Road Intersection Upgrade: Ballarto Road and Lyrebird Drive, Carrum Downs

Aboriginal Cultural Heritage Management Plan

Heritage Advisors: Joseph Minter Brooke
Authors: Joseph Minter Brooke, Caroline Wilby, Tom Kimber and Melinda Albrecht
Date of completion: 16 June 2022
CHMP No: 18037
Sponsor: Department of Transport (ABN/ACN 69 981 208 782)
Levels of Assessment: Desktop, Standard and Complex (Small)
Aboriginal Heritage Identified: No

UNEARTHED HERITAGE

Title Page

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Acknowledgements

The authors would like to acknowledge the Traditional Owners of the land that this assessment is on.

Cover photo: The activity area facing east_29 July 2021_Tom Kimber

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Executive Summary

Compliance requirements are set out in Part 1 of the Cultural Heritage Management Plan (CHMP).

Activity and Activity Area

This CHMP has been prepared for the Department of Transport for a proposed road intersection upgrade along a section of Ballarto Road around the Lyrebird Drive intersection, Carrum Downs, Victoria.

Desktop Assessment

The activity area is situated within a geomorphic landscape of low-lying coastal plains characterised by a series of inland sand dunes, lunettes, and longitudinal north-west trending dune ridges. The surface geology consists entirely of inland dune deposits of siliceous sand, silt, and clay, known as the Cranbourne Sand formation. Registered Aboriginal cultural heritage places within the geographic region comprise eight surface and subsurface stone artefact scatters – seven of which are low density scatters. Subsurface stone artefacts have been found in A and upper B horizon deposits, with particular concentrations commonly occurring at depths around 500 mm. Previous archaeological investigations within the geographic region have identified that the Cranbourne Sands landform has high potential for Aboriginal archaeological places. The activity area has been subject to varying degrees of ground disturbance and impact, due primarily to the mid-19th century establishment of Ballarto Road, and the continued maintenance, upgrade, widening, and service installation carried out on and ajacent to the roadway. Sections of the activity area extend into landscapes that are likely to have been subject to lesser degrees of historical disturbance, and may be of moderate archaeological sensitivity for stone artefact scatters and LDADs, particularly in any elevated sections of potential remnant sandy rises.

Standard Assessment

Aside from built surfaces, all of the activity area was surveyed. No Aboriginal cultural heritage was identified during the standard assessment. Two augers were undertaken in areas that appeared to have lower levels of disturbance and identified deep sandy soils in the northeast of the activity area, and swampy soil profiles in the south. The results of the augers suggested that the activity area has been subject to modification and ground disturbance to around 300-500mm. Due to this disturbance, the activity area has been assessed to be of very low, low and moderate archaeological.

Complex Assessment

A total of one TP, and 3 STPs were excavated, resulting in a total of 1.75m^2 being excavated. No artefactual material was identified in any excavation unit. Test excavations confirmed that moderate to high levels of disturbance had occurred across the areas selected for subsurface testing.

Aboriginal Heritage

No Aboriginal heritage was detected within the activity area. There is some potential for low density occurrences of stone artefacts to be present within the activity area, below instances of high disturbance. There is also a moderate potential for artefacts to occur below the surface in the area marked as 'Inspection Location 2' in Figure 1-1.

Impact Assessment

As no Aboriginal heritage was identified, the activity is not likely to harm Aboriginal heritage.

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List of Abbreviations

ABN	Australian Business Number
ACN	Australian Company Number
AH	Aboriginal Heritage
AV	Aborigianl Victoria
BLCAC	Bunurong Land Council Aboriginal Corporation
BOM	Bureau of Meteorology
CHMP	Cultural Heritage Management Plan
CHS	Cultural Heritage Senstivity
DELWP	Department of Environment, Land, Water and Planning
FP-SR	First Peoples – State Relations
GMU	Geomorphological Unit
HA	Heritage Advisor
km	Kilometre
LDAD	Low density artefact distribution
LGA	Local Government Authority
m	Metre
mm	Millimetre
OSL	Opticallly Stimualted Luminecene
VAHR	Victorian Aborigiail Heritage Registrar
VRO	Victorian Resources Online
RAP	Registered Aboriginl Party
STP	Shovel test pit
TP	Test pit

Part I – Management Conditions

1 Cultural Heritage Management

These conditions and contingencies become requirements once this Cultural Heritage Management Plan (CHMP) is approved. Failure to comply with a condition is an offence under section 67A of the *Aboriginal Heritage Act* 2006.

The Cultural Heritage Management Plan must be readily accessible to the sponsor and their employees and contractors when carrying out the activity

1.1 Conditions

These conditions are pro-active measures that must be followed to manage known Aboriginal cultural heritage and aid in the identification of unexpected Aboriginal cultural heritage during the activity. The Sponsor and/or their contractor is responsible for undertaking all management conditions and contingencies herein, where appropriate, including payment to undertake these items.

1.1.1 General Condition 1: Adherence to the Cultural Heritage Management Plan (CHMP) Before, During and After the Activity

1. A hard copy of the approved CHMP must always be available and present onsite for the duration of the activity.
2. The Sponsor, site supervisor and all relevant personnel must be aware of the compliance requirements of the CHMP.
3. The Sponsor or site supervisor is responsible for ensuring that all personnel onsite are aware of the management conditions and contingency plans, and of the onsite location of the hard copy of the approved CHMP.
4. The Sponsor, site supervisor and all relevant personnel are responsible for implementing the management conditions contained within the CHMP.
5. The Sponsor or site supervisor is responsible for ensuring that the activity adheres to the activity description as detailed in Section 4 of the CHMP. Any change to the activity area, the activity description or the approved management conditions may require either an amendment to the CHMP or the preparation of a new CHMP.

1.1.2 General Condition 2: Cultural Heritage Induction to be Undertaken Before the Activity

1. A cultural heritage induction must be undertaken prior to the commencement of any ground disturbance works within the activity area.
2. The Sponsor or site contractor must submit a booking request to the BLCAC at least two weeks before the cultural heritage induction is required.
3. The cultural heritage induction must be conducted by the BLCAC Heritage Unit.
4. The cultural heritage induction must include the Sponsor or their representative/project manager and where possible, the site supervisor and all relevant personnel directly involved in ground disturbing works within the activity area.
5. The cost of the cultural heritage induction must be met by the Sponsor or site contractor.
6. The Sponsor or site contractor must indicate during the induction both the commencement date of the activity and the likely completion date of the activity.

1.1.3 General Condition 3: Protocol for Handling Sensitive Information Before During and After the Activity

1. Apart from publicly available information there shall be no communication or public release of information concerning Aboriginal cultural heritage without the written permission of the BLCAC.
2. No photographs of onsite cultural heritage, or information concerning Aboriginal cultural heritage is to be circulated to the media or via public media without the written permission of the BLCAC.

Specific Conditions

1.1.4 Specific Condition 1: BLCAC Inspections

During the activity…
A minimum of one BLCAC inspection must be undertaken during the activity. The purpose of the inspection is to examine excavated and exposed soils and to ensure the works are being undertaken in accordance with the conditions and contingencies of the approved CHMP.
The inspection must be scheduled for the following occasion/location (as indicated in Figure 1-1):

1) Inspection Location 1 - After the completion of major ground stripping works within the southern side of the road (c. 200 m section of the activity area) during the conduct of the activity.
2) Inspection Location 2 - A second inspection must be undertaken if the public reserve (Botany Park) on the northeast corner of the Lyrebird Drive/Ballarto Road intersection is to be used as a staging area and/or lay down area – this inspection is to be of the staging area at some point during the works – works within this area must be temporary *and* above the ground surface only.

The inspection must be undertaken by the BLCAC Heritage Unit, and all representatives must comply with any Occupational Health and Safety conditions applicable to the activity area.

The Sponsor or site contractor must contact the BLCAC to request a booking at least two weeks before the required inspections.

The inspections must be organised and paid for by the Sponsor or site contractor.

1.1.5 Specific Condition 2: Area of no excavation

During the activity…
No excavation, grading or other intrusive works are to occur within the area hatched and labelled 'Inspection Location 2', shown in Figure 1-1. Temporary activities on and above the ground surface may occur within this area, such as material lay down (stack site), site compound (site offices, toilets, etc), and plant movement.

Specific Condition 3: Removal, Custody, Curation and Management of Aboriginal Cultural Heritage

After the activity…

A Heritage Advisor must ensure that all Aboriginal cultural heritage (other than Aboriginal Ancestral Remains) recovered from the activity area either during the assessment phase of the CHMP or during subsequent salvage processes are managed in the following way:

1. A Heritage Advisor must fully document, package, and securely store all recovered cultural material until it is repatriated to the BLCAC.
2. A Heritage Advisor must submit all relevant documentation to the VAHR.

3. A Heritage Advisor may initially retain custody of the recovered cultural material for scientific analysis for a period of up to six months from the completion of the activity.
4. Within six months after the completion of the activity a Heritage Advisor must contact the BLCAC to arrange the repatriation of all cultural material recovered within the activity area.

Upon completion of the activity, a Heritage Advisor must repatriate all recovered cultural material to the BLCAC. The repatriation process must occur as follows:

1. All cultural material must be appropriately packaged in a durable container and sorted by archaeological context from which it was recovered.
2. The packaged cultural material must be accompanied by the relevant artefact catalogue as well as the nature, extent and significance statement for the associated place.
3. All relevant recording and documentation, including VAHR place record edits must be undertaken by a Heritage Advisor.
4. All costs associated with the repatriation must be met by the Sponsor.

Following the repatriation of the recovered cultural material to the BLCAC, should the BLCAC wish to rebury the recovered cultural material the following must occur:

1. Available space within the activity area must be set aside which is protected from future development or disturbance.
2. The location of the reburial area must be negotiated and agreed upon between the Sponsor and the BLCAC.
3. All cultural material must be appropriately packaged in a durable container and sorted by archaeological context from which it was recovered.
4. The packaged cultural material must be accompanied by the relevant artefact catalogue as well as the nature, extent and significance statement for the associated place.
5. The reburial of the cultural material must be conducted by the BLCAC Heritage Unit.
6. A smoking ceremony must be undertaken by a BLCAC representative during the reburial.
7. All relevant recording and documentation, including VAHR place record edits must be undertaken by a Heritage Advisor.
8. All costs associated with the reburial must be met by the Sponsor.

Figure 1-1 Locations of inspections that must be undertaken during the activity

1.2 Contingencies

These matters are reactive measures that must be evoked if/when particular circumstances arise.

1.2.1 Contingency 1: Proposed Changes to the Activity

The contingency plans presented in this section are specific to the activity area and the activity described within this CHMP. If, following the approval of this CHMP, changes to the activity or the activity area requiring statutory authorisation or which require any changes to the management conditions contained within the approved CHMP occur, the Sponsor must either apply to amend the approved CHMP or prepare a new CHMP which incorporates any changes.

1.2.2 Contingency 2: Matters Referred to in Section 61 of the Act

If Aboriginal cultural heritage is unexpectedly discovered during the activity, the following contingencies (which takes into account matters referred to in Section 61 of the *Aboriginal Heritage Act 2006* with regard to harm avoidance and minimisation) must be implemented by the Sponsor or the relevant representative of the Sponsor in consultation with the BLCAC.

1.2.3 Contingency 3: Dispute Resolution Process

Procedures for dispute resolution aim to ensure that all parties are fully aware of their rights and obligations, that full and open communication between parties occurs and that those parties conduct themselves in good faith.

If a dispute arises that may affect the conduct of the activity, resolution between the parties using the following dispute resolution procedure is required:

1) All disputes will be jointly investigated and documented by both the BLCAC and the Sponsor.
2) Where a breach of the CHMP conditions has been identified, and there is no agreement between the parties as to how that breach is to be remedied, the BLCAC and the Sponsor must meet within one week of the initial notification of the breach to seek agreement as to a suitably appropriate remedial measure.
3) The Sponsor and the BLCAC must arrange for authorised representatives to be present at the meeting.
4) At the meeting, the authorised representatives of both the BLCAC and the Sponsor must state their understanding of the issue(s) in dispute and ensure each party is aware of their position. If requested by either the BLCAC or the sponsor, third party mediation may be held during the meeting.
5) If the authorised representatives of the parties reach agreement, the agreed corrective method for the breach must be recorded in writing and signed by both parties (Agreed Method Statement). If the authorised representatives of the parties do not reach agreement, the parties will participate in third party mediation of the dispute by an agreed mediator within two weeks. Any costs of the mediation are to be met equally by the parties. Any agreed outcome of the mediation must be recorded in writing and signed by both parties (Agreed Method Statement).
6) The Sponsor, site supervisor, contractor and any relevant personnel will not undertake any correction or remedial activities except in accordance with the Agreed Method Statement. Any correction or remedial activities required must:
    a) Be recorded in writing and signed off by the authorised representatives of the BLCAC and Sponsor.
    b) Be supervised by a BLCAC representative.
    c) Occur in accordance with the instructions of the BLCAC, providing they are consistent with the agreed correction activities.

d) The BLCAC will strive to minimise delays to work schedules while not compromising Aboriginal cultural heritage, places or values.

