Crib Point Pakenham Pipeline

Desktop Historical Assessment



Client: APA Transmission Pty Limited (ABN 84 603 054 404)

Author: Natalie Paynter & Anita Barker

16 August 2018

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Front Cover: (H047 Dalmore Well Hobson Road - View East)

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1. Introduction & Project Overview

APA Transmission Pty Limited, a wholly owned subsidiary of the APA Group (together referred to as APA) is proposing to construct and operate a 56.2 km in length high pressure gas pipeline which will connect AGL's proposed Gas Import Jetty at Crib Point to the Victorian Transmission System (VTS), near Pakenham. Archaeological Excavations has been commissioned to undertake a historical desktop cultural heritage assessment ahead of the proposed activity.

Upon completion, APA transmission pipeline and AGL's Gas Import Jetty will increase energy security and supply stability to Victoria. In addition, the pipeline will present other long term opportunities for the supply of gas to residential and industrial growth areas along the pipeline route and the potential for future power generation opportunities across the design life of the pipeline. The pipeline will also be designed in manner that will enable reverse flow from the main VTS connection at Pakenham to future customers connected to the pipeline.

The proposed AGL gas importing jetty project will consist of a Floating Storage and Regasification Unit (FSRU) continuously moored at the existing Crib Point Jetty. The FSRU will vaporise the natural gas from a visiting Liquefied Natural Gas (LNG) carrier that will moor directly adjacent to the FSRU. The natural gas will then be transferred to APA's Crib Point Receiving Facility via a marine loading arm and jetty piping. The high pressure gas pipeline will transfer the generated gas from the Crib Point Receiving Facility to the APA Pakenham Delivery Facility where it is conditioned to maintain the operating parameters of the VTS before injection.

1.1. Project Overview

The project area comprises a 56.2 km long alignment within an approximate 30m wide easement that includes additional construction locations relating to set down and welding areas, bell holes, temporary dams and access roads associated with the installation of a gas pipeline (hereafter referred to as the Right of Way or ROW). Under-boring will occur in the ROW under named waterways and sealed roads. The pipeline alignment commences at Crib Point in the south, terminates at Pakenham in the north and traverses the eastern Melbourne suburbs of Crib Point, Hastings, Tyabb, Pearcedale, Tooradin, Cardinia, Rythdale, Dalmore, Pakenham and Nar Nar Goon (Figure 1).

A portion of the r.7 pipeline ROW occurs in an existing ESSO easement from: Woolleys Road, Crib Point to Reid Parade, Bittern; and within BlueScope Steel property on Frankston-Flinders Road to Denham Road, Tyabb. The ROW also occurs within the road reserve and a train maintenance depot at Oakview Lane, Pakenham East and the road reserve at Mount Ararat South Road, Pakenham East.

The Crib Point Pakenham Pipeline project consists of the following components:

• 56.2km of high pressure gas transmission pipeline with a diameter of 600mm with a minimum cover of 1.2 m from ground level.

• Crib Point Receiving Facility situated at landside of the Crib Point Jetty managed by Port of Hastings Development Authority (PoHDA) and include metering, pigging facility, nitrogen storage and injection, odourant plant, gas analysers and a vent stack.

• Pakenham Delivery Facility situated adjacent to the Pakenham East Rail Depot, which is within land owned by Public Transport Victoria and include a scraper station, filtration, metering, heating, pigging facility and a vent stack.

• Two mainline valves (MLVs) will be situated along the pipeline at kilometre point (KP)12 and KP40. MLVs are provided as a means to isolate the pipeline in segments for maintenance, repair, operation, and for the minimisation of gas loss in the event that pipeline integrity is lost. Once isolated, the gas from the relevant pipeline section may be vented prior maintenance taking place. A typical MLV site comprises of 10 m x 10 m fenced compound.

• Cathodic protection (CP) is to be provided via a combination of crossbonds to existing CP system and the installation of an impressed current system at either of the MLVs which will be determined during detailed design. The pipeline primary corrosion protection system shall be its external coating.

The preferred pipeline route r.7 has been selected after more than 6 months of consultation with affected landowners and Government Stakeholders, and the completion of detailed environmental investigations that inform the construction methodology for avoidance and minimisation of impacts.

1.2. Purpose of the Report

The main purpose of the assessment is to identify constrains in relation to historic heritage associated with APA Crib Point Pakenham Pipeline. This report has been prepared to support the:

- Referral under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999.
- Referral under the Victorian Environment Effect Act 1978.
- Identification of requirements for any permits under the Heritage Act 2017.

1.3. The Study Area

The study area selected for this assessment extends in an approximate 1km radius from either side of the centre line of the r.7 pipeline alignment commencing at Crib Point in the south and terminating at Pakenham in the north (Figure 1). The study area traverses the eastern Melbourne suburbs of Crib Point, Hastings, Tyabb, Pearcedale, Tooradin, Cardinia, Rythdale, Dalmore, Pakenham and Nar Nar Goon.

1.4. Limitations

This study is limited to a desktop review of relevant heritage databases and known (existing) registered heritage places. No fieldwork or field inspection was undertaken as part of this assessment.

1.5. Documentation of Consultation

Consultation with Heritage Victoria regarding Denhams Road Farmhouse Site (VHI H7921-0119) was undertaken on 3 and 7 June 2018. Heritage Victoria informed Anita Barker (Heritage Advisor) via email that a Consent to Damage (C1059) was issued to Andrew Long & Associates in July 2016 to monitor grading works associated with the installation of an ESSO replacement pipeline (Cultural Heritage Management Plan 12826) in the area of H7921-0119. Heritage Victoria outlined that if the extent of the site disturbance for the current study area is within the same footprint of the works approved under C1059, no additional Consent is required. If the study area falls outside of the C1059 area, a new Consent to Damage will be required.

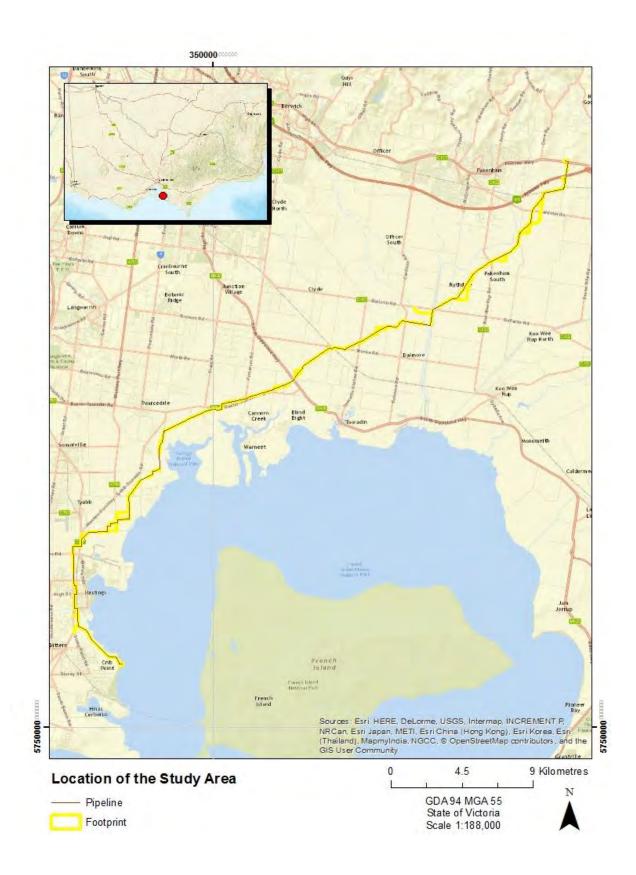


Figure 1: Location map showing the study area

2. Legislation

2.1. EPBC Act 1999

The *Environment Protection and Biodiversity Conservation (EPBC) Act* 1999 provides protection for Australia's natural, Indigenous and historical heritage. The Act applies to:

- World heritage properties;
- National heritage places;
- Wetlands of international importance (often called 'Ramsar' wetlands after the international treaty under which such wetlands are listed);
- Nationally threatened species and ecological communities;
- Migratory species;
- Commonwealth marine areas;
- The Great Barrier Reef Marine Park;
- Nuclear actions (including uranium mining);
- A water resource, in relation to coal seam gas development and large coal mining development.

Features of the *Act* relevant to this report include:

- A National Heritage List of places of national heritage significance.
- A Commonwealth Heritage List of historical heritage sites owned or managed by the Commonwealth.
- The creation of the Australian Heritage Council, an independent expert body to advise the Minister on the listing and protection of historical heritage sites.

2.2. The Planning & Environment Act 1987

The *Planning and Environment Act* 1987 provides a framework for planning the use, development and protection of land in Victoria. It also sets out the process for obtaining permits and enforcing compliance with planning schemes and permits. The Act provides for

- A system of planning schemes that sets out how land may be used and developed;
- The Victorian Planning Provisions (VPP) that set out the template for the construction and layout of planning schemes;
- The procedures for preparing and amending the Victorian Planning Provisions and planning schemes;

• The procedures for settling disputes, enforcing compliance with planning schemes and other administrative procedures.

Places of local heritage significance may be protected by a Heritage Overlay within the local Council planning scheme under the *Planning & Environment Act* 1987. Places are identified and managed by the planning scheme and associated schedule to the Heritage Overlay. A place included on the VHR is included in the local planning scheme.

Section 85 of the *Pipeline Act* 2005 provides an exemption form the need to obtain planning approvals under the Planning and Environment Act 1987. The Project is however, subject to any other relevant Victorian environmental legislation including the Heritage Act 2017.

2.3. Environment Effects Act 1978

The *Environment Effects Act* 1978 provides for the assessment of actions that are capable of having a significant environmental effect.

The process under this Act is not an approval process but enables statutory decision makers to assess whether a project with potentially significant environmental effects should proceed (Planning online, 2018). There are numerous referral criteria.

Historical Heritage forms part of the referral criteria in accordance with the Ministerial Guidelines for assessment of environmental effects under the *Environment Effect Act*.

2.4. Heritage Act 2017

The *Heritage Act* 2017 provides for the protection and conservation of cultural heritage within the State of Victoria. Cultural heritage means places and objects of cultural heritage significance or of State level cultural heritage significance (s.3). The Act provides protection of cultural heritage under two listings outlined below.

Victorian Heritage Register (VHR)

The Victorian Heritage Register provides registration and protection for the State's most significant heritage places, objects and historic shipwrecks. The Register has categories of registration including places objects, archaeological place, archaeological artefact, shipwreck, shipwreck artefact, protected zone and places included in the World Heritage List (s.25).

Under Sections 87 and 88 of the Act, it's an offence to knowingly, recklessly or negligently remove, relocate or demolish, damage or despoil, develop or alter, or excavate, all or any part of a registered place. Penalties can include a fine, imprisonment or both (s.87). A permit is

required under s.93 of the Act to carry out works or activities in relation to a registered place or object. A Permit can be amended under s.105 of the Act.

