Residential Redevelopment

Dr Cupp

Lot 10 LP8386 (11 Beach Street, Frankston)

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Significant Ground Disturbance Assessment

Report to CAAMCo 11 Beach Street Pty Ltd



23 April 2024

Landskape

a division of ML Cupper Pty Ltd ABN 48 107 932 918

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Executive Summary

ADVE Residential Redevelopment Frankston

PLAN

CAAMCo 11 Beach Street Pty Ltd proposes to construct multiple residentiality dwellings on a suburban lot (Lot 10 LP8386) located at 11 Beach Street, Frankston, approximately 35 km southeast of Melbourne CBD.

As part of the planning application pertaining to the proposed redevelopment Landskape's principal research scientist Dr Matt Cupper was engaged by CAAMCo 11 Beach Street Pty Ltd to complete a significant ground disturbance assessment and identify whether a mandatory Aboriginal cultural heritage management plan is required for the activity. Dr Cupper is a qualified geoscientist and archaeologist, with high-level expertise in geomorphology and soil science. He is also a Research Fellow in the School of Geography, Earth and Atmospheric Sciences at The University of Melbourne.

The Victorian Aboriginal Heritage Regulations 2018 (r.7) require an Aboriginal cultural heritage management plan for a proposed activity, if: (a) all or part of the activity area for the activity is an area of cultural heritage sensitivity (not subject to significant ground disturbance); and, (b) all or part of the activity is a high impact activity.

Lot 10 LP8386 is within 200 m of Kananook Creek and an area mapped as "Qm1" on the Surface Geology of Victoria 1:250,000 map book. According to the Aboriginal Heritage Regulations 2018, land within 200 m of waterway (r. 26) or the Koo Wee Rup Plain (r. 34[1]) is an area of cultural heritage sensitivity (according to r. 34[3] Koo Wee Rup Plain means an area identified as "Qg" and "Qm1" in the Surface Geology of Victoria 1:250 000 map book). However, under regulations 26(2) and 34(2), if part of the land within 200 m of a waterway, or if part the Koo Wee Rup Plain has been subject to significant ground disturbance, that part is not an area of cultural heritage sensitivity.

This assessment concludes the entire area of Lot 10 LP8386 has been subject to previous significant ground disturbance and is therefore not in an area of cultural heritage sensitivity according to the Aboriginal Heritage Regulations 2018.

The second limb (part [b]) of regulation 7 is also not met.

Regulation 10 of the Aboriginal Heritage Regulations 2018 permits construction of 3 or more dwellings on a lot as an exempt activity if the allotment is (a) not within 200 metres of the coastal waters of Victoria or the Murray River; and (b) less than 0.11 hectares. Specifically, Lot 10 LP8386 is (a) not within 200 metres of the coastal waters of Victoria or the Murray River; and (b) measure 829 m2 in area, less than 0.11 ha.

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Accordingly, the proposed redevelopment of Lot 10 LP8386 does not require a mandatory Cultural Heritage Management Plan (CHMP) under Section 46 of the *Aboriginal Heritage Act* 2006.

Moreover, no Aboriginal cultural heritage has been previously identified in the activity area, and predictive modelling, complemented by observations of the level of previous ground disturbance, concludes that the likelihood of encountering Aboriginal cultural heritage in the activity area is negligible.

Nevertheless, in the hightly unlikely event that previously unidentified Aboriginal cultural heritage items are encountered during the proposed activities, any further disturbance must be avoided. Works within 20 metres of the Aboriginal cultural material must cease immediately and a heritage advisor or First Peoples – State Relations (tel: 1800 762 003) consulted about an appropriate course of action prior to recommencement of activities. In the case of suspected human remains, all activity in the vicinity must be suspended. If human skeletal remains are encountered, the Police or Victorian Coroner's office (tel: 03 9684 4444) must be notified immediately. If it is suspected on reasonable grounds that the human remains are Aboriginal Ancestral remains, the Coronial Admissions and Enquiries hotline on tel: 1300 888 544 must be contacted immediately.

A voluntary Aboriginal cultural heritage management plan could also be prepared for the activities under section 45 of the *Aboriginal Heritage Act* 2006.



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List of Abbreviations

CHMP – Cultural Heritage Management Plan VCAT- Victorian Civil and Administrative Tribunal







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Introduction

CAAMCo 11 Beach Street Pty Ltd proposes to construct multiplese residential breach any dwellings on a suburban lot (Lot 10 LP8386) located at 11 Beach Frankston, approximately 35 km southeast of Melbourne CBD.

As part of the planning application pertaining to the proposed redevelopment Landskape's principal research scientist Dr Matt Cupper was engaged by CAAMCo 11 Beach Street Pty Ltd to complete a significant ground disturbance assessment and identify whether a mandatory Aboriginal cultural heritage management plan is required for the activity. Dr Cupper is a qualified geoscientist and archaeologist, with high-level expertise in geomorphology and soil science. He is also a Research Fellow in the School of Geography, Earth and Atmospheric Sciences at The University of Melbourne (see section 1.2).

1.1 Aims of the Investigation

The aim of this geomorphic investigation was to prepare a general statement identifying whether the activity area has been subject to previous significant ground disturbance. Statutory requirements pertaining to Aboriginal cultural heritage were also examined to determine their applicability to the proposed redevelopment.

Preparation of this assessment involved review of the Aboriginal Heritage Act 2006 and the Aboriginal Heritage Regulations 2018.

Aerial photographs were used to identify areas of potential significant ground disturbance.

Field inspection of the activity area was completed to complement the air-photograph interpretation and examine the ground surface and determine the actual risk to cultural heritage.

1.2 Personnel Involved in the Assessment

Landskape's principal research scientist Dr Matt Cupper undertook the investigation and produced this report.

Dr Cupper has a wide background in the sciences and humanities, with degrees (including a PhD) in archaeology and classical history, geology and botany, with particular expertise in understanding the formation of archaeological sites and Quaternary environments. He has published extensively on these topics in high-profile, peer-reviewed scientific journals and was lead author for the Quaternary chapter of the

Lands_kape 1 Geology of Victoria (Cupper et al. 2003), the current, premier reference to Victoria's geology.

Dr Cupper is currently a Research Fellow in the School of Geography, Earth and Atmospheric Sciences at The University of Melbourne (www.findanexpert.unimelb.edu.au/display/person20521), where he manages the luminescence dating facility in addition to teaching geological methods and sedimentary geology to undergraduate students and supervising postgraduate research.

As a consulting geoscientist and archaeologist, Dr Cupper has been engaged in hundreds of management and research-oriented studies throughout southeastern Australia for industry and government.