Issues related exclusively to cultural heritage management, which do not have an impact on the conduct of the activity, will be handled through the following dispute resolution mechanism:

1. Within one week of notification to each party that a breach is deemed to exist, authorised representatives of the BLCAC and the Sponsor must attempt to negotiate a resolution to any dispute related to the cultural heritage management of the activity area within two working days.
2. If the authorised representatives of the BLCAC and the Sponsor do not reach agreement, the parties will participate in third party mediation of the dispute by an agreed mediator within two weeks. Any costs of the mediation are to be met equally by both parties. Any agreed outcome of the mediation must be recorded in writing and signed by both parties (Agreed Method Statement).

Regardless of the category of dispute, the dispute resolution process does not preclude:

1. The parties seeking advice from First Peoples – State Relations Group (FP-SR) to assist in resolution of the dispute; and
2. Any legal recourse open to the parties being taken; however, the parties must agree that the above resolution mechanism will be implemented before such recourse is made

1.2.4 Contingency 4: Management of Aboriginal Cultural Heritage Found During the Activity

1.2.4.1 Discovery of Human Remains

If any suspected human remains are found during any activity, works must cease. The Victoria Police and the State Coroner's Office should be notified immediately. If there are reasonable grounds to believe the remains are Aboriginal, the Coronial Admissions and Enquiries hotline must be contacted immediately on 1300 309 519. This advice has been developed further and is described in the following five-step contingency plan.

Any such discovery at the activity area must follow these steps:

1. <u>Discovery:</u>
   - If suspected human remains are discovered, all activity in the vicinity must stop; and,
   - The remains must be left in place and protected from harm or damage.
2. <u>Notification:</u>
   - If suspected human remains have been found, the State Coroner's Office and the Victoria Police must be notified immediately;
   - If there are reasonable grounds to believe the remains are Aboriginal Ancestral Remains, the Coronial Admissions and Enquiries hotline must be immediately notified on 1300 309 519;
   - All details of the location and nature of the human remains must be provided to the relevant authorities; and,
   - If it is confirmed by these authorities the discovered remains are Aboriginal Ancestral Remains, the person responsible for the activity must report the existence of them to the Victorian Aboriginal Heritage Council in accordance with Section 17 of the *Aboriginal Heritage Act 2006*.
3. <u>Impact Mitigation or Salvage:</u>
   - The Victorian Aboriginal Heritage Council, after taking reasonable steps to consult with any Aboriginal person or body with an interest in the Aboriginal Ancestral Remains, will determine the appropriate course of action as required by Section 18(2)(b) of the *Aboriginal Heritage Act 2006*; and,
   - An appropriate impact mitigation or salvage strategy as determined by the Victorian Aboriginal Heritage Council must be implemented by the Sponsor.

4. Curation and Further Analysis:
   - The treatment of salvaged Aboriginal Ancestral Remains must be in accordance with the direction of the Victorian Aboriginal Heritage Council.
5. Reburial:
   - Any reburial site(s) must be fully documented by an experienced and qualified archaeologist, clearly marked and all details provided to Aboriginal Victoria; and,
   - Appropriate management measures must be implemented to ensure the Aboriginal Ancestral Remains are not disturbed in the future.

1.2.4.2 Discovery of Low Density Artefact Distributions

If 10 or less stone artefacts within a 10 m x 10 m area (100 m^2 area) are uncovered during the activity, the following measures must be undertaken:

1. The person in charge of the activity must notify both the BLCAC and a Heritage Advisor of the suspected Aboriginal cultural heritage within one business day of the discovery. The person in charge of the works at the time of the discovery is deemed to be the person who discovered the Aboriginal cultural heritage place or object(s).
2. All works must cease within 10 m of the discovery area, and all personnel contracted to undertake the activity must be notified of the suspected discovery.
3. The suspected Aboriginal cultural heritage must be cordoned off by a suitable barrier (e.g. safety barrier mesh, temporary fencing, or flagging tape) and remain in place until it has been assessed by the BLCAC and a Heritage Advisor;
4. A Heritage Advisor must facilitate the participation of the BLCAC in the assessment of the Aboriginal cultural heritage.
5. A Heritage Advisor and a BLCAC representative must inspect the suspected Aboriginal cultural heritage as soon as practicable and within a maximum of five business days of the notification of the discovery.
6. A Heritage Advisor, in consultation with the BLCAC, must identify the extent, nature and significance of the Aboriginal cultural heritage material in the activity area.
7. The Sponsor, the Heritage Advisor and the BLCAC must discuss opportunities of avoiding and minimising harm to the Aboriginal cultural heritage. The Sponsor must attempt to avoid or minimise harm to the Aboriginal cultural heritage as the first priority.
8. Where harm cannot be avoided or minimised, a qualified archaeologist in consultation with the BLCAC must salvage the Aboriginal cultural heritage material. The salvage must involve the recording, collection (labelled and packaged according to provenance), and analysis of the Aboriginal cultural heritage. The Aboriginal cultural heritage must be recorded with the use of a DGPS (with <1 m accuracy).
9. A Heritage Advisor within three weeks of the salvage and associated analysis must submit any required VAHR place record edits or new place registrations.
10. All costs associated with the procedures specified in this contingency must be organised and paid for by the Sponsor.
11. The activity may recommence within the 10 m exclusion area once:
    I. All the procedures specified above have been followed; and
    II. No dispute occurs as to the course of action(s) required.

1.2.4.3 Discovery of Artefact Scatters, Stratified Deposits and/or Cultural Features

If artefact scatters, stratified deposits, and/or other cultural heritage features are identified during the activity, then the following measures must be undertaken:

1. The person in charge of the activity must notify both the BLCAC and a Heritage Advisor of the suspected Aboriginal cultural heritage within one business day of if its discovery. The person in charge of the works at the time of the discovery is deemed to be the person who discovered the Aboriginal cultural heritage place or object(s).

2. All works must cease within 10 m of the discovery area, and all personnel contracted to undertake the activity must be notified of the suspected discovery.
3. The suspected Aboriginal cultural heritage must be cordoned by a suitable barrier (e.g. safety barrier mesh, temporary fencing, or flagging tape) and remain in place until it has been assessed by the BLCAC and a Heritage Advisor.
4. A Heritage Advisor must facilitate the participation of the BLCAC in the assessment of the Aboriginal cultural heritage.
5. A Heritage Advisor and a BLCAC representative must inspect the suspected Aboriginal cultural heritage as soon as practicable and within a maximum of five business days of the notification of the discovery.
6. A Heritage Advisor, in consultation with the BLCAC, must identify the extent, nature and significance of the Aboriginal cultural heritage material in the activity area.
7. The Sponsor, a Heritage Advisor and the BLCAC must discuss opportunities of avoiding and minimising harm to the Aboriginal cultural heritage. The Sponsor must avoid or minimise harm to the Aboriginal cultural heritage as the first priority.
8. Where harm cannot be avoided or minimised, and the identified Aboriginal cultural heritage is suitable for salvage excavation, then this must be undertaken by a qualified archaeologist in consultation with the BLCAC. The purpose of the salvage is to establish the extent, nature, and significance of the Aboriginal Place. A DGPS (with <1 m accuracy) must be used when mapping the cultural material and features. Any salvage methodology must be approved by the BLCAC. The objectives of the salvage must establish, but are not limited to:
    a. The stratigraphy, with an emphasis of where the Aboriginal cultural heritage material was found (e.g. the context of the stratigraphic layer);
    b. The chronological sequence (if possible) of the Aboriginal cultural heritage material, features, and/or remains;
    c. The composition and characteristics of the Aboriginal cultural heritage; and
    d. Whether there is any spatial variability or patterning of the Aboriginal cultural heritage investigated.
9. If the Aboriginal archaeological remains are assessed as being in-situ, appropriate age determinations to establish the age of the Aboriginal heritage must include Optically Stimulated Luminescence (OSL) when sufficient organic samples cannot be obtained for radiocarbon analysis (Carbon 14 dating). All Aboriginal cultural heritage material recovered from the activity area must be stored by a Heritage Advisor until the salvage excavation has been concluded.
10. A Heritage Advisor within three weeks of the salvage and associated analysis must submit any required VAHR place record edits or new place registrations.
11. The salvage excavation must be supervised by a person appropriately qualified in archaeology and be undertaken in accordance with Regulation 65(3-7) of the Aboriginal Heritage Regulations 2018, and the FP-SR Practice Note on Salvage Excavations.
12. A Heritage Advisor must lodge the final salvage report to the BLCAC and the VAHR no later than six months after the completion of the salvage excavation and analysis.
13. All costs associated with the procedures specified in this contingency must be organised and paid for by the Sponsor.
14. The activity may recommence within the 10 m exclusion area once:
    a. a) All the procedures specified above have been followed; and
    b. No dispute occurs as to the course of action(s) required.

1.2.5 Contingency 5: Removal, Custody, Curation and Management of Aboriginal Cultural Heritage During the Activity

A Heritage Advisor must ensure that all Aboriginal cultural heritage (other than Aboriginal Ancestral Remains) recovered from the activity area either during the assessment phase of the CHMP or during subsequent salvage processes are managed in the following way:

1. A Heritage Advisor must fully document, package, and securely store all recovered cultural material until it is repatriated to the BLCAC.
2. A Heritage Advisor must submit all relevant documentation to the VAHR.
3. A Heritage Advisor may initially retain custody of the recovered cultural material for scientific analysis for a period of up to six months from the completion of the activity.
4. Within six months after the completion of the activity a Heritage Advisor must contact the BLCAC to arrange the repatriation of all cultural material recovered within the activity area.

Upon completion of the activity, a Heritage Advisor must repatriate all recovered cultural material to the BLCAC. The repatriation process must occur as follows:

1. All cultural material must be appropriately packaged in a durable container and sorted by archaeological context from which it was recovered.
2. The packaged cultural material must be accompanied by the relevant artefact catalogue as well as the nature, extent and significance statement for the associated place.
3. All relevant recording and documentation, including VAHR place record edits must be undertaken by a Heritage Advisor.
4. All costs associated with the repatriation must be met by the Sponsor.

Following the repatriation of the recovered cultural material to the BLCAC, should the BLCAC wish to rebury the recovered cultural material the following must occur:

1. Available space within the activity area must be set aside which is protected from future development or disturbance.
2. The location of the reburial area must be negotiated and agreed upon between the Sponsor and the BLCAC.
3. All cultural material must be appropriately packaged in a durable container and sorted by archaeological context from which it was recovered.
4. The packaged cultural material must be accompanied by the relevant artefact catalogue as well as the nature, extent and significance statement for the associated place.
5. The reburial of the cultural material must be conducted by the BLCAC Heritage Unit.
6. A smoking ceremony must be undertaken by a BLCAC representative during the reburial.
7. All relevant recording and documentation, including VAHR place record edits must be undertaken by a Heritage Advisor.

1.2.6 Contingency 6: Reviewing Compliance and Mechanisms for Remedying Non-compliance with the CHMP

The Sponsor or nominated representative is responsible for remedying non-compliance with this CHMP. In the event that the conditions or contingencies set out in this CHMP are not adhered to, all works must cease, and the BLCAC contacted immediately. A record of the breach must be documented, and immediate action taken to remedy the breach, under the direction of the BLCAC. The record of the breach must include the reasons for non-compliance. The Sponsor or nominated representative must take immediate action to remedy non-compliance in accordance with the relevant condition or contingency. All acts of non-compliance must be reported to both the BLCAC and FP-SR, which may result in an investigation by an Authorised Officer or Aboriginal Heritage Officer. A record of CHMP compliance must also be maintained by the Sponsor or nominated representative at all times and must be available for inspection by either an Authorised Officer or Aboriginal Heritage Officer under the *Aboriginal Heritage Act 2006* or any other representative of the BLCAC or FP-SR.

Table 1-1 Compliance checklist

Contingency	Yes/No	If no…
Ensuring Compliance		

Have all the conditions in Section 1 of the approved Cultural Heritage Management Plan been met?		All works must immediately cease and the BLCAC contacted immediately. Refer to Section 1
Contingency Plans for Discovery of Aboriginal Heritage During Works		
If suspected human remains have been identified, have all works immediately ceased and the Coroner, the VAHC and the BLCAC been contacted as per the 5-step contingency plan in Contingency 4?		All works must immediately cease and the BLCAC and authorities contacted immediately. Refer to Contingency 4.
If a low density artefact distribution has been discovered, has the correct procedure been followed as per Contingency 4?		All works must immediately cease within a 10m buffer of the suspected heritage and the BLCAC contacted immediately. Refer to Contingency 4
If an artefact scatter, stratified deposit and/or cultural feature has been discovered, has the correct procedure been followed as per Contingency 4?		All works must immediately cease and the BLCAC contacted immediately. Refer to Contingency 4.
Removal, Custody, Curation and Management of Aboriginal Cultural Heritage During the Activity		
Has the procedure been followed for management of Aboriginal cultural heritage identified during works?		Refer to Contingency 5

Part II – Cultural Heritage Assessment

2 Introduction

2.1 The project and its location

This Aboriginal cultural heritage management plan (CHMP) has been prepared for a proposed road intersection upgrade (the **activity**) along a section of Ballarto Road around the Lyrebird Drive intersection, Carrum Downs, Victoria (the **activity area** - [cadastral details in Table 2-1]). The activity area is located approximately 38 km southeast of the centre of Melbourne, Victoria (see Figure 2-1 and Figure 3-4). The activity area is located within the City of Frankston local government area.