Victorian Heritage Inventory (VHI)

The Victorian Heritage Inventory is a listing of Victoria's historical archaeological sites, of which there are currently more than 6,500. These places reflect the historical settlement, growth and change of Victoria and have the capacity to make a meaningful contribution to understanding Victoria's history. The *Heritage Act* 2017 provides protection of archaeological sites that contain an artefact, deposit or a feature which is older than 75 years and provides information of past activity in the State. In addition, the place must require archaeological methods to reveal information about the settlement, development or use of the place, thus determining the site of archaeological value (s.130). If a site is considered of low archaeological value and it does not meet the thresholds for archaeology and place history it will not be included on the VHI (s. 118(1)(a)).

Under Section 123 of the *Heritage Act* 2017, it is an offence to knowingly or negligently deface, damage or otherwise interfere with, or carry out an act likely to endanger a site recorded in the VHI or an archaeological site not recorded in the VHI (s. 123(1)(a)(b)). In addition, it is an offence to knowingly uncover or expose, disturb or excavate land for the purposes of uncovering or discovering a site recorded or not in the VHI (s.123(2)(a)(b)).

It is necessary to obtain a Heritage Consent under s.124 of the *Heritage Act* 2017 from Heritage Victoria before harming historical archaeological remains. In most cases, an initial Consent to Excavate will authorise archaeological investigation requiring a process which may include historical research, site recording and excavation. Following this, a Consent to Damage must be obtained, allowing site disturbance and development to proceed. There may be Conditions within this Consent that must be complied with (s.125 AHA 2017), including reporting, further investigation and the treatment of artefacts.

2.5. National Trust

The National Trust is a heritage advocacy organisation that promotes the preservation and protection of Australia's heritage places. The National Trust maintains a database available for public access. The Trust does not have a statutory role and places listed on the database are not legally recognised.

3. Desktop Methodology

This historical archaeological desktop due diligence involved a collation of a basic land use history focussing on the early pastoral occupation dating from the 1840s through to development of townships relevant to the study area. This basic land use history was developed from an analysis of published and unpublished local history books, heritage studies, and historical maps accessed from a number of collection institutions.

Known registered cultural heritage places and objects within the study area were also identified. This was achieved by a search of relevant databases including:

• Hermes database online (Heritage Overlay, Victorian Heritage Register and Victorian Heritage Inventory).

- Victorian War Memorial Heritage Inventory.
- Australian Heritage Database.

In addition, previous historical archaeological assessments undertaken within the study area were analysed to provide a thorough understanding of areas previously investigated.

4. Desktop Assessment

4.1. Historical Background

4.1.1 Early Exploration and Settlement

George Bass is the first European recorded as visiting the Westernport region in 1798 (Edgecombe 1989: 6). However, European activity associated with sealing may have occurred along the coast earlier as sealing bases were well established on Bass Strait islands and along the coast of Van Diemen's Land (Tasmania) by the early 1790s. As seal numbers were depleted in these areas attention shifted to seal colonies located on the Victorian coast where the sealing grounds of Western Port were exploited from the early 1800s until the early 1820s (Townrow 1997: 7-8, 15). The first detailed survey of the Port Phillip region was conducted in 1802 when Acting Lieutenant John Murray, in the Lady Nelson, explored the Port Phillip coastline (Edgecombe 1989: 10).

European settlement in the Mornington Peninsula region commenced in 1803 when the first Victorian colony at Sorrento was established. Over four hundred people, comprised of convicts, troops and some free settlers, landed at Sullivan's Bay near Sorrento. The settlement was abandoned less than a year later mainly due to the lack of potable water. A second unsuccessful settlement was established at Corinella in 1826, but this too faltered within twelve months (Hutchinson 2011: 8, 12; Dingle 1984: 21).

4.1.2 Squatters and pastoral occupation

Shortly after the establishment of Melbourne in 1835 settlers began to take up land across the State, from the 1840s onwards. The settlement of the Westernport area commenced during this time with the occupation of many large pastoral holdings. The study area crosses through the boundaries of numerous former pastoral runs including Coolort, Bunguyan, Longwaring, Balla-Balla, Kilmore, I.Y.U, Great Swamp, Kooweerup and Mt Ararat. Further details including occupiers are presented in Table 1 below.

Table 1: Details of former pastoral runs within the study area

Pastoral Run	Occupier and Date	Description
Coolort	1848 – 1853 William Payne	Gazetted in 1848, run extended across an area of 6,000
	1853 – 1854 Harry Drew	acres. Forfeited in 1875.
	1854 – 1862 Joseph Hann	
	1862 – 1875 Theadotus John Sumner	
Bunguyan/ Bungunyan	1845 - 1859 Ms Martha Jane King	Licenced in 1845 for an area of 15,000 acres
	1859 – 1864 Vaughn & Wild	(Spreadborough & Anderson 1983: 154). Subdivided in 1854 to the Bunguyan Run and Sandstone Island Run.
	1865 – 1870 John Watson	(Bunguyan Run was forfeited in 1864, then sold by auction in 1865, forfeited again in 1870. This was revoked later that
	1872 – 1879 William Brown Jnr of Melbourne (Bunguyan/ Bunguyan North)	year and in 1874 the run was further subdivided into Bunguyan North and Bunguyan South (Spreadborough &
	1874 – 1877 John Watson (Bunguyan South)	Anderson 1983: 155). Bunguyan North was forfeited in 1879 and Bunguyan South in 1882 (Spreadborough & Anderson
	1877 – 1882 Eliza Selina Sadlier of Toorak Rd, South Yarra	1983: 155). The Bunguyan homestead is located in the Banguyan Reserve off the Frankston-Flinders Road (Victorian Places online, 2018).

Longwaring/ Langwarrin	1846 – 1861 W. Willoby 1861 – 1868 Michael Callanan	Licensed in 1846 extending across an area of 8,320 acres. Gazetted in 1850 and forfeited in 1868. Once part of the Carrup Carrup run.
Ballabool/ Balla Balla	 1839 - 1848 Robert Hines Allen 1848 - 1850 C. J. Haslewood 1850 - 1852 Henry Foley 1852 -1854 H. Jennings 1854 - 1872 Dr James Smith Adams 1872 Alexander M. Hunter 	Balla Balla originally contained 2,400 ha (6000 acres) supporting 120 cattle and 2000 sheep (City of Casey 2017: 4). By 1848, the property supported 400 cattle (Context 2004: 9). Jennings secured the PR in 1854 (Contex 2004: 10). House constructed c.1880. Run area reduced to 3,840 acres in 1850 (cardiniacasey online, 2018).
Kilmore	1842 Rutherford & Blackmore c.1850s Richard Corbett	Located on Rutherford's Creek. Rutherford was living in the area by 1841 (Context 2004: 9).
I.Y.U.	1839 – 1850 Dr William Kerr Jamieson 1850 – 1866 William Waddell 1866 – 1872 George John Watson	Licensed 1839, gazetted 1848. area 12,945 acres. Forfeited in 1872.
Great Swamp		8,873 acres

Tooroodan/Tooradan	Mickle, Bakewell and Lyall Manton Bros.	PR block of 640 acres secured in 1854 (Context 2014: 10). Run later known as Manton's Old Station (Context 2004: 9).
Koo-Wee-Rup	1861 - 1864 J. Connolly 1867 Graheme Berry & Thomas Lowrey	First licensed in 1861 for an area of approximately 60,000. Forfeited in 1864 (Spreadborough & Anderson 1983: 145). Berry and Lowrey reported many flooding events.
Mt Ararat	1845 – 1848 John Watson Edward B Wight & Richard Philpott 1848 – 1853 Fred Wight 1853 – 1855 Samuel Henry Clutterbuck 1855 – 1870 John Startup 1870 – 1874 Forfeited	Licensed in 1845 for an area of 16,000 acres. Forfeited in 1874 (Spreadborough & Anderson 1983: 173).
Mt Ararat	1846 – 1855 John Dore & Hennessy 1855 – 1861 John Dore	Run licensed in 1846 for an area of 19,000 acres. License cancelled in 1861 (Spreadborough & Anderson 1983: 173).

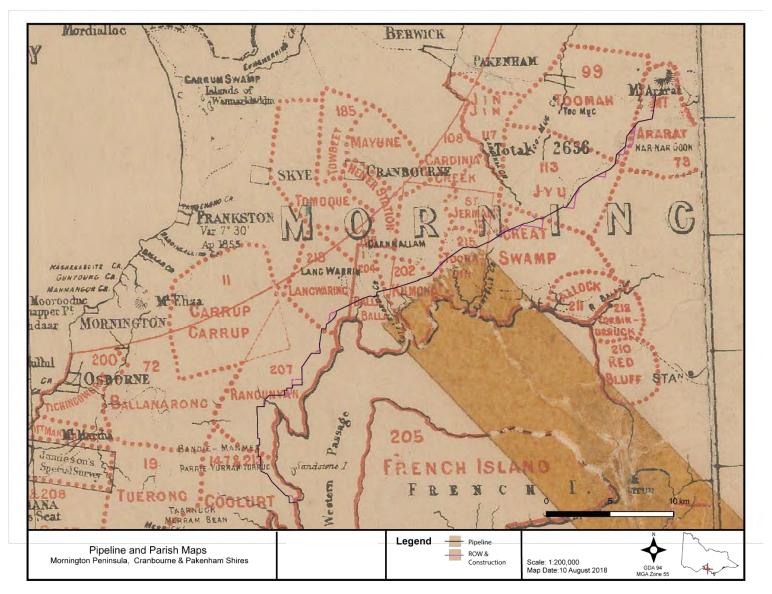


Figure 2: Showing the location of former pastoral runs within the study area

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The Order-in-Council 1847 allowed squatters to purchase up to 640 acres of land within the boundary of their licensed pastoral run as a homestead area (Land Victoria 2009: 49). The study area crosses directly through one of these pre-emptive right selections, part of the Balla Balla run (Parish of Sherwood, Crown Allotment A) (Figure 3). This pastoral run was occupied from the 1850s and the pre-emptive right selection was 640 acres. A plan of the pre-emptive right has not been sighted. This plan may contain former structures and features associated with the occupation of the property relating to this early occupation of pastoral Victoria.

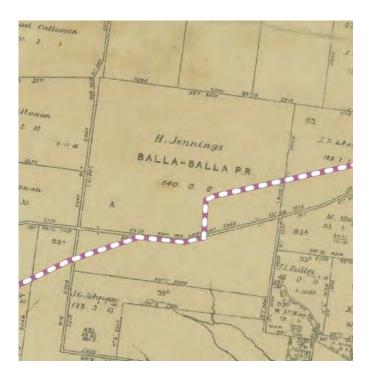


Figure 3: Showing the alignment of the study area passing through the former Balla Balla Pre-emptive Right selection (Source: State Library of Victoria, dated 1930)

The passing of land section Acts from the 1860s resulted in the unlocking of Lands allowing small scale farming and the establishment of freeholds.

