

ATTACHMENT 8 DESKTOP SUBMERGED HISTORICAL ARCHAEOLOGY ASSESSMENT



High Sea Wind Offshore Wind Farm

Desktop Submerged Historical Archaeology Assessment

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Executive Summary

Wessex Archaeology was commissioned by Ocean Winds to prepare a desktop assessment of submerged historical archaeology for the offshore component of the proposed High Sea Wind Offshore Winds Project. The marine elements of the proposed development extend to Mean High Water Springs. The offshore development area is located within the Bass Strait and landfall is at Ninety Mile Beach in the Gippsland region of Victoria.

This document comprises a desktop assessment of documentary sources to assess the known and potential submerged historical cultural heritage resource within the offshore development area, as defined by the extent of the proposed development.

Within this desktop assessment the following submerged historical cultural heritage sites have been identified:

- five known shipwreck sites dating from the 19th to 20th centuries within the offshore study area
 - one of which, *SS Glenelg*, is within a Protected Zone
- ten known shipwreck sites dating from 19th to 21st century located just outside the offshore development area
 - one of which, *PS Clonmel*, is within a Protected Zone

The desktop assessment identified potential for the discovery of shipwreck material within the offshore study area from the beginning of European contact in the early 17th century to the present day and potential for the discovery of 20th century aircraft material, particularly from the Second World War.

No known shipwreck or aviation wreck or other submerged historical archaeological remains have been identified within the offshore development area. Preliminary geophysical investigations for the project have identified two anomalies within the development area that may be shipwrecks. The data has not yet been archaeologically reviewed, however any marine cultural heritage will be reported in line with current legislation.

Acknowledgements

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High Sea Wind Offshore Wind Farm

Desktop Submerged Historical Archaeology Assessment

1 INTRODUCTION

1.1 Project background

1.1.1 Wessex Archaeology was commissioned by Ocean Winds to prepare a desktop assessment of submerged historical archaeology for the offshore components of the High Sea Wind Offshore Wind Project (HSW). This report will form part of a package of reports that are submitted as part of the project's referral process under the *Environmental Effects Act 1978* (EE Act, Vic) and the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act, Cwth).

1.1.2 This report presents an assessment of the known and potential for submerged historical archaeology to be present within the footprint of the offshore components of the project. The offshore development area was assessed for known submerged historical cultural heritage assets including shipwrecks, aviation wrecks, and maritime infrastructure sites. Undertaking this work will provide a greater understanding of the marine utilisation in the area and understand the maritime, aviation, and coastal heritage potential within the broader region of eastern Bass Strait, Gippsland, Ninety Mile Beach and the offshore development area.

1.2 Project description

1.2.1 The HSW development is proposed to be located within and off the south coast of Gippsland in Victoria in an area approximately 200km to the east of Melbourne.

1.2.2 As this project is in an early stage of development, detailed design elements are not yet known. Broadly, the project will comprise a 1.28 GW bottom-fixed offshore wind farm within the Gippsland Offshore Wind Zone. The offshore wind farm will be located 76km off the coast and extend across the 150km² High Sea Wind feasibility licence area (see Figure 1). The project will comprise offshore wind farm infrastructure, an offshore export cable, a shore crossing, and an onshore transmission line to the proposed VicGrid connection hub in Giffard.

1.3 Methodology and background

1.3.1 A desktop review of coastal and offshore datasets including the Victorian Heritage Database (VHD) and the Australasian Underwater Cultural Heritage Database (AUCHD) has been undertaken. Supplementary sources of relevant peer reviewed academic papers, books, grey literature, and published maps and charts have also been included.

1.3.2 Data used to compile this report includes secondary information derived from a variety of sources, only some of which have been directly examined for the purposes of this assessment (e.g. datasets with poorly constrained positional information such as reported shipwreck losses). The assumption is made that the data, as well as that derived from other secondary sources, are reasonably accurate.

- 1.3.3 The records held by the VHD, the AUCHD, and other sources used in this assessment, are not a record of all surviving submerged historical cultural heritage assets, rather a record of the discovery of a range of archaeological and historical components of the coastal and marine historic environment. The information held within these sources is not complete and does not preclude the subsequent discovery of further submerged historical cultural heritage that are, at present, unknown.

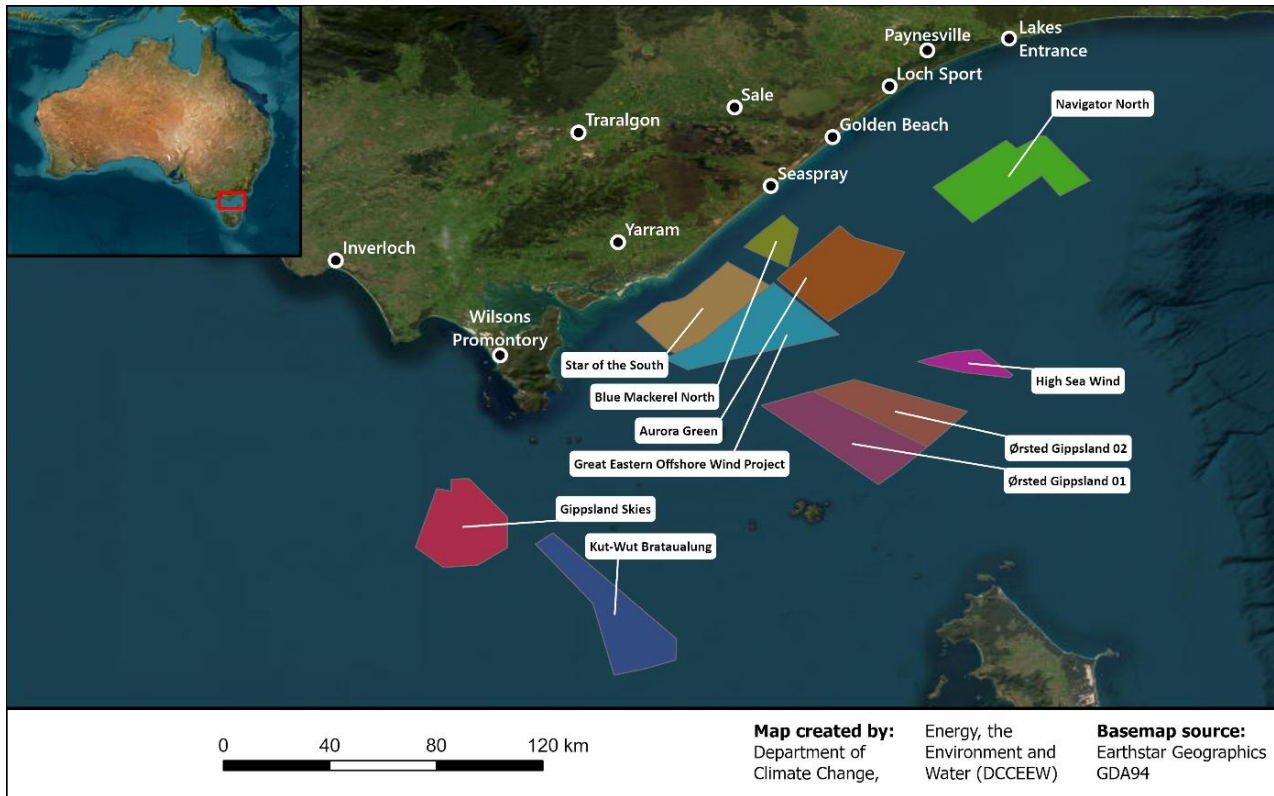


Figure 1: Feasibility licence areas off the coast of Gippsland, showing the location of the High Sea Wind feasibility licence area (Department of Climate Change, Energy, the Environment, and Water 2025).