At the commencement of this CHMP, a search of the Victorian Aboriginal Heritage Register (VAHR) was undertaken to check for Aboriginal places that may occur within or around the activity area. At the commencement of this CHMP, there were no Aboriginal places registered within the activity area or within 200 m of the activity area (Figure 3-4).

The majority of the activity area is road reserve and is managed by local council and VicRoads as detailed in Table 2-1 and Figure 3-4 and Figure 3-5.

Table 2-1 Activity area cadastral information

Parcel details	LGA
RES1\LP116650	City of Frankston
2194\PP3025	City of Frankston
2170\PP2619	City of Frankston
2086\PP383678	City of Frankston
2051\PP383004	City of Frankston
2213\PP2619	City of Frankston
2043\PP2619	City of Frankston
Roadway and road reserves of Lyrebird Drive, Greenshank Court	City of Frankston
Ballarto Road roadway and road reserve	Department of Transport

2.2 The Sponsor/Owner

The Sponsor of this CHMP is **the** Department of Transport (ABN/ACN 69 981 208 782). The Sponsor manages part of the land comprising the activity area, with the City of Frankston managing the remainder of the activity area (as per Table 2-1, Figure 3-5).

2.3 Legislative requirements

2.3.1 Aboriginal Heritage Act 2006

The *Aboriginal Heritage Act* 2006 (the AH Act) and the associated Aboriginal Heritage Regulations 2018 (the AH Regulations) are the primary pieces of legislation providing protection for Aboriginal cultural heritage in Victoria.

The AH Act establishes a number of processes to protect Aboriginal cultural heritage, in particular how to manage cultural heritage for proposed developments. The principal method for this management is a CHMP, which includes a cultural heritage investigation and assessment of proposed development in the activity area and provides management conditions that must be followed to mitigate impact on, and manage cultural heritage within, the activity area.

This process includes the involvement of and consultation with Registered Aboriginal Parties (RAPs), who are also responsible for the ultimate review and approval or rejection of CHMPs for their prescribed area.

The requirement for the undertaking of a CHMP is triggered by the AH Regulations (regulation 7) when an activity includes a *high impact activity* and the defined activity area includes an *area of cultural heritage sensitivity*. These are further defined below.

2.3.1.1 High Impact Activities

The AH Regulations define numerous *high impact activities*, one of which is constructing specified items of infrastructure – Regulation 47:

Regulation 47 Buildings and works for specified uses

(1) The construction of any one or more of the following is a high impact activity if the construction would result in significant ground disturbance—

(f) a roadway with a length exceeding 100 metres;

As the proposed activity is the construction of a road, it is classed as a high impact activity.

2.3.1.2 Areas of Cultural Heritage Sensitivity

Areas of *cultural heritage sensitivity* (CHS) are defined in the AH Regulations by a number of different spatial parameters intended to reflect where *Aboriginal cultural heritage places* (Places) are most commonly found. According to the definitions in the AH Regulations, the activity area includes an area of CHS; as the entire activity area is an area mapped as "Qd1":

- Sand sheets - Regulation 41

There is also a section of the activity area that is located within 200m of Boggy Creek, which is an area of CHS:

- Waterways – Regulation 26

2.3.1.3 Rationale for Preparing the Management Plan

As the proposed activity includes a high impact activity and includes an area of CHS, the preparation of a mandatory CHMP is required for the activity.

2.4 Notification

Pursuant to s.54 of the AH Act, a Notice of Intent to Prepare a CHMP form was submitted to the Secretary to First Peoples-State Relations (FP-SR) on 15 June 2021 and to the RAP on 15 June 2021. This form is included in Appendix A. FP-SR responded, issuing CHMP number 18037. On 15 June 2021, the RAP responded stating that they intend to evaluate the CHMP (Appendix A). Local council and relevant landowners were also notified of the preparation of the CHMP.

2.5 Heritage Advisors and Authors

Joseph Brooke is the heritage advisor for this report and Joseph Brooke, Caroline Wilby[1], Tom Kimber and Melinda Albrecht are authors for this report.

Joseph[2] has over 13 years of experience in cultural heritage management and archaeology and is qualified as both a heritage advisor and an archaeologist and is on the FP-SR list of approved Victorian

[1] Bachelor of Arts 1998, The University of Melbourne. Bachelor of Arts (Honours) 2000, La Trobe University.
[2] Bachelor of Archaeology (Honours – first class) 2006, La Trobe University.

heritage advisors. Joseph is a full member of the Australian Association of Consulting Archaeologists Inc. Joseph's previous archaeological experience includes archaeological investigation of a similar scope and scale as this CHMP.

Melinda[3] has over 15 years of experience in heritage management and archaeology and is qualified as both a heritage advisor and an archaeologist and is on the FP-SR list of Victorian heritage advisors. Melinda's previous archaeological experience also includes archaeological investigations of a similar or larger scope and scale as this CHMP.

The standard assessment was supervised by Tom Kimber and the complex assessment was supervised by Eyad Malaeb.

Tom[4] has over 5 years of experience within the heritage industry and completed his Honours at the University of Leicester in 2006, with a Masters' degree in archaeology in 2008. He has worked in the private sector for a number of heritage consulting companies conducting archaeological assessments and heritage studies.

Eyad[5] has over three years of experience in heritage management and archaeology and is qualified as both a heritage advisor and an archaeologist and is on the FP-SR list of Victorian heritage advisors. Eyad's previous archaeological experience also includes supervising archaeological excavations of a similar or larger scope and scale as this CHMP.

Therefore, Eyad has the qualifications and experience required (r.65 [3] of the AH Regulations) to supervise and undertake the archaeological excavation in this complex assessment.

Reporting of the standard and complex assessments was undertaken by Tom Kimber and Melinda Albrecht. Caroline Wilby with assistance from Joseph Brooke undertook the desktop assessment. The search of the Victorian Aboriginal Heritage Register (VAHR) was undertaken by Joseph Brooke on 16 June 2021.

2.6 Registered Aboriginal Parties

The Registered Aboriginal Party (RAP) for the activity area is the Bunurong Land Council Aboriginal Corporation (BLCAC).

[3] Bachelor of Arts in Classics and Archaeology (Honours) 1997, University of Melbourne; Masters of Arts in Archaeology 2004, La Trobe University.

[4] MA Archaeology and Landscape History, University of Leicester, 2008 and Bachelor of Arts (Honours) University of Leicester, 2006

[5] Bachelor of Archaeology (Honours), La Trobe University, 2019. Industry experience – 4 years

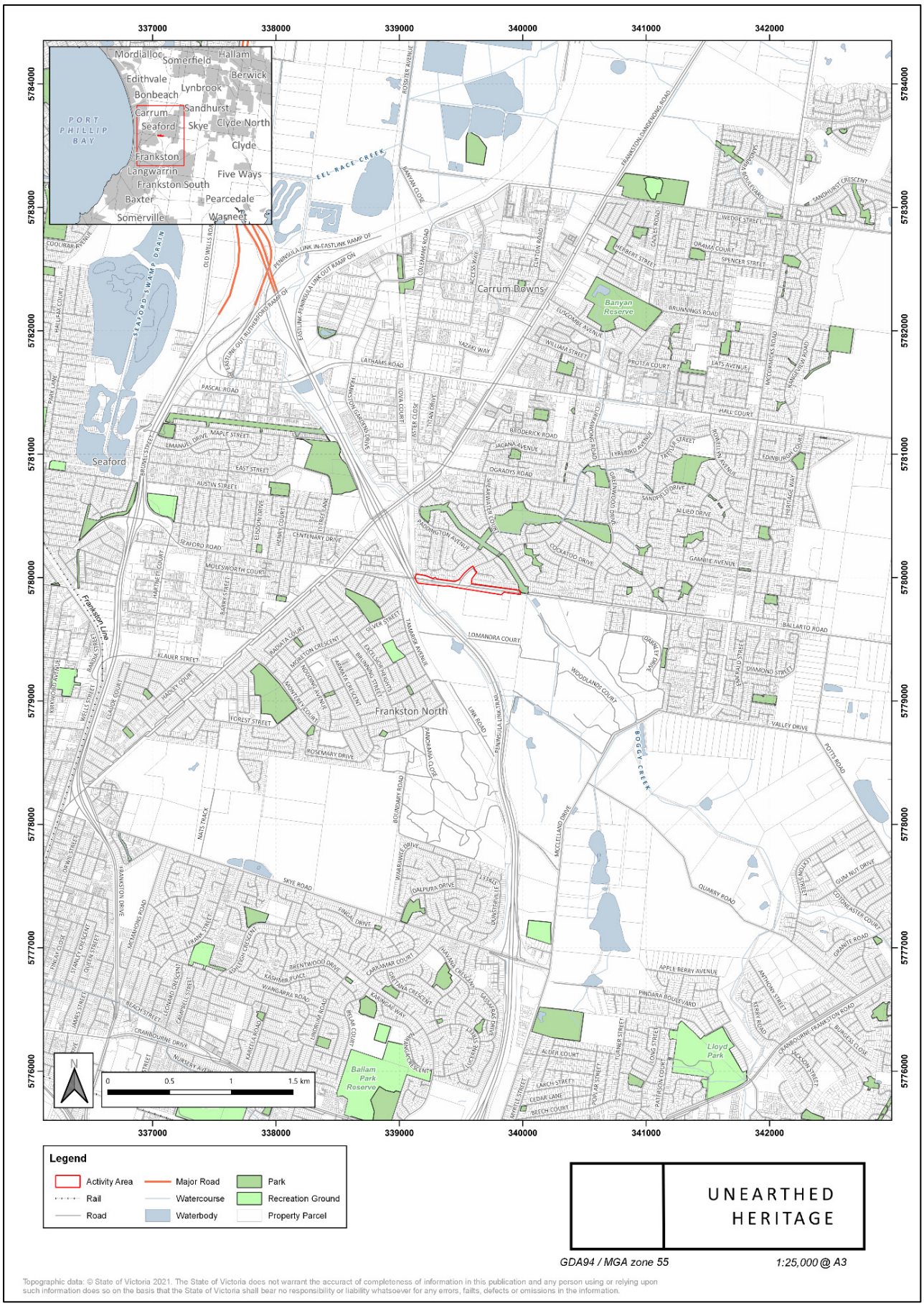

Figure 2-1 Location of the activity area

3 Activity area

3.1 Activity description

The proposed activity is a proposed intersection upgrade of the Ballarto Road / Lyrebird Drive intersection in Carrum Downs, Victoria.

The activity area will be used in accordance with the zoning of the land under the City of Frankston Planning Scheme (FPS). Appendix F identifies the current zoning applicable to the land under the FPS:

- PUZ7 – Public Use Zone
- TRZ2 – Transport Zone 2 – Principal Road Network
- PPRZ – Public Park and Recreation Zone
- RIZ – General Residential Zone

This CHMP prepared for the activity covers all ground disturbing activities as part of the activity within the activity area. The activity will include but is not limited to the following impacts within the activity area:

- Temporary lay down of materials.
- Parking and movement of vehicles and plant.
- Grading of surface in preparation for road surfacing.
- Cutting and filling to deliver appropriate road batter gradients.
- Excavation for drainage.
- Removal of vegetation within the activity area –this will be limited wherever possible.
- Road construction including construction of road pavement and curbs.
- Shared-use path construction, including link path in southern projection of activity area.
- Construction of a twin box culvert and associated works as part of the shared use path.
- Installation of new services as required.
- Realignment of services as required.
- Temporary installation of site office.
- Installation of safety barriers.
- Landscaping
- Ongoing maintenance
- Ancillary works as required

Typical impacts from construction will be shallow (for example widening of roads and works associated with culvert upgrade and replacement), with typical impact depths being up to 300-500mm in depth. The deepest impacts from construction will occur as part of drainage works and service installation and realignment where local impacts may reach approximately 1.5 m. It should be noted that much of the road and pedestrian upgrade work will occur in soils that have been disturbed as part of original road construction.

Ongoing maintenance works will include the following:

- Works to repair the road surface defects including rutting, corrugations, drainage scours, rough surface, potholes and excessive loose surface materials. Works to restore drainage to the road and ensure table drains are functional.

- Grading will be restricted to the existing road footprint – specially the prepared road surface, table drains and existing run-offs.
- Landscaping.

A plan showing the key components of the activity is shown in Figure 3-3.

3.2 Potential impacts

This CHMP prepared for the activity covers all ground disturbing activities as part of the activity within the activity area. The activity will include but is not limited to the following impacts within the activity area:

Typical impacts from construction will be shallow (for example widening of roads and works associated with culvert upgrade and replacement) and likely to be in general no more than approximately 300-500 mm deep. Localised deeper impacts may occur during the activity, including (but not limited to) impacts from drainage works and service installation where local impacts may reach approximately 1.5m.

No buried land surfaces were identified in the part of the activity area subject to proposed works. The activity area has been highly modified and disturbed by the construction, use and maintenance of Ballarto Road/Lyrebird Drive from the 1850s onwards, as well as by vegetation clearance and agricultural and residential land uses, and the installation of drainage facilities and underground services and utilities. Due to the degree of modification and disturbances present within the activity area brought about by the previous and current uses of the area as outlined above, it is unlikely that the activity will impact upon any buried former land surfaces.

3.3 Extent of the activity area

The activity area comprises a total of c. 5.5ha land. The activity area is clearly defined in Figure 3-4 and Figure 3-5.

The activity is located within the City of Frankston local government area in the locality of Carrum Downs.

