MOVEMENT**
- Railway
- Potential Bus Route
- Potential Bus Stop
- BUFFERS**
- Indicative Minimum Recycling & Resource Recovery Use Buffer
- Provide separation from Future Development associated with CORA
- CULTURAL SIGNIFICANCE**
- Aboriginal Cultural Significance - Byourac



RESPONDING TO REGIONAL HOUSING DEMAND

State planning policy requires councils to plan to accommodate population growth over a 15 year period in a municipal wide context. In 2022 Council commenced the process of developing a Shire-wide Urban Futures Strategy to respond to the State Government requirement of providing for 15 years supply of land to accommodate population growth. The strategy will consider the implications of the Distinctive Areas and Landscapes (DAL) Statement of Planning Policy, which has introduced a protected settlement boundary around Torquay/Jan Juc and reduced areas previously identified for greenfield growth.

There is no requirement to accommodate growth at a township level and therefore in determining what the appropriate level of supply for Moriac might be, Council and the community need to consider the following:

- State Government policy, which states that planning for growth must consider opportunities for consolidation, neighbourhood character and landscape, land capability, natural hazards, environmental assets and servicing constraints¹;
- The regional and local policy designation of Moriac as a small town with limited growth potential;

1 Clause 11.02-1S, Surf Coast Planning Scheme

- The identification of Torquay and Winchelsea as the 'only towns with capacity to accommodate substantial growth'²;
- Opportunities and constraints to additional growth that might exist within the study area;
- The infrastructure implications associated with different growth options.

Based on recent dwelling approval data, current vacant land in Moriac would accommodate less than 5 years demand at a township level, at a current development rate of 8.6 dwellings per annum. It is difficult to predict future demand and this will be influenced by the available supply of housing, but it is expected that demand for housing in Moriac will continue at least at the current rate. Therefore new opportunities for housing need to be identified, albeit in the context of a policy framework which designates Moriac as a small town with potential for incremental growth. This continues to align with the community's aspirations for Moriac.

Options for future residential growth are explored below and with reference to particular sites in Part C.

2 Clause 02.03-1, Surf Coast Planning Scheme



UNDERSTANDING RESIDENTIAL ZONES

The low density built form of Moriac is largely the product of a lack of sewer infrastructure, where the minimum lot size for new parcels created by subdivision is determined by their ability to treat and contain domestic waste water. A summary of existing zoning controls across the study area is provided in figure 3.8.

The minimum lot size for subdivision in the Low Density Residential Zone is 4000 square metres (1 acre). There is no specified minimal subdivision area for new lots in the Township Zone, however opportunities are constrained by land capability requirements. Any increase in building density within the existing footprint of the town has the potential to contribute to the contamination of stormwater flowing through Moriac and into the

Thompson Creek.

The term 'incremental growth' is notably subjective, and it is therefore important for the Moriac Structure Plan to clearly explain the key features and implications of different growth models.

Figure 3.9 introduces a lot typology diagram to illustrate the differences between densities of residential subdivision. The four typologies reference existing locations within Moriac and Winchelsea to help explain zoning implications relevant to dwelling density and population yield in a conceptual neighbourhood. Each of the model neighbourhoods assumes a yield of 40 dwellings, with the potential to accommodate approximately 124 additional residents.

ZONE	LAND AREA (HECTARES) & PERCENTAGE OF URBAN MORIAC WITHIN ZONE	PURPOSE OF THE ZONE	HOW IS THE ZONE CURRENTLY UTILISED / DEVELOPED IN MORIAC?
Low Density Residential Zone (LDRZ)	58.3 (47%)	To provide for low-density residential development on lots which, in the absence of reticulated sewerage, can treat and retain all wastewater.	Lots generally have an area greater than 4000 square metres.
Township Zone (TZ)	51.67 (42.1%)	To provide for residential development and a range of commercial, industrial and other uses in small towns. To encourage development that respects the neighbourhood character of the area. To allow educational, recreational, religious, community and a limited range of other non-residential uses to serve local community needs in appropriate locations.	Majority of TZ land is developed with dwellings on separated titles. Newer lots (lots created since 1979) have an average area of 2000 square metres.
Public Use Zone (PUZ)	2 (1.6%)	To recognise public land use for public utility and community services and facilities. To provide for associated uses that are consistent with the intent of the public land reservation or purpose.	Applies to the Moriac Primary School.
Public Park and Recreation Zone (PPRZ)	5 (4%)	To recognise areas for public recreation and open space. To protect and conserve areas of significance where appropriate. To provide for commercial uses where appropriate.	Applies to land within the Newling Reserve.
Transport Zone Category 2	4 (3.2%)	To identify significant existing roads. To identify land which has been acquired for a significant proposed road.	Applies to Hendy Main Road.
Transpory Zone Category 3	1.72 (1.4%)	To identify significant existing roads. To identify land which has been acquired for a significant proposed road.	Applies to the Cape Otway Road.

Figure 3.8 Summary of Zones applying to land in Moriac



MORIANC LOT TYPOLOGIES ANALYSIS

Lot typology 1 references an existing General Residential Zone neighbourhood in Winchelsea for the purposes of demonstrating housing densities in a town with reticulated sewerage infrastructure. The average lot size is approximately 600 square metres. Typology 1 can deliver a potential dwelling yield of 12 new homes per hectare however the average lot width is only 20 metres. General Residential Zone development would significantly alter the character of Moriac.

Lot typology 2 references the Broadway area in Moriac, an area first developed in the 1920's. This provides a good example of Township Zone development created at a time when septic tank requirements were less onerous and many properties backed onto farmland. A recent Council Septic Study identified a number of wastewater / stormwater interface issues associated with older systems located within the Broadway area.

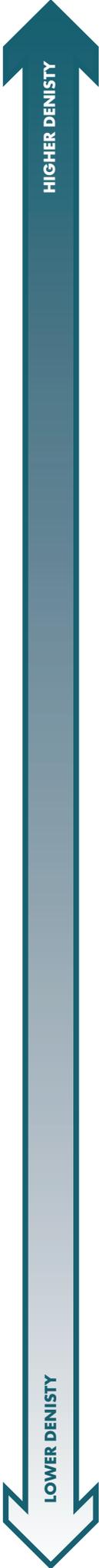
Lot typology 3 references the Greenfields Estate. Developed in the 1980's and 90's the Greenfields Estate was a 'rural residential' subdivision, delivering 2000 square metre parcels. This density of housing is not supported by today's LDRZ subdivision requirements.

Lot typology 4 references the Hinterland Estate, the most recent greenfield subdivision in Moriac. The Low Density Residential Zone specifies a minimum area of 4000 square metres (1ha) for new lots created by subdivision. Land capability assessment is however required to determine how many parcels can be delivered within a particular area. Lots with an area greater than 4000 square metres may be required in parts of Moriac where sub-surface basalt restricts sub-surface irrigation.

*Today only **Type 04** subdivisions can be achieved in Moriac in the absence of reticulated sewer infrastructure.*

Figure 3.9 – Moriac Lot Typologies Analysis

Source: Mesh Urban Planning



TYPE 01
GENERAL RESIDENTIAL ZONE
 WINCHELSEA AREA



STUDY AREA (HA):
4.10ha

AVERAGE LOT SIZE (RANGE):
641m² (411m²-1026m²)

AVERAGE LOT DEPTH:
30.0m

AVERAGE LOT WIDTH:
20.0m

NEW SEPTIC APPROPRIATE:
No

STREET WIDTHS:
20.0m

DWELLINGS PER HECTARE:
40 dwellings / 4.10ha = 12.1 dw/ha

TYPE 02
ORIGINAL TOWNSHIP ZONE
 THE BROADWAY AREA



STUDY AREA (HA)
4.95ha

AVERAGE LOT SIZE (RANGE):
949m² (644m²-1389m²)

AVERAGE LOT DEPTH:
50.0m

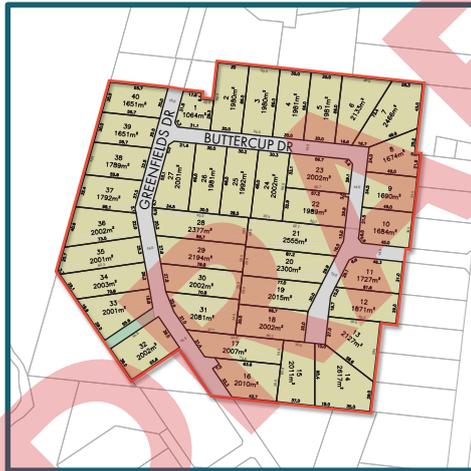
AVERAGE LOT WIDTH:
20.0m

NEW SEPTIC APPROPRIATE:
No

STREET WIDTHS:
20.0m

DWELLINGS PER HECTARE:
40 dwellings / 4.95ha = 8dw/ha

TYPE 03
LARGER LOT TOWNSHIP ZONE
 GREENFIELDS DRIVE AREA



STUDY AREA (HA)
9.11ha

AVERAGE LOT SIZE (RANGE):
1,985m² (1064m²-2617m²)

AVERAGE LOT DEPTH:
66.0m

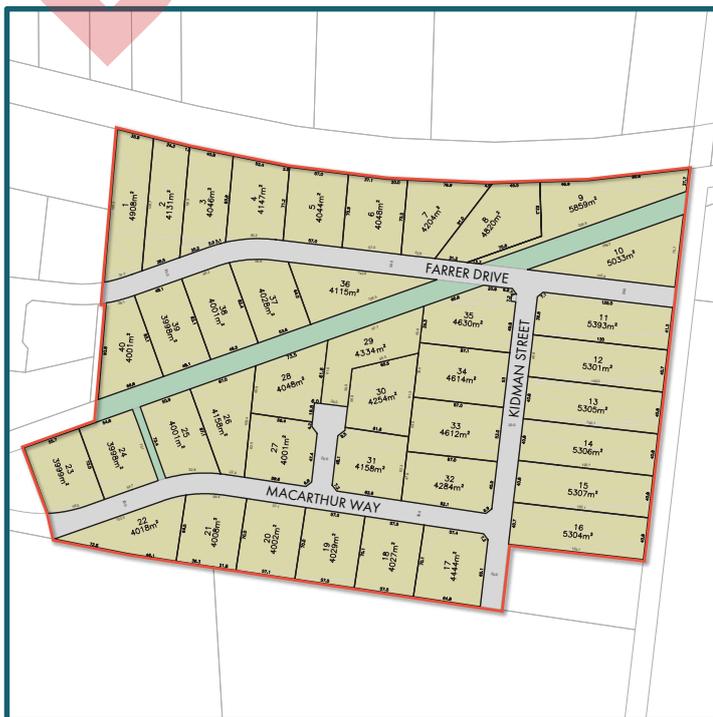
AVERAGE LOT WIDTH:
30.0m

NEW SEPTIC APPROPRIATE:
No

STREET WIDTHS:
15.0m

DWELLINGS PER HECTARE:
40 dwellings / 9.11 ha = 4.39 dw/ha

TYPE 04
LOW DENSITY RESIDENTIAL ZONE
 HIGHLANDS / MEWS AREA



STUDY AREA (HA)
21.66ha

AVERAGE LOT SIZE (RANGE):
4420m² (3998m²-5859m²)

AVERAGE LOT DEPTH:
80m - 130m

AVERAGE LOT WIDTH:
40m - 60m

NEW SEPTIC APPROPRIATE:
Yes

STREET WIDTHS:
20.0m

DWELLINGS PER HECTARE:
40 dwellings / 21.66 ha = 1.85dw/ha



INVESTIGATIONS INTO RETICULATED SEWERAGE PROVISION

In the absence of a reticulated sewer network the density of residential development in Moriac has been defined by the capability of land to support the onsite treatment of waste water. Community survey responses confirm that the resulting low density, rural character of Moriac is greatly valued by residents. Survey responses also reveal that Moriac residents have a diverse range of views on the topic of reticulated sewer infrastructure (Figure 1.6). Whilst the largest group of respondents (46% of survey respondents) indicated support for the reticulated servicing of the town, free field comments suggested that further information was required to better understand implications for the built environment. It is also suggested that the cost implications of retrofitting sewerage in the town would have a significant influence on landowner support for such a proposal.

Prior to the adoption of the 1979 Moriac Structure Plan, the Geelong and District Water Board considered the feasibility of constructing reticulated sewerage infrastructure in Moriac. Records indicate that the project did not make it into a capital works program due to the small scale of the town at the time (population and size of urban area). Perhaps more importantly preliminary investigations into the design for a sewer network identified significant project risks associated with sub-surface basalt deposits. The 1992 Moriac Structure Plan stated:

'The incidence of hard rock is common throughout the township and is a cost constraint that is not peculiar to any one area'.

The 2010 Moriac Structure Plan further considered the possibility of a future sewerage scheme:

'If Moriac is to grow it would be reasonable to expect the town to be serviced either with a reticulated sewerage system or some form of 'packaged' sewerage system i.e. decentralised on-site wastewater treatment system (DOWTS).'

The most recent reference to the potential servicing of the town can be found in the Moriac Septic Study Report prepared by Council in 2021. The report was written by Council's Environmental Health team who presented the following recommendation:

'Provide this report to Barwon Water and advocate to undertake a feasibility study into providing a reticulated sewer, factoring in future developments and the Moriac Structure Plan'.

The above recommendation contemplates a retrofit type project with a view to resolving identified waste water related impacts detected within the existing

urban area. Targeted stakeholder engagement with officials from Barwon Water has provided clarification regarding the scale of new residential development required to justify the construction of a reticulated sewer main.

Barwon Water have confirmed that a retrofit sewer project would be a costly exercise requiring financial contribution from Moriac property owners. High level estimates indicate that a new local water reclamation plant is likely is cost between \$20 – 25 million, and would require a large area of open land to be set aside and protected from the encroachment of sensitive uses (i.e. dwellings). Due to the fall of land the logical location for any future water treatment facility would be to the south east of Moriac. The location of any future water treatment or reclamation plant would need to avoid impacts of areas of Aboriginal sensitivity, including land within proximity to the Byourac Junction. Individual property owner contributions may be as high as \$30,000 to \$50,000 per property, with any initiative unlikely to progress without the support of more than 50% of residents.