Dr Cupper also meets the requirements of a 'heritage advisor' under section 189(1) of the *Aboriginal Heritage Act* 2006:

(https://www.firstpeoplesrelations.vic.gov.au/choose-heritage-advisor).



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2 Contextual Information

2.1 Legislative Context

All Victorian registered and unregistered Aboriginal cultural heritage sites are protected by the *Aboriginal Heritage Act* 2006 (commenced 28 May 2007). This Act prohibits the wilful destruction or disturbance of any Aboriginal cultural heritage site, place or object, whether on private or public land.

First Peoples – State Relations is the Victorian State Government agency that administers this Act.

2.1.1 Aboriginal Heritage Act 2006

The Aboriginal Heritage Act 2006 and its Aboriginal Heritage Regulations 2018 are of particular relevance to the proposed redevelopment. A core component of this Act is the preparation of Aboriginal Cultural Heritage Management Plans (CHMPs), which are required under certain circumstances for high impact activities.

The regulations can be used to determine if an Aboriginal Cultural Heritage Management Plan is required for an activity. Section 5.1 of this scoping study makes such a determination for the proposed residential redevelopment. The regulations also detail the standards expected of an Aboriginal Cultural Heritage Management Plan.

2.2 Environmental Context

The lot (Lot 10 LP8386) proposed for construction of residential dwellings is located in the outer metropolitan Melbourne suburb of Frankston, part of the Port Phillip Bay region of southern Victoria. Geologically, the study area is on a sand sheet, approximately 300m inland from the shore of Port Phillip Bay. The sand sheet is aeolian (wind-blown) sediment, deposited across the eastern hinterland of the bay over the past 10,000 years (VandenBerg 1997, Cupper *et al.* 2003).

Current land use of the proposed redevelopment area is a suburban lot occupied by a large residential dwelling now used for offices constructed in the 1930s. Existing structures at the lot include a detached double-brick single-level dwelling, with associated carport and garden shed.

Lot 10 LP8386 (11 Beach Street, Frankston) has been extensively modified by past European land use practices. The original vegetation has been completely removed and the lot cut and levelled. The topsoil and subsoil within the lot has been substantially disturbed during past excavation of the foundations for the existing dwelling and associated carport and garden shed (Figures 1 and 2).

The remainder of the topsoil and subsoil within the lot has also been heavily modified by earthworks during past excavations, terracing and levelling to construct concrete and paved driveways, concrete footpaths, brick and concrete retaining walls, footings for brick and timber property boundary fences and garden-beds, destroying all of the original land surface (Figure 3).

Additionally, trenches have been excavated across the lot to install utilities including water, sewer and gas pipes and telecommunications cables. This includes a large diameter sewer falling main, which traverses the eastern boundary of the lot.

This extensive previous ground disturbance means that none of the original land surface for the entire redevelopment area remains intact.

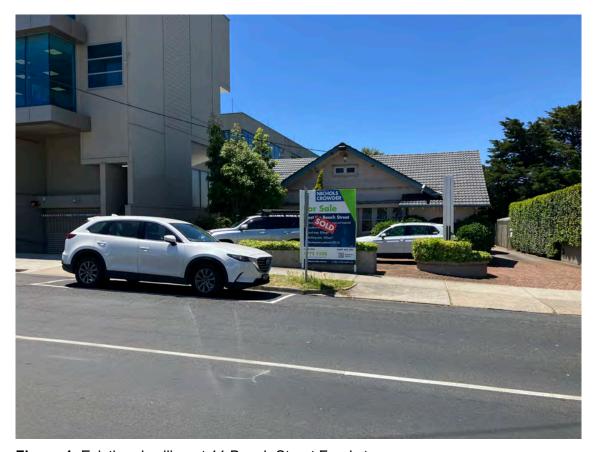


Figure 1. Existing dwelling at 11 Beach Street Frankston.





Figure 2. Existing dwelling at 11 Beach Street Frankston.



Figure 4. Existing dwelling at 11 Beach Street Frankston.

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2.3 Aboriginal Cultural Heritage Context

2.3.1 Aboriginal Ethno-History

Assistant Aboriginal Protector William Thomas kept journals, which are the chief source

of information about the Aborigines who may have once lived in the Frankston area (Thomas Journals 1840-1843). Thomas made his observations from protectorate stations he established at Arthurs Seat (1839-1840) and Narre Narre Warren (1840-1843). Useful secondary sources include the studies of Barwick (1984), Goulding (1988), Clark (1990) and Presland (1994). These sources provide accounts of Aboriginal life during the early contact period including insights into Aboriginal social organization. Below is a summary of the relevant information.

At the time of first contact with Europeans, the area southeast of Melbourne was occupied by Aboriginal people of the Bunurong (or Boon wurrung) language group (Clark 1990). The Bunurong were part of the East Kulin group of languages, who included peoples of the related Woiworung— (or Woi wurrung), Taungurong (or Daung wurrung)— and Ngurai-illam wurrung—speakers to their north (Barwick 1984, Clark 1990). These language groups shared similar language and kinship systems, notably the division members into patrilineal moieties (two-part social classification) termed 'Waa' (raven) and 'Bungil' (eagle) (Clark 1990).

Thomas estimated that in 1839 the population of Bunurong was around 500 people. The Bunurong intermarried with other East Kulin language groups, although these relationships did not prevent conflict between the groups (Clark 1990). In 1844, a large inter-tribal gathering was recorded between the Bunurong and their neighbours the Woiworung from the north. This took place near the site of the Melbourne Cricket Ground. The Bunurong also traded with the Woiworung, particularly for greenstone from which stone axe-heads could be made (McBryde 1984a).

Barwick (1984) and Clark (1990) identified six Bunurong clans. The coastal strip at the top of the Mornington Peninsula encompassing the study area is on land that was traditionally owned by the Mayone buluk (Barwick 1984, Clark 1990). Mayone means 'swamp' and the suffix –buluk or (–bulug) means 'a number of people'; thus the Mayone buluk were 'people of the swamp'. According to Gunson (1968), the Mayone buluk clan usually camped beside waterholes, creeks, rivers and coastal locations.

The seasonal availability of plants and animals probably determined the movements of Bunurong people (Presland 1994). Thomas noted the importance of swamps, which drew large numbers of Aboriginal people to spear eels. Wallabies, wombats and other animals were hunted in the hills in summer. Plant foods favoured by the Bunurong included tuberous roots, fern tree hearts and liquid amber from the black wattle tree.

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The Bunurong population began to decline from the late 1790s onwards when the tribe first clashed with European sealers and whalers (Barwick 1984, Clark 1990, Goulding 1988). This population decline accelerated rapidly from 1836 when Melbourne was founded. The population decrease was caused by dispossession of land and the consequent destruction of habitat and social networks. Introduced diseases also took their toll (Barwick 1984). By 1856, most of the Bunurong were gone but for a small population at Moody Yallock (Mordialloc).