As the activity is more than one hectare in size, but less than it is classified as a medium activity area, consistent with Regulation 81 of the *Aboriginal Heritage Regulations* 2018.

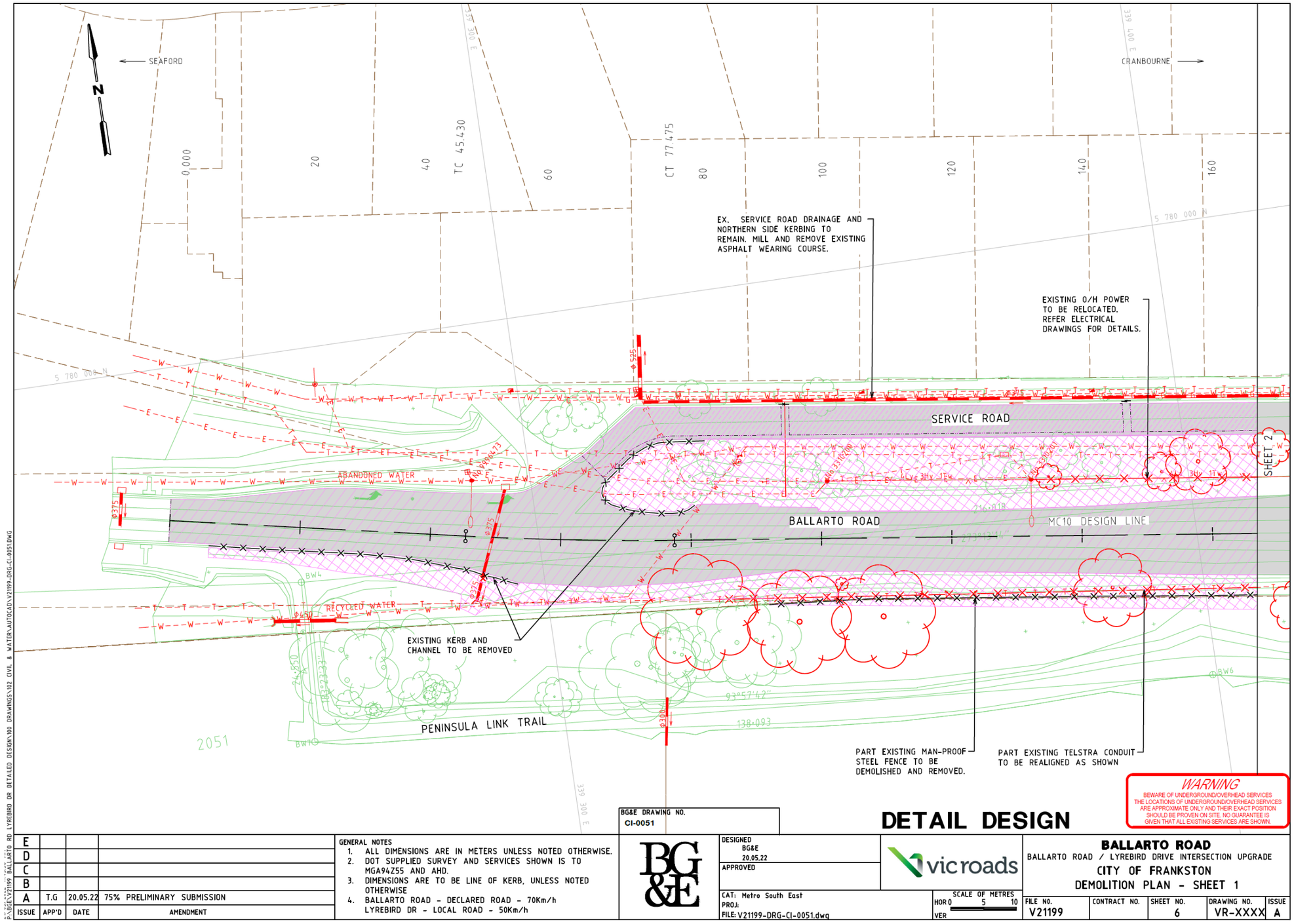

Figure 3-1 Proposed development plan (preliminary) – Part 1

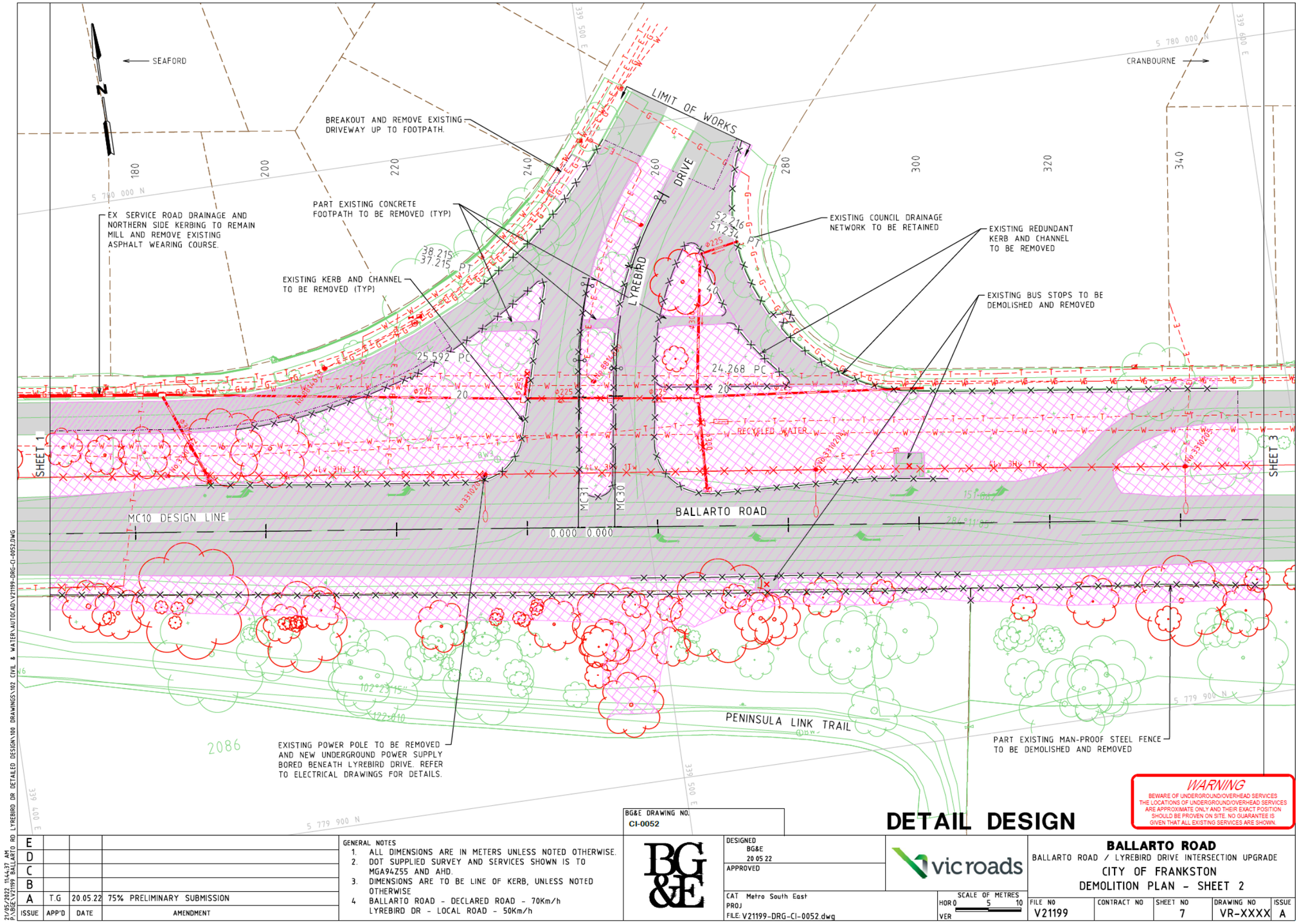

Figure 3-2 Proposed development plan (preliminary) – Part 2

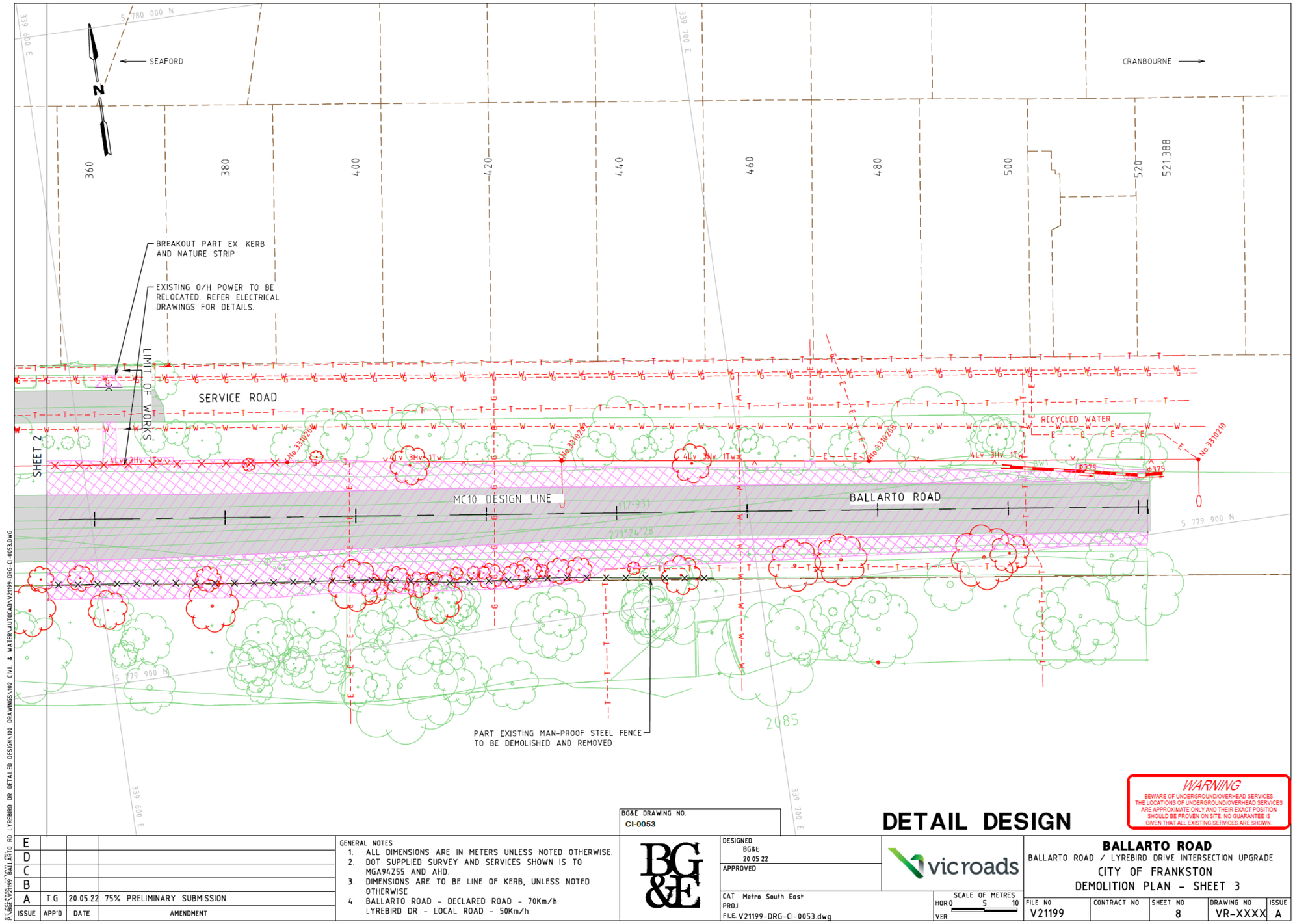

Figure 3-3 Proposed development plan (preliminary) – Part 3

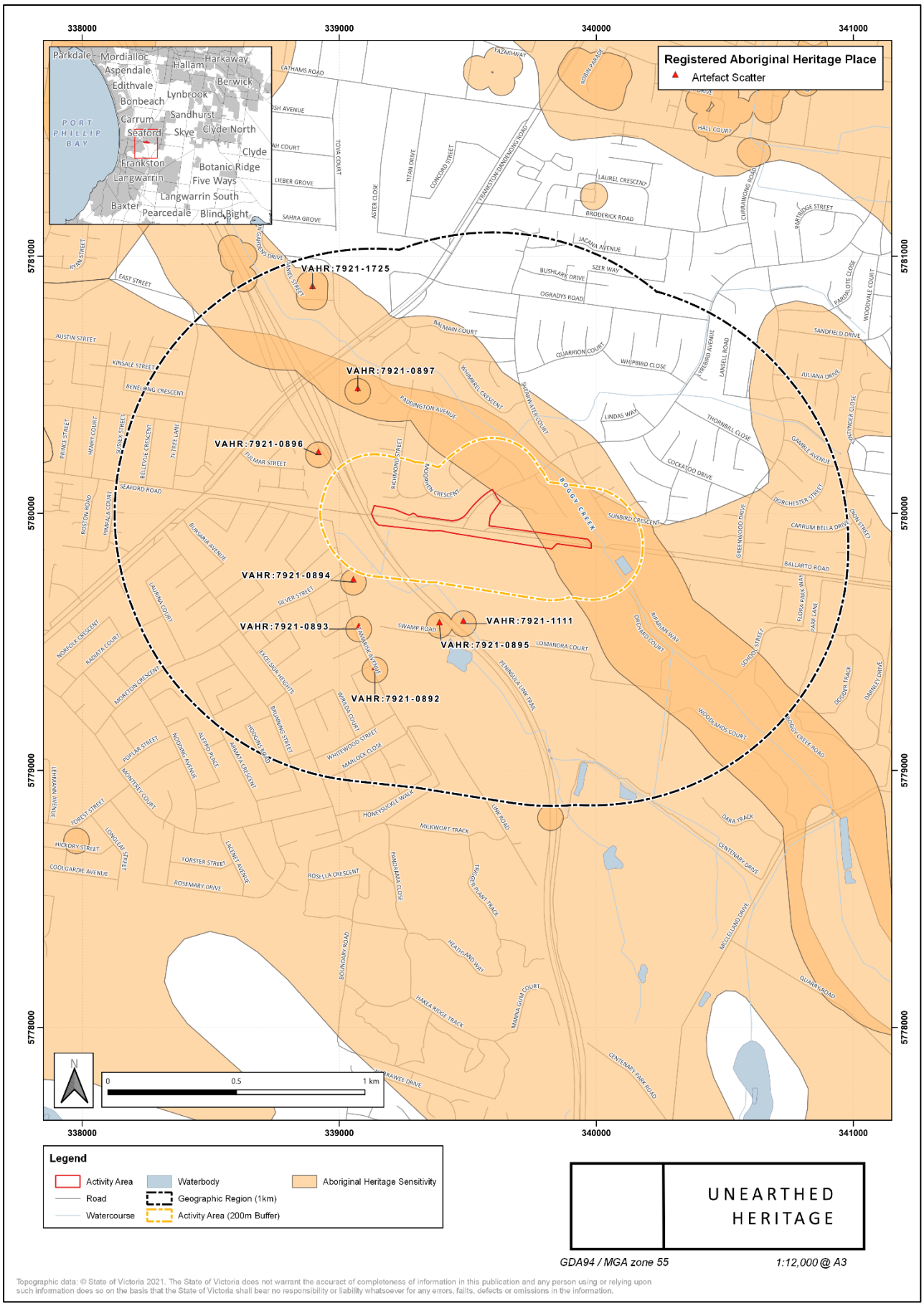

Figure 3-4 Extent of activity area, showing registerd Aboriginal places within 200 m of the activity area

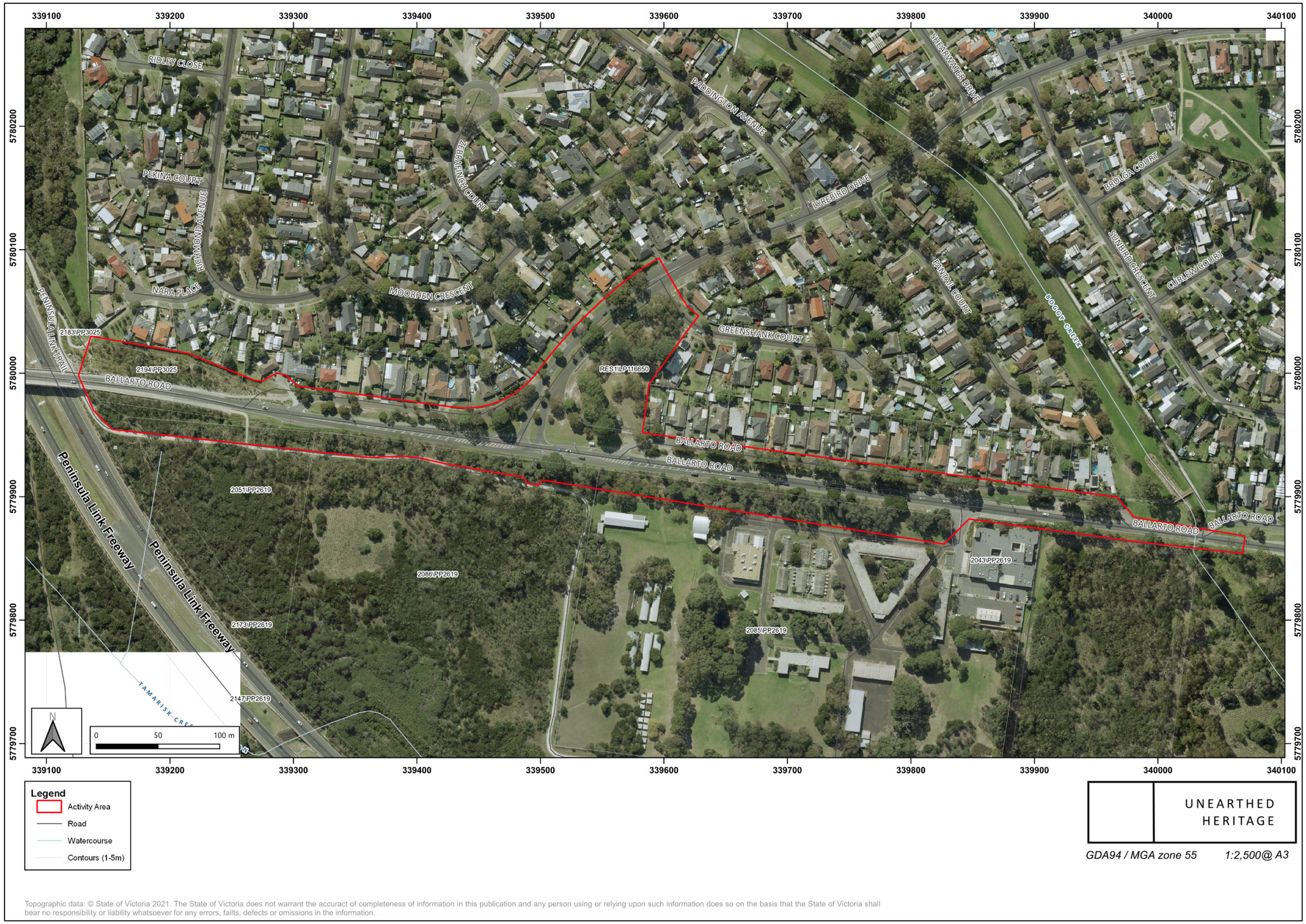

Figure 3-5 Photomap of the activity area, showing existing conditions

4 Consultation

4.1 Government consultation

A Notice of Intent to Prepare a CHMP form was submitted to the Secretary to FP-SR on 15 June 2021 and to the relevant LGA (City of Frankston) on 15 June 2021 (Appendix A).

4.2 RAP stakeholder consultation

The Registered Aboriginal Party (RAP) for the activity area is:

- The Bunurong Land Council Aboriginal Corporation (BLCAC)

The Notice of Intent was provided to the RAP on 15 June 2021, and they responded on 15 June 2021, electing to evaluate the CHMP (see Appendix A). Field methods and management conditions were discussed with the RAP during meetings and during field investigations for standard and complex assessment.

The RAP was consulted as part of the CHMP for the activity. Field representatives representing the RAP were involved in standard assessment (29th and 30th July 2021) and complex assessment on 08 November 2021, as follows:

Standard Assessment

- Minta Franks
- Richard Cole

Complex Assessment

- Jungala Ellis
- Kira Edwards

Reasonable efforts were made by the heritage advisor and Sponsor to consult with the RAP during the preparation of this CHMP about the collection and review of oral history related to the activity area, with no specific information provided. Specifically, the HA enquired with the RAP during the inception meeting if any oral information relating to the activity wanted to be discussed or shared, no oral information about the activity area was communicated.

Table 4-1 summarises the consultation undertaken during this CHMP.

Table 4-1 Summary of substantive consultation undertaken with the RAP during the preparation of this CHMP

Date	From	To	Format	Summary
15 June 2021	Joseph Brooke	FP-SR	Electronic, Email	Notice of Intent to prepare a CHMP form
15 June 2021	VAHR	Joseph Brooke and Sponsor	Email	Automatic response and provision of CHMP identifier 18037
15 June 2021	Joseph Brooke	BLCAC	Email	Notice of Intent to prepare a CHMP and request for BLCAC to confirm they intend to evaluate the CHMP
15 June 2021	BLCAC	Joseph Brooke and Sponsor	Email	BLCAC confirm they intend to evaluate the CHMP and provision of standard policy documents.
6 July 2021	Joseph Brooke	BLCAC	Email	Email booking request for inception meeting.

Date	From	To	Format	Summary
22 July 2021	See below for attendees		Meeting	Inception meeting – see below for details
20 August 2021	Joseph Brooke	BLCAC	Email	Email booking request for standard assessment results meeting.
1 September 2021	See below for attendees		Meeting	Standard Assessment results meeting – see below for details
24 November 2021	See below for attendees		Meeting	Complex Assessment results meeting – see below for details
1 June 2022	Joseph Brooke	Bradley Ward (Heritage Unit, BLCAC)	Phone	Joseph raised (1) minor addition to activity area to allow for shared-use trail to south, (2) a change to the activity description to remove a retaining wall on southern side of Ballarto Road, which is no longer proposed, and (3) inclusion of some use of Botany Park as potential site compound/lay down (previously no work proposed). Joseph queried whether BLCAC would like field assessment to occur of this extension. Brad agreed that fieldwork wasn't required, and that the compliance inspection previously proposed for the retaining wall could be repurposed to cover the shared-use trail tie-in. Brad agreed that a second compliance inspection was to be included if the site compound went ahead in Botany Park.

4.2.1 Summary of meetings

A total of three meetings were held with the RAP and the Sponsor as part of the preparation of this CHMP.

<u>Inception meeting, 22 July 2021 – Online Zoom Meeting</u>