1.4 Study areas

- 1.4.1 The following study areas have been defined for the purposes of this report, illustrated in Figure 2:

- The **onshore development area**, inclusive of the onshore components of the High Sea Wind OWP,
- The **offshore development area**, inclusive of the offshore components of High Sea Wind OWP, and,
- The **offshore study area**, defined for research purposes to understand historic activity in the area surrounding of the offshore development area.

- 1.4.2 The offshore development area (Figure 2) straddles the coastal, intertidal, nearshore and offshore environments and is defined by the extents of the proposed development. The offshore development area forms a loop, with the proposed turbine array located in the south-eastern point, and two offshore export cable routes - one cable route around the north and one around the south of the feasibility licence areas for the Blue Mackerel North and

Aurora Green Offshore Wind Farms, which join immediately offshore adjacent to the onshore development area.

- 1.4.3 Offshore oil and gas exploration in the offshore region has resulted in deep geological exploration, with shallow water exploration primarily conducted by the fishing industry and dive and shipwreck enthusiasts. There are large areas of the seabed that have not been explored in detail nor comprehensively surveyed at high resolution, which means that there are data and knowledge gaps. As a result, there is potential for previously unlocated shipwrecks to be identified during works, especially associated with areas of mobile or accumulated sediments, which can be found on the seabed, intertidal area and dunes, with the latter being exposed during the laying of onshore cables. These areas of accumulated sediments are also considered potential navigation hazards, possibly contributing to the loss of ships that run aground in the vicinity. However, the mobile nature of the sediments may also facilitate the preservation of archaeological material.

1.5 Heritage Legislation

- 1.5.1 The following legislation applies to the High Seas Wind OWP, which straddles both Victorian State and Commonwealth waters:

Heritage Act (Victoria) 2017

The *Heritage Act 2017* protects historic shipwrecks, archaeological sites and artefacts associated with these site types that are over 75 years old on land and within Victorian waters, which extend out to 3nm.

Under Part 1 (3) Definitions of the *Heritage Act 2017* 'archaeological sites', including underwater aircraft wrecks and historical maritime infrastructure, are defined as places containing artefacts, deposits, or features over 75 years old, which require archaeological methods to reveal information about past activity in the State.

Section 123 of the *Heritage Act 2017* establishes that it is an offence to knowingly or negligently 'deface, damage or otherwise interfere with, or carry out an act likely to endanger' an archaeological site without consent (issued under section 124), whether it is recorded in the Heritage Inventory or not. Further, it is an offence to knowingly uncover, expose, disturb or excavate for the purposes of uncovering or disturbing an archaeological site, whether it is on the Heritage Inventory or not, without consent. Consent to damage, excavate or disturb an archaeological site may be applied for from the Executive Director. Section 127 of the *Heritage Act (Victoria) 2017* describes the requirements for reporting the discovery of archaeological sites during investigative survey (within 30 days) or excavation and construction works (as soon as practicable).

Under Part 1 (4) Definitions of the *Heritage Act 2017*, 'historic shipwreck' is defined as a *shipwreck that has been situated in Victorian waters for 75 years or more ... whether or not the existence or location of the shipwreck is presently known*. Historic shipwrecks are protected whether or not they have been added to the Victorian Heritage Register. A 'registered historic shipwreck' refers to a shipwreck that is not yet 75 years old but which has been determined by the Executive Director to be of State-level cultural heritage significance and therefore included in the Victorian Heritage Register and therefore protected under the *Heritage Act 2017*.

It is an offense to knowingly or recklessly destroy, damage, disturb, or otherwise interfere with any registered historic shipwreck, historic shipwreck, or associated artefact without a permit (Part 4, Section 74), or to perform certain activities without a permit, including



remove, relocate or demolish, damage or despoil, develop or alter, or excavate, all or any part of a registered place (Part 5, Section 87(1)).

Furthermore, under Part 4 Division 2, Section 80 (1) *A person who discovers a shipwreck or shipwreck artefact must within 7 days give to the Executive Director a notice in writing setting out— (a) a description of the shipwreck or shipwreck artefact; and (b) description of the place where the shipwreck or shipwreck artefact is situated which is sufficient to enable the shipwreck or shipwreck artefact to be located.*

Underwater Cultural Heritage Act (Cwth.) 2018

- 1.5.2 The *Underwater Cultural Heritage Act* (Cwth.) 2018 automatically protects all remains of vessel and aircraft wrecks within Commonwealth waters. The Act also provides a route by which to protect any other underwater cultural heritage – defined as ‘any trace of human existence’ with a cultural, historical or archaeological character that is preserved within Commonwealth waters, including their archaeological and natural context.
- 1.5.3 The Act can declare Protected Zones around specific sites, which prohibit access without a process. One wreck within the offshore study area, *SS Glenelg*, and one wreck outside the offshore study area, *PS Clonmel*, are located within Protected Zones.

Non-Statutory Guidance

- 1.5.4 The Burra Charter (2013) underpins the standard principles for assessing heritage significance in Australia. It identifies five primary value domains: aesthetic, historic, scientific, social and spiritual, providing the Australia-wide agreed approaches to establishing cultural heritage significance.
- 1.5.5 The DCCEEW Guidelines on the application of the *Underwater Cultural Heritage Act 2018*, provides nationally agreed standards for assessing and managing impacts to underwater cultural heritage in Australian waters. The approach aligns with the 2001 UNESCO Convention on the Protection of the Underwater Cultural Heritage, which advocates for avoidance of harm to cultural heritage sites, and where unavoidable, the minimisation of harm through management measures.

2 HISTORICAL BACKGROUND

2.1 Introduction

- 2.1.1 The coastal waters of Victoria, particularly around Wilson's Promontory, Ninety Mile Beach, and the Bass Strait are recognised as some of Australia's most hazardous marine environments (Victorian Heritage Database 2025a). Throughout the colonial period to the 20th century, these regions formed maritime highways that were key shipping routes that linked Melbourne, Sydney and Hobart. However, the combination of rugged and exposed coastlines, shifting sandbars, unpredictable and intense weather conditions and poorly charted navigation and navigational aids, made this area extremely hazardous. The subsequent loss of significant numbers of ships together with developments in navigational aids and evolving maritime practices and infrastructure contributed to the archaeological record for the colonial period within this region.
- 2.1.2 Wilson's Promontory and the surrounding area is characterised by granite headlands, deep bays, and submerged reefs that extend offshore. Coupled with strong tidal currents and gales, this area was treacherous for wooden sailing ships, particularly before the introduction of reliable charts and navigational aids. A granite and stone lighthouse was erected at Wilson's Promontory in 1859. It was a key component in a series of navigational aids constructed with the cooperation of intercolonial maritime officers for appropriate maritime safety (Victorian Heritage Database 2025b).
- 2.1.3 The sea within the Bass Strait is often rough, due to its location within the Roaring Forties and the relative shallowness of the water (c. 60 m). There have been a number of extreme weather conditions recorded within the strait, particularly related to rogue waves and high winds, and it is possible that these are at least partially responsible for the large number of historic shipwrecks within the strait (Murray-Smith 1988). These are particularly relevant within the western and central sections of the strait including the waters around King Island which contain Australia's first and second most deadly shipwrecks - those of the *Cataraqui* (AUCHD ID 6982) and the *Neva* (AUCHD ID 7542).
- 2.1.4 The Ninety Mile Beach landscape has an equally dangerous environment with a long featureless expanse of sandy coastline, and little opportunities for safe anchorage or identifiable landmarks. Without natural harbours or points of refuge, the ships that wrecked along this coastline were usually driven ashore in winds or storms, or wrecked in the heavy surf and often broken apart before rescue, as the case of *Trinculo* (AUCHD ID 6668) in 1879.