The Aboriginal Protectorate system was replaced in 1860 by the Central Board for the Protection of Aborigines (Barwick 1984). It established Coranderrk Station at Healesville for the Aboriginal survivors. However, many Bunurong continued to live by "fringe dwelling" in and around Melbourne. Many Bunurong also remained at the Mordialloc Station reserve and did not move to Coranderrk until 1878 when it closed (Barwick 1984, Goulding 1988). In 1924, most of the Coranderrk residents were moved to the Lake Tyers Aboriginal Reserve, which operated until 1950. The present day Bunurong people

are the descendants of the Bun wurrung language group and the Kulin clans who once occupied the study area.

2.3.2 Previous Archaeological Studies

Previous archaeological studies in the Port Phillip Bay region have demonstrated purpose which may breach any Aboriginal occupation dating back at least 20,000 years. The didest archaeological sight in the region is on the Maribyrnong River near Keilor west of Melbourne where human remains were unearthed in 1940 (Mahony 1943, Gill 1966, Bowler 1976, Simmons and Ossa 1978, Witter and Simmons 1978). The river terrace deposits at this site also contain the bones of extinct giant marsupials or 'megafauna' in association with Aboriginal stone artefacts (Marshall 1974, Duncan 2001).

The majority of Aboriginal sites in the Port Phillip Bay region have been recorded along the coast. These date from around 6,000 years ago when sea levels stabilized near their present levels following the melting of the glaciers and ice-caps. Excavation of shell midden deposits has shown how shellfish gathering patterns and technology changed over this period (e.g. Coutts et al. 1976). The changes are usually interpreted by archaeologists as responses to changing environmental conditions.

Sullivan's (1981) investigation of the Mornington Peninsula resulted in a detailed account of the regional archaeological record. She located 371 Aboriginal sites of which most were shell middens dominated by Mytilus shells located along the coastline of Port Phillip Bay. Comparatively few middens were located along the Western Port coastline. Most of the sites on the Western Port side were located in the hinterland and comprised stone artefact scatters associated with freshwater swamps. Stone assemblages on the Mornington Peninsula are dominated by flakes and flaked pieces mostly struck from silcrete, chert and quartz. Backed blades are the most common category of formal tool (see also Gaughwin 1981, 1988, Presland 1983, Gaughwin and Sullivan, 1984).

On a similar regional scale, Ellender and Weaver (1991) attempted an archaeological survey of almost the entire Port Phillip Bay foreshore. Their 'east coast zone' is the most relevant to the current investigation. A total of 38 Aboriginal sites were located in this zone of which most (n = 28) were shell middens located on cliff tops, foredunes and in parts of the former Carrum Swamp. The most commonly represented shellfish species in the middens were locally available *Mytilus planulatus* (Common Mussel), *Cellana tramoserica* (Limpet), and *Subninella undulata* (Turbo). Most species are associated with rocky shores. Interestingly, no stone artefacts were recorded in association with any of the middens. Six rock wells and four scarred trees were also recorded. The rock wells were associated with rocky shorelines. The scarred trees were located in association with Kananook Creek and the former Carrum Swamp.

Ellender and Weaver (1991) concluded that Aboriginal use of the coast was characterized by brief visits specifically to exploit shellfish, with base camps established inland around fresh water sources. The rock wells at Half Moon Bay and Frankston extended opportunities for shellfish exploitation at these locations.

The results of their archaeological survey of the east coast of Port Phillip Bay led Ellender and Weaver (1991) to predict that:

- Small, single-layered shell middens may be encountered on rocky shores, specifically the tops of cliffs or bluffs;
- Shell middens maybe encountered in foredunes and around fresh water coastal swamps to a lesser extent;
- Rock wells are possible where this is fresh water and suitable geological conditions, such as cliff faces with rock platforms at the base;
- Scarred trees and stone artefact scatters would be associated with creeks and other fresh water sources inland from the coast.

2.3.3 Previously Identified Aboriginal Cultural Heritage in the Study Area

According to the Victorian Aboriginal Cultural Heritage Register and Information System (ACHRIS), no Aboriginal cultural heritage places have been located previously in the lot proposed for construction of residential dwellings.

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3 Cultural Heritage Predictive Model

Previous archaeological studies indicate that the most frequently recorded Aboriginal cultural heritage places in the wider Melbourne region are stone artefact scatters and scarred trees (Victorian Aboriginal Heritage Register for Ringwood 7922 1:100,000 map sheet area). Earthen features such as mounds have also been identified in the archaeological record. Other site types include stone sources and burials. Based on these observations of archaeological site types and their distribution and landscape setting, the following predictive model of Aboriginal cultural heritage site locations for the proposed redevelopment can be proposed. A summary of the predictive model is presented in Table 1.

Past Aboriginal occupation of the Melbourne area would have been heavily focussed on the shoreline of Port Phillip Bay because this area offered a rich resource zone. Consequently, most archaeological sites can be expected adjacent to the coast. The hinterland including the area now occupied by the lot proposed for construction of residential dwellings has a much lower potential for containing Aboriginal cultural heritage places and items.

The landscape setting of the proposed redevelopment area precludes the possibility of encountering some site types. For example, stone sources will definitely not occur because suitable rock outcrop is absent. Burials are also unlikely, given that most occur in sandy deposits near rivers.

The potential for encountering Aboriginal cultural heritage within the proposed redevelopment area is also mitigated to a large extent by the high degree of previous disturbance of the lots. For example, the past removal of the original vegetation means that scarred trees would not be encountered. Similarly, extensive modification of the original land surface during previous earthworks for land cutting, levelling and dwelling and associated outbuilding construction and other excavations such as installing driveways, paths, paving, fences and utility pipes and cables would have destroyed stone artefacts and earthen mounds, had such cultural heritage previously existed in the lots.

Table 1. Probability of encountering Aboriginal cultural heritage sites within the proposed redevelopment area.

Scarred trees	Stone artefacts	Earthen mounds	Stone sources	Burials
Negligible	Negligible	Negligible	Negligib <mark>l</mark> e	Negligible

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Field Inspection

Dr Cupper inspected Lot 10 LP8386 on 20 December 2022. The primary purpose of the ground inspection was to ascertain whether they had been subject to significant ground disturbance, with a secondary purpose to observe whether Aboriginal cultural heritage was likely to occur.

Figure 4 shows the subject land in its suburban setting. The lot (Lot 10 LP8386) has been significantly impacted by previous residential redevelopment.