Attendees: Bradley Ward (Heritage Unit, BLCAC), Jason Cheah, John Tunn and Edward Liao (Sponsor's representative), David Mathews (UHA).

The meeting commenced with introductions. David gave an overview of the activity, proposed works and the activity area, as well as a summary of the archaeological background of the geographic region and activity area, including geology, geomorphology and other environmental conditions.

A summary of previous archaeological investigations undertaken adjacent to the activity area was given. Standard assessment methodology was proposed, refined and agreed upon. A comprehensive surface survey would be undertaken with auger holes to also be conducted. A meeting would then be held to discuss the results of the standard assessment, and any further assessment that would be required.

<u>Standard assessment results meeting, 1 September 2021 – Online Zoom Meeting</u>
Attendees: Bradley Ward (Heritage Unit, BLCAC), Jason Cheah and Edward Liao (Sponsor's representative), Joseph Brooke (UHA).

The meeting commenced with introductions. Joseph gave a recap of the proposed works and the activity area, as well as a summary of the archaeological background. Joseph then summarised the

results of the standard assessment, which included a comprehensive surface survey of the area and included auger holes. No Aboriginal cultural heritage was identified. The activity area has been subject to moderate to high modification and disturbances associated with land clearance, agricultural land uses, road construction, road uses and maintenance. The activity area was assessed to be of very low, low and moderate archaeological potential, with the area of moderate potential in the area to the east of Lyrebird Drive which appears to be lesser disturbed than the remainder of the activity area. Subsurface testing was then proposed, would involve the excavation of one 1x1m test pit and a series of STPs that would target the areas to be impacted by the proposed activity.

It was agreed that should any of the initial STPs excavated contain Aboriginal cultural heritage, radial test pits (double negatives) would be excavated around the STP (BLCAC requested maximum 5m spacing at cardinal directions) and that the STPs would be expanded to 1x1m test pits (note that radial excavation that contained Aboriginal cultural heritage did not need to be expanded to 1x1m test pits). These excavations would only take place in areas that would be subject to proposed impacts.

It was agreed that following the standard and complex assessments, a results meeting would occur to update BLCAC on results and discuss the required management conditions of the CHMP.

<u>Post-standard assessment meeting, 24 November 2021 – Online Zoom Meeting</u>
Attendees: Bradley Ward (Heritage Unit, BLCAC), Jason Cheah and Edward Liao (Sponsor's representative), Joseph Brooke (UHA).

The meeting commenced with introductions. Joseph acknowledged Country. Joseph presented the complex assessment results and summarised the results of the CHMP assessment. Activity area contained single landform, with differences in archaeological potential due to disturbance. Complex Assessment was proposed to sample less disturbed portions of the activity area, including a 1x1m pit to sample the landform. Brad mentioned that there had been a find immediately to the south. For the management conditions, it was agreed that a RAP inspection would take place across the southern side of the road (c. 200 m section). There would be RAP standard conditions and contingencies.

4.2.2 Outcomes of consultation with the RAP

The management conditions all agreed to in the final meeting, being:

- A RAP inspection across the southern side of the road in the activity area;
- Standard BLCAC management conditions and contingencies.

Aboriginal Cultural Heritage Assessment

This section presents desktop, standard and complex assessments of the activity area.

5 Desktop assessment

This section provides background information on the activity area and the surrounding region. This information is presented to provide an understanding of the physical, historical, cultural, and archaeological setting in which the activity area is located. This information is useful in developing archaeological place prediction models. Caroline Wilby and Joseph Minter Brooke undertook the background research for the desktop assessment. There were no obstacles encountered to undertaking the desktop assessment.