2.2 Sealing and whaling

- 2.2.1 Whaling and sealing were instrumental in shaping early colonial economies and commercial networks in Victoria and the Bass Strait and were established before the widescale invasion and formal colonial enterprises (Lawrence and Davies 2011, 95). These industries not only supported economic growth but also gathered valuable geographic and strategic information that furthered imperial ambitions and territorial claims (Gibbs and Russel 2021, 1046).
- 2.2.2 The early exploration of the Pacific, Indian, and Atlantic Oceans was largely propelled by the demand for whale oil, which was essential for lighting, and lubrication (Pearson 1983, 40). by the growing use of machinery during the industrial boom in Europe, Britain, and America. Conflicts such as the American War of Independence and the exhaustion of northern fishing stocks encouraged maritime ventures into the southern hemisphere. As European settlement and colonisation expanded throughout the 18th and 19th centuries,

explorers increasingly ventured beyond officially recognised boundaries (Gibbs and Russel 2021, 1045).

- 2.2.3 From the early 1800s, the Bass Strait was a hub for sealing (Duncan and Nicolson 2007; Duncan 2000). Early sealing expeditions were seasonal and opportunistic, yet they were the first to establish European dwellings and infrastructure in the region. Sealers operated from shore camps, with some being found on Kent, Hogan and Furneaux island groups (Stuart 1997, 47), as well as along Wilson's Promontory and the Gippsland coast. Archaeological surveys of these sites have revealed evidence of try-pots and rudimentary shelters (Gibbs 2006, 75). Seal skins and oil were shipped locally and internationally, which was the earliest colonial export. However, seal populations quickly dwindled to alarming levels from overexploitation and were almost depleted by the 1820s (Stuart 1997, 48).
- 2.2.4 Whaling soon replaced sealing as the dominant maritime industry in the region by the 1830s and 1840s. Whalers following the migratory paths of marine animals, took advantage of the nutrient rich waters which were favoured by humpback and southern right whales, often reaching remote coastal areas. Pelagic whaling—conducted far from shore and lasting months or even years—enabled crews to chart and report on unfamiliar territories previously unknown to Europeans and North Americans (Gibbs and Russel 2021, 1045). Shore stations were established at Portland, Port Fairy, and Refuge Cove (Harvey 2023, 27). These stations were used to process whale blubber for international export. When these seafarers came ashore and found reliable sources of food and materials, they frequently returned to the same locations (Gibbs 2006, 76). Over time, these repeated visits led to the cultivation of crops in areas that might otherwise have remained untouched by colonial activity (Duncan 2000, 63). Archaeological remains from these sites include brick and stone fireplaces, iron cauldrons and domestic objects that reveal industrial and domestic scenes from early European coastal enterprise (Gibbs 2006, 76 - 78).
- 2.2.5 Interactions between sealers, whalers and coastal Aboriginal communities were complex with individuals and communities exploited for colonial gain. Aboriginal women from around the Tasman Sea were abducted, traded, and abused by the whalers, who used them to carry out domestic duties within whaling shore camps and their local knowledge. It has been suggested that these early whaling expeditions in Bass Strait would not have succeeded without the contributions, made willingly or otherwise, by Aboriginal women (Eldridge 2015, 33).
- 2.2.6 By the 1850s, whaling stocks were depleted and the rise of petroleum for lighting brought the beginning of the end for whaling industries around the globe (Pearson 1983, 40). Archaeological remains such as industrial objects, shipwrecks and associated materials provide evidence on the earliest phase of colonial settlement and exploitation in the region.

2.3 Colonisation and maritime expansion

- 2.3.1 Soon after the arrival of the First Fleet in 1788, the British began a rapid, extensive, and often violent colonisation of Indigenous lands on the east coast of Australia. The newly established colonial outpost of Port Jackson was formed by the British Government as a penal colony. Transportation routes bringing convicts and colonists, trade goods and food sources from Europe crossed the Indian and Southern Ocean, rounding Tasmania (formerly Van Diemen's Land) before heading up the east coast of Australia. These more southerly areas of Australia were largely undocumented, until George Bass sheltered on the eastern side of Wilson's Promontory in 1797 and identified the entrances to what are now Corner Inlet and Port Albert (Bowen 2012, 42). It was not until George Bass and Matthew Flinders circumnavigated Van Dieman's Land in the sloop *Norfolk* between 1798 and 1799 that Bass Strait was formally identified, and Van Dieman's Land confirmed as an island (Sprod 2009).

Nicholas Baudin, while on a scientific exploration aboard *Naturaliste* in 1801, sailed along the southern coast of Australia. Baudin met Matthew Flinders in March 1802, who was going in an easterly direction on his way to survey Port Phillip. Flinders later named the area Encounter Bay (Barker 2007, 6; Scott 1913, 341). The presence of French explorers in the region added pressure to the British desire to control shipping in Bass Strait in order for them to maintain contact with and support for any future colonies (Duncan 2000, 63).

- 2.3.2 Along with the increased American sealing and whaling activities, this resulted in a heightened English naval presence and expanded exploration voyages (Duncan 2000, 63). The British desire for a colony in the Bass Strait saw the establishment of Sorrento in 1803, a penal colony on the southeastern side of Port Phillip Bay. The first colonists comprised convicts, free settlers, wives and children, royal marines and civil officers (Timbury 2021). The colony was later abandoned due to the lack of vital resources, primarily fresh water.
- 2.3.3 Assisted immigration schemes began in the 1830-1850s sponsored by the British and colonial governments to expand infrastructure with a skilled workforce, population growth and financial stimulation of the economy (Barnard 2008, 25). Maritime routes direct to the southeastern colonies or Tasmania began in earnest by the middle of the 19th century. By 1864, The Gippsland Lakes Navigation Company was offering a regular service between Melbourne and ports on the Lakes, with a steam tug stationed to help vessels across the sand bar at the entrance (Duncan 2000). Melbourne, then Port Phillip, was the main hub for immigration. Onboard conditions for migrants made mortality by infectious disease a high possibility. Crowded conditions onboard vessels, lacking in ventilation and with little opportunity to increase cleanliness, allowed for the spread of disease (Barnard 2008, 26). In an attempt to stop the spread throughout the colony, minor quarantine camps were put in place for those unwell on arrival. Public outrage at quarantine facilities being located close to the Port Phillip settlement forced the government to find a more permanent and remote location. A new quarantine facility was proposed at Point Nepean, located on the tip of the Mornington Peninsula, which had adequate anchorage facilities. Before the facility was ready, the *Ticonderoga* arrived with 300 passengers sick with fever, having already lost 100 passengers who perished on the journey. Limeburner's, who were current lease holders on Point Nepean were relocated and a facility was hastily erected (Barnard 2008, 27).
- 2.3.4 Many more passengers perished at Point Nepean quarantine station in the proceeding years, with the last patient leaving in 1977. *Ticonderoga's* emergency highlighted the importance of quarantine measures during large scale international migration to Melbourne and the rest of Australia (Barnard 2008, 27). Immigration numbers continued to rise and further outposts such as Port Albert, Corner Inlet and Snake Island serviced the regional immigration needs.
- 2.3.5 There was a demand for expansion outside established settlements, due to the lack of arable land and suitable land claims to allow the successful cattle grazing on the east coast. Angus McMillan, a Scottish explorer, took a group of explorers into western Gippsland in 1839. After discovering prime grazing land, he established the first station and stock route in western Gippsland, that connected the rivers and the waterways to the open sea, which saw the establishment of Port Albert and Port Fairy (Duncan 2000, 64 and 185). Farming of resources and livestock in these remote colonial outposts relied on the ability of the maritime network to distribute and restock, especially before the introduction of land-based transport.
- 2.3.6 In addition to suitable land for livestock and farming, was the critical growth of convicts brought from Britain to the penal colonies. The increasing number of convicts in Tasmania, along with drought in New South Wales led to significant demand on the cattle and supplies

trade. Port Albert became the epicentre for cattle trade, with the safest, fastest and sometimes only form of long-distance transport being via the sea. The discovery of gold in eastern Gippsland, and subsequent gold rush, saw an increase in shipping traffic to Port Albert and associated growth in ancillary industries including timber, lime, stone, and fishing, with shipping reaching its peak in the late 1850s and early 1860s (Duncan 2000, 65).