4.1.3 Closer Settlement

The *Sale of Crown Land Act* 1860, the *Land Act* 1862 and various later Land Acts, allowed for surveyed allotments to be selected in areas across the State. Although many parishes in areas of closer settlement had been settled by this point, agricultural lands were still being 'unlocked' after the occupation of pastoral runs.

Parish of Bittern

Wattle bark stripping, used for the tanning of hides was one of the first industries that took place around Westernport (Butler 2001:14). This bark was exported to Tasmania. There is

local evidence of the use of a tanning pit at Jack's beach to tan fishing nets at Crib Point possibly up until the 1920s (VHI D7921-0016; HO324) (Butler 2001: 14).

Fishing took place during the 1840s at Kings Creek, later the focus for development of the township of Hastings (Butler 2011: 14). By 1892 there were 100 fishing boats operating out of Hastings, supporting the Melbourne market (Butler 2001: 16). Commercial fishing in Westernport is still a strong local industry.

The Parish of Bittern was surveyed in 1860 with land offered mainly in 100 acre farm lots for selection (Butler 2001: 9; VHD 2018 online) (Appendix 1). These small farmlets supported orchards, or mixed farms of livestock and crops, many of which continued operation into the twentieth century.

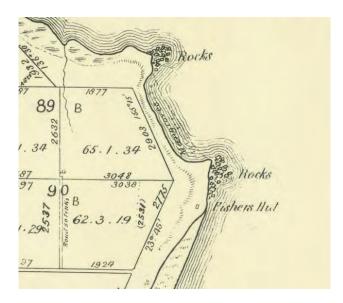


Figure 4: Showing the location of a hut located south of the study area

The township of Crib Point is believed to have been named after J. and R. Hann's settlement at Westernport where they had a 'crib' (a hut) but the name also means sheltered harbour (Blake 1977:73, 241). This hut is likely the "fisher's hut' visible in Figure 4. In 1889 a railway line from Frankston was extended to Crib Point to allow the deployment of troops, strengthening the fortification of Westernport Bay in response to the threat of French invasion (Victorian Places, online 2018). The Flinders Naval Depot (later renamed HMAS Cerberus) was established between 1912-1920. Additional land along the Westernport Coastline was acquired and permanently reserved for 'Military Purposes' around the coastline in 1921 (Victorian Places, online 2018) (Figure 5). The study area crosses through a small portion of this reserve north of Crib Point (Table 2). By 1915 a town hall and store were added to the existing school and post office at Crib Point.



Figure 5: Number 5 Battery of the Australian Field Artillery at the Bittern encampment in 1908 (Source: Australian War Memorial, Image P00587.027)

In 1963 British Petroleum (BP) purchased land at Crib Point for an oil refinery and negotiated a deep-water anchorage on Western Port with the Bolte Government followed by legislation (The Age, 10/01/2005). BP began operation of a refinery at Crib Point in 1966. A wharf was constructed off the point and the presence of industry lead to quick growth of the township and surrounding area over the next 30 years (Victorian Places online, 2018). The BP Administration building (VHR H1016; HO240) was built in 1965 and comprises a brick ground floor mounted on a low plinth with a cantilevered glass curtain wall overhung by eaves and an enclosed colonnade (VHD online, 2018). BP ceased operations at the site in 1985 when it was no longer economical (Butler & Associates 2001: 42).

Parish of Tyabb

Tyabb was surveyed in 1858 and land sales occurred later that year (Appendix 1). The township of Hastings was originally known as Old Tyabb, located to the north of the Hastings primary school. It was renamed Hastings c.1860 after the Marquis of Hastings, a former Governor General of India (Blake 1977: 119). The old township was eventually incorporated into the current day Hastings in 1968 (Graeme Butler & Associates 2001: Vol 1: 212). The name Tyabb is believed to have originated from the Aboriginal work '*tyaba*' meaning mud hole or land of waterholes (Blake 1977: 262).

The first jetty at Hastings was built in 1864, allowing for the establishment of a ferry service between Hastings and Grantville from 1868 (Butler & Associates 2001: 39). The Hastings post office and store were established around 1865, leading the development of the township, including the Anglican Church, pubs, stores, schools and a boarding house. The small rural seaside township was at the end of an area of orchards and farming centred on Somerville and Tyabb.

The Westernport coastline at Hastings has been modified by some land reclamation and coastal engineering over the years along with the construction of marinas.

The area of Somerville, named after Sir William Meredyth Somerville, (MP Chief Secretary for Ireland 1847-52), became a major fruit growing area from the early twentieth century till the 1960s. Apple and pears were grown in nurseries with fruit sent across Australia. A Fruitgrowers Association was formed in 1892 and construction of the Great Southern Railway in 1889 assisted in the development of the town (Somerville Heritage Society online, 2018).

Parish of Langwarrin

The township of Langwarrin was first surveyed in 1886, following the establishment of the Langwarrin Military Reserve (eMelbourne online, 2018) (Appendix 1). Twenty allotments formed the township area, and land within the parish became populated by corn farmers and orchardists. By 1889 a sawmill, butcher, baker, bootmaker and boarding house were established within the local agricultural community. The town had a downturn in 1895 following the closure of the sawmill. Nathaniel Pearcedale purchased the township blocks demolishing buildings, apart from the boarding house which became his residence (Gunson 1968: 157-158). A new town area was established near Langwarrin Military Camp and the old estate became known as Pearcedale after Nathaniel Pearcedale (Blake 1977:213). During the First World War the Reserve was used as a prisoner of war camp and a military hospital for soldiers (eMelbourne online, 2018). In 1985, the Reserve was gazetted as the Langwarrin Flora & Fauna Reserve.

Parish of Sherwood

Early settlement around the Pakenham, Nar Nar Goon and Koo Wee Rup regions was focussed around the Great Swamp, as it was fed by fresh creeks enabling successful agriculture (Context 2017: 10). Local farming centred on sheep farming and the planting of crops such as oats, potatoes and onions (Gunson 1968:124). By 1914, Koo Wee Rup was considered the most important potato growing district in the state (Gunson 1968:90, 109-110, 137, 139, 148, 152).

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In 1873 a new bridge was constructed at Tooradin and the local shire councillors were considering draining the Koo Wee Rup Swamp. Work on the drainage scheme commenced in 1888 and during the depression of the 1890s this provided relief work. By October 1892, 500 men were at work draining the swamp and nine miles had been complete with numerous major drains and outlets constructed including the Cardinia Drain.

In 1875, a store and school had been established within the township of Tooradin, followed closely by a Mechanics Institute, Basan's Hotel and stables, and the Bay View House (SLV, Batten & Percy Collection, 1889). The opening of the Southern Railway Line in 1888 aided the settlement of the township of Tooradin, previously a focus of fishing activities. Sales plans advertised the sale of 21 marine residential sites and 21 sites within the township. The railway provided easy transport to the popular fishing location providing a direct route from Melbourne instead of crossing the bay at Hastings (Gunson 1968:160, 164-165).

Parish of Koo Wee Rup

Woodlands and grassy plains extended across the region, with land between Toomuc Creek and the Great Swamp heavily timbered white gum, box and native hop (Context 2004: 8). The cancellation of the Great Swamp lease in 1874 resulted in 8,873 acres of swampland becoming available for settlement in the Dalmore area. In the 1920s the remaining larger estates at Dalmore were subdivided as Italian settlers arrived in the district (Gunson 1968:90, 109-110, 136-137, 139, 148, 152, 164, 202).

Another increase in settlement in the region occurred in the early 1900s and an influx of soldier settlers and private farmers led to the growth of the townships of Koo Wee Rup and Pakenham. The settlement of Koo Wee Rup (known as Yallock until 1890) was greatly influenced by the draining of the swamp with the population increasing by 500 people between 1908 and 1923. Despite bad floods in 1923 and 1924, when water lay six feet deep in the cheese factory, further areas of the swamp were drained for additional closer settlement. The settlers demanded that contour drains be constructed around the swamp to prevent future inundation and Hagelthorne's Drain was planned (Gunson 1968:56-57, 156-157, 197-199).

Following the closer settlement schemes of the late nineteenth and early twentieth century land in the area was further divided up into smaller landholdings after the passing of the *Discharged Solider Settlement Act* 1917 (Appendix 1). Drained swamp around Koo Wee Rup proved unsuitable for closer settlement with many of the blocks not allowing intensive cultivation. In addition, many of the settlers were unsuited to the task of farming and holdings were later abandoned. The *Solider Settlement Act* 1945 proved to be more successful (Nelson

& Alves 2009: 285). By 1944 Koo Wee Rup was the largest business centre in the Shire and a high school was opened in 1953 (Gunson 1968: 218).

In 1934 a 'super' flood was recorded in the Koo Wee Rup district inundating the entire area including the township. 400 cattle, 6,000 sheep and nearly 1,000 pigs were lost and 1,000 people were left homeless. Many of the drainage channels, roads and bridges were damaged. The drainage of the swamp continued as Depression relief work and in 1936 a Royal Commission was set up to examine the efficiently of the water supply, drainage and irrigation. The commission suggested improvements providing outfalls for the Deep and Cardinia Creeks with the existing Cardinia drains utilised to handle the waters of Toomuc and Gum Scrub Creeks (Gunson 1968:204-208).

Parish of Nar Nar Goon

Land was acquired along Toomuc Creek under pre-emptive rights associated with the IYU and Toomah pastoral runs. In 1853 pastoral runs around Cardinia Creek, Toomuc Creek and Nar Nar Goon were subdivided and offered for sale.

The Toomuc region became an apple growing and agricultural area after John Kitchen acquired land in the 1870s and established apple orchards, many of which remain in the area today (Berwick-Pakenham Historical Society 1982:134-136-138). The Gippsland Road was constructed from the 1860s and the Great Southern Railway in the 1870s aided the development of the region, providing marketing of produce from small farms, orchards and market gardens to the city (City of Casey 2017: 4). Their construction also paved the way for the establishment of small towns such as Nar Nar Goon and Pakenham. The township of Nar Nar Goon became significant for its role in West Gippsland timber and sawn products (Butler 1998: 70).

Following the First World War the Government purchased large landholdings in the district to subdivide into smaller lots under the Closer Settlement Scheme. Rythdale resulted from the combination of McGregor's and Hazelthorn's properties that were combined as part of the closer settlement scheme (Blake 1977: 232; Berwick- Pakenham Historical Society 1982:136). The Rythdale area is characterised by a sandy ridge running north to south through otherwise heavy black soil. Early settlers built on this ridge because it was high and dry (Berwick-Pakenham Historical Society 1982: 137).

The first school was built in Pakenham in 1874, run by C. Hansen who was also the postmaster. Pakenham is believed to have been named after Sir Edward Michael Pakenham who served in the Crimea War. Pakenham had limited growth pre-war, however it grew to

form a major township in the 1960s where it was beginning to be recognised as a commuter town (Context 2011: 3).