5.1 Environmental context

This section provides an overview of the environmental context of the activity area, with particular focus on factors that may have influenced past human behaviour and hence archaeological place formation processes and the distribution of Aboriginal cultural heritage places. The land-use history of the activity area is also reviewed as it assists in identifying any site formation processes that may have impacted on the occurrence and/or location of Aboriginal cultural material.

It is necessary to place geographical parameters on this desktop assessment to provide a meaningful context broad enough to capture regional environmental and Aboriginal place distribution patterns, while remaining targeted so that these patterns are not missed. The geographic region used for this CHMP covers an area within a 1 km radius of the activity area. This region is considered to provide an effective comparative sample of previous assessments and registered places both on similar landforms and from a broader landscape perspective as numerous studies have been undertaken within this radius. It also provides an effective scope to understand the flora and fauna, geology, soils, and geomorphological context which would have influenced the occupation by Aboriginal people and the post-contact land-use history that may have impacted Aboriginal places.

5.1.1 Geology and geomorphology

The activity area is situated within the geomorphological landscape of *Coastal plains with ridges and dunefields (Brighton, Cranbourne)* (Victorian geomorphological unit [GMU] 7.1.1), in the low-lying Central sunklands of the Victorian Eastern Plains – see Figure 5-2.

These coastal plains are formed over Neogene (23-2.5 million years ago) sediments, generally mantled by a layer of sand of variable thickness. The landscape is characterised by a series of low, parallel, north-west trending dune ridges, that run parallel to the present coastline. These dune ridges are believed to represent stranded Neogene dune ridges or former coastlines that formed as the sea retreated during the Neogene approximately 5.8-5.6 million years ago. These dune ridges are separated by low hollows and swales; many of which contain streams and swamps (VRO 2021; Wallace, Dickinson, Moore & Sandiford 2005).

The surface geology within the activity area consists of inland dune deposits (Qd1), also known as Cranbourne Sands, comprising lunette and longitudinal dune deposits of well sorted, friable to consolidated siliceous sand, silt, and clay – see Figure 5-2. The soils within this landscape are either acidic sandy texture contrast soils (Chromosols) or deep, strongly acidic sands with bleached subsoil and a hard, dark brown B horizon of “coffee rock” composed of organic matter, aluminium and / or iron compounds occurring at c. 800 mm depths (Podsols) (VRO 2021).

The majority of the surrounding geographic region (79.5%) also falls within the *Coastal plains with ridges and dunefields (Brighton, Cranbourne)* (GMU 7.1.1) geomorphological landscape. The remainder (20.5%) consists of an area of *Former swamps and lagoonal deposits (Koo-Wee-Rup, Tobin Yallock, Bass River Delta, Carrum Downs)* (GMU 7.1.3), extending from the west – see Figure 5-2. These former swamp and lagoonal deposits are the result of swamp deposits from various rivers, creeks, and streams that formerly flowed across the coastal plains landscape.

The surface geology across the geographic region consists primarily of inland dune deposits *(*Qd1) / Cranbourne Sands with an area of Miocene to Pliocene (23-5 million years ago) Red Bluff Sandstone (Nbr) (13.6%) – a fine to coarse grained massive to well bedded pale yellow and brown sandstone, conglomerate and ironstone channelled fluvial formation – occurring in the north, see Figure 5-2. The former swamp soils across the geographic region generally have a high clay content and crack when dry (Vertosols) (VRO 2021) (Figure 5-2).

No outcrops or exposures of lithic material suitable for the manufacture of stone tools are known to be located within the current geographic. However, various workable lithic raw materials including silcrete, quartz, quartzite, granite, sandstone, and chert occur in geological deposits across the wider region and inland Mornington Peninsula, and marine flint is also commonly found on beaches as large nodules washed ashore on the Bass Strait coastline (Jenkin 1974, Sullivan 1981). Ochre is also reported to be found near Mount Eliza (Thomas 1840 in Sullivan 1981), west of the geographic region. Quartz, quartzite, chert and silcrete suitable for making flaked stone artefacts may have been available in small amounts in local creek beds and would have been exploited on an opportunistic basis. These materials would have originated in the hilly regions to the north of the geographic region, and could have been sourced from there, either directly or imported through the movement of people and/or trade from that area. Basalt outcrops in the north of Berwick and the south of Cranbourne and may have been used for fashioning ground stone implements.

5.1.2 Landforms

The activity area comprises an undulating dunal landform which has been extensively modified by urban development. The heavily modified course of Boggy Creek lies to the immediate east of the activity area.

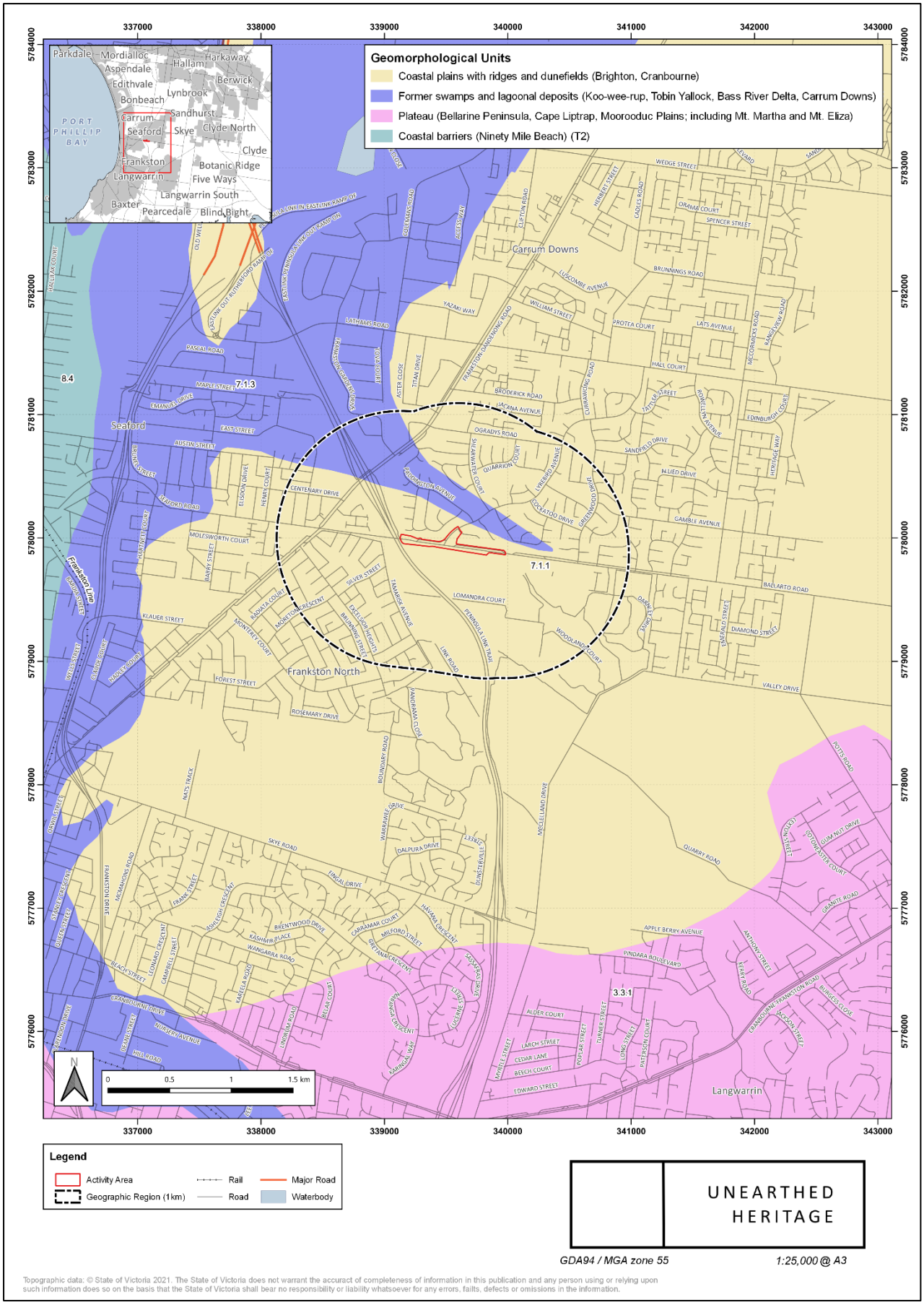

Figure 5-1 Geomorphology within the geographic region

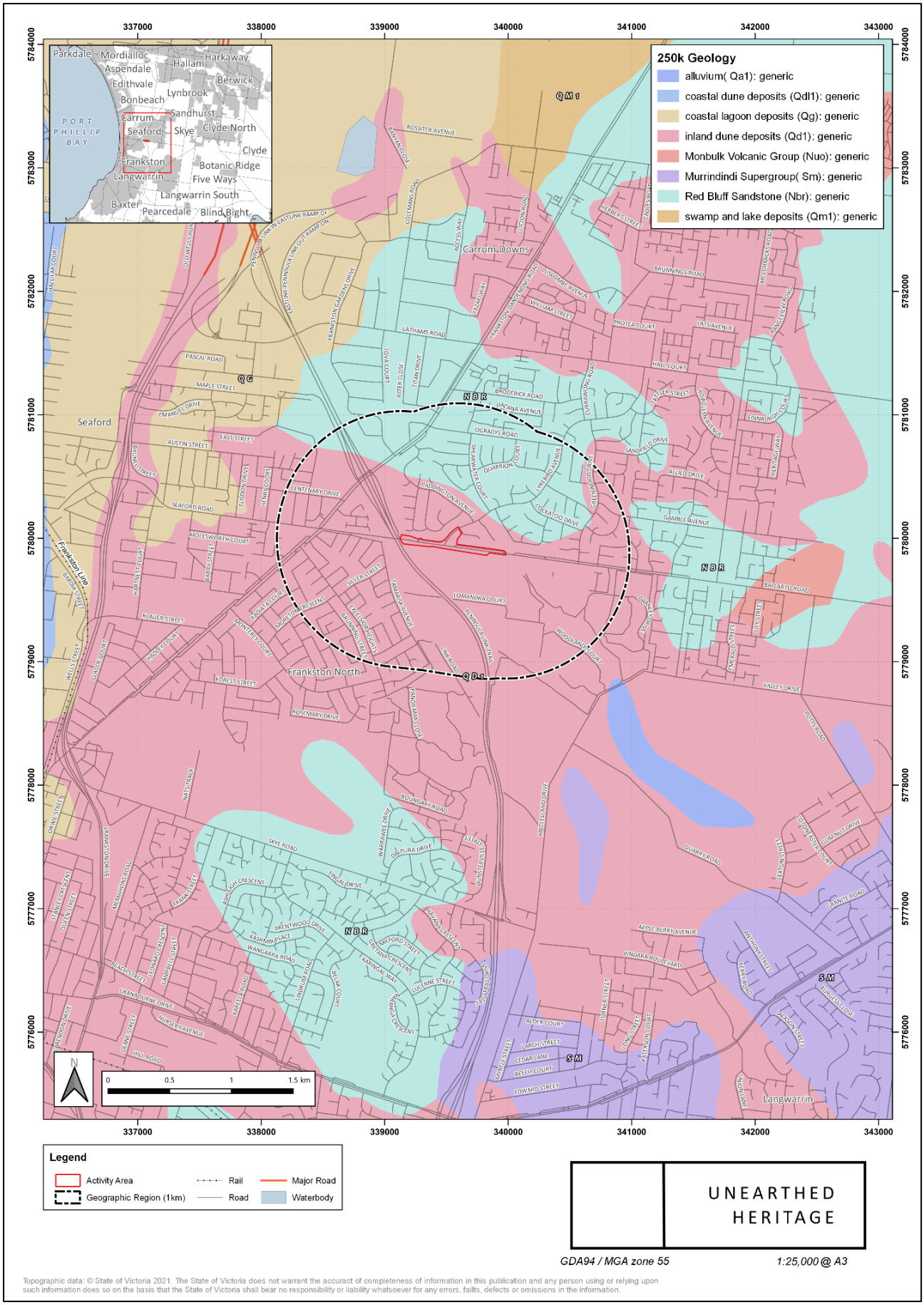

Figure 5-2 Geology within the geographic region

5.1.3 Flora and fauna

Prior to European settlement and land-use, the activity area would have been covered with vegetation typical of *Swamp Scrub* (Victorian Ecological Vegetation Class [EVC] 53) within the broader *Riparian Scrubs or Swampy Scrubs and Woodlands* ecosystem group, and *Heathy Woodland* (EVC 48) in the broader *Heathy Woodlands* group – see Figure 5-3.

Swamp Scrub (EVC 53) consists of a closed scrub up to 8 m tall, dominated by Swamp Paperbark (*Melaleuca ericifolia*) and Woolly Tea-tree (*Leptospermum lanigerum*), which often forms a dense thicket, out-competing other species. Ground cover commonly consists of a range of moss / lichen / liverwort or herbaceous species. *Swamp Scrub* generally occurs at low elevations on alluvial deposits along streams or on poorly drained sites with higher nutrient availability (DSE 2007).

Heathy Woodland (EVC 48) consists of a eucalypt-dominated low woodland up to 10 m tall, characterised by Jimmy's Shining Peppermint (*Eucalyptus willisii*), Messmate Stringybark (*Eucalyptus obliqua*), Narrow-leaf Peppermint (*Eucalyptus radiata* s.l.), Rough-barked Manna Gum (*Eucalyptus viminalis* spp. *pryoriana*) and Saw Banksia (*Banksia serrata*). The understorey generally consists of a diverse array of narrow or ericoid-leafed shrubs and bracken, over a sparse ground cover of geophytes and annuals. *Heathy Woodland* is generally associated with nutrient-poor soils including deep uniform sands and Tertiary sand / clay quartzite gravels.