2.4 Trade and development

- 2.4.1 During the 19th century, maritime trade was essential and the primary driver for Victoria's colonial economy. Before the advent of inland transport networks, shipping provided the ability to move goods and people, as well as maintain communication with other settlements and smaller regional ports.
- 2.4.2 Early settlers were largely British and European, however by the 1850s the discovery of gold saw a rise in Asian migrants, who brought with them traditional fishing technology. Chinese immigration was a big part of maritime industry in the Gippsland region. They were the first non-Indigenous people to exploit fish in the region (Duncan and Nicolson 2007), settling around Port Albert sometime in the 1860s (Bowen 2012). The Chinese caught, cured, and smoked fish for distribution to Chinese workers in the goldfields and the penal colonies. Remains of the fish curing racks and residential buildings indicate a group of around 16 Chinese residents were involved in fishing and curing operations at Port Albert for a period of around 40 years from the 1860s (Bowen 2012).
- 2.4.3 By the 1850s, the discovery of gold had dramatically increased the flow of maritime trade into Victoria. Melbourne rapidly became the dominant port in the southern colonies for resources and export of goods. Coastal intercolonial shipping expanded to meet the demands of the goldfields and new agricultural settlements. Transported items included salted meats, grains, and materials for infrastructure (Duncan 2000, 194; Staniforth 2000, 24).
- 2.4.4 The smaller regional ports, such as Port Albert and Port Welshpool, served as maritime bases for the agricultural zones inland. The opening of a direct sea route into the Gippsland Lakes in 1858 led to goldfields traffic avoiding Port Albert and overland travel by heading straight for the goldfields via the Gippsland Lakes (Duncan 2000). By 1866 shipping traffic through Port Albert was negligible (*ibid.*), with economic prosperity for these settlements reliant on their maritime connections. Steamships took over earlier sailing ships during the 1850s with multiple steamship navigation companies being established, which heightened more reliable services, despite potential for inclement weather (Victorian Heritage Database 2025a). Therefore, the movement of these commodities and evolution of the settlement have patterns similar to maritime advancement in the region.
- 2.4.5 The introduction and rapid expansion of the railway network in the late 19th century transformed Victoria's transport system. The first railway in Victoria was the Melbourne to Hobson's Bay Railway, which ran from Melbourne to the Port of Melbourne, opening on the 12 September 1854 (GJM Heritage 2024, 4). It was built to facilitate movement of goods and passenger transport between Melbourne and the port during the Gold Rush (National Museum Australia 2024). Later railways such as the Geelong - Ballarat (1862), Melbourne - Bendigo (1862) and Melbourne - Ballarat lines (GJM Heritage 2024, 16) bolstered the economic development and the movement of goods between colonies and international commerce. This ultimately reduced the reliance on small scale coastal shipping (Parks Victoria 2002). By the 1800s, major lines extended into wider Gippsland. The expansion enabled the faster and more reliable movement of goods from inland settlements (Department of Environment, Land, Water and Planning 2019). However, these early



railways could not compete with the reliability of sea travel. Maritime transport was utilised most frequently until more sophisticated and advanced rail technology was built and implemented in the early 20th century. Despite this, transportation of bulk goods from the interior would have continued to remain a maritime trade, being exported from larger ports such as Melbourne and Portland, with smaller coastal ports servicing local industries such as fishing and timber exports (Duncan 2000, 66- 67 ad 72). Railways in some ways complemented maritime trade, by transporting goods from the interior to the coast, and vice versa. This period marks a transition in early colonial economic and technological history. The decline in smaller shipping to a larger port structure symbolises advancement in vessel design, cargo handling and port infrastructure. The remnants of these early ports including jetties and associated infrastructure are physical records of the adaptation and development of technologies.



3 KNOWN SUBMERGED HISTORICAL CULTURAL HERITAGE SITES

3.1 Introduction

- 3.1.1 Submerged historical cultural heritage sites can include maritime and aviation wreck sites, along with associated infrastructure, detailed below.
- 3.1.2 Maritime archaeological sites can be considered to comprise two broad categories; the remains of vessels that have been lost because of stranding, foundering, collision, enemy action and other causes, and those that consist of vessel-related material. Wreck related debris include (but is not limited to) equipment lost overboard or deliberately jettisoned such as fishing gear, ammunition and anchors or the only surviving remains of a vessel such as its cargo or a ballast mound. Shipwrecks on the seabed provide an insight to the types of vessels used in the past, the nature of shipping activity in the wider area, and the changing usage of the marine environment through different periods. Such remains are considered more likely in sediments which promote the preservation of wreck sites (e.g. finer grained sediments that are not subject to high levels of mobility), particularly where such sediments have seen limited and recent disturbance.
- 3.1.3 Shipwreck inventories and documentary sources within Australasia date from the 17th century and record European contact and colonisation, with reporting of shipwrecks becoming more systematic in the 19th and 20th centuries. While there is potential for earlier wreck material relating to early European exploration and the pre-colonial period there are few historical records, and the identification of these important sites can only be achieved through assessment of oral history traditions and through investigative fieldwork/survey in environments with preservation potential.
- 3.1.4 Marine aviation archaeology assets comprise the remains or associated remains of military and civilian aircraft that have been lost at sea. Evidence is divided into three primary time periods based on major technological advances in aircraft design: pre-1939; 1939-1945; and post-1945. Marine aircraft crash sites can retain a significant amount of material, whilst being an ephemeral target to identify, with the potential for in-situ human remains.
- 3.1.5 Maritime infrastructure sites comprise structures associated with shipping and aviation activity at sea, and the transfer of goods and people from land to sea. Historic and archaeological remains of ports, wharves, and jetties are frequently found along the coast, in intertidal and inshore areas, whilst navigational aids, such as lighthouses, light ships, or beacons can be found offshore, at the coast or inland.

3.2 Shipwrecks within the offshore study area

- 3.2.1 There are no known shipwreck sites within the offshore development area.
- 3.2.2 There are five shipwrecks that lie within the offshore study area (Figure 2, Table 1), one of which, *SS Glenelg*, is within a Protected Zone. These wrecks range from the 19th and 20th centuries.
- 3.2.3 The earliest wreck within the offshore study area is the Canadian built barque *Duke of Wellington* (**WA2001**), built in 1840 and sunk in 1853 after it was becalmed and drifted ashore, grounding heavily on the sand where the rudder broke and then beached. The ship was carrying a cargo of ballast and hay from Melbourne to Newcastle. Although there is minimal detail and work conducted on this wreck, the site offers an insight into mid-19th century wooden hulled merchant vessels operating in Australian coastal waters, contributing to our understanding of trade in the colonial period in the Bass Strait and Gippsland.