The implications for the servicing of future greenfield development were found to be equally prohibitive. In the case of Moriac, a high level desktop calculation indicates that approximately 800 additional homes would be required to qualify as growth requiring 'strategic infrastructure' in the form of reticulated sewerage. This would more than triple the size of the existing town (294 dwellings in 2021). At this scale Barwon Water would be required to fund the servicing of land identified for growth within the Surf Coast Planning Scheme. Hypothetically if a high model of growth were to occur in the future Barwon Water's investment in a pressurised sewer network would not however guarantee the servicing of the existing urban area of Moriac.

The cost of providing reticulated servicing infrastructure for any scale of housing beneath the strategic infrastructure threshold would need to be financed by a private developer.

In summary the number of new homes required to justify a reticulated sewer represents a scale of development that is inconsistent with community sentiments regarding future growth, and is not supported by existing planning policy.

STRATEGIES

S4.1

Future residential growth will be confined to the Low Density Residential Zone.



PRESERVING RURAL CHARACTER

The open, rural character of Moriac is highly valued by Moriac residents. The character of the built form is relatively homogenous, with a prevalence of single storey dwelling developments on larger properties (1000sqm to 1 acre). Dwellings are generally well setback from title boundaries and individual lots are large enough to contain outbuildings and large canopy trees. The town contains some fine examples of Edwardian era weatherboard homes, however, the prevailing character is not defined by its heritage elements. At present there are no neighbourhood character controls influencing built form outcomes for new home developments. Planning controls such as the Design and Development Overlay can help achieve or maintain preferred character aspirations, however, the zoning and servicing of land has the biggest influence on built form.

To retain and enhance the small town, rural character of Moriac Council will implement the following strategies:

STRATEGIES

S4.2

Identify an enduring settlement boundary that provides opportunities for growth without compromising the compact footprint of Moriac.

S4.3

Ensure that future rezoning for residential use and development occurs in a staged manner that provides for integration with existing streetscapes.



3.4.2 LAND USE PLANNING DECISIONS SHOULD CONSIDER THE HOUSING AND TRANSPORT NEEDS OF AN AGE DIVERSE POPULATION

The MSP Background Report found that the population of the Deans Marsh and Moriac Districts is expected to grow by 348 people to the year 2036, with significant growth in retirement aged people. Council's Age Friendly Strategy 2020-24 recommends that Council investigate and advocate for changes to improve options for people to age well in place.

At present there is very little housing diversity in Moriac. Of the 294 dwellings in Moriac at the time of the 2021 Census 100% were classified as 'separate houses' and 54.3% had four or more bedrooms. There were only 14 two-bedroom dwellings listed and none with a single bedroom. Without a significant change in the way that new housing is designed and delivered it is likely that many older residents of Moriac will consider moving to larger urban centres for smaller accommodation units and better access to services.

Given the identified infrastructure and zoning related constraints previously identified, the potential for achieving a greater diversity of accommodation types in Moriac will be restricted to accommodation opportunities that exist within planning and local law provisions, such as aged care accommodation and dependent persons units.

STRATEGIES

S4.4

Encourage accommodation types suitable for older persons.



PUBLIC TRANSPORT

At present there are no public transport services available to Moriac residents, and therefore residents are heavily reliant on private vehicles for transport. The current lack of public transport is a significant disadvantage for the town due to the limited availability of local facilities, and the need for residents to frequently access health and other essential services in Geelong.

The history of the Moriac settlement is closely linked to the Geelong – Warrnambool railway line. A return of rail passenger services has been considered in the MSP at a conceptual level with a view to understanding the barriers to investment and implications for Moriac as a small town in a growing region. The return of passenger rail services is not considered to be a viable transport option for the following reasons:

- Investment in pedestrian rail infrastructure is typically responsive to strong population growth;
- Moriac does not currently support the population or the planned growth to justify a new rail platform.

Future public transport services are most likely to be in the form of bus services.

In 2009 Council organised a trial bus service for Moriac residents in collaboration with the Department of Transport. The trial responded to a desktop appraisal that found the 'greatest gap' in transport service provision was in the North-west of the Surf Coast Shire (Moriac district). The trial service operated 4 days per week, (Tuesday, Thursday, Saturday and Sunday) for a four month period in 2010. The service offered Moriac residents

3 return trips per day to Waurm Ponds Shopping Centre and 2 return trips per day to Torquay (with stops in Jan Juc and Bellbrae). Over the 16 week trial period there were 320 trips transporting 648 passengers, representing an average patronage rate of 1.98 passengers per trip.

An evaluation of the trial found that patronage peaked during the school holiday period, and by far the largest user group of the service were passengers under 18 year old. In spite of underwhelming patronage figures, the service was highly rated by users. A number of issues were raised regarding the timing of the trial and a lack of media coverage advertising the service. In conclusion the regional office of the Department of Transport recommended that the service be retried in the future with amendments.

The population of Moriac has grown by more than 100 residents since the last bus trial. Furthermore the demographic profile demonstrates the importance of Moriac as a town for young families. Council will continue to advocate for opportunities to secure funding for future bus service trials.

ACTIONS

A4.1

Advocate for funding to support a further trial of a bus service linking Moriac to Waurm Ponds.

3.5 OPEN SPACE



3.5.1 OPEN SPACE AREAS WILL CONTINUE TO PLAY AN IMPORTANT ROLE IN DEFINING THE CHARACTER AND LIVEABILITY OF THE MORIAC TOWNSHIP.

ENHANCING OPEN SPACE AND COMMUNITY FACILITIES

Moriac has a basic range of community facilities with good access to public open space. The Newling Reserve contains a total area of approximately 5 hectares and is well connected to the surrounding community via footpaths and linking reserves. The Newling Reserve offers both passive and active open space opportunities, accommodating the Moriac Tennis Clubrooms and courts, the Moriac Skate Park, a 'district scale' playground, a basketball half court and public toilets.

The second largest open space asset in Moriac is located along the Thompson Creek corridor. The Greenfields Reserve contains an area of 2.5 hectares and was recently upgraded with sections of footpath, significantly improving accessibility. At present land within the Greenfields reserve is zoned Township Zone. The current zoning is considered to be an anomaly and does not reflect the current and future intended use of the land for public recreation purposes.

In 2020 the Moriac Community Network submitted a project proposal to upgrade the Lions Park as a way of enhancing the town centre and potentially addressing some of the road safety / pedestrian movement issues in this area. Site investigations preceding the commencement of works revealed the potential for land contamination and project funding was redirected to other community projects. Additionally, the renewal of the lease on the land owned by VicTrack has been placed on hold at the time of writing this structure plan. The land is required for the Regional Network Development Plan (RNDP2) and the Warrnambool Line Upgrade 2 (WLU2). Council will endeavour to renew the lease on the land when this becomes available.

STRATEGIES

S5.1

Council will advocate to deliver upgrades to the Moriac Lions Park.

ACTIONS

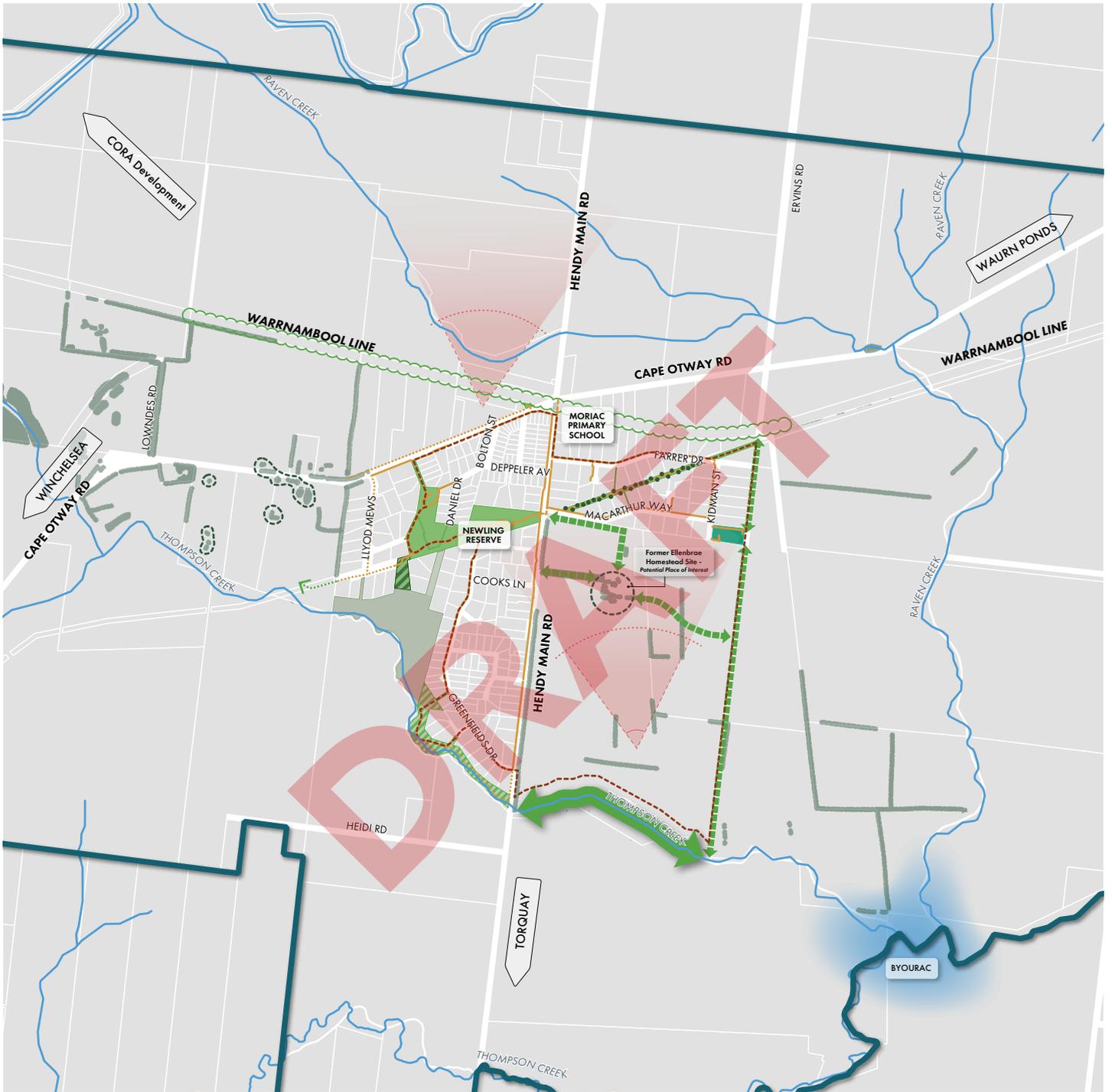
A5.1

Rezone land at 38 Greenfields Drive (Res 1 PS: 516887Y) from Township Zone to Public Park and Recreation Zone.



Figure 3.10 – Moriac Structure Plan: Open Space

Source: Mesh Urban Planning



DRAWING KEY

Study Area

LAND USE / ZONING

- Public Open Space
- Rezone to Public Park and Recreation Zone (PPRZ)
- Rezone to Public Park and Recreation Zone (PPRZ) - Previously Low Density Residential Zone
- Common Property Open Space
- Drainage Reserve

LANDSCAPE FEATURES

- Watercourse
- Key Views
- Extension of Thompson Creek Reserve Corridor
- Potential Open Space Corridor Extensions
- Biodiversity Corridor and Weed Management Area
- Protect Tree Cluster
- Potential Retention of Existing Tree Clusters/Rows
- Potential Tree Planting in Pipe Corridor

MOVEMENT

- Existing Pathway Network
- Potential Extension of Pathway Network / Missing Links in Network
- Potential Outer Town Trail Loop (approx 6.5km)
- Investigate Extension of paths along Thompson Creek

CULTURAL SIGNIFICANCE

- Aboriginal Cultural Significance - Byourac
Consider Aboriginal Cultural Heritage in proximity to watercourse



PLANNING FOR FUTURE OPEN SPACE PROVISION

In 2016 the Surf Coast Shire prepared and adopted an Open Space Strategy to deliver an open space classification framework and provide an assessment of existing open space assets. The assessment component of the strategy considered the suitability of open space assets in Moriac and the surrounding district, concluding that there was no immediate need for the provision of new open space areas. Since the adoption of the Open Space Strategy, Council has considered one significant subdivision proposal in Moriac where a financial contribution (for the maintenance of existing assets) was sought 'in lieu' of additional public open space. Community submissions to the amendment demonstrated that Moriac residents seek to have a greater influence in determining where and how open space assets are secured and managed in the future.

The opportunities plan provided at Figure 3.2 identifies the potential extension of open space corridors within the study area to provide future linear linkages. To the south-east of Hendy Main Road the plan identifies an opportunity to provide a new boundary walking path, opening access to otherwise inaccessible sections of the Thompson Creek. Open space corridors will need to be managed so as not to increase risk from bushfire or create additional hazards.

Directly adjoining the Greenfields Reserve to the west is a parcel of private common land presenting a 640 metre interface with the Thompson Creek. This land has an area of more than 8 hectares and is accessed from Daniel Mew. Through engagement forums a number of Moriac residents have enquired about the availability of this land for future public recreation purposes. Adding weight to the suggestion were a number of Council plans (including the 2010 Moriac Structure Plan) that identified an opportunity to continue the Greenfields trail along the Thompson Creek through private common land. At the time of its creation (by subdivision), the land was purposefully

set aside for the benefit of residents living within the Blue Water Estate. Notes from the original concept design state:

'The balance area has been set aside as common farming which could be share-farmed by the owners of the cluster allotments, an adjoining owner, or an outsider altogether. The advantage of this is that it creates a rural atmosphere for the cluster allotments and still leaves the land in production'.