Lot 10 LP8386 (11 Beach Street, Frankston) has been extensively modified by past European land use practices. The original vegetation has been completely removed and the lot cut and levelled. The topsoil and subsoil within the lot has been substantially disturbed during past excavation of the foundations for the existing dwelling and associated carports and garden shed (Figures 1-3). The remainder of the topsoil and subsoil within the lot has also been heavily modified by earthworks during past excavations, terracing and levelling to construct concrete and paved driveways, concrete footpaths, brick and concrete retaining walls, footings for brick and timber property boundary fences and garden-beds, destroying all of the original land surface (Figures 5-8).

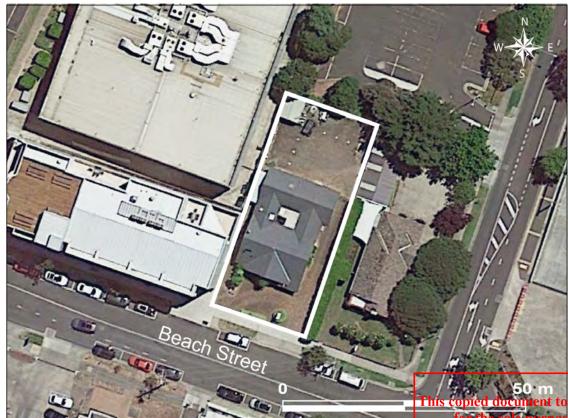


Figure 4. Aerial photograph of Lot 10 LP8386 (11 Beach Street Frankston). Frankston part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

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Figure 5. Rear of 11 Beach Street Frankston demonstrating the high levels of significant ground disturbance during concrete paving and dwelling construction.



Figure 6. Rear of 11 Beach Street Frankston showing the significant ground disturbance by dwelling and concrete paving installation.

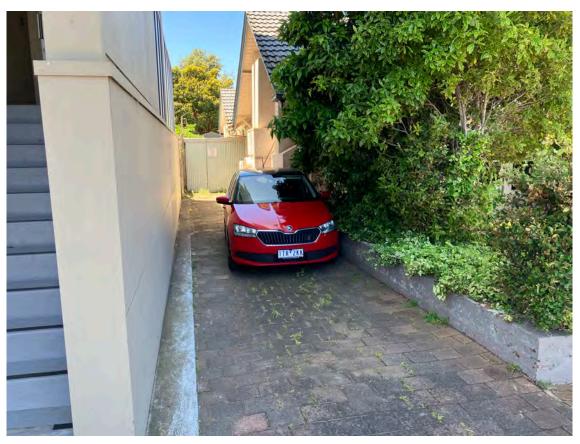


Figure 7. Western side of 11 Beach Street Frankston showing the significant ground disturbance.



Figure 8. Eastern side of 11 Beach Street Frankston showing the for the sole nurrouse of enabling disturbance.

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5 Assessment of Proposed Redevelopment According to Aboriginal Heritage Regulations 2018

All Aboriginal cultural heritage is protected by the State *Aboriginal Heritage Act* 2006. Responsibility rests with the proponent of a redevelopment to demonstrate that due care and diligence have been taken to identify and avoid impacts on archaeological sites through construction works.

A key component of the Act is Aboriginal Cultural Heritage Management Plans, which are required under certain circumstances for high impact activities.

Using the *Aboriginal Heritage Regulations* 2018 that accompany the *Aboriginal Heritage Act* 2006 it is possible to determine whether the redevelopment proposal for the construction of residential dwellings on Lot 10 LP8386 would trigger an Aboriginal Cultural Heritage Management Plan.

The *Aboriginal Heritage Regulations* 2018 (r. 7) stipulate that an Aboriginal Cultural Heritage Management Plan is required for a proposed activity, if:

- (a) all or part of the activity area for the activity is an area of *cultural heritage* sensitivity¹; and,
- (b) all or part of the activity is a *high impact activity*.

Lot 10 LP8386 is within 200 m of Kananook Creek and an area mapped as "Qm1" on the Surface Geology of Victoria 1:250,000 map book. According to the *Aboriginal Heritage Regulations* 2018, land within 200 m of waterway (r. 26) or the Koo Wee Rup Plain (r. 34[1]) is an area of cultural heritage sensitivity (according to r. 34[3] Koo Wee Rup Plain means an area identified as "Qg" and "Qm1" in the *Surface Geology of Victoria* 1:250 000 map book). However, under regulations 26(2) and 34(2), if part of the land within 200 m of a waterway, or if part the Koo Wee Rup Plain has been subject to significant ground disturbance, that part is not an area of cultural heritage sensitivity

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An area of 'cultural heritage sensitivity' means an area with the potential to **contains identifying and review as** cultural heritage items, places and/or values.

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Significant ground disturbance is defined in the Aboriginal Heritage Regulations 2018 as disturbance of: (a) the topsoil or surface rock layer of the ground; or (b) a waterway - by machinery in the course of grading, excavating, digging, dredging or deep ripping, but does not include ploughing other than deep ripping' (r.5).

First Peoples - State Relations has produced a practice note for determining significant ground disturbance (see Appendix A). This practice note is based on the Victorian Civil and Administrative Tribunal's (VCAT) recent determination about significant ground disturbance in the Mainstay Australia Pty Ltd v Mornington Peninsula SC & Others [2009] VCAT2009/145 (24 February 2009) case. The following determination for Lot 10 LP8386 (11 Beach Street, Frankston) is guided by the VCAT (2009/145) case and complies with First Peoples - State Relations' practice note.

According to First Peoples - State Relations and VCAT, the words disturbance, topsoil, surface rock layer, machinery, grading, excavating, digging, dredging, ploughing (other than deep ripping) are not defined in the regulations and therefore have their ordinary meanings. Topsoil is of particular relevance to Lot 10 LP8386 (11 Beach Street, Frankston) because there is no surface rock layer on the lots. VCAT use the Macquarie Dictionary to define topsoil as 'simply the surface or upper part of the soil' and state that 'disturbance to the topsoil could therefore arise through a relatively limited interference at limited depth'.

For significant ground disturbance to have occurred on the topsoil, machinery must have been used. If machinery has been used to grade, excavate, dig or dredge the topsoil of an area, it will constitute significant ground disturbance of that area.

The onus rests with the planning permit applicant to prove that there has been significant ground disturbance if an exemption from the Aboriginal Heritage Regulations 2018 is to apply. The standard of proof required should be enough to satisfy a planning decision maker that there has been significant ground disturbance, on the balance of probabilities having regard to the purposes of the Aboriginal Heritage Act 2006, which in essence is to protect Aboriginal cultural heritage. Mere assertion of disturbance by an applicant or landowner has little weight.

Notwithstanding the burden of proof on the applicant, First Peoples - State Relations submitted to VCAT that there should be no hard and fast rules on what information should be required to satisfy a planning decision maker that significant ground disturbance has occurred and cautioned against guidelines that might create

unreasonable obligations on applicants or responsible authorities. VCAT agreed. The This copied document to be made available level of inquiry, and the information required, will depend on the circumstances of enabling case.