- 3.2.4 The SS *Glenelg* (**WA2002**), an iron twin-screw steamer built in Glasgow in 1875, served along Australia's coastlines before tragically sinking off Ninety Mile Beach on 25 March 1900 while en route from Lakes Entrance to Melbourne. Of the approximately 41 people aboard, only three survived making it one of Victoria's worst maritime disasters. Lost for more than a century, the wreck was discovered in 2009 by Southern Ocean Exploration and is now within a Protected Zone established under the Commonwealth *Underwater Cultural Heritage Act* (2018). The vessel's significance lies in its relatively intact nature as an example of a 19th century coastal steamer, which offers insight into the construction of iron ships from this period.

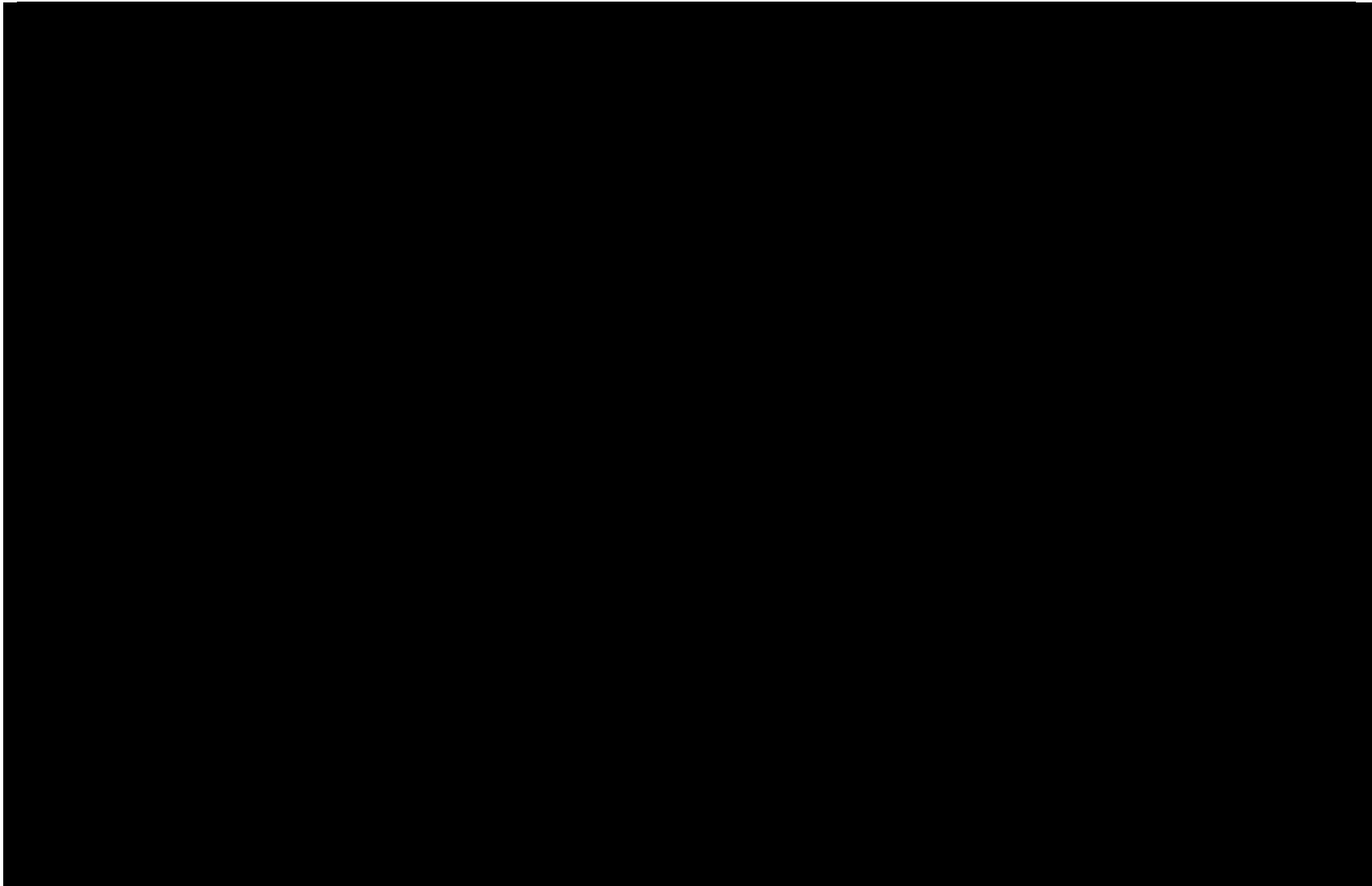


Figure 2: Known shipwreck sites within and outside the offshore study area.

- 3.2.5 The steel screw steamer *SS Vicky* (**WA2003**) was en route from Sydney to Melbourne to collect and tow the dredge *Lady Stanley* when faulty valves caused the engine to disable. The vessel began to list due to sea conditions and the crew were forced to abandon ship, with eight fatalities. In 2018, the Maritime Archaeology Association of Victoria (MAAV) discovered the wreck. The *SS Vicky* was built in 1930 in Aberdeen, Scotland and was lost in 1956, which means the vessel is not currently protected under the *Underwater Cultural Heritage Act* (2018) until 2031. However, the vessel has been included in this report as it will become a protected shipwreck within the lifetime of the project.
- 3.2.6 The record of an unknown wreck *Unidentified: 22 miles east of Seaspray* (**WA2004**) sits within one of the most treacherous stretches of the Bass Strait coast, where shifting sands, sudden gales and unlit shores claimed dozens of vessels during the 19th and 20th centuries. This route was a main shipping route between Lakes Entrance and Melbourne, and was frequented by small trading schooners, steamers and fishing craft, which connected the Gippsland region with larger colonial settlements. The vessel's loss is not dissimilar to others, as it was likely to have been driven ashore or foundered in heavy seas while attempting to round Wilson's Promontory. The vessel name and type are unknown so limited documentary evidence exists, although the remains are significant as an example of the lesser-known vessels that serviced this region.
- 3.2.7 The *City of Hobart* (**WA2005**) was an iron screw steamer launched in 1853 in the Clyde shipyards of Glasgow, Scotland and was one of the earliest iron vessels to serve in Australian waters. It was commissioned by the Tasmanian Steam Navigation Company for inter colonial travel and cargo trade between Melbourne, Hobart, and Launceston. This route was vital for Tasmania's economic connection to mainland Australia. The vessel showcases the transition from sail to steam in colonial coastal transport combining a single screw propulsion with schooner rigging for improved efficiency on long journeys. The *City of Hobart* was instrumental in carrying settlers, gold rush passengers, mail, and produce between the colonies, but towards the end of its working life, it became outdated compared to newer steel hulled steam vessels. It was lost in 1877 after the propeller shaft broke in rough winter weather.



Table 1 Known and located shipwreck sites within the offshore study area.