The subject land continues to be utilised for farming purposes and plans for its future use and development will ultimately be decided by the land owners in common. Consequently all reference

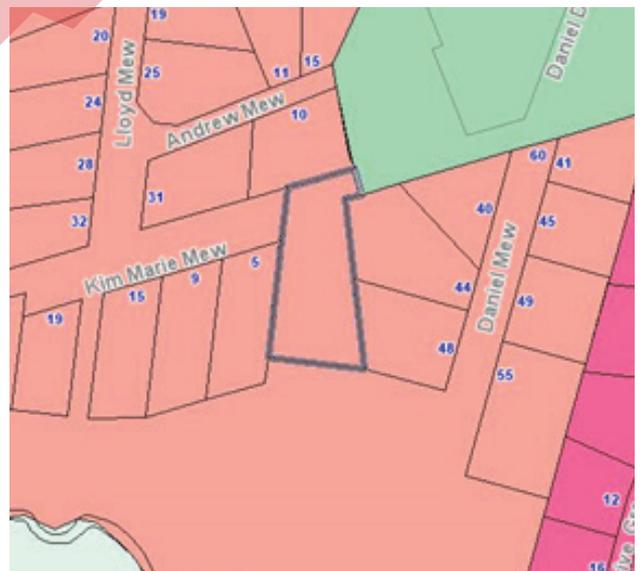


Figure 3.11: Council owned land to rezone to PPRZ.

Source: ?



to the continuation of a public access path will be removed from the Moriac Structure Plan 2022.

The Structure Plan presents an opportunity to address the zoning of Council owned land linking the Newling Reserve with Kim Marie Mew. An implementation action proposes the zoning of the land identified in Figure 3.11 from Low Density Residential Zone to Public Park and Recreation Zone.

Any future growth of the town will require a further assessment of open space needs based on population yield and identified community aspirations. Future open space areas should be designed to build upon the strengths of the Newling Reserve example,

connecting Moriac streets and places of interest. A highly valued element of the Newling Reserve is the openness afforded by low rural fencing. Rural fencing facilitates passive surveillance and creates a comparatively seamless transition between private land and areas of open space (when compared to closed pail fencing).

In considering the provision of open space future rezoning proposals will continue to rely on the recommendations outlined within Council's Open Space Strategy. To ensure that Moriac residents have good access to open space reserves encouraging passive transport and connecting places of interest Council will implement the following strategies:

STRATEGIES

S5.2

Facilitate the provision of new public open space that links with existing open space areas, and particularly alongside creeks.

S5.3

Protect views to and from public open space areas.

ACTIONS

A5.2

Require permit applicants to provide open rural fencing where abutting public open space as a condition of planning approval for future low density residential developments.

A5.3

Ensure new subdivision proposals abutting creeks provide public open space allowing public access to stream sides.

A5.4

Manage open space corridors so that there is no increased risk from bushfire or new hazards created.

Rezone land at 32 Daniel Drive (Res 1 CS1512) from Low Density Residential Zone to Public Park and Recreation Zone.

3.6 MOVEMENT



3.6.1 FUTURE LAND USE AND DEVELOPMENT DECISIONS WILL PRIORITISE THE NEEDS OF PEDESTRIANS AND CYCLISTS TO CREATE A SAFER BUILT ENVIRONMENT THROUGH IMPROVED ACCESSIBILITY AND CONNECTIVITY

Moriac residents are heavily reliant on private motor vehicles for transport. Fortunately the town has a well-established network of paths and trails that help facilitate pedestrian connectivity. Figure 3.7 identifies movement related infrastructure, highlighting strengths and weaknesses in existing networks.

ROAD SAFETY

The commercial and social heart of Moriac exists at the juncture of two locally significant roads, both of which are carrying increasing levels of traffic each year. Road safety concerns continue to feature strongly in community conversations and in survey responses. Specific concerns have been expressed about the design of the intersection of Cape Otway Road, Hendy Main Road and the Warrnambool-Geelong railway line and speed limits on the Cape Otway Road within the township boundary. Discussions with Council engineers and Regional Roads Victoria confirm that there are no straightforward upgrade options for amending the existing configuration of the central intersection, and any complex solution involving grade separation would require significant Government funding.

In 2015 Council commissioned road safety improvement designs for the Cape Otway Road, within the Moriac settlement boundary area. These works have subsequently been funded and construction is scheduled to commence in 2023. Through the assessment of a rezoning proposal

in 2021 (Amendment C124) Council has secured a developer funded pedestrian crossing and a new footpath on the Cape Otway Road. The new crossing will provide a pedestrian connection from the existing footpath near Clerk Court to the houses on the north side of the Cape Otway Road. Figure 3.12 identifies an opportunity to upgrade the pedestrian crossing linking the footpath on Hendy Main Road with the Moriac Primary School.

To improve pedestrian safety outcomes in central Moriac Council will implement the following strategies:

STRATEGIES

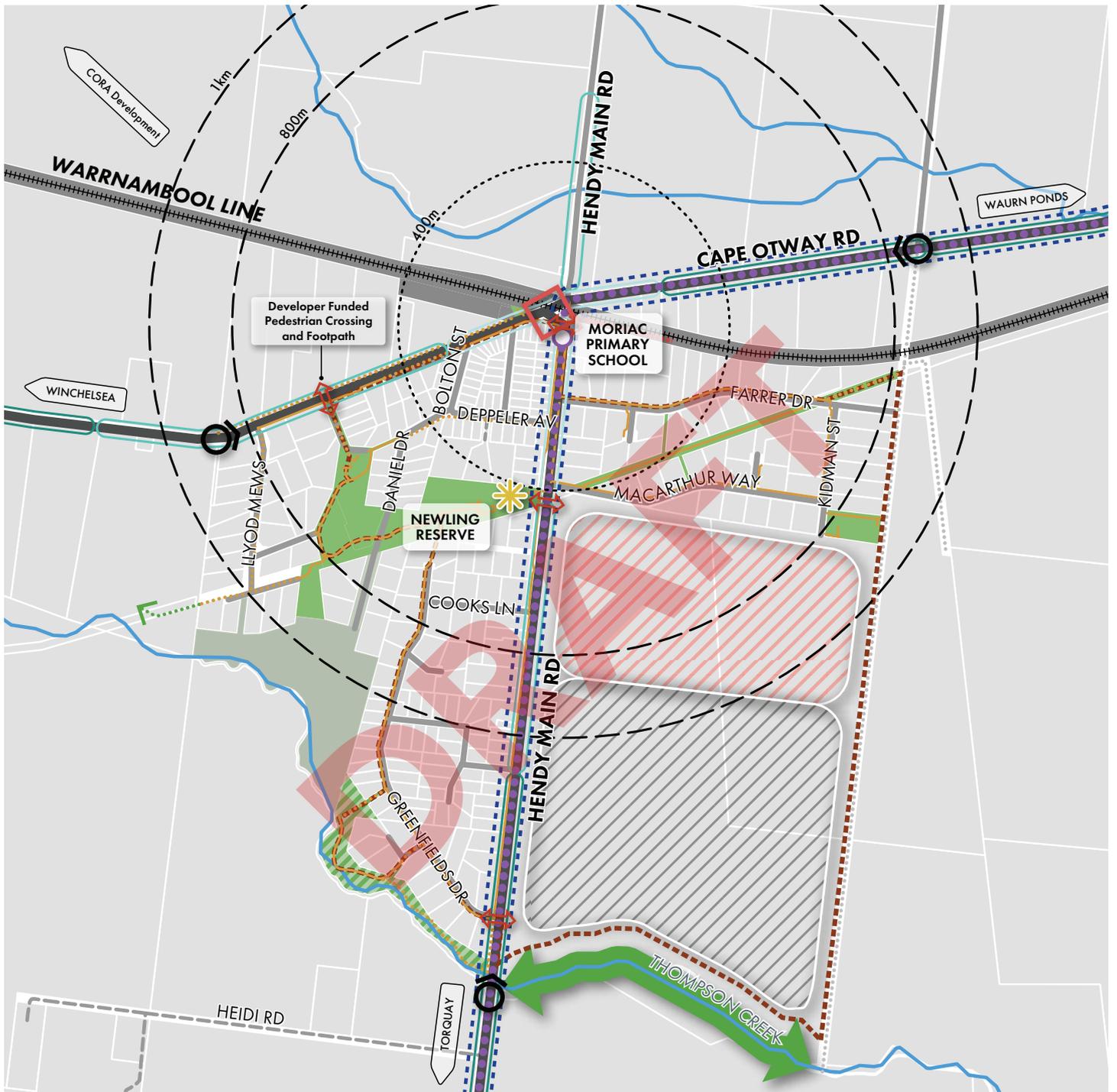
S6.1

Future greenfield development accessed from Hendy Main Road should contribute to the provision of new pedestrian crossings.



Figure 3.12 – Moriac Structure Plan: Movement

Source: Mesh Urban Planning



DRAWING KEY

- | | | | |
|--|--|---|---|
| <ul style="list-style-type: none"> Study Area Proximity to Town Centre LAND USE Transport Road Zone (TRZ1) Public Open Space Possible Extension of Public Open Space Common Property Open Space Extension of Thompson Creek Reserve Corridor Future Low Density Development Area Future Investigation Area | <ul style="list-style-type: none"> MOVEMENT Railway Sub-Arterial Road Local Road Unsealed Road Paper Road 50km/hr Posted Speed Limit 60km/hr Posted Speed Limit 80km/hr Posted Speed Limit Key Township Entry Opportunity for Intersection Improvement | <ul style="list-style-type: none"> ACTIVE TRANSPORT Existing Pathway Network Potential Extension of Pathway Network / Missing Links in Network Potential Outer Town Trail Loop (approx 6.5km) Investigate Extension of paths along Thompson Creek Potential Formalised Pedestrian Crossing PUBLIC TRANSPORT Potential Bus Route Potential Bus Stop BUFFERS Provide Safety Buffer Treatment to Railway Line Bordering Primary School | <ul style="list-style-type: none"> ROAD MANAGEMENT Road Managed by DOT/VicRoads
<i>All other roads managed by council</i> KEY LOCATIONS Neighbourhood Safer Place
<i>Consider vegetation management requirements</i> LANDSCAPE FEATURES Watercourse CULTURAL SIGNIFICANCE Aboriginal Cultural Significance
<i>Consider Aboriginal Cultural Heritage in proximity to watercourse</i> |
|--|--|---|---|



PATHS AND TRAILS

The enhancement of pedestrian and cycling infrastructure may hold the key to improved connectivity and movement within Moriac, particularly given the absence of short term solutions to identified traffic concerns.

The Moriac Structure Plan 2010 proposed the extension of a footpath along the Thompson Creek. This led to the community driven project delivering the Greenfields Reserve Nature and Fitness Trail. The potential of this project was enthusiastically pursued by the Moriac Community Network, who have played an instrumental role in making sure that the project was delivered for the benefit of Moriac residents. The State Government has committed further funding to complete the eastern link of the Greenfields Trail (connecting the existing path on Hendy Main Road to the recent extension works). A

significant length of this path section may need to be constructed with an elevated board walk given the fall of the land and its path through an area that is subject to periodic inundation.

Through the community survey Moriac residents emphasised the importance of connecting 'places of interest' or destination points. Future greenfield development may provide new opportunities for extending circular walking routes to access places of interest currently located on private land. The opportunities plan provided at 3.2 identifies an opportunity to secure a town perimeter path with a total length of 6.5km. Whilst conceptual in nature the designation reflects the aspirations of many residents who have clearly articulated the value of walking and cycling paths through community engagement.

STRATEGIES

S6.2

Future paths and trails should be designed to create or complete walking and cycling 'loops' connecting destinations and places of interest.

ACTIONS

A6.1

Require residential rezoning proposals to demonstrate how the resulting land use and development will improve the existing paths and trails network.



3.7.1 FUTURE GROWTH MUST CONSIDER IMPACTS ON SERVICE INFRASTRUCTURE AND WHERE REQUIRED CONTRIBUTE TO INFRASTRUCTURE IMPROVEMENTS.

STORMWATER INFRASTRUCTURE

The majority of stormwater collected across the Moriac township discharges to the Thompson Creek south of the town. Whilst an initial stormwater sampling program, undertaken as part of the Moriac Septic Study, did not detect human bacteria (evidence of human faecal content) within the Thompson Creek, additional sampling was a key recommendation of the investigative report. One indicator of concern that did emerge from preliminary findings relates to nitrogen levels. High nitrogen levels can lead to eutrophication of a watercourse resulting in excessive weed and algae growth. High nitrogen levels can be attributed to a range of naturally occurring phenomena, however they can also be associated with waste water runoff.

There are no comprehensive historical water sampling datasets to allow the consideration of impacts associated with a range of indicators over time. Further research is therefore required to determine the full extent of environmental impacts associated with stormwater outfall to the Thompson Creek. A future water sampling program will require a dedicated budget and an agreed methodology to ensure the validity of the dataset for comparative analysis.

In the process of developing the Structure Plan, Council has worked closely with Barwon Water to consider opportunities to incorporate Integrated Water Management (IWM) principles in future land use planning directions for Moriac.

‘Integrated water management is a collaborative approach to planning that brings together organisations that influence all elements of the water cycle, including waterways and bays, wastewater management, alternative and potable water supply, stormwater management and water treatment. It considers environment, social and economic benefits’.

A high level assessment of IWM opportunities and challenges is attached at Appendix D. The Barwon Water ‘Design Sprint’ template considers Moriac specific implications associated with the key challenges of population growth, climate change impacts and water scarcity in the region.

To avoid ongoing impacts on the Thompson and Raven Creeks, Council will implement the follow strategies and actions:

STRATEGIES

S7.1

Reduce negative impacts on Thompson and Raven Creeks from stormwater run-off.

ACTIONS

A7.1

Require a Water Sensitive Urban Design response for future rezoning and subdivision proposals directing stormwater to the Thompson Creek and/or Raven Creek.

A7.2

Advocate for regular and consistent water quality sampling along the Thompson Creek.

A7.3

Seek funding to deliver stormwater improvement recommendations outlined with the Moriac Septic Study report 2021.

A7.4

In the assessment of rezoning and subdivision proposals consider opportunities to deliver on aspirations identified through the Integrated Water Management – Design Sprint 2023.