The pre-European vegetation across the broader geographic region would have also largely consisted of *Swamp Scrub* (EVC 53), and *Heathy Woodland* (EVC 48). An area of *Plains Grassland/Plains Grassy Woodland Mosaic* (EVC 897), a mosaic unit within the *Plains Grasslands and Chenopod Shrublands* group would also have occurred in the north. This vegetation unit comprises a mosaic of volcanic grassy Eucalypt woodland and natural temperate grassland communities. Patches of *Sand Heathland* (EVC 6), consisting of a low, dense treeless heathland dominated by dense heathy shrubs, sedges, and sedge-like species, would also have occurred (DSE 2007).

The woodland and swamp vegetation communities within the geographic region would have supported a rich diversity of fauna that would have been utilised by Aboriginal populations for food and raw materials such as meat, bones, skins, and furs, including kangaroos, wallabies, possums, gliders, koalas, bandicoots, potoroos, and various species of birds, bats, snakes, and lizards. Waterways and swamp areas would have provided further food sources, such as fresh-water fish, eels, crustaceans, and shellfish. The vegetation itself would have also provided many resources to Aboriginal people, such as timber, bark, reeds and grasses for tools, utensils, weapons, nets, mats and baskets, plant material for medicinal purposes, and native vegetable foods, such as nuts, fruits, tubers, and seeds.

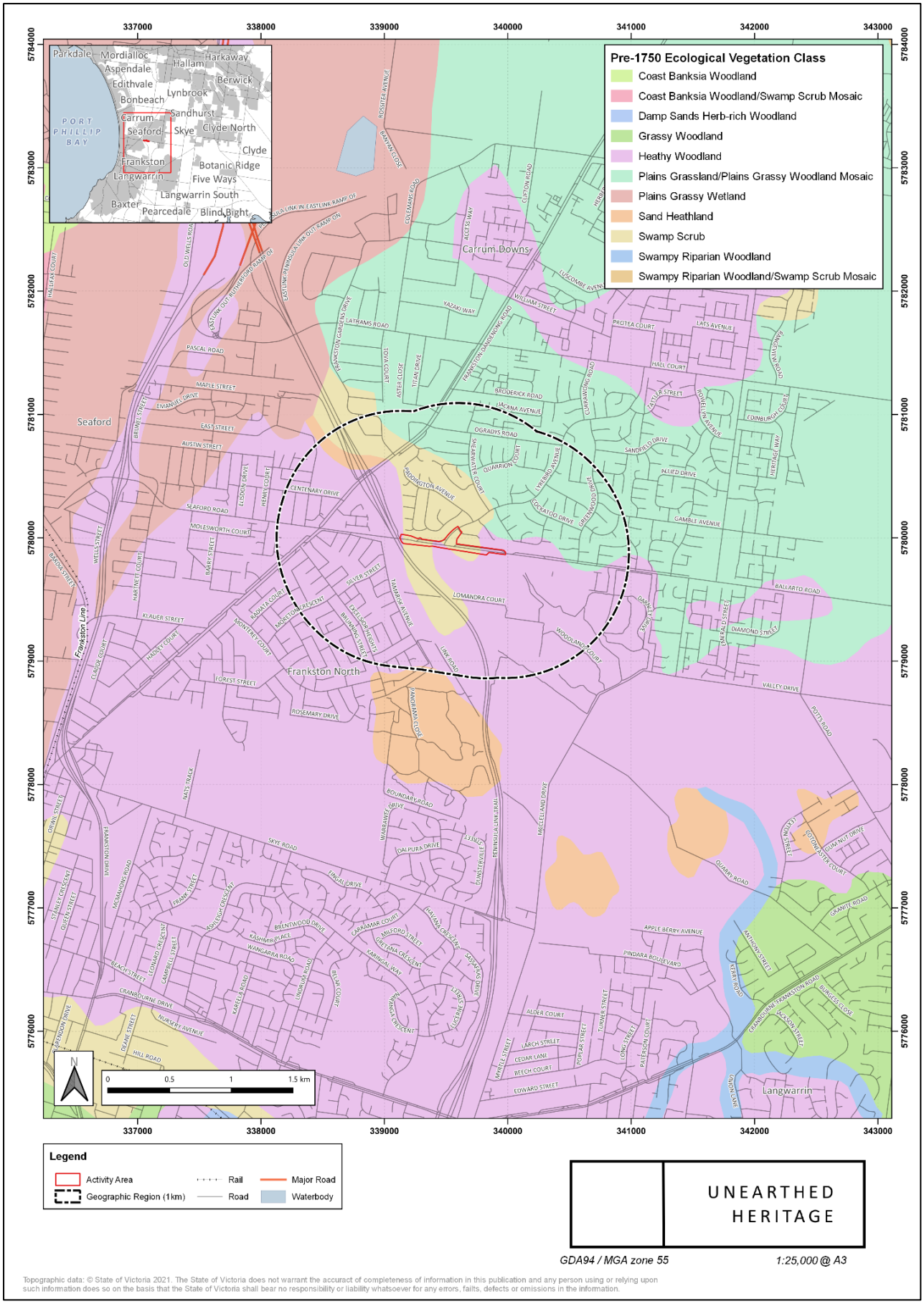

Figure 5-3 Pre-European occupation native vegetation communities within the activity area and geographic region

5.1.4 Climate

The current climate in the Skye region is a cool to warm temperate climate, tempered by the proximity of Port Phillip Bay and Bass Strait, with occasional extreme winter and summer temperatures. Average winter temperatures range from 2.9°C to 14.5°C, whilst average summer temperatures range from 12°C to 25°C. The average annual rainfall is 774.1 ml, with August generally having the highest average monthly rainfall of 76.6 ml and March being the month of lowest average rainfall of 46.4 ml (BOM 2021).

While these climatic conditions would have placed no strictures on Aboriginal occupation, they would have clearly led to differential seasonal occupation between different parts of the landscape. Additionally, during the long period of Aboriginal occupation of this region (at least c. 37,000 years), climatic conditions have varied significantly. This would have included colder and drier conditions during the last ice age that would have seen the drying up of Port Phillip Bay, to warmer and wetter periods (in the mid-late Holocene, c. 3,000-4,000 years ago) that would have provided different challenges (e.g. more extensive swampland) and opportunities (e.g. more water and resources) for occupation (Mulvaney & Kamminga 1999).

5.2 Cultural context

Information about the early inhabitants of the region around the activity area is predominantly derived from observations made by Europeans in the nineteenth century at a time when traditional life had already been severely disrupted so this must be taken into consideration when utilising these resources.

5.2.1 Ethno-historic background

The following section provides a summary of ethno-historic information relevant to the activity area. It should be noted that such information is predominantly derived from observations made by Europeans in the 19th century; particularly the papers and journals of the Assistant Protector of Aborigines, William Thomas, and Chief Protector, George Augustus Robinson. Such information was recorded at a time when traditional Aboriginal life had already been severely disrupted, and this must be taken into consideration when utilising these resources.

The activity area is located within the traditional lands of the *Bun wurrung* tribe (also called *Boonwurrung* or *Bunurong*) (Clark 1990: 365). The *Bun wurrung* clan that would have occupied the activity area was the *Mayune Balug* clan, who were said to be associated with the Carrum Swamp and the upper portion of the Mornington Peninsula (Clark 1990: 364, 365, 368).

Language groups were comprised of collections of neighbouring clans who shared a common dialect as well as mutual economic and political interests. They were also communally connected to specific areas of land through their spirituality, including an association with topographic features linked to deities and other mythic beings (Clark 1998). The *Bun wurrung* tribe was part of the larger East *Kulin* language group, along with several other neighbours.

Prior to European settlement, Aboriginal populations in the region around the activity area would have hunted wallabies, koala, possums, other small mammals, and birds using wooden spears. Hunting eels was an important seasonal economic activity witnessed regularly by early settlers, as was net and spear fishing. A range of plant resources was also exploited for food, medicine, and utility (Presland 1983: 32-5). The swamp was a rich source of many resources for Bun wurrung, as was Port Phillip Bay.

5.2.2 Post-European contact

The *Bun wurrung* people are among the first of the Victorian tribes to encounter Europeans, due to their coastal location. From 1798, whalers and sealers were active in locations offshore and along the southern coast of Victoria (Ellender 2002: 12) and a number of sealers lived year-round on Phillip Island, exploiting a colony of furs seals (Weatherall 1826 in Gaughwin and Sullivan 1984; Gunson 1968: 3). The early explorer Hovell (1826-7: 51) noted that sealers on Phillip Island had taken and were subjugating several hundred Aboriginal women for domestic chores, seal hunting and sex. The presence and actions of the sealers caused considerable tension with *Bun wurrung* populations, leading to at least two altercations (Ellender 2002: 12). Additionally, William Thomas, Assistant Protector of Aborigines, reported that the *Bun wurrung* populations were suffering significantly from repeated raids and attacks from Gippsland Aborigines (Clark 1990: 364; Thomas 1840 in Gaughwin and Sullivan 1984: 83).

European settlement from the 1830s and the consequent urban development of Melbourne, resulted in the loss of traditional lands, foods and resources for the many tribes around Melbourne, including the *Bun wurrung* people (Thomas nd in Gaughwin and Sullivan 1984: 83). This proved to be devastating for Aboriginal people, particularly coupled with the spread of European introduced diseases, and social turmoil and breakdown due to the relocation of individuals and groups to reserves and mission stations (Clark and Heydon 1998). To add to this, Aboriginal people from various clans and language groups, from as far away as the Murray River, were attracted to (or were moved to) Melbourne for a range of reasons. In this situation, it would have been extremely difficult for the European colonists to differentiate between clans and/or tribes.

5.2.3 Land-use History

The first recorded European occupation of the activity area occurred in 1839, when brothers Charles Richard, John Helder, and Henry Wedge obtained a squatter's license for approximately 42 square miles of land from the coast inland, south of Carrum Swamp. The Wedge brothers named the run "Balleymarang"; also later known "Banyan Water Holes." The size of such squatters' runs was often determined by the number of livestock – sheep and / or cattle – that could be grazed on them with minimal labour, and the runs commonly had little clearing and few constructions apart from a hut and fencing around stock holding yards. No detail of specific land use within the activity area during this time has been found in the historical record, however, it is likely that use was limited to livestock grazing (Billis & Kenyon 1932, Dingle 1984, Spreadborough & Anderson 1983).

In 1852, the Wedge brothers' pastoral license for Balleymarang was cancelled and the majority of the run was divided up into smaller landholdings to cater for the rapidly increasing population of Melbourne resulting from the central Victorian goldrushes. A Government survey of numerous rural allotments, associated access roads was laid out, covering much of Lyndhurst, Langwarrin, and Frankston parishes, with allotments variously sold to existing settlers under pre-emptive rights, or offered for sale or selection at public auction. This subdivision included a main east-west access track leading from the coast inland, which also marked the boundary between Lyndhurst parish in the north and Frankston and Langwarrin parishes in the south. This track follows the current alignment of Ballarto Road – see Figure 5-4. A village reserve named "Skye" was also laid out on either side of Ballarto Road (near the current intersection with McCormicks Road), with smaller rural / town allotments offered for public sale in following years (Gunson 1968, Jones 1989). Village and parish plans of the area during the 1850s show much of the land on either side of Ballarto Road remained wooded with "heath and scrub." Interestingly, a water hole with reserved right of way is also marked on the northern side of Ballarto Road, close to Boggy Creek and the western extent of the activity area – see Figure 5-4.

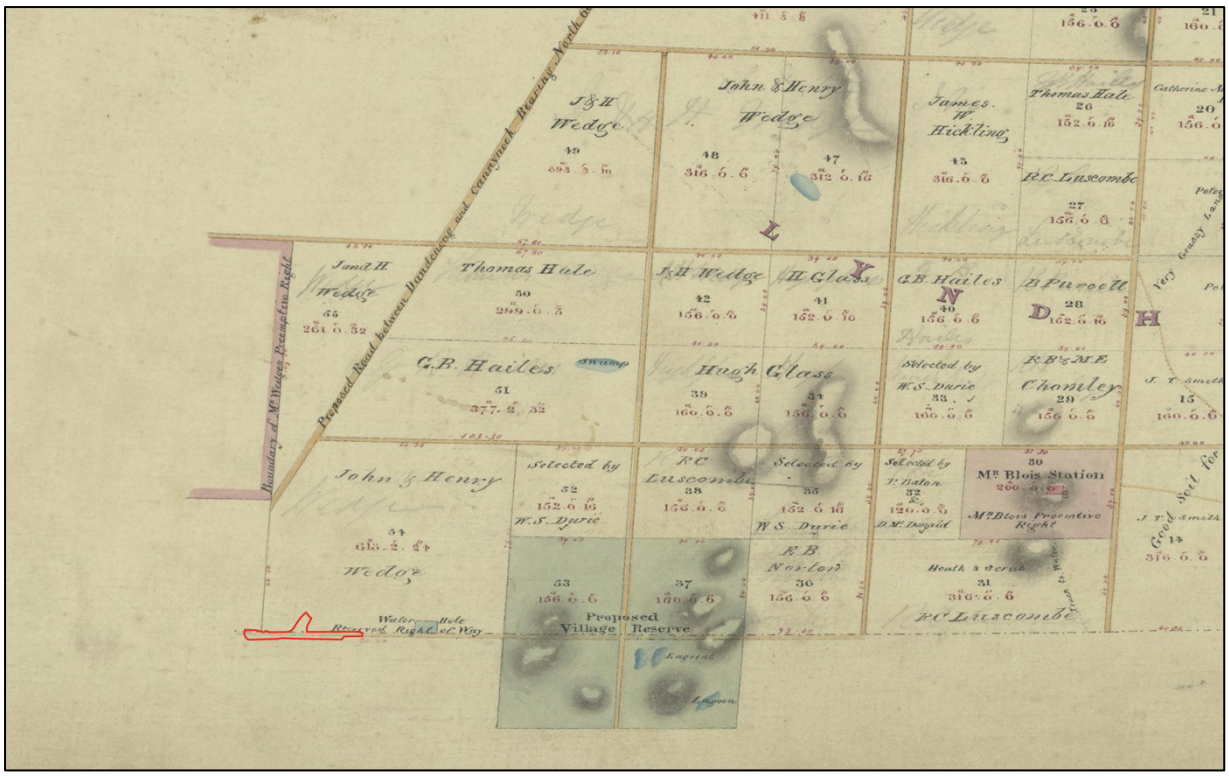

Figure 5-4 1856 plan of Lyndhurst parish (Windsor 1856), showing access track / later Ballarto Road; with the activity area marked in red.