WA ID	VHR ID	AUCHD ID	Type	Name	Year Lost	Description
2001	S179	N/A	Barque	<i>Duke of Wellington</i>	1853	Date sunk 03.04.1853. Owned by James Orr at time of loss, it was en route to Newcastle from Port Phillip when the vessel was carrying a cargo of ballast, coal and hay when it was becalmed and drifted into breakers. The rudder was broken on the sand and finally beached. Length 114.50 ft, breadth 23.00 ft and 16.60 ft depth.
2002	S291	6231	Screw steamer	<i>SS Glenelg</i>	1900	Date sunk 25.03.1900. Built in 1875 by Aitken and Mansel in Glasgow, Scotland, the vessel was an iron two masted screw steamer. It foundered when a possible loose plate caused damage to the stern. The site is listed as a Protected Wreck after its discovery in 2011 by the Southern Ocean Exploration team. Length 41 m, width 6.4 m and depth 3.44 m.
2003	S695	7875	Screw steamer	<i>SS Vicky</i>	1956	Date sunk 25.06.1956. A steel screw steamer built in Aberdeen, Scotland with a triple expansion engine sunk in the Bass Strait, off Wilsons Promontory. The vessel was en route from Melbourne to collect the dredge Lady Stanley and tow it to Singapore. The vessels engines were disabled by faulty valves, and the sea conditions created a list, causing the crew to abandon ship. Eight crewmen were lost. The MAAV discovered the wreck in 2018. Vessel is currently not protected under the <i>Underwater Cultural Heritage Act 2018</i> , as it was sunk in 1956, until 2031, thus requiring its inclusion. Length 165 ft, width 36.6 ft and depth 11.2 ft.
2004	S767	6231	Unknown	Unidentified: 22 miles east of Seaspray	N/A	Unknown and unidentified vessel wrecked 22 miles SE of Sea spray.
2005	S123	6066	Screw steamer	<i>City of Hobart</i>	1877	Screw steamer; <i>City of Hobart</i> . Date sunk 24.07.1877. Built in 1853 by T Wingate and Co in Tasmania for the Tasmanian Steam Navigation Company for inter colonial passenger transport and cargo trade. It was later used as a vessel for carrying coal. It was en route to Melbourne from Newcastle when the propeller shaft broke and is believed to have pierced the hull causing the vessel to sink. The wreck was discovered during survey work in advance of the Iberdrola Australia's Aurora Green OWP.



3.3 Aircraft

- 3.3.1 There are no identified aircraft losses in the offshore development area or the offshore study area.

3.4 Maritime Infrastructure

- 3.4.1 There are no identified maritime infrastructure sites in the offshore development area.

3.5 Shipwrecks in the vicinity of the offshore study area

- 3.5.1 There are ten shipwreck sites, one of which is within a Protected Zone, that fall just outside the offshore study area. These sites provide useful contextual information about historic shipping activity within the immediate region of the offshore development area. These wrecks date from the 19th to the 21st century (Figure 2 and Table 2).
- 3.5.2 The paddle steamer *Thistle* (**WA2007**) was a small coastal trader and passenger vessel that operated along the Victorian coast during the late 19th century. It was one of the first vessels to have advanced paddle steamer technology in Australia, as it was rigged as a two masted schooner and boasting two engines. The vessel wrecked on the 23 November 1859 on the sand banks at the entrance of Port Albert, after striking a submerged sandbank in heavy weather. The crew and passengers survived, but the vessel was a total loss. Corner Inlet served as an important access point for trade in the Gippsland region.
- 3.5.3 The ketch *Secret* (**WA2008**) was built in Auckland and sank in 12ft of water in 1898 (Trove 2025). The vessel was en route from Port Albert to Flinders Island when it went missing in the Bass Strait.
- 3.5.4 The small coastal trader *Wave* (**WA2009**) was active along the Gippsland and Bass Strait routes during the 19th century. The vessel was wrecked when it was carrying stone from Refuge Cove to Port Albert for road works when a strong northwest wind forced her to drag her anchor, parting the cable and crashing into a sandbank at the entrance to Port Albert.
- 3.5.5 The paddle steamer *Clonmel* (**WA2010**) was built in 1836 and wrecked in 1841 due to navigational error brought on by foggy conditions. The vessel is one of the most significant archaeological sites in Victoria. It was one of the first steam vessels in Australia, was instrumental in the settlement and exploration of the Gippsland region and the establishment of Port Albert. The vessel lies in the deep harbour of Port Albert within a Protected Zone. It is technically significant as the wreck of a wooden hulled paddle steamer with an early flue type boiler, which is believed to be the only example known in Australia.
- 3.5.6 The schooner *Sylvanus* (**WA2011**) was an Australian built vessel that was en route to Hobart with a cargo of livestock when it ran ashore at Port Albert. This vessel signifies early colonial resource movement amongst the early colonial settlements in the south. A new schooner, the *Mary Ann*, was chartered to salvage the remains of *Sylvanus* but was wrecked whilst loading salvaged material.
- 3.5.7 The three-masted wooden barque *Lune* (**WA2012**) was built in England in 1874. The vessel sank off Cliffy Island near Wilson's Promontory on 17 February 1885. Coming upon rough seas and submerged reefs, the vessel foundered in about 19 metres of water, with all the crew surviving. Today the site is a popular dive site.
- 3.5.8 The remaining vessels, *Venus* (**WA2006**), *Unknown buried wreck McLoughlins beach* (**WA2015**), and *Unidentified: Port Albert Bar* (**WA2014**), have limited documentary



information, but are significant in understanding the quantity of smaller vessels operating in the region and rudimentary documentation in the early colonial period.

- 3.5.9 The modern wreck *Albertross 2* (**WA2013**) sank in 2006 and is therefore not protected as a historic shipwreck site but is included in this report for completeness, and as a navigational and development hazard.



Table 2 Known historic shipwreck sites outside the offshore development area.

WA ID	AUCHD ID	VHR ID	Type	Name	Date sunk	Description
2006	S1035	N/A	N/A	Venus	1939	Wreck.
2007	S670	N/A	Schooner	PS Thistle	1859	An iron paddle steamer with two side lever engines and rigged as a two masted schooner, the vessel was commissioned by the Hunter River Navigation Company and built by William Fairbairn and Co. It was the fastest vessel to travel from Sydney to Newcastle. In 1859 it was sold to the Port Albert Steam Navigation Company and was instrumental in the laying of the first telegraphic cable between mainland Australia and Tasmania, when it was commissioned to make repairs to the cable on King Island in 1859. It was one of the first to have the new paddle steamer technology which signalled a period of rapid advancements in maritime engineering and this technology revolutionised coastal travel and trade. Forced into a headwind for its whole journey, the vessel ran out of coal and was burning cargo and passengers' belongings. It ultimately was wrecked on Port Albert bar and quickly disappeared. Length 148.670 ft, breadth 19.50 ft and depth 11.00 ft.
2008	S598	6605	Ketch	Secret	1898	A ketch, built in 1865 in Auckland. The vessel was en route to Flinders Island from Port Albert when it went missing. The captain and one crew member were never found.
2009	S717	N/A	Schooner	Wave	1859	This vessel was carrying stone from Refuge Cove to be used to improve the roads in Port Albert and Tarraville. Due to a strong northwest wind, it was forced to drag anchor with the cable later parting. It was then blown onto a sandbank, becoming a total wreck.
2010	S129	6072	Paddle steamer	PS Clomnel	1841	Built in 1836 in Birkenhead of wood this vessel had three masts. It was the first steam powered vessel on the Australian coastline but was wrecked on its third voyage with most cargo being lost. All onboard survived the incident. The ship wrecked due to a navigational error brought on by foggy coastal weather. It is one of the most significant archaeological sites in Victoria, and is within a Protected Zone.



2011	S617	6642	Schooner	Sylvanus	1850	Date sunk 02.07.1850. Built in 1843 by Charles Williamson in Australia. It was en route to Hobart with a cargo of livestock when it ran ashore at Port Albert in the channel.
2012	S421	6377	Barque	Lune	1885	Built in 1876 by Simpson in Glasson Dock, Lancashire, UK, this wooden three masted schooner was carrying a cargo of 750 tonne of coal at the time of loss. Whilst en route from Newcastle to Batavia, Dutch East Indies with a crew of nine, the vessel detoured to Melbourne, and it was caught in a thick fog and struck a reef to the east of Clifty Island. The vessel soon broke up in heavy swell, but all the crew survived. Length 41.76 m. and width 8.23 m.
2013	S1018	N/A	N/A	Albertross/Albatross 2	2006	Modern wreck sunk in 2006.
2014	S797	6689	Unknown	Unidentified: Port Albert bar	N/A	Unidentified wooden vessel that ran aground on Port Albert bar.
2015	S875	6757	Unknown	Unknown buried wreck McLoughlins beach	1830	Whilst undertaking oil drilling exploration activities (borehole surveys) in the dunes close to McLaughlins beach, remains of a wooden wreck were uncovered. After testing, the wood was found to be Oregon pine, which could indicate an early sealing vessel dating prior to official European settlement in Victoria.