Figure 3.13 – Moriac Structure Plan: Infrastructure

Source: Mesh Urban Planning



DRAWING KEY

- Study Area
- BUILTFORM**
 - Existing Builtform
 - Community Buildings
- LAND USE**
 - Township Zone (TZ)
 - Existing Residential
 - Potential Residential Growth Direction
- LANDSCAPE FEATURES**
 - Watercourse

MOVEMENT

- Railway
- Sub-Arterial Road
- Local Road
- Unsealed Road
- Paper Road
- Improve Existing Town Entrance Signage

CULTURAL SIGNIFICANCE

- Aboriginal Cultural Significance
Consider Aboriginal Cultural Heritage in proximity to watercourse

SERVICES / INFRASTRUCTURE

- Drainage Pits
- Drainage Pipes
- Drainage Reserve
- Potential Open Space and Integrated Water Management Corridor
- Investigate Stormwater Management Infrastructure
- Stormwater Upgrade Improvement Works
- Future Electrical Servicing
- Electrical Transmission Lines

BUFFERS

- Investigate Potential Setback Buffer from High Value Natural Features



POTABLE WATER

Moriac is supplied with drinking water from the Wurdee Boluc Transfer Main. Through the community survey Moriac residents expressed concerns regarding poor water pressure. Barwon Water have advised Surf Coast Shire that any future residential growth within Moriac would trigger the need to upgrade potable water supply infrastructure. Clause 19.03-2L of the Surf Coast Planning Scheme requires developers to consider:

‘Providing for a tanker or booster system in the provision of reticulated water supply for land in Moriac that is above an elevation of 105 metres AHD’.

The above policy is specifically relevant to land located to the north of Cape Otway Road, rezoned in 2021 for the purposes of Low Density Residential subdivision (Amendment C124). Clause 19.03-2L is required to be updated to provide accurate directions for future growth.

TELECOMMUNICATIONS

The 2021 Census confirms that an increased number of Moriac residents are working from home following the COVID 19 pandemic. In 2016, 8% of Moriac residents indicated that they worked from home, compared to 22.1% in 2021. These figures are likely to represent those residents who only work from home exclusively, and miss a potentially larger group who are working under hybrid conditions (i.e. with some days spent in a workplace away from home). A permanent increase in working from home arrangements has implications for infrastructure planning. The speed and reliability of internet services will have a major bearing on the success of home based business activities. To encourage ongoing investment in home based businesses and to support the growing trend of Moriac residents working from home, Council will implement the following actions:

ACTIONS

A7.5

Update Clause 19.03-2L to clarify future potable water supply infrastructure upgrade requirements.

ACTIONS

S7.6

Advocate for timely upgrades and improvements to service infrastructure to support planned development.

S7.7

Enter into agreements with developers to ensure that those who benefit from the provision of service infrastructure contribute to the cost of construction.

3.8 LOCAL ECONOMY



3.8.1 MORIAC WILL SUPPORT A PROSPEROUS ECONOMY, PROVIDING NEW OPPORTUNITIES TO FOSTER LOCAL EMPLOYMENT AND ENHANCE THE VISITOR EXPERIENCE

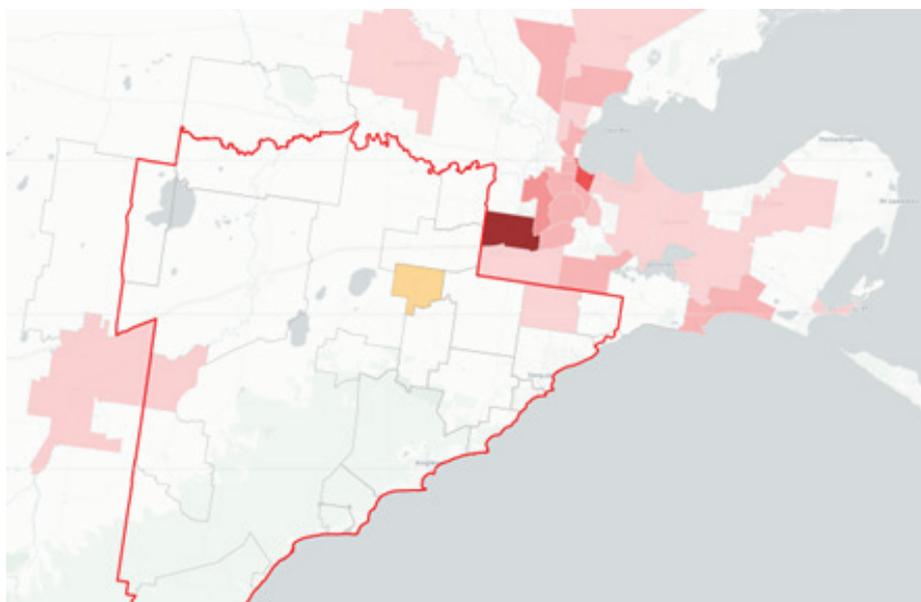
SUPPORT FOR THE LOCAL ECONOMY

Moriac supports a small number of commercial businesses operating within the Township Zone. The limited offering of services is largely explained by the proximity of Moriac to larger service centres. Resident expenditure data by spending type indicates that Moriac residents regularly shop outside of the Surf Coast Shire and frequently shop online.

Resident expenditure data by locality confirms that Waurin Ponds in Geelong is the most important destination for Moriac residents (see Figure 3.X). The same dataset reveals that in an economic sense Moriac residents do not have a strong relationship with businesses based in Winchelsea.

EXPENDITURE TYPE	VALUE	SUMMARY
Total Local Spend	\$2.76 M	Local businesses represent a relatively small yet significant component of the regional economy.
Resident Local Spend	\$319.69 K	Moriac businesses rely on visitors' spending money in town.
Internal Visitor Local Spend	\$735.84 K	Moriac is a place of interest for Surf Coast residents from other towns.
External Visitor Local Spend	\$1.45 M	Visitors' from Geelong spend approximately four and a half times more than Moriac residents at Moriac businesses.
Resident Internal Escape Spend	\$1.52 M	Moriac residents spend more in other towns of the Shire.
Resident External Escape Spend	\$14.47 M	Moriac residents spend a significant amount in Geelong. \$10m was spent on groceries alone.
Resident Online Spend	\$7.01 M	Very high spend online.

Figure 3.14 - Annual Expenditure Overview – Expenditure within Moriac



**ADD DRAWING KEY
need further
information**

Figure 3.15: Escape spend distribution (March 2022-February 2023) – Top 100 Suburbs

Source: Spendmapp by Geografia, 2022.



Figure 3.16 – Moriac Structure Plan: Local Economy

Source: Mesh Urban Planning



DRAWING KEY

- Study Area
- BUILTFORM**
- Existing Builtform
- Community Buildings
- LAND USE**
- Existing Developed Area
- LANDSCAPE FEATURES**
- Watercourse

MOVEMENT

- Railway
- Sub-Arterial Road
- Local Road
- Unsealed Road
- Paper Road
- Improve Existing Town Entrance Signage

CULTURAL SIGNIFICANCE

- Aboriginal Cultural Significance
Consider Aboriginal Cultural Heritage in proximity to watercourse

LOCAL ECONOMY

- * Investigate Commercial / Community Uses
- Support Consolidation of Existing Township Commercial Development
- * Cell Tower - Invest in Telecommunications
- Support Work from Home Arrangements
- Potential Parking Area
- Formalise On-street Parking



Visitors to Moriac who live outside of the Shire are the largest contributors to the local economy. This finding reinforces the importance of businesses catering for the tourist economy and the need to address documented concerns about a current lack of safe parking in central Moriac.

The efficacy of existing township signage is another issue which has been raised in submissions to the Structure Plan. The design of signage should consider the significance of the Cape Otway Road for visitors travelling on the Great Ocean Road circuit. Improved town signage may potentially highlight services, or provide an insight into the history of the township as presented in Part A of the Structure Plan.

Existing local planning policy focuses on the consolidation of activity in the town centre however a significant number of Township Zoned properties, identified in the current Moriac Structure Plan for future commercial growth, are developed with single dwellings effectively limiting the opportunity for new business development.

Clause 17.02-1L – Business in Surf Coast

‘Direct commercial use and development in Moriac to the Town Centre (identified on the Moriac framework plan in Clause 02.04) so that the centre thrives and remains as the focus for commercial development for the township.’

ABN registration data confirms that Moriac is home to a significant number of successful home based businesses, many of which operate within the Low Density Residential Zone. The Surf Coast Planning Scheme contains home based business provisions that allow small business operators to undertake certain activities from residential properties. These provisions allow the incubation of home based businesses whilst protecting residential amenity.

The latest ABS statistics chart a significant increase in the number of Moriac residents working from home. Timely investment in the continual upgrade of telecommunications infrastructure will be critical to the health of the local economy. Strategies seek to reinforce the role of central Moriac as the focus of commerce and services and ensure that visitors to Moriac are well catered for.

STRATEGIES

S8.1

Encourage the use and development of properties within the Township Zone for home based commercial activities whilst considering potential impacts on the amenity of residential properties.

S8.2

Facilitate the provision of well-designed and sited way-finding signs.

ACTIONS

A8.1

Improve existing town entrance signage.

A8.2

Explore opportunities to secure additional land for parking in central Moriac.



PLANNING FOR FUTURE COMMERCIAL SERVICES

Successive Structure Plans have considered the need for additional business estate development however Moriac does not have a supply of undeveloped land zoned specifically for commercial land use purposes.

A review of historical land use directions regarding commercial development opportunities provides a reference for the consideration of future commercial land supply. The 1992 Moriac Structure Plan Review contemplated population thresholds required to support the development of a 'Basic Neighbourhood shopping centre'. It was determined that a population catchment of approximately 2000 residents would be required to support an investment of this scale. A more recent New South Wales Department of Planning study (prepared in 2018) considered population thresholds required to support a 'Neighbourhood Supermarket'. The report found that even in a 'low sales' environment a population of 5131 people would be required to support a relatively small 500sqm supermarket (small IGA equivalent).

In the next 10 years the Moriac community will continue to be highly dependent on larger service centres for household shopping. In the absence of reticulated sewerage infrastructure Moriac is unlikely to support investment in the development

of a supermarket scale service centre. Efforts should be focused on supporting the existing General Store and other local businesses.

The 1992 Structure Plan did highlight an opportunity to protect land for future service business / light industrial style development near the town centre. A resulting policy direction sought to:

'Encourage development of service business facilities in the vicinity of the existing centre adjacent to the former railway station'.

This opportunity was not taken up at the time and part of the subject land was subsequently developed with two rural residential dwellings. The 2010 Moriac Structure Plan did not further explore the potential of this location, instead favouring a location on the western boundary of Moriac for a light industrial park. It is considered that an opportunity exists to re-identify and future proof the development potential of land in central Moriac for commercial or service related development. The site may provide a location for a commercial business catering specifically for visitors to the region, providing a platform for the sale of products from the surrounding hinterland.

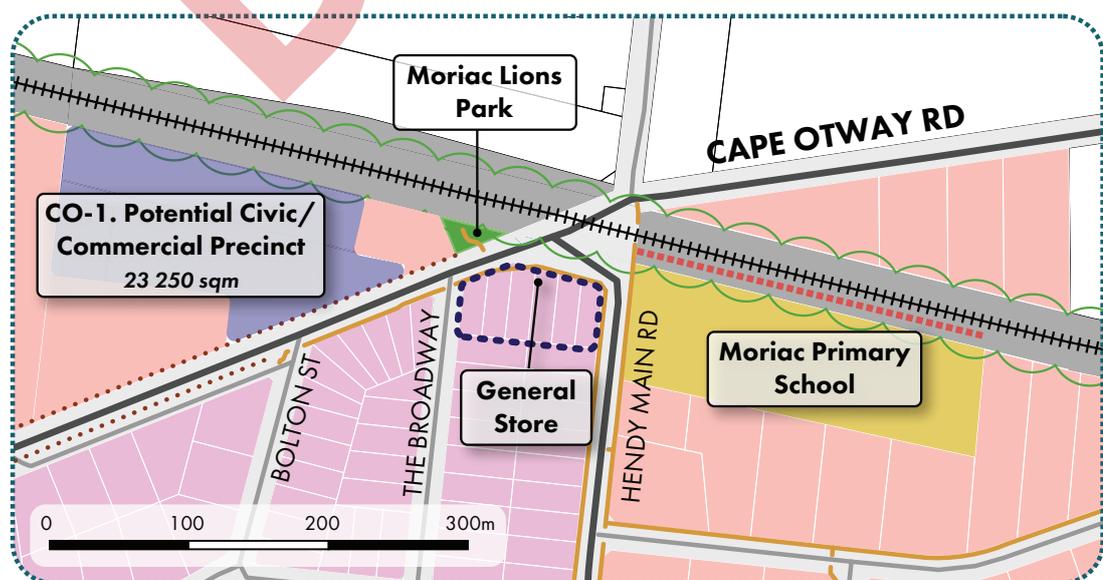


Figure 3.17: Future Commercial / Civic Precinct Opportunity

Source: Mesh Urban Planning



The subject area currently contains two private properties, each developed with single dwellings and an area of VicTrack rail reserve land (see figure 3.X). Land capability constraints dictate that the development potential of this land would be dependent on the approval of an onsite wastewater management system. Land adjoining to the north-west contains the former CFA shed. This land has been identified for future community development opportunities. Given that future population growth is forecast to be limited, the viability of the commercial development opportunity is likely to be influenced by a number of factors including;

- Tourism / visitation growth;
- Future servicing;
- The potential for a mixed use opportunity – combining civic and commercial elements.

Council will support the consolidation of commercial development in central Moriac through the implementation of the following strategies:

STRATEGIES

S8.3

Support well considered commercial development opportunities in the Township Zone.

S8.4

Support landowner initiated rezoning requests for land identified for commercial / civic opportunities with the Strategic Framework Plan.

S8.5

Recognise the commercial / civic land use development potential of land in central Moriac with policy directions in the Surf Coast Planning Scheme.