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As a result of these deliberations, VCAT proposed four levels of inquiry and that assessment of significant ground disturbance should be dealt with at lowest applicable level. These levels are summarized by First Peoples - State Relations as follows:

Level 1 - Common knowledge

The fact that land has been subject to significant ground disturbance may be common knowledge. Very little or no additional information should be required from the responsible authority. For example, common knowledge about the redevelopment of a petrol filling station with extensive underground storage tanks.

Level 2 – Publicly available records

If the existence of significant ground disturbance is not common knowledge, a responsible authority may be able to provide assistance from its own records about prior redevelopment and use of land, or advise the applicant about other publicly available records, including aerial photographs. These documents may allow a reasonable inference to be made that the land has been subject to significant ground disturbance. In such event, no further inquiries or information would be needed by the responsible authority. The particular records and facts relied upon should be noted by the responsible authority as a matter of record.

Level 3 – Further information from applicant

If common knowledge or publicly available records do not provide sufficient evidence of significant ground disturbance, the applicant may need to present further evidence either voluntarily or following a formal request from the responsible authority. Further evidence could consist of land use history documents, old maps or photographs of the land, or statements by former landowners or occupiers. Statements should be provided by statutory declaration or similar means.

Level 4 - Expert advice or opinion

If these levels of inquiry do not provide sufficient evidence of significant ground disturbance (or as an alternative to Level 3), the applicant may submit or be asked to submit a professional report with expert advice or opinion from a person with appropriate skills and experience. Depending on the circumstances, this may involve a site inspection and/or a review of primary documents. If there is sufficient uncertainty, some preliminary sub-surface excavation may be warranted.

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should not be required as a matter of course. In terms of expertise, First Peoples - State Relations regards geomorphologists as suitable to undertake high-level inquiries. The cultural heritage practitioner in this case is also a geoscientist, with a PhD in geomorphology.

Also relevant is a more recent VCAT decision, Azzure Investment Group Pty Ltd v Mornington Peninsula SC [2009] VCAT2009/1600 (14 August 2009), which addressed the case of a similar lot to Lot 10 LP8386 (11 Beach Street, Frankston) in an established urban area where the lot had been extensively developed, serviced and used over an extended period of time. In that instance, it was accepted by the Tribunal that significant ground disturbance for the lot was established to a sufficient level of satisfaction with the aid of comparative and contextual information. This included the urban context within which the land is situated; the timing of subdivision; the shape, size, topography and configuration of lot in the subdivision; the actual redevelopment of dwellings and outbuildings and the pattern of use over time; the provision of underground drainage and services; the style and configuration of the house and garden; and the lack of remnant vegetation.

In that instance, it was suggested the contextual approach may assist in achieving a level of satisfaction that significant ground disturbance has occurred through a reasonable inquiry and examination of a range of relevant information (none of which is necessarily conclusive in itself) and 'joining the dots' to reach a commonsense conclusion from the available information. In that case, a reasonable level of analysis of these factors disclosed extensive site coverage by buildings and works and other services. There was also some comparative research disclosing mechanical grading of similar lot in the area at the time of subdivision. The combination of factors in that case made it likely that the whole site had been subject to significant ground disturbance over time.

In particular, in Azzure Investment Group Pty Ltd v Mornington Peninsula SC [2009] VCAT2009/1600, the Tribunal determined that: "A planning decision maker still needs to be reasonably satisfied, on the balance of probabilities based on the information in a given case, that 'significant ground disturbance' (as defined) has occurred. However, the balance of probabilities does not require proof beyond doubt. The level of inquiry, and information required, to satisfy a decision maker will depend on the circumstances of each case. In relation to a relatively small intensively develope<mark>d բւբիզդ իշէ (զճ էայթիւ</mark>կից be made available required level of inquiry or information required might therefore beonthlesolminethese of enabling its consideration and review as

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compared with that required for a sparsely developed larger site". part of a planning process under the Planning and Environment Act 1987. The document must not be used for any purpose which may breach any copyright

Part (b) of regulation 7 is also not met for the redevelopment of 11 Beach Street Frankston.

Regulation 10 of the *Aboriginal Heritage Regulations* 2018 permits construction of 3 or more dwellings on an allotment as an exempt activity if the allotment is (a) not within 200 metres of the coastal waters of Victoria or the Murray River; and (b) less than 0·11 hectares. Specifically, Lot 10 LP8386 is (a) not within 200 metres of the coastal waters of Victoria or the Murray River; and (b) measure 829 m² in area, less than 0.11 ha.

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5.1 Lot 10 LP8386 (11 Beach Street, Frankston)

Common knowledge (Level 1), publicly available records (Level 2) in the form of aerial photography (Figure 9) and utilities assets maps (Appendix 2) and expert advice (Level 4) based on the field investigation described in Section 4 (above) are used to establish that Lot 10 LP8386 (11 Beach Street, Frankston) has been subject to significant ground disturbance.

It is common knowledge that 11 Beach Street, Frankston, is an existing residential dwelling in a long-established suburb, with all above and below-ground services usually associated with a residential lot in the Melbourne metropolitan area. The site history is that of an intensively developed residential dwelling and as a consequence the original ground surface is no longer recognizable on any part of the lot. The existing dwelling, carport, shed, paving and other modified surfaces occupy the entire lot.

The aerial photograph in Figure 9 clearly shows the locations of the large existing dwelling and associated carport and garden shed on the lot and concrete paving. These surface features clearly visible on a publicly available aerial photograph show that the entire lot has been directly impacted by significant ground disturbance. Additionally, all land surrounding the lot has been significantly disturbed by heavy earthmoving machinery excavating the foundations for adjacent offices and dwellings, suburban streets (with kerbs and guttering), nature-strips and concrete footpaths.

A South East Water sewer assets map shows a buried sewer falling main pipe of DN150 mm diameter traverses the western boundary of Lot 10 LP8386 (Appendix B).

City of Frankston assets include two large diameter (DN600 mm and DN125 mm) stormwater pipes in the western and northern easements within the boundaries of the lot (Appendix B).

Earthworks involving heavy trenching machinery would have occurred during pipe installation.



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Figure 9. Aerial photograph of Lot 10 LP8386 demonstrating the significant previous development of the lot.

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Figure 10. Front of 11 Beach Street Frankston demonstrating the high levels of significant ground disturbance.



Figure 11. Western side of 11 Beach Street Frankston showing the fisighting and review as its consideration and review as

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Figure 12. Rear of 11 Beach Street Frankston demonstrating the high levels of significant ground disturbance.