Clyde is believed to have been named after a Scottish river (Blake 1977: 67) carved into a tree by a shepherd watering sheep in the area in the mid-1840s (Gunson 1968: 58). The region was one of the first to be surveyed and sold at auction to cater for the increased demand for land as a result of the gold rush. In 1851 Anthony Ridgeway purchased 312 acres at Clyde where he kept a dairy and apiary. In 1862, Ridgeway's brother-in-law, Thomas Cadd, purchased land at Clyde and planted a vineyard. In 1889, the Clyde Railway Station Post Office opened and by 1915 the old post town became known as Clyde North and the station village became Clyde (Gunson 1968: 66, 106, 121, 165).

By the beginning of the twentieth century closer settlement and industrial expansion had taken shape. New communities emerged at Devon Meadows and Cannons Creek. Devon Meadows was the community centre of the estate of the same name owned by Benjamin Cox prior to subdivision of the area (Gunson 1968: 56, 171, 211-212).

4.1.4 Summary

Historical research has indicated that the study area crosses through land occupied from the 1840s that is associated with the early pastoral occupation of Victoria. There is potential for historical archaeological places to occur within the study area. Given the number of varied land uses across the study area, there is potential for historical archaeological places to be present. This is discussed in further detail in Section 4.2.

4.2. Previous Heritage Reports

4.2.1 Regional Assessments

Numerous broad scale municipal heritage studies have been completed within the region. The majority of these reports result from municipality heritage studies for growth areas or to support the local planning schemed. Assessments include:

- Hastings Heritage Study, Vols. 1 & 2 (Graeme Butler & Associates 2001);
- Cardinia Shire (Pakenham District) Heritage Study, Vols 1-3 (Graeme Butler & Associates 1996);
- Cardinia Local Heritage Study (Context 2007)
- Cardinia Local Heritage Study Review Vols 1-3 (Context 2011/2013/2015);
- Pakenham East PSP (Context 2017)
- Casey Heritage Study (Context 2004);

- Heritage of the City of Casey: Historic Sites in the former Cranbourne Shire (Graeme Butler & Associates 1994).

Only reports that resulted in the identification of cultural heritage places within the study area are discussed below.

Hastings District Heritage Study

Graeme Bulter & Associates (2001) completed a heritage study for the Hastings District, extending from Tyabb south to Sandy Point, within the area of the former Hastings Shire. He produced an excellent environmental history of the district, combined with a heritage survey to identify a total of 713 potentially significant heritage places, of which 112 were prioritised for their State, regional or local levels of significance (Graeme Butler & Associates 2001: Vol 1: 10). The study also identified a number of landscapes, trees and historical plantings (Graeme Butler & Associates 2001, Vol. 1 : 24). Butler identified a number of places within 100m of the current study area including:

- Former BP Administration Building (VHR H1016; HO240);
- BP Westernport Refinery (significant as one of two refineries in the State and for its geographic location at Western Port;
- Sandy Point coastal landscape part Point Leo to Watson's Inlet precinct (Place 78) classified by the National Trust in 1975 for its environmental values;
- Point Leo to Watsons Inlet coastal landscape precinct (Plate 691) including the Tyabb hinterland bounded by Bungower Rd, Tyabb Tooradin and Dandenong Hastings Road to the West and Denhams Road to the south. The Tyabb hinterland and coastline is important for its environmental values, harbour development and inland rural settlement;
- Tyabb Waterholes (Place 632): Historical and social significance possibly as a watering place and for its environmental values (Graeme Butler & Associates 2001: Appendix 1: 63);
- Frankston to Stony Point Railway Precinct (Place 634): Railway reserve, remaining early remnants and plantings, including the Hastings Railway Station, built from 1887 (Graeme Butler & Associates 2001: Vol 1: Appendix 1: 477).

Recommendations for the above sites included listings on the National Trust (Victoria) register and inclusion on the Heritage Overlay.

Casey Heritage Studies

Butler (1996) undertook a brief examination of heritage places listed at that time within the Shire of Cranbourne Planning Scheme. He aimed to identify site significance and provide guidelines on future management (Butler 1996: ii). Butler assessed 10 places, including Balla Balla pre-emptive right and homestead, which he identified as being of regional significance for its historical connections to the early pastoral period and early fabric (Butler 1996: 4). He also notes that a section of the homestead may date from 1856, perhaps incorporating a former kitchen or hut, however the homestead was substantially constructed c.1870-1880 (Butler 1996: 3,4).

The c.1880s homestead was not constructed within the pre-emptive right block which was uncommon for the time. Butler reports that Edmund Callanan, son of a grazier and surveyor was born at Balla Balla in the 1860s (Butler 1996: 2). This postdates the acquisition of the pre-emptive right but pre-dates the construction of the homestead. Thus, there were likely earlier structures relating to this property. There is some potential for these to be located within the pre-emptive right block.

Context (2004) completed identification, assessment and documentation of heritage places within the City of Casey, completed in three volumes. Recommendations were made for statutory protection and management of heritage places by development of a Conservation Strategy, completed by the City in 2017. The thematic environmental history was only able to be viewed as part of this assessment. The volume identifying places as a result of this assessment was not able to be viewed.

Cardinia Heritage Study

The Cardinia Heritage Study was completed in three volumes including individual places and precincts recommended for the Heritage Overlay, along with corrections and extensions to the Heritage Overlay. In addition, some places were recommended for the VHR and the VHI and a program of interpretation. The three volumes were revised in 2010-2011 in preparation for amendments to heritage controls. The key findings comprised the identification of 22 individual heritage places and four precincts, noted for inclusion in the Heritage Overlay (Context 2011: 11). Another place was recommended for inclusion on the VHI (the IYU Pre-Emptive Right Homestead Heritage Site), and one place to be nominated for register on the VHR (Context 2011: 11-12). Most relevant to the study area was the analysis of Rythdale Reserve Trees (HO115) at 205 Soldiers Road, Rythdale (Place No. 161) located 155m west of the study area.

The site comprises four Monterey Pines and a Monterey Cypress, next to the tennis court which served the soldier settlement community (Context 2015: 497-499).

Pakenham East PSP

Context (2017) prepared a post-contact heritage assessment for the Pakenham East PSP on behalf of the Cardinia Shire. The study provided an assessment of extant buildings, trees and landscapes and in addition provided an indication of areas of historical archaeological sensitivity following a field survey in 2012-2013 (Context 2017: 1). A single property at 32 Mt Ararat Road South, Nar Nar Goon (PSP Property No. 37) falls within the far northern extent of the current study area at Nar Nar Goon. The current study area lies on the eastern most margin of this property. The report resulted in the following recommendations:

- The inclusion of three places on the Cardinia Shire Heritage Overlay (a pear tree at 40 Dore Rd, 'Carinya', Homestead at 32 Mount Ararat South Road and a bungalow at 140 Ryan Road);
- Three places of potential archaeological sensitivity to be further investigated by survey (PSP Property Nos 8, 11 & 32);
- Two trees of historic interest including a pair of Italian Cypress and various exotic trees and shrubs within a remnant homestead garden (PSP Property Nos 8 & 11) to be recorded prior to removal;
- Retention of four trees including an English Oak, Canary Island Palm, Hoop Pine and a Deodar Cedar (PSP Property Nos 6, 8, 11 & 50) within the new urban landscape (Context 2017: 4-5).

The three places noted as having archaeological sensitivity relate to small scale farming and former house sites (PSP Property Nos. 8, 11 and 32; Context 2017: 20-21). The property at 32 Mount Ararat Road South comprises a small section of land confined around the homestead. Paddocks to the east, incorporating the current study area identified no historical significance associated with the property (Context 2017: Appendix D, 3).

As a result of the Context report (2017), Cardinia Shire Council made an amendment (C234) to the planning scheme incorporating the Pakenham East PSP and rezoning of land to support this. Most relevant was the amendment to Clause 43.01 of the Heritage Overlay to include controls to the 3 places nominated above by Context, applying HO275 – HO277 to the three heritage places (Cardinia Shire Council, 2018). None of these places are located within the study area.

4.2.2 Localised Studies

A limited number of local historical archaeological assessments and investigations have occurred within 500m of the study area (Stuart 2002; Nicholson 2003; Andrew Long & Associates 2016a, Andrew Long & Associates 2016b, Seawright 2018). These investigations were undertaken at Crib Point and Hastings for proposed residential development, road upgrades and large-scale industry.

Crib Point

Seawright (2018) completed a desktop heritage assessment of a proposed Liquefied Natural Gas import facility at Crib Point falling partially within the study area. The study area comprised land at 2040 The Esplanade, Crib Point and the Crib Point Jetty. Background research identified 4 historical heritage places registered within 1km of the study area including the former BP Refinery Administration Building (VHR H1016, HO240, RNE 103692); Woolley's Cool Room (HO322); William (Bill) Woolley's Homestead (VHI H7921-0112) and HMAS Otama (NT B6683). The former BP Administration Building is located 28m west of the proposed import facility study area (Seawright 2018: 11). A predictive statement formulated as a result of the desktop identified there is little potential for previously unidentified historical heritage places to be within the study area due to past land use practises relating to land scale industry, allowing little likelihood (Seawright 2018: 15). In addition, aerial photography dating from 1957 - 1990 did not reveal any obvious heritage features (Seawright 2018: 15). Recommendations stated that no works are to occur within the registered boundary, or a Permit is required under the Heritage Act 2017. The report also recommended a report assessing vibration risks be prepared and dust control measures be considered to protect the building (Seawright 2018: 19). The assessment determined that proposed works were unlikely to impact on heritage values and therefore did not trigger referral under the EPBC Act (Seawright 2018: 20).

Denhams Road Farmhouse

The preliminary findings of the excavation as part of Consent C1059 were communicated to Heritage Victoria in 2016. Archaeological monitoring occurred across an area of potential archaeological sensitivity at Denhams Road Farmhouse (H7921-0119) through the excavation of mechanical trenches within the proposed construction corridor (Andrew Long & Associates 2016: 1). Excavated trenches measured 1m in width and were ceased at a depth of 200mm to avoid impact to surrounding tree root systems. Excavation revealed soils in a disturbed context from past construction and demolition activities. Building foundations including

concrete pads, ceramic drainage pipe alignments and brick footings were identified, associated with later occupation of the site (Andrew Long & Associates 2016: 1-2) (Figures 6-7). Andrew Long & Associates concludes that '*modern foundations utilised the foundation of earlier structures which were demolished and built over*' (Andrew Long & Associates 2016: 2). No intact artefactual deposits were identified within the monitored area. Andrew Long & Associates recommended that no further archaeological investigation occur within the construction corridor within the registered boundary of H7921-0119. In addition, they recommended that development works are permitted as the Conditions of issued Consent C1059 were satisfied (Andrew Long & Associates 2016: 2).