CAPE OTWAY ROAD AUSTRALIA (CORA)

CORA is a unique \$340 million land use and development concept, combining elements of elite sports, accommodation, retail, recreation and conservation located in proximity to Lake Modewarre on Cape Otway Road. In October 2020 the Minister for Planning approved the rezoning of the CORA site in Modewarre from Farming Zone to the Comprehensive Development Zone (Schedule 9). The approved land use and development is yet to commence

CORA has the potential to create significant employment and other economic opportunities for Moriac and the region both during construction and permanently. Of concern to residents are potential impacts associated with additional traffic travelling through Moriac on the Cape Otway Road. The Committee that considered the CORA proposal concluded that Cape Otway Road was an appropriate main access to the CORA site. Additional traffic management measures may need to be taken by

the Road Authority in the future should the site be fully developed.

Community survey responses indicate that many Moriac residents want greater certainty and more information regarding the key components of the CORA business model. In the absence of additional plans it is difficult to accurately define the potential opportunities afforded by the development for Moriac including: access to sporting facilities by local teams, access to the child care centre and other facilities.

The opportunities and impacts associated with the CORA concept will need to be revisited in a midlife review of the Moriac Structure Plan if all approvals for the project are issued within that time period. To assist the Moriac community to respond to impacts and opportunities associated with the development of the CORA site Council will implement the following strategies:

STRATEGIES

S8.6

Encourage the CORA project managers to consider direct consultation with the Moriac community.

S8.7

The Strategic Framework Plan will reinforce the need to limit development between Moriac and Modewarre to protect a non-urban landscape break.

ACTIONS

A8.3

Upon the approval of detailed construction plans Council should consider the preparation of an Impacts and Opportunities Study to better understand how the CORA development can benefit the Moriac district.

DRAFT



PART C - DEVELOPING DIRECTIONS FOR THE FUTURE



04

04 | PART C – INVESTIGATING LOCATIONS FOR FUTURE GROWTH

Part C presents information directly relevant to the consideration of future residential growth in Moriac. Boundary analysis identifies objective boundaries allowing for the informed consideration of investigation areas. The identification of a preferred location for the expansion of Moriac provides a basis for development of directions for growth within the Strategic Framework Plan.

4.1 BOUNDARY ANALYSIS

A settlement boundary defines the developable area of a town. Settlement boundaries are established through a process of boundary analysis that applies an objective filter to the review of tangible constraints such as natural features and major infrastructure.

In preparing a Boundary analysis plan the project team has considered the following:

- The natural contours of the Moriac township area and the adjoining rural landscape;
- The location of services, including easements, reserves and major utilities;
- Existing vegetation (tree clusters / rows);
- Planning ordinance – e.g. Environment overlays
- Existing residential zoned areas.

Figure 4.1 details the findings of boundary analysis review and identifies strong, temporal and weak boundaries to urban growth within the Moriac Structure Plan study area. Strong boundaries include major roads, railway lines, creeks and other topographic features that are unlikely to change in the life of the Structure Plan. Temporal boundaries are features that may change in the future, an example may be a business activity of a plantation row of mature trees. Title boundaries are an example of a weak boundary to future urban growth, as they have the potential to be altered by subdivision.

Directly to the south of the Moriac settlement boundary the Thompson Creek corridor provides a strong barrier to growth. Successive Moriac Structure Plans have emphasised the importance of containing the settlement within the one catchment area. Clause 11.01-1L-04 of the Surf Coast Planning Scheme seeks to:

‘Direct development in Moriac to the southern drainage catchment (located south of the railway line) and along the likely route of any future sewer main to facilitate efficient service provision’.

The above policy serves a dual purpose of simplifying any future initiative to service the town and limits the impacts of urban development on natural watercourses. The above policy remains relevant and should be retained within the Planning Scheme.

The northern settlement boundary is largely defined by the Geelong- Warrnambool railway line. Any further residential development north of the rail reserve would exacerbate identified road and pedestrian safety concerns by increasing the movement of people and vehicles at the existing level crossing. Residential growth north of the rail reserve therefore should be avoided.

Opportunities for expansion of the town to the east or west are represented in five locations in Boundary Analysis Plan at Figure 4.X (Areas 1A – 2C). The Raven Creek provides a strong boundary to urban growth to the east, with expansion to the west limited by the convergence of the Salt Creek and the Geelong-Warrnambool Railway line. The operations of a demolition & excavation business provide a further ‘temporal’ boundary to expansion in the west. The existing business operations have the potential to impact housing development as a result of dust and noise related impacts.

In the south-east corner of the study area the Boundary Analysis plan identifies the Byourac as an area of Aboriginal cultural significance. This location represents a topographical low point in the study area and is a location that was previously identified as a potential area for drainage or water treatment. As an area of cultural significance, this is not considered appropriate and future land use decisions should prevent land use impacts in the vicinity of the Byourac.

The findings of the Boundary Analysis suggest that options for further investigation into the potential for future residential growth in Moriac are restricted to land east and west of the existing township.

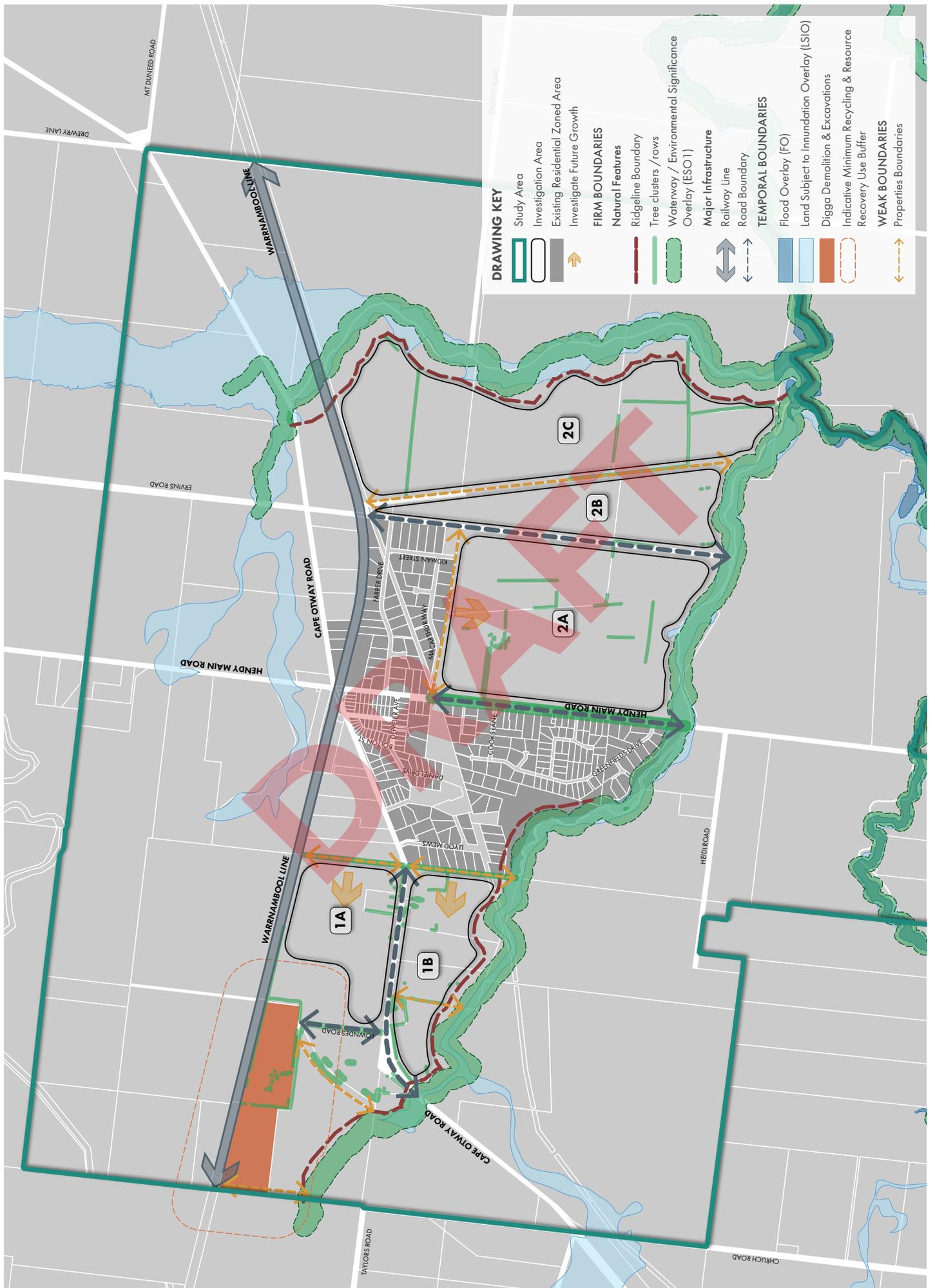


Figure 4.1 – Boundary Analysis Plan

Source: Mesh Urban Planning

4.2 ASSESSMENT OF INVESTIGATION AREAS

Following the first round of community engagement Council received three submissions from private land owners highlighting opportunities for future growth of the town.

In assessing the three locations put forward for consideration in the development of a new Moriac Structure Plan Council engaged Mesh planning consultants to prepare an independent review and appraisal. The Mesh team adopted the 'GAMA' model of site appraisal.

The GAMA identifies a set of tangible criteria relating to an area's; Strategic Position / Role, Planning Context, Infrastructure Capacity, Environment Protection, Landscape Sensitivity and Connectivity that contribute to determining an areas suitability for growth.

The GAMA approach has been developed from similar successful growth area investigation projects for Victorian regional towns. The site assessment criteria are grouped under the planning themes adopted throughout the structure plan.

Criteria are further broken down into priority classifications e.g. critical, important and supplementary. Ratings against specific criteria help determine a site score. The GAMA assessment considered the suitability of the three investigation areas for Low Density Residential Zone development.

The full GAMA assessment and resulting findings are provided at Appendix A.

SUMMARY OF GAMA ASSESSMENT FINDINGS:

The preliminary assessment of investigation areas revealed that all three land holdings have the potential to accommodate future residential development in spite of a number of identified constraints. The principle areas of difference between the three locations relate to measures such as walkability and road connectivity.

Area 2A was identified as the preferred location to accommodate future growth. Area 2A was previously identified as potential location for future growth in the Moriac Structure Plan adopted in 1979 and within the Moriac Structure Plan Review in 1992. Area 2A directly adjoins the recently developed Hinterland Estate. The land contains the site of the former Ellenbrae Homestead. Many of the mature trees which formed landscaping around the home survive today.

Area 2A was identified as the priority location for future growth for the following reasons:

- The land is located within a 800 metre radius (walking catchment area) of central Moriac;
- The land provides for connection to existing open space areas (Newling Reserve);
- The land directly adjoins the Hinterland Estate, an area of recently developed Low Density Residential development.
- The land does not contain significant remnant native vegetation;
- The land is considered to be low risk in relation to bushfire attack.

4.3 ADDRESSING BUSHFIRE RISK

Moriac and the surrounding district has a long and well documented history of grassfire events. The Moriac Structure Plan provides new insights into bushfire risk at the landscape level through the presentation of a Strategic Bushfire Assessment. The assessment considers in detail the requirements of Clause 13.02-1S (Bushfire Planning) of the Surf Coast Planning Scheme. The report provides a Landscape Bushfire Analysis plan (see figure 3. X), identifying potential hazards, likely threats and areas of lower risk.

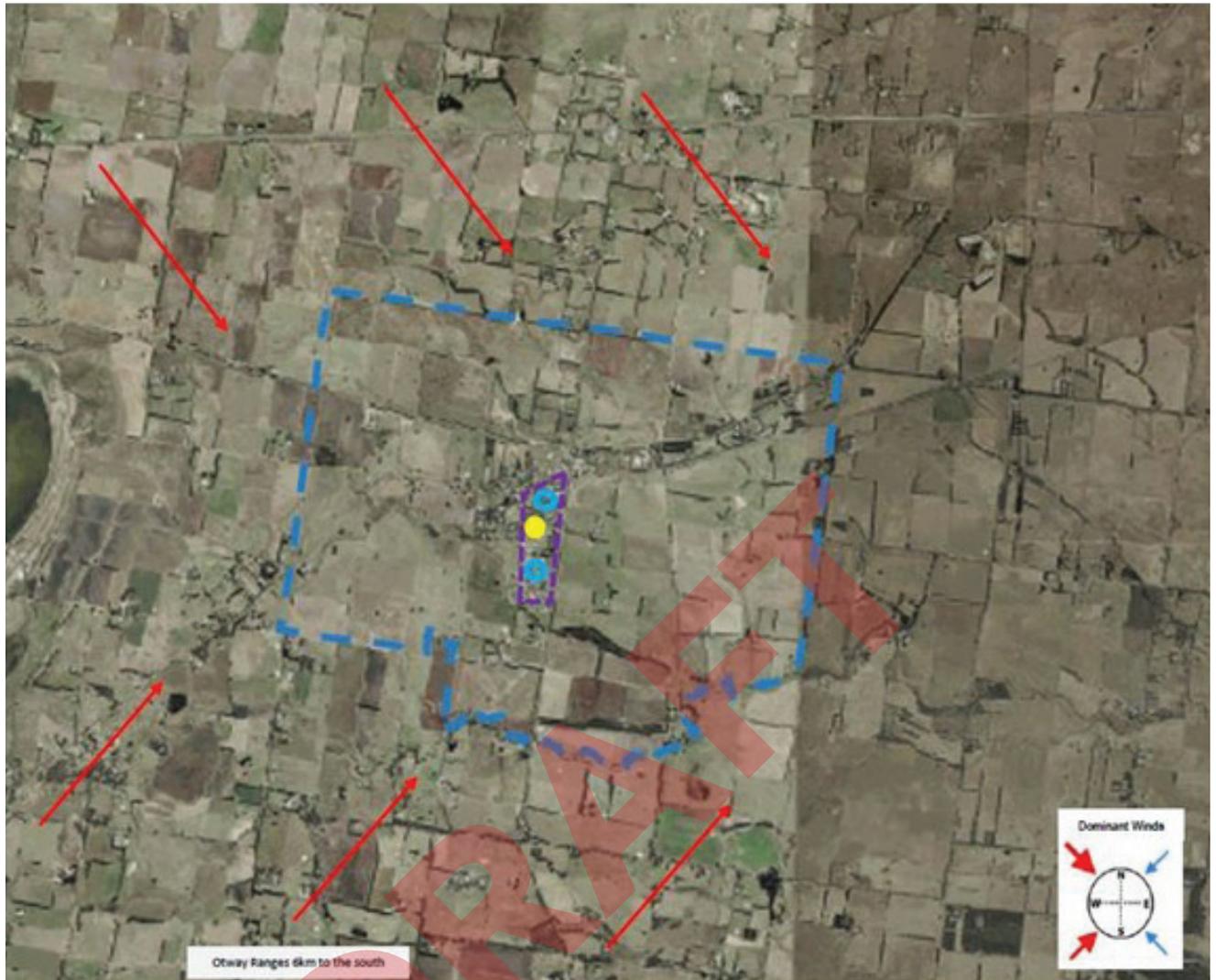
'There is no planning scheme bushfire factor that would warrant new development being directed away from the Study Area. The risk from grassfire can be managed in accordance with standard planning scheme responses to bushfire hazards'.