Figure 13. Rear of 11 Beach Street Frankston showing the significant prount of enabling disturbance. A large diameter sewer main has been trenched through the significant prount of enabling disturbance.

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Figure 14. Rear of 11 Beach Street Frankston showing the significant ground disturbance including dwelling and shed construction and concrete paving.

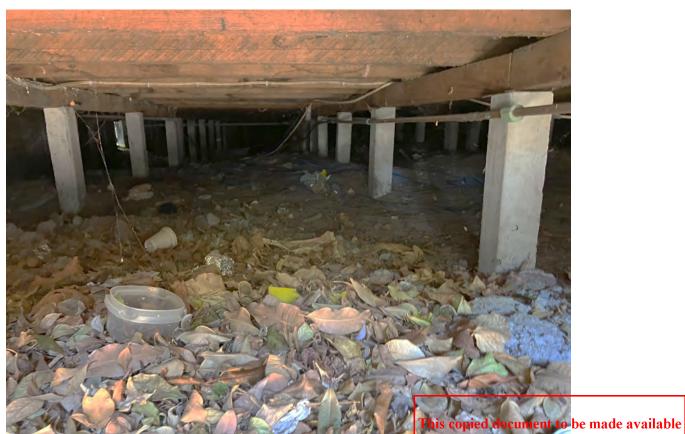


Figure 15. Underfloor cavity of 11 Beach Street Frankston.

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Figure 16. Underfloor cavity of 11 Beach Street Frankston.



Figure 17. Underfloor cavity of 11 Beach Street Frankston.

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The results of geomorphologist Dr Cupper's level 4 inquiry show that the front and backyards of the lot have also been also impacted by the use of light and heavy earthmoving machinery (Figures 10-17). This includes extensive construction of brick and concrete retaining walls to form garden beds.

Importantly, there was no trace of the original soil profile, including topsoil, on any part of the lot (see Section 4). Any archaeological sites that might have occurred in this area are no longer present as a consequence.

The Level 1, Level 2 and Level 4 inquiries show that the entire redevelopment area (Lot 10 LP8386) has been subject to significant ground disturbance including:

- clearing of all original vegetation;
- land cutting and leveling by heavy earthmoving machinery;
- excavation of trenches for water, sewer, stormwater and gas pipes and telecommunication cables by heavy trenching equipment;
- excavating footings for double-brick residential dwelling;
- · excavating concrete footings for carport and garden shed;
- excavating footings for porches and access steps;
- installing concrete paved driveways;
- installing concrete paved footpaths;
- installing brick and concrete retaining walls;
- digging garden beds; and,
- digging footings for brick and timber property boundary fences.

Therefore, Lot 10 LP8386 (11 Beach Street, Frankston) are not an area of cultural heritage sensitivity according to the *Aboriginal Heritage Regulations* 2018.

Accordingly, a CHMP under Section 46 of the *Aboriginal Heritage Act* 2006 is not required for the proposed construction of residential dwellings at Lot 10 LP8386 (11 Beach Street, Frankston).



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6 Conclusions and Recommendations

This assessment concludes the entire area of Lot 10 LP8386 has been subject to previous significant ground disturbance and are therefore not in an area of cultural heritage sensitivity according to the *Aboriginal Heritage Regulations* 2018.

Additionally, regulation 10 of the *Aboriginal Heritage Regulations* 2018 permits construction of 3 or more dwellings on a lot as an exempt activity if the allotment is (a) not within 200 metres of the coastal waters of Victoria or the Murray River; and (b) less than 0·11 hectares. Specifically, Lot 10 LP8386 is (a) not within 200 metres of the coastal waters of Victoria or the Murray River; and (b) measure 829 m² in area, less than 0.11 ha.

Accordingly, the proposed redevelopment of Lot 10 LP8386 does not require a mandatory Cultural Heritage Management Plan (CHMP) under Section 46 of the *Aboriginal Heritage Act* 2006.

Moreover, no Aboriginal cultural heritage has been previously identified in the activity area, and predictive modelling, complemented by observations of the level of previous ground disturbance, concludes that the likelihood of encountering Aboriginal cultural heritage in the activity area is negligible.

Nevertheless, In the highly unlikely event that previously unidentified Aboriginal cultural heritage items are encountered during the proposed activities, any further disturbance must be avoided. Works within 20 metres of the Aboriginal cultural material must cease immediately and a heritage advisor or First Peoples – State Relations (tel: 1800 762 003) consulted about an appropriate course of action prior to recommencement of activities. In the case of suspected human remains, all activity in the vicinity must be suspended. If human skeletal remains are encountered, the Police or Victorian Coroner's office (tel: 03 9684 4444) must be notified immediately. If it is suspected on reasonable grounds that the human remains are Aboriginal Ancestral remains, the Coronial Admissions and Enquiries hotline on tel: 1300 888 544 must be contacted immediately.

A voluntary Aboriginal cultural heritage management plan could also be prepared for the activities under section 45 of the *Aboriginal Heritage Act* 2006.



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Appendix A.

First Peoples - State Relations Practice Note: Significant Ground Disturbance

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Aboriginal Heritage Act 2006 Practice Note: Significant Ground Disturbance

This Practice Note provides guidance about the meaning of **significant ground disturbance** as it relates to requirements to prepare Cultural Heritage Management Plans under the *Aboriginal Heritage Act 2006**. The Practice Note covers:

- when a Cultural Heritage Management Plan is required
- why significant ground disturbance should be assessed
- what significant ground disturbance means
- who needs to provide proof
- how to determine significant ground disturbance
- who can determine this
- what is the role of the responsible authority
- how Aboriginal cultural heritage is protected in areas of significant ground disturbance.

Background

The Aboriginal Heritage Act 2006 (Act) and Aboriginal Heritage Regulations 2007 (Regulations) provide protection in Victoria for all Aboriginal places, objects and human remains regardless of their inclusion on the Victorian Aboriginal Heritage Register or whether they are located on public or private land.

When is a Cultural Heritage Management Plan required?

A Cultural Heritage Management Plan is required for an activity (i.e. the use or development of land) if the activity:

- is a high impact activity
- falls in whole or in part within an area of cultural heritage sensitivity.

The terms 'high impact activity' and 'cultural heritage sensitivity' are defined in the Regulations.

A Plan must also be prepared when an activity requires an Environmental Effects Statement, or when the Minister for Aboriginal Affairs requires.

High impact activities are categories of activity that are generally regarded as more likely to harm Aboriginal cultural heritage. Most high impact activities provided for in the Regulations are subject to a requirement that the activity results in significant ground disturbance.

Areas of cultural heritage sensitivity are landforms and land categories that are generally regarded as more likely to contain Aboriginal cultural heritage. A registered Aboriginal cultural heritage place is also an area of cultural heritage sensitivity.