Denhams Road intersection

Muir (2002) completed an historical archaeological survey for an area of land at the intersection of Denham Road and the Frankston-Flinders Road at Tyabb, partially covering the study area (Figure 8). No historical archaeological places were recorded during the survey; however, Muir identified a Cypress windbreak south of Denham Road, along with Cypress and pepper trees north of Denham Road as contributing to the landscape character of the area (Muir 2002: 20).



Figure 6: Concrete and brick foundations at Denhams Road Farmhouse (H7921-0119) identified during monitoring works in accordance with Consent C1059 (Source: Andrew Long & Associates 2016: 8).



Figure 7: Isolated brick footings at Denhams Road Farmhouse (H7921-0119) identified during monitoring works in accordance with Consent C1059 (Source: Andrew Long & Associates 2016: 9).

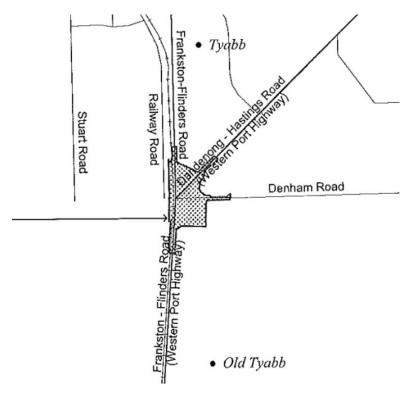


Figure 8: Showing the location of Muir (2002) study area (Source: Muir 2002: 28)

4.3. Registered Heritage Places

Six known registered places lie within 100m of the r.7 pipeline ROW:

- Former BP Refinery Administration Building (HO240; VHR H1016).
- Balla Balla Pastoral Homestead (HO13).
- Dalmore Well (HO47).
- Hobson's Soldier Settler House & Tree Reserve (HO115).
- Wattle and Daub Hut, Jatoki Farm (HO21).
- Denham Road Farmhouse (VHI 7921-0119).

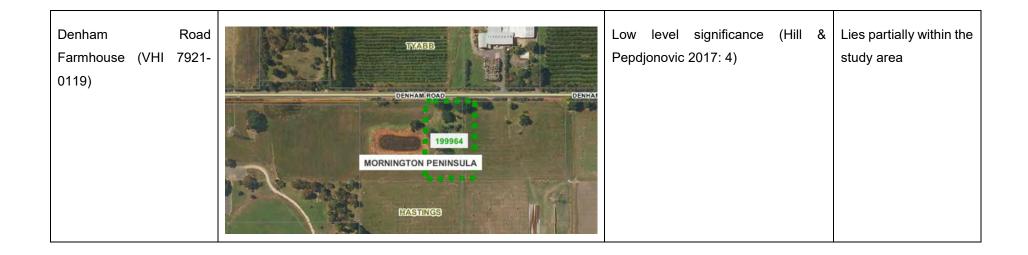
These places are registered on the VHR, VHI and relevant municipality heritage overlays and are associated with the early pastoral development of Victoria, closer settlement and the industrial development of Westernport. Further details are presented in Table 2 below. Of these, one place Denham Road Farmhouse (VHI 7921-0119) falls partially within the construction ROW for the pipeline (Table 2).

Place Name	Location Map	Description	Proximity to Study Area
Former BP Refinery Administration Building 220 – 350 The Esplanade, Crib Point (Mornington Shire HO240; VHR H1016)	H0240 H0240 T20 MORNINGTON PENINSULA	Former BP Refinery Administration building built in 1965 by Van Driel P/L to a design by Don Hendry Fulton. The building was awarded the 1966 RVIA Victorian Architecture Medal. It has a brick ground floor, a cantilevered glass curtain wall overhung by eaves and an enclosing colonnade (VHD online 2018).	60m south

 Table 2: Registered heritage places within 100m of the study area.

Balla Balla 1300 Baxter-Tooradin Road, Cannons Creek (City of Casey HO13)	DEVON MEADOWS TOPRADINERATER ROAD HO13 CASEY CANNONS CREEK	Pastoral homestead constructed c.1870-1880 associated with the former Balla Balla pastoral run, occupied from 1839. The homestead was linked with Alexander M Hunter, a well known grazier. The homestead has possible earlier features, dating c.1850s that have been incorporated into its construction. The building and gardens are regionally significant for their historic, architectural and aesthetic qualities (VHD online, 2018).	36m south
Dalmore Well, Hobsons Road Reserve adjacent to 75 Hobsons Road, Rythdale (Cardinia Shire HO47)	CARDINIA RYTHDALEE BOOM	Evidence of early farming, predating Soldier settlement of the area. Brick well associated with the remains of the Old Dalmore Homestead, built in 1883 for Duncan MacGregor (VHD online, 2018).	Approximately 25m south east

Hobson's (Soldier Settler) House, 194 Soldiers Road, Rythdale (Cardinia Shire HO115) & Tree Reserve (HO235)	HO115 HO235 HO235 BOLDIERS ROAD RYTHDALE CARDINIA	The house is significant as a well- preserved example of a soldier settlement house. It is an example of cheaper building fabrics using concrete blocks. It is significant for its association with the Hobson family. The house is of regional significance (VHD online, 2018).	
Wattle & Daub Hut, Jatoki Farm, also known as Quilley Park, 55 Craig's Lane, Pearcedale (City of Casey HO21)	EDALE HO21	A wattle and daub cottage built c.1870, significant and rare example of an early farmhouse constructed from locally procured material. It is significant for its association with the Craig family VHD online, 2018).	



4.4. Places with Cultural Heritage Sensitivity

Eleven unregistered places with potential archaeological sensitivity or cultural heritage values were identified within 100m of r.7 pipeline ROW as part of this assessment (Table 3). These places were identified as a result of a preliminary examination of historical records (historic maps), and a review of completed regional heritage studies for the area. Two of these places (Quail Island and Environs; and Tyabb Coastline and Hinterland) are listed on the National Trust database. Overall, places of potential archaeological sensitivity are associated with:

- The granting of pre-emptive right blocks from 1854 associated with the early settlement of Victoria.
- Places of environmental values that may have been modified.
- Occupation of small scale farms and activities relating to agricultural, horticultural and fishing industries.
- The establishment and development of transport and communications.
- Defending the State of Victoria.
- The development of regional towns.
- Soldier settlement in Victoria after WWI.

Cultural heritage values that may be present within identified areas of potential archaeological sensitivity may:

- Be associated with extant physical remains, such as an existing homestead or feature and may have a surface and/or a subsurface component;
- Be associated with former structures that once existed in the landscape, thus now having only a subsurface component comprising archaeological features or deposits.

Further targeted historical research and investigation can eliminate or narrow areas identified as areas of potential cultural heritage sensitivity in the broader study area. Five areas of cultural heritage sensitivity (Balla Balla Pre-emptive Right, Quail Island and Environs, Tyabb Waterholes, Tyabb Coastline and Land Gazetted for Military Purposes, Bittern) have been identified within the r.7 pipeline ROW.

Table 3: Areas of cultural heritage sensitivity

Name	Description	Location	Existing Conditions
Land Gazetted for Military Purposes, Bittern	Land used by army personnel on the Government bush reserve between Bittern and Tyabb. The study area crosses the reserve between Crown Allotments 83A and 84, Parish of Bittern.	R. Peddle 1/5 / 10 1/5 /	Unknown
Balla Balla Pre-Emptive Right	Pre-Emptive Right land selection from the Balla Balla pastoral run dating from the 1854. The Balla Balla pastoral run was leased from 1839. It is possible for early structures relating to this period to be present in the study area (shown as a red/white alignment on the map).	and Californian 330 1100 12 10 100 100 100 100 100 100 100	Small scale farming within the area.

Railway Gates, Hastings	Railway gates mapped in 1909	splendid Climate. Equable and Mild	Likely within 50m of study area. Possibly already removed.
Landing Place, Watson's Inlet	Landing Place on Watson's Inlet, mapped pre-1887.	Watson's Infl Watson's Infl Watson's Infl Watson's Infl Westing Westing Watson's Infl Westing Westing Watson's Infl Watson's Infl Watson's Infl Watson's Infl Watson's Infl Watson's Infl Watson's Infl Watson's Infl Westing Westing Watson's Infl Watson's Infl Westing Westing Watson's Infl Watson's Infl Watson's Infl Westing Westing Watson's Infl Watson's Infl Watson	Possibly located within 20m of the study area, may have been impacted by previous land uses.

Telegraph Line, Hastings	Above ground telegraph line dating pre- 1891.	HASTINGS Station HASTINGS HARTING HARTING	Unknown
Possible Farmhouse, off Frankston Hastings Road	Possible farm complex dating pre-1881.	40 Bridge 20 Byidge	Possibly affected by subsequent land use practises.
Structure adjacent to cultivation paddock, south of Denham Road	Likely rural structure associated with the cultivation paddock. Dating pre-1891.	DENHAM BERHAM ge	Unknown (some aerial maps show possible remains of a structure located approximately 85m east of the alignment at Denham Road)

Tyabb Waterholes	Identified by Butler (Place 632) during the Hastings District Heritage Study for its historical and social significance possibly as an early watering place and for its environmental values (Graeme Butler & Associates 2001: Appendix 1: 63);	AND	Study area crosses through the former Tyabb Waterholes (shown as a red/white alignment on the map).
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Fisher's Hut, Bittern	Fishers Hut dating c.1875	89 89 1. 34 65. 1. 34 65. 1. 34 80 1. 30 1.	Possibly within 30m of study area.
Quail Island and Environs (Classified by the National Trust in 1975). Hermes property No. 70342	Listed by the National Trust for its significant Indigenous vegetation, stretching along the mainland shoreline from Bungower Road to Tooradin, Watsons Inlet and Rutherford Creek (VHD online, 2018).	7 Dave Mand	Study area crosses through this location.
Tyabb Coastline and Hinterland (Last classified by the National Trust in 2005). Hermes property No. 70353	Listed by the National Trust for its significant ecological values as a relatively intact saltmarsh, mangrove inter-tidal zone and hinterland from Watsons Inlet along the Westernport coastline (VHD online, 2018).		Study area crosses through this location (see Appendix 1).

4.5. Summary of Heritage Values

A search of known heritage registrations revealed a single place, Denham Road Farmhouse Site (VHI H7921-0119) partially within the r.7 pipeline ROW (Table 2). An additional five places listed on the relevant municipality Heritage Overlay and Victorian Heritage Register were identified within 100m of the r.7 pipeline ROW.

A review of previous heritage studies, previous archaeological assessments and some historic maps identified five areas of cultural heritage sensitivity (Balla Balla Pre-emptive Right, Quail Island and Environs, Tyabb Waterholes, Tyabb Coastline and Land Gazetted for Military Purposes, Bittern) have been identified within the r.7 pipeline ROW (Table 3).