The report also considered the three investigation areas identified through submissions and found:

'There are arguments in favour of development to the east and west of the existing settlement, although they differ in emphasis. Development to the east would be exposed on only one high risk aspect whereas development to the west would be exposed to two whilst concurrently delivering significant risk reductions to existing parts of Moriac'.

'Given that development to the east and west are within a grassland setting and can fit within the broader recommendations contained in this report, there is no bushfire factor that would necessarily emphasise one area over another. The outcome in completed development to the east and west would be low(er) risk, in any event, and the risk reduction provided in the west to existing settlement areas would credible justify it being exposed on two aspects to grassfire. Where there are choices in preparing the structure plan on which development sites proceed, it is important that new development is contiguous to existing settlement areas and the proximity these provide to low fuel areas, as well as not encouraging hazards to remain or arise between different parts of what is, overall, a single settlement'.

Source: Kevin Hazell – Bushfire Planning – ‘Bushfire assessment to inform the Moriac Structure Plan’



DRAWING KEY

-  Study Area
-  Hazard Area
-  Indicative fire runs
-  Lower fuel areas
-  BAL Low capable areas
-  Neighbourhood Safer Place

The assessment report provides three general recommendations to inform future directions for growth. Recommendation 1 provides setback requirements for future development from both grassland and forest hazards. Recommendation 2 concerns the management of vegetation in completed developments. The study found ‘larger lots enable the introduction of bushfire hazards over time that may compromise reliable low fuel areas’. This recommendation is particularly relevant for the consideration of future Low Density Residential Zone development and/or development on lots with an area of more than 1200 sqm. In responding to this finding Council has an opportunity to provide proactive support to land owners and occupiers looking to undertake landscaping plantings. A Surf Coast Shire document titled ‘Landscaping

your Surf Coast Garden for Bushfire’, provides a valuable reference for conversations with community. The CFA have also developed a guide titled ‘Landscaping for bushfire – Garden design and plant selection’. This document provides a good basis for the development of town specific recommended plantings.

Recommendation 3 requires future development to be separated from permanent hazards by perimeter roads on permanent grassland interfaces. This recommendation will ensure future development incorporates strategic ‘breaks’ from a grassland threat and is relevant to all forms of residential development (i.e TZ and LDRZ). The strategies detailed below seek to strengthen the Moriac community’s resilience to bushfire.

STRATEGIES

S9.1

Ensure that future development is directed to locations of lower bushfire risk and is sited, designed and constructed to mitigate the risk of grassfire attack.

S9.2

Future rezoning proposals should be designed with reference to the landscape risk considerations identified in the 'Bushfire assessment to inform the Moriac Structure Plan – 2022'.

ACTIONS

A9.1

Apply the Development Plan Overlay to land identified for future residential development within the Strategic Framework Plan and include the recommended conditions from the Bushfire assessment to inform the Moriac Structure Plan – 2022.

RECOMMENDATIONS

RECOMMENDATION 1: INTERFACES WITH A BUSHFIRE HAZARD

Development will be required to be set back from assessed hazards for a distance no less than that required to ensure exposure is less than 12.5kw of radiant heat.

This equates to Column A in Table 2 to c53.02 Bushfire in the planning scheme and includes:

- Grasslands
- **19m** based on a slope of flat / upslope.
- **22m** based on downslope of 0-5 degrees.
- **25m** based on a downslope of 5-10 degrees.
- Forest / Woodland
- **33m** based on a slope of flat / upslope using woodland.

Constructed (perimeter) roads can be used as part of the above setbacks.

RECOMMENDATION 2: VEGETATION IN COMPLETED DEVELOPMENT

c53.02 Bushfire Planning, Table 6 Vegetation management requirements should be applied to all lots for Accommodation which are more than 1,200sq.m. Alternative hazard management approaches can be developed to the satisfaction of the relevant fire authority in conjunction with future planning. This could include integrating decision making with the Surf Coast Garden Landscaping Guide 2015, if adapted for this purpose.

Notes:

As a result of Recommendations 1 and 2, the Structure Plan can demonstrate that development is exposed to less than 12.5kw/sqm of radiant heat and a construction standard of no more than BAL:12.5 will arise.

RECOMMENDATION 3: PERIMETER ROADS

Development must be separated from permanent hazards by perimeter roads on permanent grassland interfaces. This includes as part of development within a Low Density Residential Zone or Rural Living Zone.

4.4 STRATEGIC FRAMEWORK PLAN

The presentation of a new Strategic Framework Plan with directions for growth will generate important discussions in the Moriac community. Before determining final directions Council seeks to consider submissions from the Moriac community and a The Strategic Framework Plan reflects the guiding principles of the structure plan and responds to the following key findings:

- Regional and local planning policies define the role of the town in the region;
- The study area contains landscape features which are significant to the Wadawurrung Traditional Owners;
- The Moriac community supports incremental future growth, that is respectful of the scale and character of the existing town;
- In the absence of a reticulated sewerage network future housing options are limited by land capability constraints;
- The Low Density Residential Zone supports housing development that is consistent with the prevailing and preferred character of Moriac;
- Land to the south-east of the town centre is well located to accommodate future residential development;
- Opportunities exist for the provision of future open space assets, providing access to places of interest and linkages to the existing network of paths and trails.
- Bushfire risk at the landscape level can be managed through the design of future residential subdivision proposals.
- Future development should consider Integrated Water Cycle Management principles.
- Future commercial land use should be consolidated in the town centre.
- Visitors play an important role in the local economy and visitation should be encouraged through the provision of better signage and designed streetscape improvements.

DRAWING KEY

-  Study Area
-  Proposed Settlement Boundary
-  Proximity to Town Centre

LAND USES

-  Township Zone (TZ)
-  Low Density Residential Zone (LDRZ)
-  Transport Road Zone (TRZ1)
-  Primary School
-  Drainage Reserve
-  Water Pipe Corridor
-  Public Open Space
-  Private Open Space
-  Future Low Density Development Area
-  Rezone to Farming Zone (FZ)
-  Rezone to Public Park and Recreation Zone (PPRZ)
-  Thompson Creek Reserve Corridor
-  Investigation Area for balance of Area 2A to the south
-  Investigate Commercial / Community Uses
-  Support Consolidation of Existing Township Commercial Development
-  Stormwater Upgrade Improvement Works
-  Provide Separation from Future Development associated with CORA

MOVEMENT

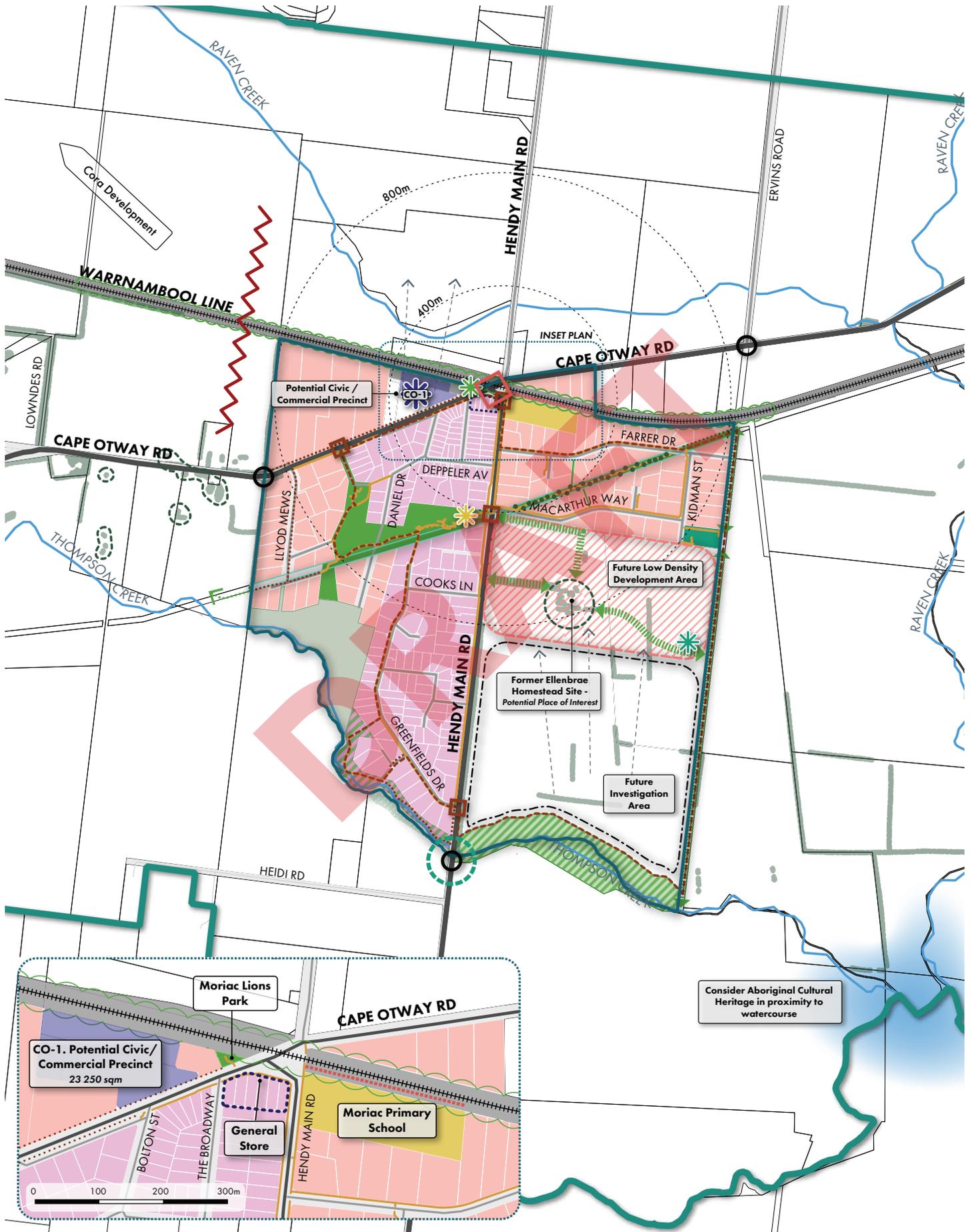
-  Rail Line
-  Sub-Arterial Road
-  Local Road
-  Unmade Road
-  Existing Pathway Network
-  Opportunity to Formalise Entry Gateway
-  Improve Intersection Safety
-  Potential Formalised Pedestrian Crossing
-  Provide Safety Buffer Treatment to Railway Line Bordering Primary School
-  Potential Extension of Pathway Network / Missing Links in Network
-  Potential Outer Town Trail Loop (approx 6.5km)
-  Investigate Extension of paths along Thompson Creek
-  Neighbourhood Safer Place Location
Consider vegetation management requirements

LANDSCAPE FEATURES

-  Waterway
-  Existing Key Views
-  Potential Open Space and Integrated Water Management Corridor
-  Biodiversity Corridor and Weed Management
-  Potential Tree Planting in Pipe Corridor
-  Protect Tree Cluster
-  Potential Retention of Existing Tree Clusters/Rows
-  Upgrade / Investigate Expansion of Local Town Park
-  Investigate Stormwater Management Infrastructure
-  Aboriginal Cultural Significance - Byourac

Figure 4.3 – Moriac Draft Strategic Framework Plan

Source: Mesh Urban Planning



In responding to key findings the Strategic Framework Plan provides the following land use directions:

- Avoid impacts on the Byourac Junction of the Thompson and Raven Creeks.
- Support the rezoning of Farming Zone land south of the Hinterland Estate for future Low Density Residential Zone development;
- Support the consolidation of commercial land use and development within central Moriac.
- Upgrade the Lions Park in central Moriac;
- Investigate opportunities to upgrade existing town entry signage;
- Investigate the development potential of land located to the east of the Hendy Main Road fronting the Thompson Creek;
- Provide additional pedestrian crossings on the Hendy Main Road;
- Retain existing tree clusters and plantations rows on land identified for future development;
- Ensure that the zoning of public land assets reflects the current and intended use of the land.

DIRECTIONS FOR GROWTH

Area 2A is made up of two titles and incorporates a total area of approximately 100 hectares (247 acres). In the testing of development scenarios an area of 87 hectares was considered as developable land, excluding land within close proximity to the Thompson Creek.

Community engagement findings suggest that incremental growth should provide for future housing development without compromising the scale or character of the existing township. Part B of the Structure Plan explains the rationale for the application of the Low Density Residential Zone.

The Strategic Framework Plan identifies an area of approximately 30 hectares for future Low Density Residential Development. At the current development rate of 8.6 dwellings per annum the area has the potential to accommodate 10 years of growth.

Land in the southern portion of Area 2A has been identified as a Future Investigation Area. This designation seeks to provide certainty regarding the location for residential growth beyond the 10 year horizon of the structure plan.

The future development potential of this land will be determined by investigations into the following matters:

- Cultural heritage assessment;
- Community support for future residential growth in Moriac beyond the 10 year horizon of the Moriac Structure Plan;
- The suitability of the land to accommodate alternate wastewater treatment systems;
- The need to demonstrate no additional impacts on the Thompson River environs;

4.5 IMPLEMENTATION

The strategies and actions identified within the Moriac Structure Plan will be achieved through the following implementation program:

- Amending the Surf Coast Planning Scheme;
- The initiation of new projects/studies;
- Advocacy; and
- Actions by other agencies and organisations.