4 DOCUMENTED SHIP AND AIRCRAFT LOSSES

4.1 Introduction

- 4.1.1 In addition to the known archaeological resource summarised above, it is necessary to understand the potential for encountering unknown shipwreck and aircraft crash sites within the offshore development area. Relevant primary and secondary source materials have been utilised to understand the nature of maritime and aviation activity across the region.
- 4.1.2 Documented Losses refer to ships and aircraft that are recorded historically as having been wrecked, but for which the exact location of any remains is unknown, or for which no remains have yet been located. The records for these losses provide documentary evidence for the potential discovery of archaeological sites and material relating to maritime and aviation activity within the offshore development area.

4.2 Documented shipwreck losses

- 4.2.1 There are 13 documented losses (Table 3) within and immediately beyond the offshore development area, which are listed by the VHR and AUCHD. The records have documentary locations such as 'east of Corner Inlet' and 'off Ninety Mile Beach', which highlights the potential for discovery of associated wreck material or remains in these areas. These losses also contribute to understanding the density, nature and type of shipping activity that was prevalent in the region, as well as identifying cargo and inter-colonial travel patterns in the region.



Table 3 Documented losses within and outside the offshore study area.

AUCHD ID	VHR ID	Type	Name	Date sunk	Description
6159	S221	Cutter	<i>Elizabeth</i>	1816	Date sunk 25.04.1816. Built of wood in Calcutta, India. The vessel was driven ashore in gale on Seal Island east of Wilson's Promontory. It is the first vessel believed to have wrecked in Victoria.
N/A	S607	Schooner	<i>Sarah</i>	1838	Vessel went missing en route to Port Phillip from Sydney when taking Mr Howe and his family servants and possessions from Sydney to Mt Macedon Station. The vessel was never heard of again but there were rumours of a white woman living with the Kurnai tribe. This led to months of searching by the police and skirmishes with the local tribal groups and colonists. Hundreds were killed during the searches.
6629	S633	Brig	<i>Struan</i>	1856	Date sunk 16.08.1856. Built in 1846 out of wood and had two masts, the vessel was loaded with coal when it sprung a leak off the Gippsland coastline. Water gathered in the hold and was gaining on the pumps. The crew abandoned ship and were rescued by the schooner <i>Gem</i> . Vessel was 26 m long.
6500	S528	Ketch	<i>Plenty</i>	1860	The vessel was blown off course and wrecked on Seal Island after looking for shelter. It was carrying a cargo of meat.
6588	S606	Schooner	<i>Saracen</i>	1860	Date sunk 23.04.1860. Built in 1838 of wood in Gainsborough. The vessel was run ashore on a Port Albert sand bar during a storm, where the vessel had broken up and there were no survivors except for a Newfoundland dog.
6547	S564	Barque	<i>Rembrandt</i>	1861	Date sunk 12.04.1861. The vessel encountered a gale off Ninety Mile Beach that carried the sails. The crew went to abandon ship when it suddenly sunk and took ten of the crew and one passenger. There were four survivors.
6075	S133	Brig	<i>Colchester</i>	1863	Date sunk 07.07.1863 Built 1849 in Londonberry, Nova Scotia, Canada. <i>Colchester</i> was typical of North American built wooden sailing ships



					common on the Australian coast. Caught in a gale on a lee shore off the Ninety Mile Beach and run ashore.
6135	S207	Barque	<i>Eclyptic</i>	1874	Date sunk 20.05.1874. Built in 1854 of wood in Pallion, Sunderland and had three masts. The vessel was en route to Melbourne from Newcastle when it went ashore on Clomnel Island, with only one survivor.
6018	S75	Screw steamer	<i>Blackbird</i>	1878	Date sunk 02.06.1878. Wrecked off Clomnel Island, Port Albert.
7154	N/A	Schooner	<i>Fear Not</i>	1882	Date sunk 26.07.1882. Built in 1875 by W and G White of Williamstown, Victoria in wood carvel technique. Vessel was en route to Melbourne from Lakes Entrance with a cargo of timber and bark when it anchored off the Hogan Group for shelter. The anchor cables parted in a heavy squall. The crew were able to scuttle and wait for the weather to calm before using the dingy to reach the La Trobe lighthouse. Length 16.25 m and width 4.51 m.
6329	S376	Schooner	<i>Magnolia</i>	1887	Date sunk 19.07.1887. Vessel was built by James Fudge in Sandridge in 1877 and registered in Melbourne, it was en route from Refuge Cove for Lakes Entrance where it wrecked. All four-crew perished. Length was 21.15 m and width 5.39 m. Current water depth over wreck is 5.3 m
6755	S687	Unknown	<i>Unique</i>	1895	Date sunk 24.07.1895. The vessel dragged its anchors and went ashore on Snake Island.
6769	S694	Ketch	<i>Victoria</i>	1908	Date sunk 02.05.1908. Built in 1886 by Peter Wallace in Williamstown, Victoria. The vessel foundered in the Bass Strait. Length 15.7 m and width 4.82 m.



- 4.2.2 Aircraft remains can be often small, scattered or ephemeral sites on the seabed and can be difficult to locate or identify. It is important to note that aircraft crash sites are difficult to identify through archaeological assessments such as geophysical survey, although with experience, material from the site, such as engines or other materials may be recorded as small obstructions or anomalies (Wessex Archaeology, 2008).

4.3 Documented aircraft losses

- 4.3.1 The area along Ninety Mile Beach was used as an air gunnery range during the Second World War, with aircraft operating out of the nearby Royal Australian Air Force (RAAF) base at East Sale. These include Bristol Beauforts and Fairey Battles which were used as training aircraft for new RAAF crews and for target tugs. One documented loss of an aircraft has been identified related to this base from the Second World War; several exist for the post-war years.
- 4.3.2 A Lockheed Hudson registration A16-133 took off from East Sale on 4th May 1945 on a night training mission. It crashed into the sea off Ocean Grange, to the north-east of the offshore study area. A wheel and undercarriage were discovered on a beach; however, no other trace of the aircraft or five crew were found.
- 4.3.3 Three aircraft, an Avro Anson and two Douglas Sky trains, crashed in the onshore area around East Sale between late 1945 and 1958. These crashes demonstrate the types of aircraft that were in use during the post-war years.