A discussion of the implications and impacts for these areas is presented in Section 4.6.

4.6. Implications and Impacts

Table 4 provides a summary of the registered heritage places in the study area and shows that despite the scope of the works a small number of known places are likely to be impacted by the project. A single registered place has been identified as falling partly within the study area, Denham's Road Farmhouse Site (H7921-0119) and will be impacted by the proposed development (Table 4). Consent to Damage (C1059) was previously issued to Esso Australia Resources Pty Ltd for Denham's Road Farmhouse Site (H7721-0119) in July 2016 (Appendix 2). The conditions of this Consent were met by Andrew Long & Associates, partly by archaeological monitoring (2016: 2). If the extent of site disturbance is within the same footprint of the works approved under C1059, no additional Consent is required (Figure 9).



Figure 9: Purple outline shows the registered boundary of H7921-0119 in purple, ESSO pipeline footprint in green and the ESSO study area in yellow (Source: Andrew Long & Associates 2016: 32)

Two registered places occur within 50m of the ROW (Balla Balla Pastoral Homestead HO13, and Dalmore Well HO47) and three registered places (Former BP Refinery Administration Building HO240/VHR H1016, Hobson's Soldier Setter House HO115/HO235, Wattle & Daub Hut H021) have been identified within 60-100m of the proposed alignment. These places are all listed on the relevant municipality Heritage Overlay and may have archaeological values that will need to be considered (Table 4). These places may be impacted from work vibrations and dust from construction vehicles and construction materials. If there are changes to the existing alignment, there may be potential for impact to these places. If the mapped extent of these Heritage Overlay places is impacted by the development then a Permit is required from the relevant municipality. This can be reviewed following the finalisation of the project area.

Table 4:	Summary of	registered	heritage	places
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Site Name	Registration	Discussion of sensitivity and impacts
Former BP Refinery	HO240; VHR H1016	This place does not occur within the r.7 pipeline ROW.
Balla Balla Pastoral	H013	Unlikely to have <i>in situ</i> archaeological features where
Homestead		the r.7 pipeline ROW occurs due to the construction of
		the Baxter-Tooradin Road, the installation of fencing and
		drainage, the installation of a telecommunications cable
		in a north - south easement through the r.7 pipeline
		ROW and agricultural activities throughout.
Dalmore Well	H047	This place does not occur within the r.7 pipeline ROW.
Solider Settler House &	HO115;	This place does not occur within the r.7 pipeline ROW.
Rythdale Trees	HO235	
Wattle & Daub Hut,	HO21	This place does not occur within the r.7 pipeline ROW.
Jatoki Farm		
Denham Road	VHI 7921-0119	This place lies partially within the r.7 pipeline ROW and
Farmhouse		has been subject to previous disturbance associated
		with the construction of the ESSO pipeline at this
		location.

Five areas of cultural heritage sensitivity (Land Gazetted for Military Purposes, Balla Balla Pre-emptive Right, Quail Island and Environs, Tyabb Coastline and Tyabb Waterholes) occur within the r.7 pipeline ROW (Table 5). These areas are considered to have low potential for *in situ* archaeological features as:

- Extensive ground disturbance associated with the construction of the existing ESSO pipeline has occurred at Land Gazetted for Military Purposes.
- The area associated with Tyabb Waterholes will have been impacted by the construction of South Boundary Road East, drains, fences and a lane.
- Balla Balla Pre-emptive right is dissected by the r.7 pipeline ROW and has undergone extensive ground disturbance associated with the construction of the Baxter-Tooradin Road, agricultural practices and farm infrastructure. Apart from an area of approximately 500m, the ROW at this location runs parallel and alongside the existing ESSO pipeline through the Balla Balla Pre-emptive Right area. It is likely that if archaeological features are present at this location they would have been identified during the construction of the ESSO easement in 2016.

Discussion of sensitivity and impacts
Unlikely to have in situ archaeological features where the r.7 pipeline
ROW occurs due to the construction of the existing ESSO
pipeline/easement at this location (the r.7 pipeline ROW will occur within
the ESSO easement in this area).
This place is outside of the r.7 pipeline ROW.
The r.7 pipeline ROW crosses through this location. There is some,
albeit low, archaeological potential associated with this area.
This section of the r.7 pipeline ROW will be under-bored for
approximately 85m - this place will be avoided.
The location of this feature is unknown. The r.7 pipeline ROW through
Hastings township will occur in the existing road reserve which has been
subjected to substantial ground disturbance through the construction of
the road and road reserves, and the installation of above ground and
subsurface infrastructure.
This place is situated approximately 200m west of the r.7 pipeline ROW
on the west side of Frankston-Flinders Road.
The location of this place is unknown but is considered to occur south of
Denham Road. This place does not appear to occur within the r.7
pipeline ROW based on the review of a historical map. However, if the
pipeline alignment is amended this will need to be reviewed.
This area is unlikely to have in situ historical features where it occurs in
the r.7 pipeline ROW due to the construction of South Boundary Road
East, drains, a laneway and agricultural practices which would have
resulted in substantial ground disturbance at this location.
This place does not occur within the r.7 pipeline ROW.
The r.7 pipeline ROW crosses through this place, however it has low
historical archaeological potential.
The r.7 pipeline ROW crosses through this place, however it has low
historical archaeological potential.

Table 5: Summary of areas of cultural heritage sensitivity

One area of cultural heritage sensitivity, Telegraph Line Hastings, may occur within close proximity to the ROW. However, its exact location is unknown and it is likely to have been significantly impacted by the development of Hastings.

Other areas of known cultural heritage sensitivity within the r.7 pipeline ROW such as Quail Island and Environs and Tyabb Coastline are unlikely to have any *in situ* historical cultural heritage values and will be subject to detailed environmental investigations that will inform the construction methodology for avoidance and minimisation of impacts at these locations.

A number of places with possible heritage values were identified in the broader study area during this assessment, a result of the collation of previous heritage studies and historical maps. These places may have an archaeological expression and may meet the threshold as an archaeological place under the *Heritage Act* 2017. Although not currently registered on the VHI, archaeological places older than 75 years are afforded protection under the *Heritage Act* 2017. The areas of cultural heritage sensitivity in the broader study area may need to be reviewed following the finalisation of the project area.

5. Legislative Requirements and Management Recommendations

5.1. Desktop Assessment Conclusions & Legislative Requirements

The assessment has identified that one registered heritage place, Denham's Road Farmhouse (VHI 7921-0119), occurs partially within the r.7 pipeline ROW and five areas of cultural heritage sensitivity (Land Gazetted for Military Purposes, Balla Balla Pre-emptive Right, Quail Island and Environs, Tyabb Coastline and Tyabb Waterholes) occur within the r.7 pipeline ROW.

The desktop assessment findings have been considered in light of the relevant legislation:

- Environment Effect Act 1978
 - This assessment has not identified any potential major extensive effects on existing registrations currently on the Victorian Heritage Register, Victorian Heritage Inventory or municipal Heritage Overlay.
- EPBC Act 1999
 - This assessment has not identified any potential major extensive effects on existing registrations on the National Heritage List, the Commonwealth Heritage List and Australia's World Heritage List.
- Planning and Environment Act 1987
 - If the registered extent of places included on the Heritage Overlay, Mornington Peninsula Shire HO240; City of Casey HO13 and HO21; Cardinia Shire HO47 and HO115, (identified as located within 100m of the study area) are impacted by development, a Permit is generally required from the relevant municipality. Section 85 of the *Pipeline Act* 2005 provides an exemption form the need to obtain planning approvals under the *Planning and Environment Act* 1987.
- Heritage Act 2017
 - Archaeological places older than 75 years whether registered or not are afforded protection under the *Heritage Act* 2017.
 - A Consent to Damage under the *Heritage Act* 2017 is required prior to any works occurring at Denham's Road Farmhouse (VHI 7921-0119). Consent to Damage (C1059) was previously issued to Esso Resources Australia Pty Ltd in 2016 (Appendix 2). The conditions of this Consent were met by Andrew Long & Associates (2016).

5.2. Mitigation Measures & Recommendations

Denhams Road Farmhouse H7721-0119

Denhams Road Farmhouse (H7721-0119) is partially located in the r.7 pipeline ROW. Consent to Damage (C1059) was previously issued to Esso Australia Resources Pty Ltd for Denham's Road Farmhouse Site (H7721-0119). If the extent of site disturbance for the ROW is within the same footprint of works approved under C1059, no additional Consent is required (the existing consent may need to be extended to allow for the timing of the proposed works). If the pipeline alignment falls outside of the approved C1059 area, a new Consent to Damage is required. Care should be taken to avoid damage to this place where it occurs outside of the C1059 consent area.

Former BP Refinery Administration Building HO240/VHR H1016,

The Former BP Refinery Administration Building (VHR H1016) is located within 100m of the r.7 pipeline ROW. Care should be taken to ensure that the method of construction and details of the proposed works will not lead to damage from vibration, and from dust from construction vehicles and construction materials blowing over the area over a long period of time. A structural engineer should be engaged to provide expert advice to ensure its protection. If the project alignment is amended and will impact this registered place, a Permit is required under s.93 of the *Heritage Act* 2017.

Balla Balla Pastoral Homestead HO13

The Balla Balla Pastoral Homestead (HO13) is located within 100m of the r.7 pipeline ROW. Care should be taken to ensure that the method of construction and details of the proposed works will not lead to damage from vibration, and from dust from construction vehicles and construction materials blowing over the area over a long period of time. A structural engineer should be engaged to provide expert advice to ensure its protection. If the project alignment is amended and this place will be impacted by the proposed works, then a Permit is required from the relevant municipality. If this place is impacted by the project targeted historical research should be completed to determine the full extent, nature and significance of any cultural heritage values that may exist within these areas of potential archaeological sensitivity.

Dalmore Well HO47

Dalmore Well (HO47) is located within 100m of the r.7 pipeline ROW. Care should be taken to ensure that the method of construction and details of the proposed works will not lead to damage from vibration, and from dust from construction vehicles and construction materials blowing over the area over a long period of time. A structural engineer should be engaged to provide expert advice to ensure its protection. If the project alignment is amended and this place will be impacted by the proposed works, then a Permit is required from the relevant municipality. If this place is impacted by the project targeted historical research should be completed to determine the full extent, nature and significance of any cultural heritage values that may exist within these areas of potential archaeological sensitivity

Hobson's Soldier Setter House & Trees HO115/HO235

Hobson's Soldier Setter House & Trees (HO115/HO235) is located within 100m of the r.7 pipeline ROW. Care should be taken to ensure that the method of construction and details of the proposed works will not lead to damage from vibration, and from dust from construction vehicles and construction materials blowing over the area over a long period of time. A structural engineer and arborist should be engaged to provide expert advice to ensure its protection. If the project alignment is amended and this place will be impacted by the proposed works, then a Permit is required from the relevant municipality. If this place is impacted by the project targeted historical research should be completed to determine the full extent, nature and significance of any cultural heritage values that may exist within these areas of potential archaeological sensitivity

Wattle & Daub Hut Jatoki Farm H021

Wattle & Daub Hut Jatoki Farm (H021) is located within 100m of the r.7 pipeline ROW. Care should be taken to ensure that the method of construction and details of the proposed works will not lead to damage from vibration, and from dust from construction vehicles and construction materials blowing over the area over a long period of time. A structural engineer should be engaged to provide expert advice to ensure its protection. If the project alignment is amended and this place will be impacted by the proposed works, then a Permit is required from the relevant municipality. If this place is impacted by the project targeted historical research should be completed to determine the full extent, nature and significance of any cultural heritage values that may exist within these areas of potential archaeological sensitivity.