The Strategic Framework Plan is to be inserted into the Surf Coast Planning Scheme and the Moriac Structure Plan is to be included as a reference document. A detailed implementation action table identifying action owners, timeframes and funding requirements is provided at Appendix B.

4.5.1 IMPLEMENTATION SUMMARY TABLE

STRATEGIES & ACTIONS FOR IMPLEMENTATION

PLANNING THEME	GUIDING PRINCIPLE	STRATEGIES	ACTIONS
ENVIRONMENT & CULTURE	<i>Preserve and enhance the natural environments of Moriac and the surrounding rural hinterland.</i>	<ul style="list-style-type: none"> • Facilitate opportunities for Traditional Owners to consider and inform land use planning decisions. • Where supported by Traditional Owners, future place making projects in Moriac should seek to incorporate Wadawurrung language on signage and on interpretation boards explaining key features of the landscape. • Support landowners and land care groups to identify opportunities to expand and link native vegetation corridors. • Encourage succession planting of large trees to provide habitat for indigenous species. • Seek opportunities to reduce and mitigate negative effects from climate change through land use planning decision making. 	<ul style="list-style-type: none"> • Advocate to the Department of Energy, Environment and Climate Action for a review of Cultural Heritage Sensitivity Area mapping applying to land in the Moriac Structure Plan study area, including the Salt Creek tributary. • In undertaking preliminary investigations to support a rezoning or subdivision of land, encourage applicants to engage with Traditional Owners prior to the drafting of detailed plans or designs. • Identify opportunities to create biodiversity corridors in the Strategic Framework Plan. • Require building envelopes on new lots created by subdivision to protect vegetation on lots that contain significant trees. • Require future flora and fauna assessments to include opportunities to provide for succession planting. • Through the assessment of residential subdivision proposals encourage landscape and design responses to provide additional shade in Moriac. • Develop a standard planning permit condition for residential subdivision approvals requiring proponents to provide canopy trees for shade on public land (including nature strips).

PLANNING THEME	GUIDING PRINCIPLE	STRATEGIES	ACTIONS
ENVIRONMENT & CULTURE	<i>Protect rural areas from impacts associated with housing developments.</i>	<ul style="list-style-type: none"> Contain future development within the defined settlement boundary identified on the Strategic Framework Plan. Ensure future street lighting is only used where it improves safety for residents and avoids light spill onto private land or significant habitat corridors. 	<ul style="list-style-type: none"> Require detailed land capability assessments for rezoning proposals impacting Farming Zone land located within the Moriac settlement boundary. Require an assessment of potential light spill and its associated impacts in support of greenfield subdivision proposals.
HOUSING	<p><i>Future residential growth will be incremental in scale and incorporate elements of Environmentally Sustainable Design.</i></p> <p><i>Land use planning decisions should consider the housing and transport needs of an age diverse population.</i></p>	<ul style="list-style-type: none"> Future residential growth will be incremental in scale and consist of lots sizes capable of treating all wastewater on site. Identify an enduring settlement boundary that provides opportunities for growth without compromising the compact footprint of Moriac. Ensure that future rezoning for residential use and development occurs in a staged manner that provides for integration with existing streetscapes. Encourage accommodation types suitable for older persons. Investigate opportunities to support a further trial of a bus service linking Moriac to Waurn Ponds. 	<ul style="list-style-type: none"> Incorporate Strategic Framework Plan into Surf Coast Planning Scheme. Advocate for funding to support a further trial of a bus service linking Moriac to Waurn Ponds. Rezone land at 38 Greenfields Drive (Res 1 PS: 516887Y) from Township Zone to Public Park and Recreation Zone.
OPEN SPACE	<p><i>Open space areas will continue to play an important role in defining the character and liveability of the Moriac township.</i></p>	<ul style="list-style-type: none"> Advocate to deliver upgrades to the Moriac Lions Park. Facilitate the provision of new public open space that links with existing open space areas, and particularly alongside creeks. Protect views to and from public open space areas. 	<ul style="list-style-type: none"> Secure funding to complete the designed improvement works to the Lions Park. Require permit applicants to provide open rural fencing where abutting public open space as a condition of planning approval for future low density residential developments. Ensure new subdivision proposals abutting creeks provide public open space allowing public access to stream sides. Manage open space corridors so that there is no increased risk from bushfire or new hazards created. Rezone land at 32 Daniel Drive (Res 1 CS1512) from Low Density Residential Zone to Public Park and Recreation Zone.

PLANNING THEME	GUIDING PRINCIPLE	STRATEGIES	ACTIONS
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MOVEMENT

Future land use and development decisions will prioritise the needs of pedestrians and cyclists to create a safer built environment through improved accessibility and connectivity.

- Future greenfield development accessed from Hendy Main Road should contribute to the provision of new pedestrian crossings.
- Future paths and trails should be designed to create or complete walking and cycling 'loops' connecting destinations and places of interest.
- Advocate for funding to support a further trial of a bus service linking Moriac to Waurrn Ponds.
- Require residential rezoning proposals to demonstrate how the resulting land use and development will improve the existing paths and trails network.
- Rezone land at 32 Daniel Drive (Res 1 CS1512) from Low Density Residential Zone to Public Park and Recreation Zone.

INFRASTRUCTURE

Future growth must consider impacts on service infrastructure and where required contribute to infrastructure improvements.

- Reduce negative impacts on Thompson and Raven Creeks from stormwater run-off.
- Require a Water Sensitive Urban Design response for future rezoning and subdivision proposals directing stormwater to the Thompson Creek and/or Raven Creek.
- Advocate for regular and consistent water quality sampling along the Thompson Creek.
- Seek funding to deliver stormwater improvement recommendations outlined with the Moriac Septic Study report 2021.
- In the assessment of rezoning and subdivision proposals consider opportunities to deliver on aspirations identified through the Integrated Water Management – Design Sprint 2023.
- Update Clause 19.03-2L to clarify future potable water supply infrastructure upgrade requirements.
- Advocate for timely upgrades and improvements to service infrastructure to support planned development.
- Enter into agreements with developers to ensure that those who benefit from the provision of service infrastructure contribute to the cost of construction.



PLANNING THEME	GUIDING PRINCIPLE	STRATEGIES	ACTIONS
<p>LOCAL ECONOMY</p>	<p><i>Moriac will support a prosperous economy, providing new opportunities to foster home based employment and enhance the visitor experience.</i></p>	<ul style="list-style-type: none"> • Encourage the use and development of properties within the Township Zone for home based commercial activities whilst considering potential impacts on the amenity of residential properties. • Facilitate the provision of well-designed and sited way-finding signs. • Recognise the commercial / civic land use development potential of land in central Moriac with policy directions in the Surf Coast Planning Scheme. • Encourage the CORA project managers to consider direct consultation with the Moriac community. • The Strategic Framework Plan will reinforce the need to limit development between Moriac and Modewarre to protect a non-urban landscape break. 	<ul style="list-style-type: none"> • Improve existing town entrance signage. • Explore opportunities to secure additional land for parking in central Moriac. • Upon the approval of detailed construction plans Council should consider the preparation of an Impacts and Opportunities Study to better understand how the CORA development can benefit the Moriac district.
<p>BUSHFIRE PLANNING</p>	<p><i>Implement key recommendations from 'Bushfire assessment to inform the Moriac Structure Plan – 2022'</i></p>	<ul style="list-style-type: none"> • Ensure that future development is directed to locations of lower bushfire risk and is sited, designed and constructed to mitigate the risk of grassfire attack. • Future rezoning proposals should be designed with reference to the landscape risk considerations identified in the 'Bushfire assessment to inform the Moriac Structure Plan – 2022'. 	<ul style="list-style-type: none"> • Apply the Development Plan Overlay to land identified for future residential development within the Strategic Framework Plan and include the recommended conditions from the Bushfire assessment to inform the Moriac Structure Plan – 2022. • Council will ensure that the 'Bushfire assessment to inform the Moriac Structure Plan – 2022' is available on the Council website.

4.5.2 MONITORING AND REVIEW

Regular monitoring will ensure that Council, working with the Moriac community and a range of stakeholders progressively implements the actions outlined throughout the Structure Plan. Council will provide a summary progress report on the implementation of the Structure Plan in the annual report.

It is considered that a five year review of the Moriac Structure Plan is required to consider implications associated with the ongoing development and approval of the CORA concept.

4.6 CONSULTATION

The presentation of a new Strategic Framework Plan with directions for growth will generate important discussions in the Moriac community. Before determining final directions Council seeks to consider submissions from the Moriac community and a range of stakeholders.

Following circulation of the draft plan Council will ensure that community views are recorded and carefully considered. An online portal will provide an opportunity for residents and other stakeholders to lodge written submissions.

DRAFT

4.7 APPENDICES

A: Implementation action table - Detailed

B: Integrated Water Management – Design Sprint - 2023

DRAFT

A: IMPLEMENTATION ACTION TABLE - DETAILED

DRAFT

**B: INTEGRATED WATER MANAGEMENT –
DESIGN SPRINT - 2023**

DRAFT

Moriac IWM Plan - Design Sprint

05/04/2023



Design Sprint

- **Why a Sprint?**

- Insufficient time or funding available to complete a full IWM Plan now
- To quickly develop high level Moriac IWM Plan to input into the Moriac Structure Plan being developed

- **Prep**

- Gather a sprint team & align on intention

- **Activities**

- 1- Strategic Landscape mapping
- 2 – Opportunities & options
- 3 – Stakeholders and Drivers
- 4 – Deliverables

- **Outcomes**

- Key messages, Principles and Potential Projects
- Likely actions and owners
- Risks and mitigation
- Resources and commitment



Moriac Key Features

BW Services

Water supply – limited
Sewerage – not currently available
Recycled Water not available.
Previous discussion on regional recycled water for Lake Modewarre.

Stormwater

Interactions between septic and drainage system.
Areas around Hendy Main Road and railway known to flood.
Greenfields estate – All flows down Hendy Main Road.

Onsite Wastewater

All of the town is serviced via onsite systems including septic tanks and more advanced systems in newer areas.
Evidence that septic run off is entering stormwater system particularly in the old part of town where lots are less than 1000m².
Septic study showed high nitrogen detected at the outfall pipe leading to eutrophication in Thompson Creek however did not detect human bacteria.

Geology

Presence of basalt rock throughout town making excavation difficult as well as effluent disposal and infiltration.

Waterways

Majority of the urban footprint of Moriac is within the one catchment – Between Raven Creek and Salt Creek. Existing policy requires that future growth should be contained to the one catchment area. Close relationship between Salt Creek and Lake Modewarre.
Management – Small portion Council owned, majority in private landholdings.

Reserves & Users

Newling Reserve – Links via BW reserve for Feeder Main.
Neighbourhood safer place at Newling Reserve- Future tapping sought for the local fire brigade.
Mt Moriac Reserve is a high water user.
Opportunities for alternative use? Modewarre Rec Reserve.
640 Cape Otway Road – Existing native nursery with plans to subdivide.

Traditional Owners

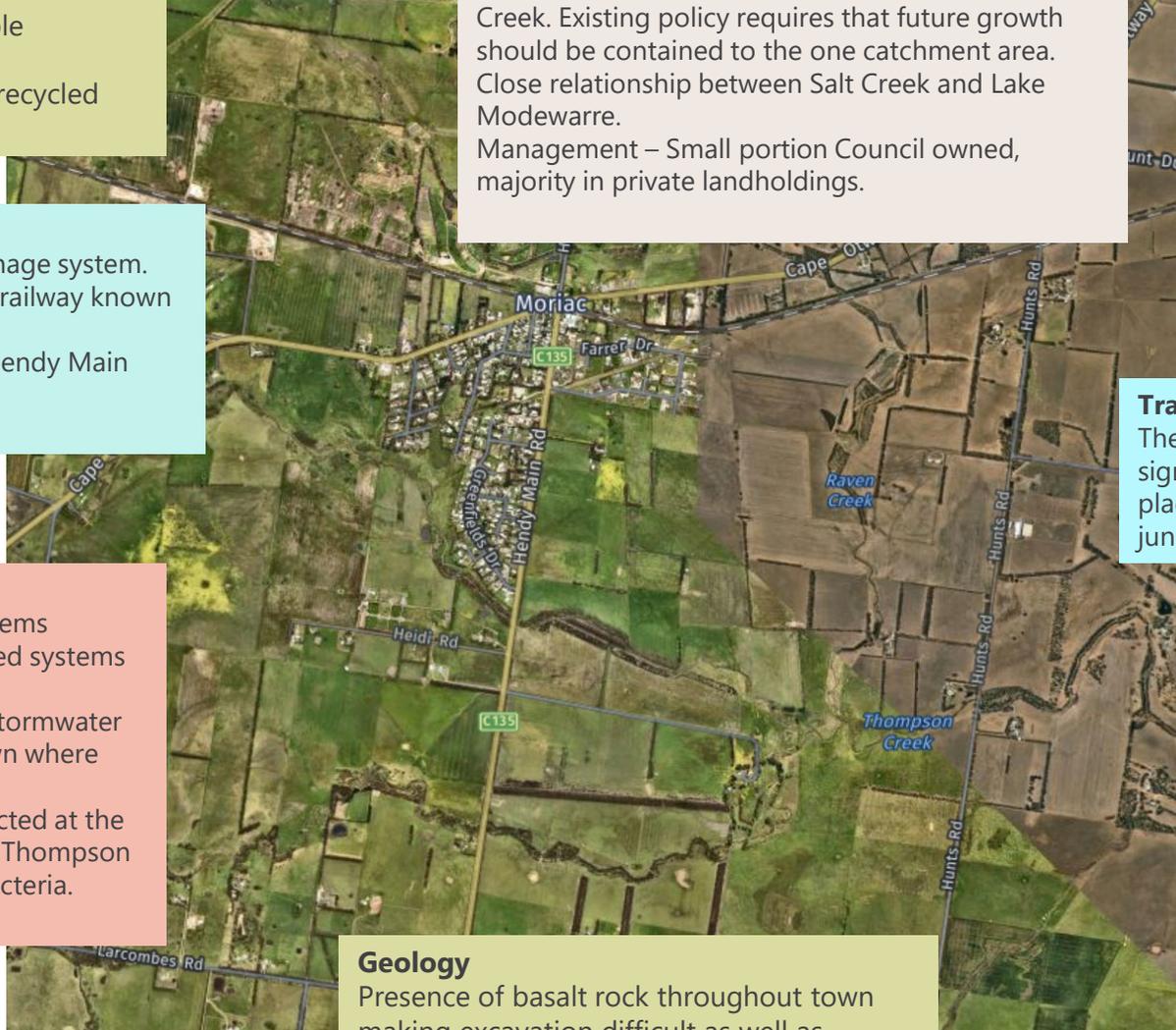
The waterways around Moriac are of cultural significance to the Wadawurrung. The Byourac is place of particular significance located at the juncture of the Thompson and Raven Creeks.