5 SUBMERGED HISTORICAL ARCHAEOLOGICAL POTENTIAL

5.1 Maritime potential

- 5.1.1 Maritime routes were important for the inter-colonial success in trade and resource development. The offshore development area lies at the junction of sea highways that serviced Melbourne, Hobart and Sydney, which were instrumental to the success of these settlements. However, this area also represents one of the most hazardous areas for shipping in Victoria, which is indicated by the abundance of wrecks. The documented maritime losses along the Victorian coastline, particularly in the region of Wilson's Promontory, Ninety Mile Beach and the wider Bass Strait, indicate a region of high archaeological potential. There are over 778 shipwreck records shown on the VHR shipwreck database in Victorian waters and within the Bass Strait approaches (Victorian Heritage Database 2025a). Many of the vessel losses are indicative of early colonial coastal resource and passenger trade, with some reflecting the early whaling and sealing industries. These wrecks reveal the high density of maritime movement and the hazardous environmental conditions in the region.
- 5.1.2 Preservation conditions in the region vary according to local geomorphology and exposure. Wave and sand action along Ninety Mile Beach is dynamic which affects the potential for long term preservation of timber vessels. However, buried wreck sites may remain intact within the dune systems. The granite rocky outcrops of Wilson's Promontory tend to protect steel and iron-built vessels, such as *SS Vicky*, and associated objects such as anchors and boilers (Parks Victoria 2002; Victorian Heritage Database 2025a and 2025c).
- 5.1.3 Hidden reefs and coves, such as those at Corner Inlet and Refuge Cove, may retain small objects jettisoned overboard during periods when ships were sheltering or at anchor.
- 5.1.4 The known and potential maritime heritage sites in the region represent a valuable archaeological resource for understanding the development of European colonisation of Victoria from a maritime perspective. The sites can provide opportunities for further investigation and research on maritime trade, patterns of navigation, early resource exploitation and maritime infrastructure and inland transport systems.
- 5.1.5 Due to the limited remote sensing that has been done in the region, future investigations associated with offshore renewable developments are likely to identify additional as yet undocumented sites that will contribute to the wider understanding of Victoria's maritime heritage.

5.2 Aviation potential

- 5.2.1 The potential for aviation material within the offshore development area can be indicated by the unknown location of the Lockheed Hudson aircraft, A16-133. Given the use of much of Ninety Mile Beach as an air weapons range throughout the Second World War there is some potential for the remains of these weapons to be present within the offshore development area, as well as the relatively unlikely potential for unreported aircraft crashes.

5.3 Maritime infrastructure potential

- 5.3.1 There is some potential for maritime infrastructure within the nearshore areas of offshore development area, as indicated by sealing and whaling sites, the remains of jetties and navigational markers in nearshore coastal waters along the Gippsland coast and at Wilsons' Promontory.



6 NAVIGATIONAL HAZARDS AND IMPACTS

- 6.1.1 Increase in shipping, which was spurred on by the gold rush and the expansion of Melbourne, its port, and the surrounding settlements, saw shipwrecks become a more frequent occurrence. Coastal routes that were popular for resource exchange and the movement of people, such as along Ninety Mile Beach and around Wilson's Promontory, were treacherous for sailing vessels that got caught in south-westerly winds, that would drive them into sand banks and dynamic surf conditions.
- 6.1.2 Navigational infrastructure became important contributions to the coastal region. To mitigate the hazards, lighthouses were constructed, with the first being in 1847 on Deal Island (Murray-Smith 1988, 76). Although navigational aids circumvented many shipwreck losses, the region still suffers from severe weather events, such as dense fog, southerly wind conditions and swell, which affected many small fishing and trade vessels (Victorian Heritage Database 2025a; Parks Victoria 2018). The sites that stretch along from Wilson's Promontory to Ninety Mile Beach and into the Bass Strait contribute to our understanding of the advancement in navigational practices, evolution of ship building techniques and strategies that helped the settlers adapt to a new environment.

7 CONCLUSIONS

7.1 Key conclusions

7.1.1 The offshore development area was assessed for known submerged historic cultural heritage assets including shipwrecks, aviation wrecks, and maritime infrastructure sites.

7.1.2 After reviewing the AUCHD, VHD and supplementary secondary sources for this desktop assessment the current baseline of knowledge indicates that there are currently:

- no known shipwrecks within the offshore development area.
- no known aviation wrecks within the offshore development area.
- no known maritime infrastructure sites within the offshore development area.

7.1.3 The desktop assessment identified the following sites:

- There are five known wrecks within the offshore study area (Figure 2, Table 1), dating between the 19th to 20th century.
- There are ten known wrecks immediately outside the offshore study area (Figure 2, Table 2), which date from the 19th to 21st century.
- There are two shipwrecks within Protected Zones:
 - *SS Glenelg* in the offshore study area.
 - *PS Clonmel* outside the offshore study area.

7.1.4 In addition, there is potential for the discovery of:

- shipwreck material from the beginning of European contact 1606- present (Table 3).
- 20th century aircraft material, particularly from the Second World War.

7.2 Further work

7.2.1 Comprehensive marine geophysical survey of the seabed within the offshore development area will confirm whether additional, previously unknown submerged historic cultural heritage assets are located within the offshore development area and which may interact directly or indirectly with the Project. Any shipwreck, aviation, or other archaeological remains over 75 years old that might be located within the offshore development area would automatically be protected by either the *Heritage Act 2017* (Vic) or the *Underwater Cultural Heritage Act 2018* (Cwth) and it is an offence to disturb or destroy such remains. As such, it is imperative that survey work establishes the presence or absence of such remains within the offshore development area. Preliminary geophysical investigations for the project have found two anomalies within the development area that may be related to shipwrecks. The data has yet to be archaeologically reviewed and any marine cultural heritage will be reported in line with current legislation.

7.2.2 Due to the limited remote sensing that has been done in the region, future investigations associated with offshore renewable developments are likely to identify additional as yet undocumented sites that will contribute to the wider understanding of Victoria's maritime

heritage. Mobile sediments within the Ninety Mile Beach area and the hazardous rocky outcrops around Wilsons Promontory may further contribute to the potential for as of yet unlocated shipwreck remains. The density of maritime movement throughout the colonial period and beyond, as well as the 13 records of documents losses referred to in Section 4.2, further enhance this.

7.2.3 Aircraft losses discussed in Section 4.3, have been documented within the vicinity of the offshore development area, but no remains for these have yet been found.

7.2.4 Aviation wrecks are difficult to discern from geophysical survey and remains can be widely scattered. However, given the use of much of Ninety Mile Beach as an air weapons range throughout the Second World War there is some potential for the remains of these weapons to be within the offshore development area, as well as the relatively unlikely potential for unreported aircraft crashes.

7.3 Referrals under the Environmental Effects Act (Vic) and Environment Protection and Biodiversity Conservation Act (Cwth)

Environmental Effects Act Referral

7.3.1 When a new or amended project could reasonably be expected to have the potential for a significant effect on the environment, the proponent or a decision-maker must ask the Minister for Planning whether an assessment is required under the Environmental Effects Act (Vic).

7.3.2 The criterion related to historic heritage is a determination of whether there is:

- Potential for extensive or major effects on cultural heritage places and sites listed on the Victorian Heritage Register or the Victorian Heritage Inventory under the Heritage Act 2017.

7.3.3 There are no known submerged historic heritage assets within the Victorian state waters section of the offshore development area. As such, the current baseline, as presented here, indicates the Project would have no adverse effects on known submerged historic cultural heritage, however comprehensive survey work of the offshore development area is required to confirm this.

Environment Protection and Biodiversity Conservation Act Referral

7.3.4 The EPBC Act (Cwth) protects matters of national environmental significance, world heritage areas, national heritage places, as well as Commonwealth land and Commonwealth marine areas (between 3 and 200 nm from the coast).

7.3.5 The guidelines regarding what constitutes significant impacts requiring referral for assessment and approval under the EPBC Act (Department of the Environment 2013) state that, with regards to the marine historic environment, an action is judged to have significant impact if there is a:

Real chance or possibility that the action will result have a substantial impact on heritage values of the Commonwealth marine area, including damage or destruction of an historic shipwreck.

7.3.6 There are currently no known submerged historic heritage assets within the Commonwealth section of the offshore development area. As such, the current baseline, as presented here, indicates the Project would have no adverse effects on known submerged historic cultural



heritage, however comprehensive survey work of the offshore development area is required to confirm this.

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