Areas of Cultural Heritage Sensitivity

Five areas of cultural heritage sensitivity (Land Gazetted for Military Purposes, Balla Balla Pre-emptive Right, Quail Island and Environs, Tyabb Coastline and Tyabb Waterholes) that occur within the r.7 pipeline ROW are considered to have low archaeological potential. Targeted historical research should be completed for these areas to determine the full extent,

nature and significance of any cultural heritage values that may exist within these areas of potential archaeological sensitivity if impacted by the project.

References

Andrew Long & Associates, 2016. Letter report: *Denhams Road Farmhouse, Hastings* (*H7921-0119*) and *Monomeith Homestead, Monomeith (H0452*). Report to Heritage Victoria.

Blake, L. 1977. Place Names of Victoria. Rigby Limited, Melbourne.

Butler, G. & Associates 1996. Heritage of the City of Casey Historic Sites in the Former Cranbourne Shire. Report to City of Casey.

Butler G. & Associates, 2001. Hastings District Heritage Study Stage 2. Volume 2. Environmental History. Report to Mornington Peninsula Shire Council.

Casey Cardinia Heritage, 2018. 'Cannons Creek, Warneet and Blind Bight – Part 1.' Accessed from <u>http://caseycardinialinkstoourpast.blogspot.com/2009/07/cannons-creek-warneet-and-blind-bight.html</u> August 2018.

Cardinia Shire Council, 2018. *Planning & Environment Act 1987 Cardinia Planning Scheme Amendment C234 Explanatory Report.* Accessed online <u>http://planning-schemes.delwp.vic.gov.au/updates-and-</u> amendments/amendment2id=8788AEE3E2A8C371CA2581EC0080D20C, July 2018

amendments/amendment?id=87B8AFE3F2A8C371CA2581FC0080D29C July 2018.

City of Casey, 2017. Heritage Strategy. Draft. City Planning. Accessed online <u>https://www.caseyconversations.com.au/17288/documents/58356 July 2018</u>.

Context 2004. *Thematic Environmental History (Post European Contact).* Report to the City of Casey.

Context 2011. *Cardinia Local Heritage Study Review*. Vol. 2: Key Findings & Recommendations. Revised Report for Cardinia Shire Council.

Context, 2017. *Post-Contact Heritage Assessment, Pakenham East Precinct*. Final Report Revised October 2017. Report to Cardinia Shire Council.

Department of Sustainability and Environment, 2006. *Ministerial guidelines for assessment of environmental effects under the Environmental Effects Act 1978.* State Government of Victoria, Melbourne.

Dingle, T. 1984. The Victorians Settling. Wilke & Co. Ltd., Clayton.

Edgecombe, J. 1989 Philip Island and Western Port. M Edgecombe, Sydney.

eMelbourne, 2018. 'Langwarrin'. Accessed from <u>http://www.emelbourne.net.au/biogs/EM00832b.htm</u> July 2018

Gunson, N. 1968. *The Good Country: Cranbourne Shire*. F. W. Cheshire Publishing P/L, Melbourne.

Hill, B. & P. Pepdjonovic, 2017. Monomeith Homestead, Monomeith and Denham Road Farmhouse, Hastings. Historical Monitoring Report. Report to Esso Australia Resources P/L.

Hutchinson, F. 2011. *Beginnings: A Brief Account of Some of the First Europeans to Explore or Settle in Victoria*. Prahran Mechanic's Institute Press, Melbourne.

Muir, S. 2002. A cultural heritage survey of the Frankston-Flinders Road and Denham Road intersection, Tyabb, Victoria. Report to VicRoads.

Nelson, P. & L. Alves, 2009. Lands Guide, Public Records Office of Victoria, Melbourne.

Seawright, C. 2018. *AGL Gas Import Jetty Project*, AGL Energy Limited. Historic Heritage Assessment.

Somerville Heritage Society, 2018. 'History' accessed from <u>http://home.vicnet.net.au/~stdhs/history.html</u> July 2018.

Spreadborough, R. & H. Anderson, 1983. *Victorian Squatters*. Red Rooster Press, Melbourne.

State Library of Victoria, 1889. Tooradin Government Road and Tooradin Esplanade. Accessed from <u>http://handle.slv.vic.gov.au/10381/157740 July 2018</u>

State Library of Victoria, 1930. '*Sherwood, County of Mornington*' Department of Crown Lands and Survey. Accessed from <u>http://handle.slv.vic.gov.au/10381/112972</u> July 2018.

The Age, 2005. Do not forget Western Port. 10 January 2005. Accessed from <u>https://www.theage.com.au/national/do-not-forget-western-port-20050110-gdzc1k.html</u> July 2018.

Townrow, K. 1997. *An Archaeological Survey of Sealing and Whaling in Victoria*. Heritage Victoria & Australian Heritage Commission.

Victorian Heritage Database, 2018. 'Former BP Refinery Administration Building'. Accessed from <u>http://vhd.heritagecouncil.vic.gov.au/places/3726/download-report July 2018</u>.

Victorian Heritage Database, 2018. 'Tyabb Coastline and Hinterland'. Accessed from <u>http://vhd.heritagecouncil.vic.gov.au</u> August 2018.

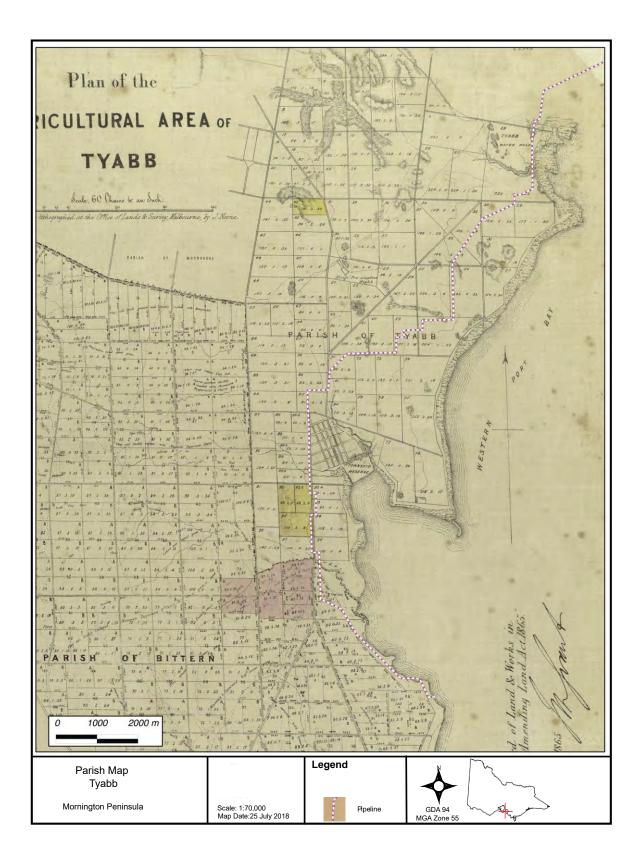
Victorian Heritage Database, 2018. 'Balla Balla'. Accessed from <u>http://vhd.heritagecouncil.vic.gov.au</u> August 2018.

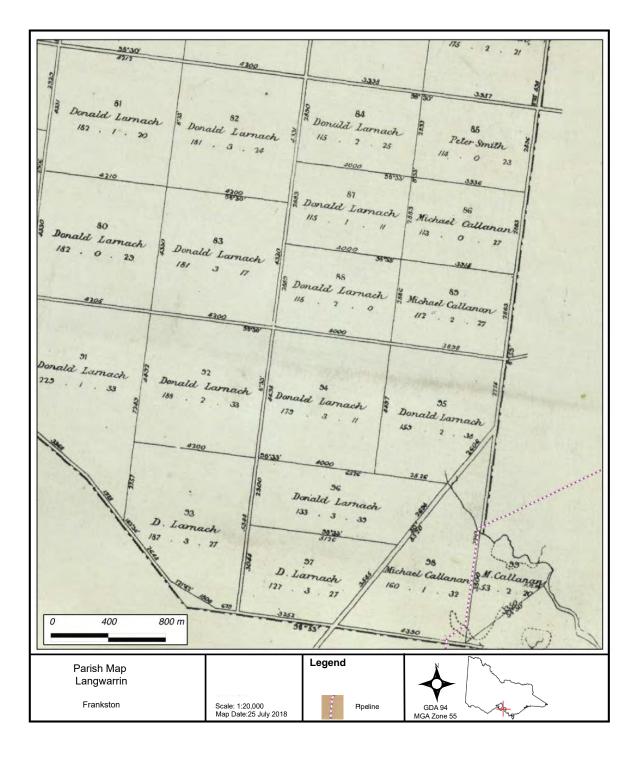
Victorian Heritage Database, 2018. 'Quail Island and Environs'. Accessed from <u>http://vhd.heritagecouncil.vic.gov.au</u> August 2018.