Demographic

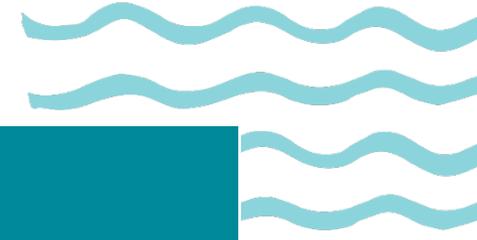
Limited growth, Additional 350 residents within the Moriac district forecast by 2036. Generally an aging population however young families have been drawn to town in the new estate developments. Average age 39.

Biodiversity

Offset site biodiversity planting adjacent Lake Modewarre.



Activity 1 – Strategic Landscape



Existing <i>What's already in place?</i>	Concurrent <i>What's currently being developed?</i>	Future <i>What's coming up?</i>
<ul style="list-style-type: none"> • Council Plan • Moriac Structure Plan 2010 • Moriac Septic Study • Rural Hinterland Strategy • Climate Emergency Response Plan 	<ul style="list-style-type: none"> • Moriac Structure Plan 2023 • SCS Urban Futures Strategy • Climate Adaptation Framework 	<ul style="list-style-type: none"> • Planning Scheme Review – Integrating IWM into the planning scheme process

Where can an IWM approach add value to the desired outcomes?

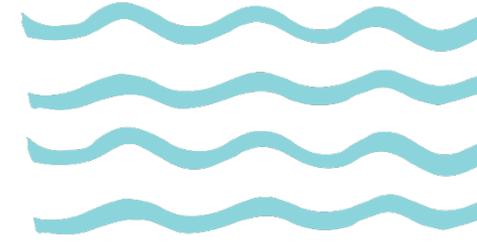
- Reconciliation – Using Water to highlight traditional owner cultural values
- Community Vision – Cooling the streetscapes
- Opportunities to green Moriac
- Make the town more resilient to Climate change related impacts
- More trees in Hendy Main Road, more shade in the public realm, canopy cover.
- Reduce stormwater volume from downstream waterways (i.e another Karaaf)
- Highest rated community aspiration – protection of the environment (Moriac rated high in Shire wide context)

Activity 2 – SWOT Analysis



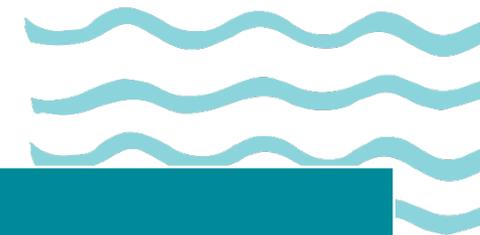
Element	Strengths	Weaknesses	Threats	Opportunities
Service Infrastructure <ul style="list-style-type: none"> • Drinking water distribution • Sewerage collection and transfer • Wastewater treatment • Recycled Water reuse 	<ul style="list-style-type: none"> • Water available 	<ul style="list-style-type: none"> • Limited water capacity • No sewerage • Incomplete records for historic septic system installations 	<ul style="list-style-type: none"> • Sewerage leading to growth not inline with expectations of the town • Basalt rock would make sewerage install difficult 	<ul style="list-style-type: none"> • Sewerage to provide for more sustainable growth. • Sewerage could require a Water Reclamation Plan (WRP) or onsite systems (hybrid) which could provide recycled water in the town. • Obtain better information on existing septic. • Better monitoring required to understand the extent of stormwater / wastewater interaction and the impact of failing septic.
Waterways and flooding <ul style="list-style-type: none"> • Waterways and floodplains • Stormwater and drainage • Stormwater quality including Blue-Green (WSUD) 	<ul style="list-style-type: none"> • Environmental values of waterways • Swales • Limited flooding from stormwater • No flood overlay • Land available for stormwater assets 	<ul style="list-style-type: none"> • Drainage info poor (GIS lacking asset register) • Old parts of Moriac have limited treatment & detention • Limited infrastructure mostly swales and drains. • Hendy Main Road floods quite easily 	<ul style="list-style-type: none"> • Septic and stormwater volume run off to waterways • Flooding • Impact of the new developments on the downstream wetlands 	<ul style="list-style-type: none"> • Raingarden and or Water Sensitive Urban Design (WSUD) end of line treatment. • Septic Study recommends WSUD improvements. • Better monitoring to understand the extent of the problem and what stormwater is contributing to it.
Liveability <ul style="list-style-type: none"> • Urban land use • Street scapes • Parks and Open space • Blue-Green Infrastructure • Suitable open space (i.e. connected, walkable, safe, exercise and health) 	<ul style="list-style-type: none"> • Connection with cultural values and knowledge of waterways • Wide street scapes • Rural feel character • Mature plantings private trees etc 	<ul style="list-style-type: none"> • Creek frontages not in public ownership • Connection – more walking / cycling loops and better connectivity 	<ul style="list-style-type: none"> • CORA • Road safety – Main roads • Not great connectivity along water ways 	<ul style="list-style-type: none"> • Community aspiration to green Moriac. • Additional vegetation – benefits vs bushfire risk? • Additional cultural education and celebration of water and the role it plays in the history of Moriac.

Activity 3 – Stakeholders



Collaborators <i>We need their insights and ideas</i>	Influencers <i>We need their support</i>	Decision makers <i>We need their approval</i>
<ul style="list-style-type: none">• Surf Coast Shire<ul style="list-style-type: none">• Planning• Engineering• Sustainability• Open Space• Moriac community• Moriac Primary School• Newling reserve committee	<ul style="list-style-type: none">• Surf Coast Shire - Executive Team• Surf Coast Shire Staff• Barwon Water• CCMA• Moriac Community	<ul style="list-style-type: none">• Surf Coast Shire Executive Team and Councillors• DEECA / DTP• CCMA• Barwon Water

Activity 4 – Deliverables



Stakeholder <i>Key Stakeholders</i>	Deliverable <i>What is the output?</i>	Communication channel <i>How would this information reach them</i>	Burning Platform <i>What are the key messages</i>
<ul style="list-style-type: none">• Surf Coast Shire• Barwon Water	<ul style="list-style-type: none">• High level IWM plan with future actions to support the Moriac Structure Plan	<ul style="list-style-type: none">• IWM Plan Sprint Document included as an appendices to Structure Plan	<ul style="list-style-type: none">• Septic issues of existing town may not be so extensive as to warrant very expensive sewerage solution however more data needed• Stormwater issues need to be better understood however plenty of opportunity to address problems within town• Traditional owner engagement has highlighted significant cultural values in the town which should be celebrated• Opportunities for IWM to assist in the Climate Emergency facing the shire by adding resilience to Moriac

Outcomes

Key Messages	Likely actions and owners	Risks and Mitigation	Resources and Commitment
<ul style="list-style-type: none"> • Moriac IWM Sprint conducted to quickly develop high level high level principles and projects to input into the Moriac Structure Plan being developed by the Surf Coast Shire. • It is acknowledged that a detailed IWM Plan should be carried out at a later date. • Opportunities to be explored include improving the understanding and data collection associated with onsite wastewater and stormwater systems, improved WSUD for stormwater, celebration of cultural values and connection to water in Moriac and IWM Plans for any future growth estates. • Thompson, Salt and Raven Creeks are seen as a critical element to the town, not only from a water cycled perspective, but also with regards to liveability, recreation, open space amenity, cultural values etc. • Sewerage is not currently viable within the existing town or for future growth. 	<ul style="list-style-type: none"> • Moriac IWM Sprint write up – BW • Incorporation of IWM Sprint principles, key projects etc in the Structure Plan – SCS. • Development of a detailed IWM Plan within the next 5 years – BW/SCS. 	<ul style="list-style-type: none"> • Response needs to be commensurate to the scale of the issues i.e. spending significant money to achieve little benefit should not be pursued (i.e. sewer to existing township). • Lack of understanding of the various problems is a risk. Water related issues need to be better understood. • Need to ensure action and projects are delivered, not just included in a plan. Full IWM plan to include delivery strategy, likely to include costs and benefits suitable for council decisions. • Need to manage the risks and benefits that additional trees/vegetation provide against the bushfire risks 	<ul style="list-style-type: none"> • To be determined. Will include time from: <ul style="list-style-type: none"> • Barwon Water • Surf Coast Shire • Corangamite CMA • DEECA / DTF • Traditional Owners

Moriac IWM Plan – Potential Principles



Element	Potential Principles
<p>Water for our Future</p> <ul style="list-style-type: none"> • Drinking water distribution • Sewerage collection and transfer • Wastewater treatment • Recycled Water reuse 	<p>Water system to be resilient and efficient</p> <ul style="list-style-type: none"> • Minimise potable water import to the area through efficient use of all water • Ensure the onsite wastewater system is well understood and the problem able to be quantified • Harness and maximise use of all alternative water in or near the growth areas, including: <ul style="list-style-type: none"> • Stormwater • Rainwater • Ensure the water system is resilient in a range of future climate scenarios.
<p>Waterways and flooding</p> <ul style="list-style-type: none"> • Waterways and floodplains • Stormwater and drainage • Stormwater quality including Blue-Green (WSUD) 	<p>Ensure healthy waterways, landscapes and neighbourhoods</p> <ul style="list-style-type: none"> • Improve water quality and ecology of local waterways and receiving environments. • Avoid or minimise any existing or future flood risks • Use Blue-Green infrastructure to reduce the urban heat island effect • Celebrate and enhance all waterways • Traditional Owners cultural and spiritual values (in particular around water) reflected in place based planning
<p>Liveability</p> <ul style="list-style-type: none"> • Urban land use • Street scapes • Parks and Open space • Blue-Green Infrastructure • Suitable open space (i.e connected, walkable, safe, exercise and health) 	<p>Provide liveable, healthy landscapes and neighbourhoods</p> <ul style="list-style-type: none"> • Ensure urban design is consistent with the towns vision, encompassing natural water flows through the development, aiding retention and movement of all water sources • Preserve and enhance the natural environments of Moriac and the surrounding rural hinterland. • Open space areas, and how they utilise water, will continue to play an important role in defining the character and liveability of the Moriac township

Moriac IWM Plan – Potential Projects



Element	Potential Projects
<p>Water for our Future</p> <ul style="list-style-type: none"> • Drinking water distribution • Sewerage collection and transfer • Wastewater treatment • Recycled Water reuse 	<ol style="list-style-type: none"> 1. Water System upgrades. Additional development is likely to require upgrades. For the Structure Plan: <ul style="list-style-type: none"> • Update Clause 19.03-2L to clarify future potable water supply infrastructure upgrade requirements. 2. Investigate rainwater tank programs for residents to assist with stormwater run off and to save drinking water. 3. Targeted education for Moriac residents in relation to septic use and maintenance. 4. Detailed septic audit/ data collection. 5. Work with Barwon Water to consider Moriac (and surrounds) as a potential demand node for recycled water as part of the Large Scale Alternative Water Grid Concept. 6. Ensure any future development proposal is informed by a detailed IWM Plan.
<p>Waterways and flooding</p> <ul style="list-style-type: none"> • Waterways and floodplains • Stormwater and drainage • Stormwater quality including Blue-Green (WSUD) 	<ol style="list-style-type: none"> 1. Data improvements – Improved sampling to understand the value proposition. i.e. Advocate for regular and consistent water quality sampling along the Thompson Creek. 2. Improvements in stormwater treatment discharging to key water ways; (Hendy Main Road and Hinterland) Apply for funding to deliver stormwater improvement recommendations outlined with the Moriac Septic Study report 2021. 3. Identify opportunities for the extension of open space reserves in the Strategic Framework Plan. This could include improvements in access and connectedness through these waterways; 4. Thompson, Salt and Raven Creeks - Improve and Enhance 5. Potential for Blue Green Infrastructure retrofitted to wide streets in Moriac <ul style="list-style-type: none"> ○ Open swales, rain gardens, rural environment, etc. ○ Streetscape, lot scale WSUD; ○ Permeable Pavements; 6. Blue Green Infrastructure opportunities maximising stormwater retention in the residential areas still to be built; <ul style="list-style-type: none"> ○ naturalisation of major waterways and flow paths; ○ new waterways designed to incorporate linear infiltration/evaporation swales.
<p>Liveability</p> <ul style="list-style-type: none"> • Urban land use • Street scapes • Parks and Open space • Blue-Green Infrastructure • Suitable open space (i.e. connected, walkable, safe, exercise and health) 	<ol style="list-style-type: none"> 1. Investigate and prepare detailed IWM plan for later Structure Plans. 2. Review the Infrastructure Design manual, and align with revised IWM Objectives and or objectives for Moriac. 3. Tree canopy cover review of existing urban areas. I.e. increasing with consideration of bushfire risks. 4. Set targets for tree cover in new growth areas (i.e. Hinterland). Through the development approval process require a canopy tree (per new dwelling) to be planted in the nature strip of all future subdivision in Moriac. 5. Celebrate Traditional Owner sites and customs in Moriac. i.e. Where supported by Traditional Owners, future place making projects in Moriac should seek to incorporate Wadawurrung language on signage and on interpretation boards explaining key features of the landscape. 6. Advocate for cultural sensitivity mapping in areas where it is currently absent. 7. Investigate environmental citizenship opportunities for key waterway assets such as Thompson Creek, Salt Creek and Raven Creek.

Moriac Structure Plan 2023

DRAFT REPORT



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