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If part of an area of cultural heritage sensitivity (other than a cave) has been subject to significant ground disturbance that part is not an area of cultural heritage sensitivity.

If a Cultural Heritage Management Plan is required for an activity it must be approved before the sponsor can obtain any necessary statutory authorisation for the activity and/or before the activity can start. For more information about Cultural Heritage Management Plans see Aboriginal Affairs Victoria's (AAV) website (www.aboriginalaffairs. vic.gov.au).

Why should significant ground disturbance be assessed?

It is important to assess significant ground disturbance when considering whether a cultural heritage management plan is required because:

- A Cultural Heritage Management Plan does not need to be prepared for a high impact activity if <u>all</u> the area of cultural heritage sensitivity within the activity area has been subject to significant ground disturbance.
- Some types of activity will not be a high impact activity, meaning a Cultural Heritage Management Plan would not need to be prepared, if the activity does not cause significant ground disturbance.

The Regulations specify the landforms and land categories that are areas of cultural heritage sensitivity. Areas of cultural heritage sensitivity are displayed in a series of maps available on AAV's website. The areas delineated on these maps however do not take account of the past history of land use and development that may have caused significant ground disturbance in localised areas.

How is significant ground disturbance defined?

'Significant ground disturbance' is defined in r.4 of the Regulations as meaning disturbance of –

- (a) the topsoil or surface rock layer of the ground; or
- (b) a waterway –
 by machinery in the course of grading, excavating, digging, dredging or deep ripping, but does not include ploughing other than deep ripping.

The words 'disturbance', 'topsoil', 'surface rock layer', 'machinery', 'grading', 'excavating', 'digging', 'dredging', 'ploughing' (other than deep ripping) are not defined in the regulations and therefore have their ordinary meanings.

Ploughing (other than deep ripping) to any depth is <u>not</u> significant ground disturbance. Deep ripping is defined in the regulations to mean 'ploughing of soil using a ripper or subsoil cultivation tool to a depth of 60 centimetres or more'. None of the words used in this definition are defined, and therefore have their ordinary meanings. The Victorian Civil and Administrative Tribunal (VCAT) has determined that a ripper or subsoil cultivation tool must be distinguished from conventional ploughs or topsoil cultivation tools such as disc ploughs or rotary hoes which are not sufficient to show significant ground disturbance.

Deep ripping will result in significant ground disturbance regardless of the degree of disturbance caused to the topsoil or surface rock layer of the ground.



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Who needs to provide proof that land has been subject to significant ground disturbance?

The burden of proving that an area has been subject to significant ground disturbance rests with the applicant for a statutory authorisation for the activity (or the sponsor of the activity). The responsible authority may assist by providing the applicant access to any relevant records it has about past land use and development.

How can a sponsor determine whether significant ground disturbance has occurred?

The responsible authority should require evidence of support for claims that there has been significant ground disturbance of an area. The levels of inquiry outlined below provide some guidance about what information should be required to satisfy a responsible authority (depending on the circumstances of each case) that significant ground disturbance has occurred. The levels of inquiry are listed in order of the level of detail that may be required. An assessment of whether significant ground disturbance has occurred should be dealt with at the lowest possible level in order to avoid unnecessary delay or cost to applicants.

Little weight should be given to mere assertions by applicants or land owners that an activity area has been subject to significant ground disturbance.

Level 1 - Common knowledge

The fact that land has been subject to significant ground disturbance may be common knowledge. Very little or no additional information should be required from the responsible authority.

For example, common knowledge about the redevelopment of a petrol station with extensive underground storage tanks.

Level 2 – Publicly available records

If the existence of significant ground
disturbance is not common knowledge, a
responsible authority may be able to provide
assistance from its own records about prior
development and use of land, or advise
the applicant about other publicly available
records, including aerial photographs.

These documents may allow a reasonable inference to be made that the land has been subject to significant ground disturbance. In such event, no further inquiries or information would be needed by the responsible authority. The particular records and facts relied upon should be noted by the responsible authority as a matter of record.

For example, a former quarry site subsequently filled, but where the public records show the area of past excavation.

Level 3 - Further information

If 'common knowledge' or 'publicly available records' do not provide sufficient information about the occurrence of significant ground disturbance, the applicant may need to present further evidence either voluntarily or following a formal request from the responsible authority. Further evidence could consist of land use history documents, old maps or photographs of the land or statements by former landowners or occupiers. Statements should be provided by statutory declaration or similar means.

For example, the construction of a former dam on a farm.

If these levels of inquiry do not provide sufficient evidence of significant ground disturbance (or as an alternative to level 3), the applicant may submit or be asked

Level 4 – Expert advice or opinion

3), the applicant may submit or be asked to submit a professional report with expert advice or opinion from a person with appropriate skills and experience. Depending on the circumstances, this may involve a site inspection and/or a review of primary documents. If there is sufficient uncertainty some preliminary sub-surface excavation may be warranted.

An expert report should comply with VCAT's practice note on expert evidence.

The responsible authority must be reasonably satisfied that the standard of proof presented by the applicant shows that all of the land in question has been subject to significant ground disturbance.

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A level 1 or 2 inquiry will commonly provide sufficient information as to whether or not the activity area has been subject to significant ground disturbance, and a level 3 or 4 inquiry should not be required as a matter of course.

There will be cases when the responsible authority is simply not persuaded or where there remains genuine doubt about significance ground disturbance regardless of the level of inquiry. In these circumstances the default position is that a Cultural Heritage Management Plan is required. This is in line with the purpose of the Act and Regulations to provide for the protection of Aboriginal cultural heritage in Victoria.

Who can provide expert advice about significant ground disturbance?

A person needs to have expertise to decide, based upon an inspection of the land or interpreting primary documents, whether the land has been subject to significant ground disturbance.

A cultural heritage advisor may not necessarily have this expertise. Under section 189 of the Act, an advisor must have a qualification directly relevant to the management of Aboriginal cultural heritage such as 'anthropology, archaeology or history' or have extensive experience or knowledge in relation to the management of heritage. An advisor appropriately qualified in archaeology may be able to assist where excavation is required to determine significant ground disturbance.

Other experts such as a land surveyor, geomorphologist or civil engineer could also have the necessary expertise (depending on the circumstances). For example, a civil engineer should have the qualifications and experience to determine the extent of previous engineering works along a watercourse or road, and therefore the extent of significant ground disturbance.

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What is the role of the responsible authority?

The responsible authority determines whether a Cultural Heritage Management Plan is required for an activity. It may require the applicant to provide information to satisfy it that an area has been subject to significant ground disturbance.