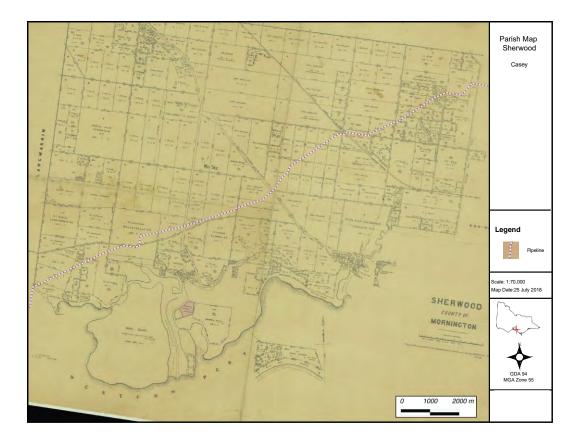
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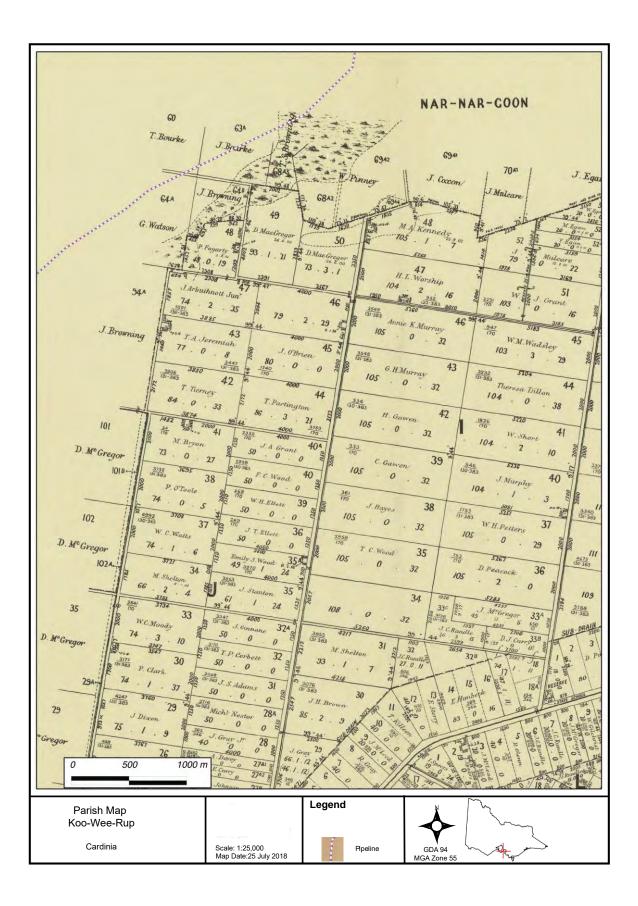
http://trove.nla.gov.au/

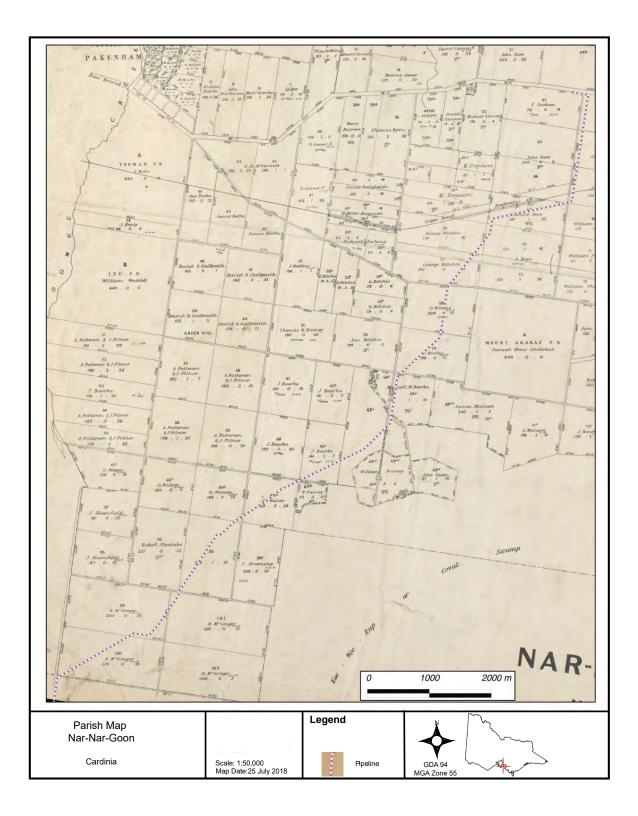
https://cv.vic.gov.au/organisations/berwick-pakenham-historical-society-inc/











APPENDIX 2: Consent to Damage C1059



Department of Environment, Land, Water & Planning

David Ffrench Esso Australia Resources Pty Ltd GPO Box 400 Melbourne VIC 3001

Level 9, 8 Nicholson Street East Melbourne Victoria 3002 Telephone: 03 9938 6894 www.delwp.vic.gov.au DX210098

Dear Mr Ffrench

HERITAGE ACT 1995 - CONSENT TO DAMAGE, C1059 Denham Road Farmhouse site (H7921-0119)

Enclosed is the Consent to Damage for the above site. The Consent authorises the disturbance of part of the site, subject to the conditions listed on the Consent.

Please read the conditions listed on the Consent thoroughly.

Should you have any queries, please contact Jeremy Smith, Principal Archaeologist, on 9938 6875 (email: jeremy.smith@delwp.vic.gov.au).

Yours sincerely

Brenge

Tim Smith for Executive Director Heritage Victoria

28/7/2016



Privacy Statement Any personal information about you or a third party in your correspondence will be protected under the provisions of the Privacy and Dato Protection Act 2014. It will only be used or disclosed to appropriate Ministerial, Statutory Authority, or departmental staff in regard to the purpose for which it was provided, unless required or authorised by law. Enquirles about access to information about you held by the Department should be directed to the Privacy Coordinator, Department of Environment, Land, Water and Planning, PO Box 500, East Melbourne, Victoria 8002

Consent Number: C1059 Consent Type: Consent to Damage Over Half

HERITAGE CONSENT

FILE NUMBER: FOL/15/7273-4

GRANTED UNDER SECTION 129 OF THE HERITAGE ACT 1995

NAME OF SITE:	Denham Road Farmhouse site
HERITAGE INVENTORY NUMBER:	H7921-0119
LOCATION OF SITE:	28 Bayview Road, Hastings in the Mornington Peninsula Shire Council
APPLICANT:	David Ffrench Esso Australia Resources Pty Ltd GPO Box 400 Melbourne VIC 3001
OWNER/LAND MANAGER:	Ron Bange John Lysaght (Australia) Ltd (now Bluescope Steel) C/- 120 Collins Street Melbourne VIC 3000
ARCHAEOLOGIST:	Paul Pepdjonovic Andrew Long & Associates 54-58 Smith Street Collingwood VIC 3066

THE CONSENT TO DAMAGE ALLOWS: THE DISTURBANCE OF PARTS OF THE SITE, SUBJECT TO HISTORICAL ARCHAEOLOGICAL MONITORING, INVESTIGATION AND REPORTING, AS REQUIRED.

THE FOLLOWING CONDITIONS APPLY TO THIS CONSENT:

- This Consent shall expire if the approved works have not commenced and been completed within two
 (2) years of the date of issue of this Consent, unless otherwise agreed in writing by the Executive
 Director, Heritage Victoria.
- The Consent cannot be transferred or reassigned without approval from the Executive Director, Heritage Victoria.
- The Consent authorises the disturbance of historical archaeological remains within the part of the site shown on the submitted *Denham Road Farm Detail Plan* (Andrew Long & Associates, 5 November 2015).
- 4. The project archaeologist must monitor all sub-surface disturbance within the site. Any potentially significant historical archaeological features, deposits and/or artefacts that are exposed at any time must be investigated and recorded, and the results presented in the project report. Site monitoring may cease when the project archaeologist determines that the works no longer have the potential to impact historical archaeological remains.
- The investigation is to be in accordance with Heritage Victoria's Guidelines for Investigating Historical Archaeological Artefacts and Sites (January 2014). Project requirements such as background research;

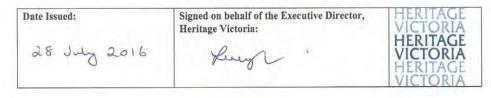
project reporting and analysis of findings; artefact cataloguing, analysis, discard and retention, conservation and management must be in accordance with the guidelines.

- One electronic copy of the Consent Report must be submitted to Heritage Victoria within 12 months of the completion of the fieldwork.
- The applicant is liable for all expenses arising from the storage, management and curation of any significant historical archaeological artefacts that are recovered and retained as a result of the project.
- If any Aboriginal archaeological material is uncovered, all works must cease immediately. The finding
 of Aboriginal archaeological material must be reported to Heritage Victoria and Aboriginal Victoria
 immediately.
- 9. Officers of Heritage Victoria may at any time inspect the works undertaken or relics recovered under the Consent, acting under the authority of the *Heritage Act* 1995. The Consent can be revoked at any time at the discretion of the Executive Director. Any person exercising the authority of this Consent must produce it for inspection, when required to do so, by any member of the police force or by any person appointed as an inspector under the Act.

NOTE THAT PERMISSION HAS BEEN GIVEN FOR INSPECTIONS OF THE PLACE OR OBJECT TO BE UNDERTAKEN DURING THE CARRYING OUT OF WORKS, AND WITHIN SIX (6) MONTHS OF NOTIFICATION OF THEIR COMPLETION.

TAKE NOTICE THAT ANY NATURAL PERSON WHO DOES NOT COMPLY WITH THE TERMS AND CONDITIONS CONTAINED IN THIS CONSENT IS GUILTY OF AN OFFENCE UNDER S.129(5) OF THE *HERITAGE ACT* 1995, AND LIABLE TO A PENALTY OF UP TO 240 (\$33,792) PENALTY UNITS, OR IN THE CASE OF A BODY CORPORATE 480 (67,584) PENALTY UNITS.

THE ATTENTION OF THE OWNER AND/OR APPLICANT IS DRAWN TO THE NEED TO OBTAIN ALL OTHER RELEVANT CONSENTS PRIOR TO THE COMMENCEMENT OF WORKS.



IMPORTANT INFORMATION ABOUT THIS CONSENT

WHAT HAS BEEN DECIDED?

The Executive Director has issued a Consent under section 129 of the Heritage Act 1995.

WHEN DOES THE CONSENT BEGIN?

The Consent operates from a day specified in the Consent.

WHEN DOES A CONSENT EXPIRE?

A Consent expires if-

the archaeological component of the development does not start within the time specified in the Consent; or

the archaeological component of the development is not completed within the time specified in the Consent.

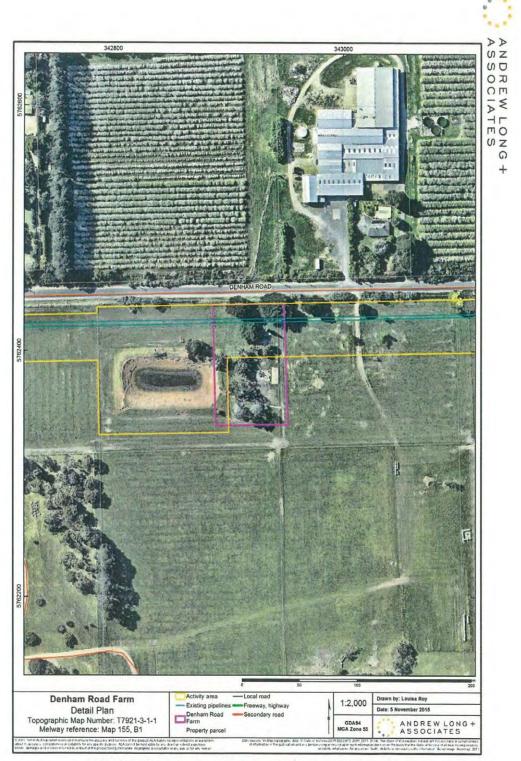


Figure 1: Detail map showing H7921-0119, activity area and existing pipeline

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