Evaluating information relating to the occurrence of significant ground disturbance may be critical in deciding whether a Cultural Heritage Management Plan is required and therefore whether a statutory authorisation can be granted. This question should be resolved at an early stage in planning a proposed development. Applicants for statutory authorisations and the responsible authority should therefore seek to agree at an early stage about whether a Cultural Heritage Management Plan is required. In the event of a dispute this can be brought without delay to VCAT for resolution. The responsible authority should take care to document the steps taken in each case.

What if Aboriginal cultural heritage is discovered in an area determined to have been subject to significant ground disturbance?

It is possible that there are Aboriginal cultural heritage places, objects or human remains within areas determined to no longer be areas of cultural heritage sensitivity due to significant ground disturbance. It is also possible that Aboriginal cultural heritage could be harmed by activities which do not amount to high impact activities.

These Aboriginal places are still protected under the Act. In particular, it is an offence under sections 27 and 28 of the Act to harm Aboriginal cultural heritage unless acting in accordance with a Cultural Heritage Permit or approved Cultural Heritage Management Plan (regardless of whether a Plan was required).

* This Practice Note is based on VCAT's determination about significant ground disturbance. For further details see VCAT, Reference No. P1020/2008 – Mainstay Australia vs Mornington Peninsula SC.

Appendix B.

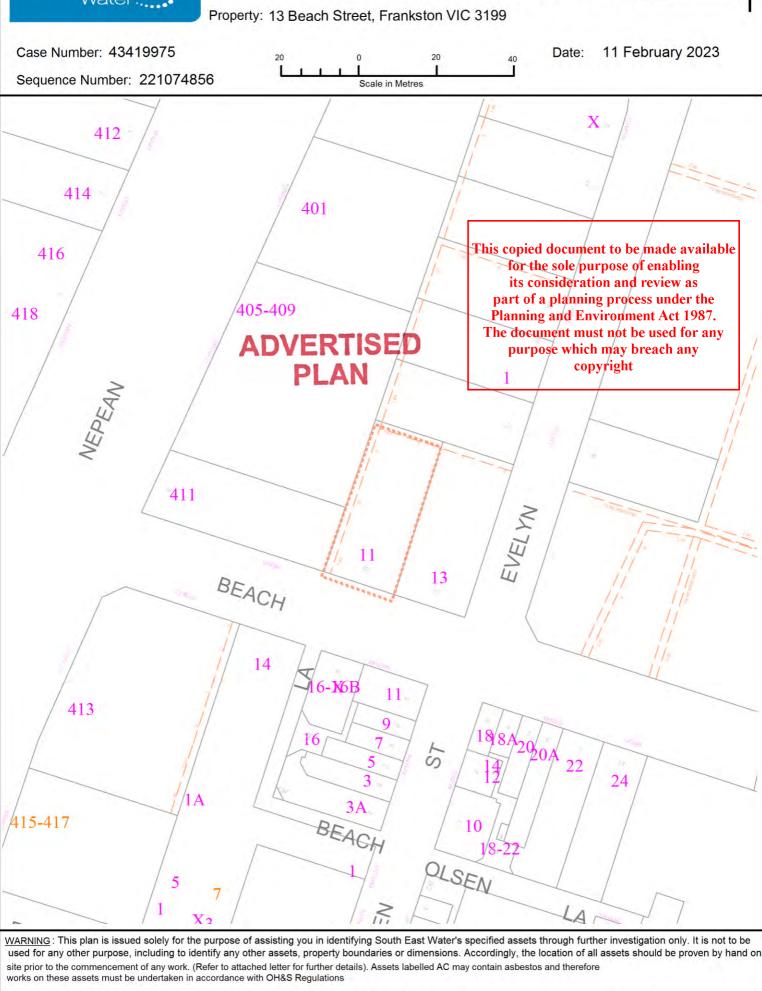
South East Water Sewer and City of Frankston Stormwater Assets Maps

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South East

ASSET INFORMATION - RECYCLED WATER

VOU DIG



Title/Road Boundary **Chlorination Assembly** Hydrant Proposed Title/Road Fireplug/Washout Recycled Water Main Valve Recycled Water Main & Services ~ 1.0 Offset from Boundary Easement



Sequence No: 221074854 Job No: 33598193

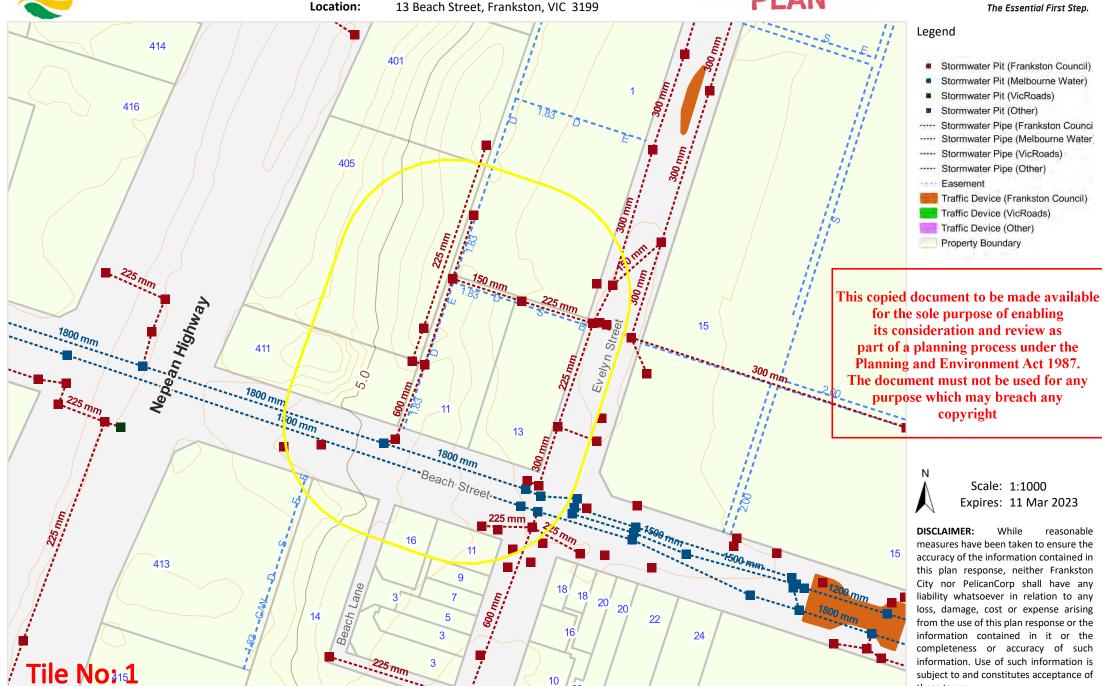
13 Beach Street, Frankston, VIC 3199

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The Essential First Step.

reasonable



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these terms.

subject to and constitutes acceptance of