Over the following decades, various farming and agricultural properties developed throughout the local region, particularly on the northern side of Ballarto Road. Prominent industries included dairy farms, poultry farms, market gardening, and orchards. However, whilst most of the smaller allotments within the village of Skye reserve were sold, little development of a village actually occurred. Settlement on the southern side of Ballarto Road was limited throughout this period; largely due to the reservation of large tracts of land on the western side of the village of Skye – initially marked by the Government as a potential Melbourne cemetery site (Gunson 1968, Jones 1989). In 1878, Ballarto Road was officially proclaimed as a public roadway throughout the parishes of Frankston, Langwarrin, and Lyndhurst; again, following the current alignment and including the activity area – see Figure 5-5 and Figure 5-6. However, the road remained a gravel surfaced track until well into the 20th century.

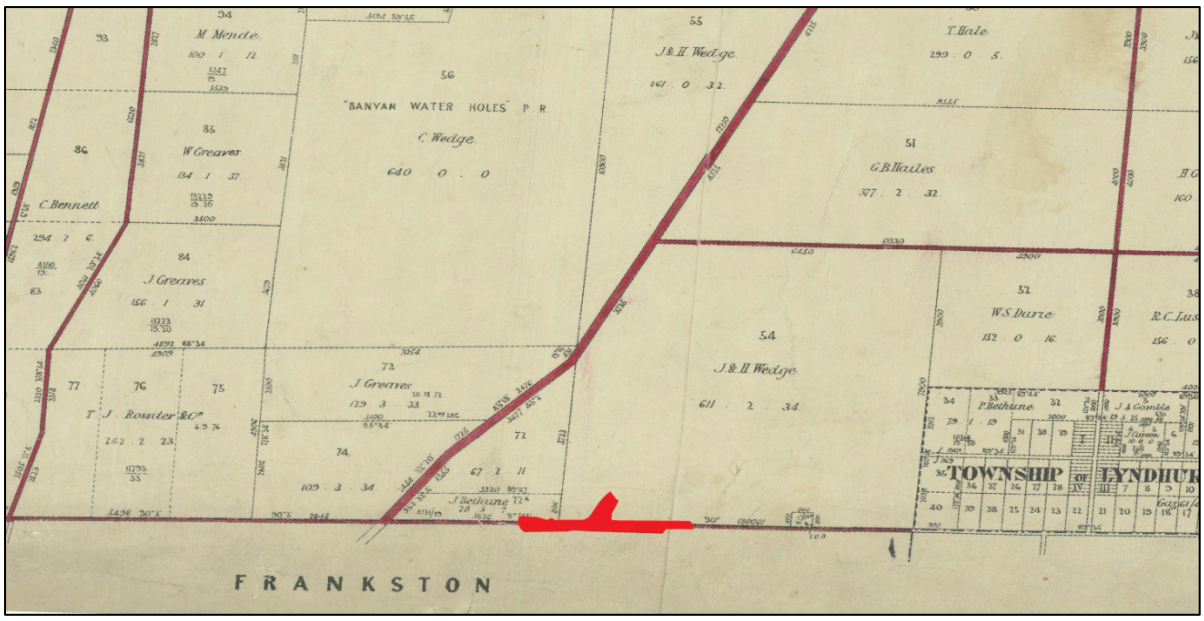

Figure 5-5 1878 map of Lyndhurst parish (Noone 1878) showing proclaimed roads (marked maroon); activity area in red.

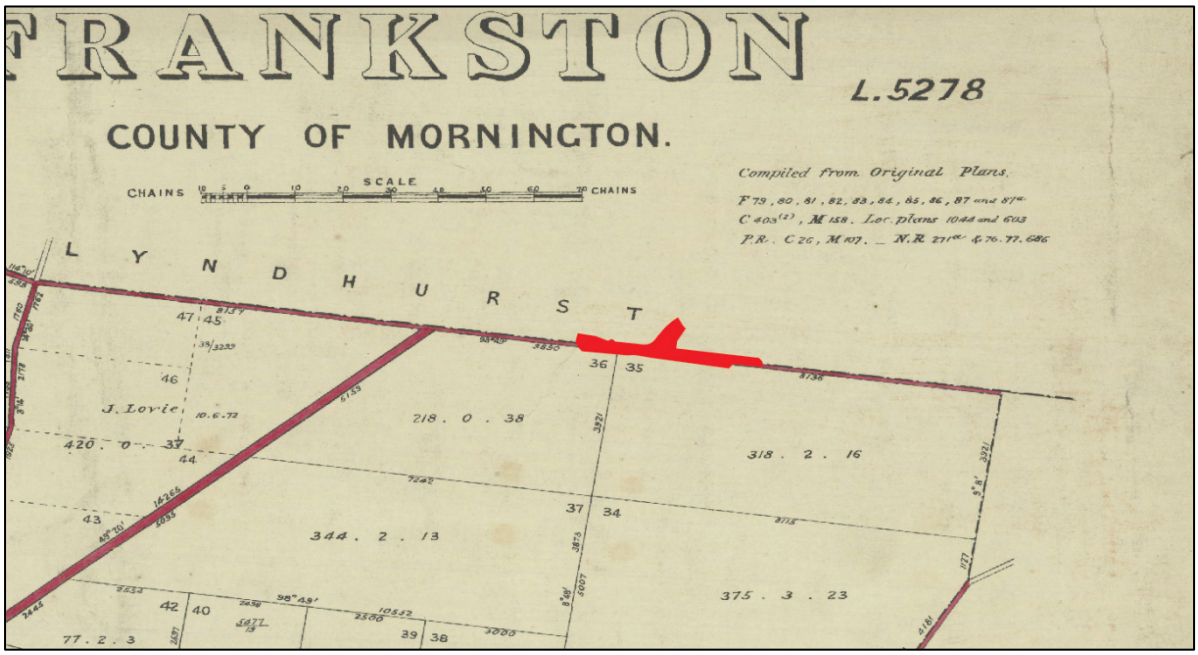

Figure 5-6 1878 map of Frankston parish (McGauran 1878) showing proclaimed roads (marked maroon); activity area in red.

Further subdivision and land sales led to more intensive farming and slightly closer settlement throughout the region from the late 19th century to early 20th century. However, the Skye area and surrounds remained predominantly rural until well into the latter 20th century.

The district roads, including Ballarto Road, began to be improved during the first decades of the 20th century, particularly after the formation of the Country Roads Board – a government authority established to centralise responsibility for the construction and maintenance of main roads throughout Victoria. By the mid-1920s, Ballarto Road was identified as a constructed and maintained "formed road" (Graeme Butler & Associates 1997, Gunson 1968).

By the mid-1950s, the Government began to divide up the large reserve on the southern side of Ballarto Road. The northern portion, however, remained under Government administration,

controlled by the Department of Agriculture, and in the 1960s a vegetable and turf research institute, and natural resources and conservation institute, were established (University of Melbourne, 1999).

In the late 1970s through to early 1980s, a large area of land on the northern side of Ballarto Road extending to Hall Road was subdivided into residential allotments and developed as a housing estate known as "Botany Park" – the first major development of its type in the area. This housing estate extends along the northern side of Ballarto Road in the western section of the activity area, from Boggy Creek to newly established Dion Drive – see Figure 5-7. The spacious land allotments, affordability, and proximity to Frankston attracted numerous families to the new estate, and community services – including the Flinders Christian Community College on the southern side of Ballarto Road – began to develop throughout the 1980s. Areas to the east of this housing estate remained largely rural and characterised by large farm holdings in the 1980s – see Figure 5-7. However, through the 1990s to early 2000s, the area was increasingly subdivided into residential allotments, resulting in the emergence of the current urbanised landscape.

Figure 5-7 1987 aerial photograph (LANDATA) – activity area approximately marked in red.

Overall, the historical impacts to the land within the activity area have included:

- Vegetation clearing and livestock grazing associated with 1830s-1850s pastoral land use of Balleymarang Run, and with the 1850s establishment of the original access track along the alignment of Ballarto Road as part of the subdivision of Balleymarang Run;
- Maintenance and improvement – likely involving various episodes of levelling, grading, surfacing, and widening, of Ballarto Road from the 1850s onwards;
- Widespread vegetation clearance and establishment of various types of farming industries, associated facilities, and farm residences and structures, throughout allotments fronting Ballarto Road from the 1850s onwards;

- Ground disturbance associated with increasing urban development, residential construction, and installation of associated facilities, along Ballarto Road from the 1970s onwards;
- Ground disturbance associated with the installation of drainage facilities and various underground services along the Ballarto Road corridor and Lyrebird Drive road reserve.

5.3 Archaeological background

The findings of previous cultural heritage assessments in the geographic region can help inform the current study by improving our understanding of the distribution of Aboriginal places in the region and the factors that have led others to their discovery. Therefore, a review of previous assessments in the wider geographic region on similar landforms, as well as in a more local context, is pertinent.

It is important to note that many Aboriginal places within the Skye region will have previously been destroyed by intensive activities, such as market gardening, sand mining and residential development, with the known distribution of Aboriginal places reflecting investigation effort and land-use, rather than the intensity of Aboriginal occupation and archaeological deposition in the region.

5.3.1 Regional-scale assessments

Archaeological Survey of the Melbourne Metropolitan Area (Presland 1983)

In 1982-1983, Presland undertook an Aboriginal archaeological study of the Melbourne metropolitan Area, initiated by Victoria Archaeological Survey (VAS) in response to the increasing threats to Aboriginal cultural heritage posed by a rapid increase in urban and industrial development. The study was directed towards developing practical and economic strategies for surveying archaeological sites, to identify areas of potential archaeological importance and sensitivity, and to implement a pilot survey programme and evaluate its effectiveness.

The study area encompassed the area within the Melbourne Metropolitan Planning Scheme; approximately 4360 km^2 stretching in a 40 km wide are around the top of Port Phillip Bay from the Werribee River to Frankston. Presland divided the study area into five landscape units based on the occurrence in common of a range of environment factors including geology, topography, vegetational regime and hydrology. The current activity area is situated within Landscape Unit 1; an expanse of flat plains including the alluvial fans, terraces, and valleys of major rivers, extending south across sandy-clay landscapes to Frankston and Carrum Swamp, covering approximately 1051 km^2. Presland noted that at the time, about one third of this unit was covered with urban residential development, with market gardens, grazing, and dairy farming comprising the major land uses across the remainder.

Twenty-four days were spent surveying Landscape Unit 1, covering 161.5 hectares amounting to 0.15% total area of the unit. Presland noted that a major part of this unit was covered by dense urban development, presenting few possibilities for effective archaeological survey. However, ten Aboriginal cultural heritage places were recorded, including six scarred trees located within or close to the area of the former Carrum Swamp, and four stone artefact scatters dominated by silcrete artefacts on the Maribyrnong River. Presland further noted that in many examined areas within Landscape Unit 1, isolated stone artefacts were frequently found on the surface, with the highest numbers occurring across the crests and upper slopes of hills in close proximity to fresh water sources. The majority of these artefacts were small waste flakes, but a few formal microlithic tools were also identified. None of these artefacts or find locations, however, were registered or recorded in detail. Presland noted that whilst isolated artefacts may be considered to be of limited

archaeological value, the presence of isolated surface finds can provide an indication of archaeological potential and subsurface deposits.

Presland concluded that the fieldwork results demonstrated at least a general use and resource exploitation by Aboriginal people of all the landscape units within the study area. However, the limited survey coverage did not allow for an examination of clear patterns of subsistence behaviours and occupation, or differential use of varying landscapes by past Aboriginal populations.

Aboriginal cultural heritage assessment, Frankston City Council (Marshall 1998)

In 1998, Marshall prepared an Aboriginal cultural heritage assessment of the Frankston municipality, covering 131 km^2 on the eastern shore of Port Phillip Bay and including the current activity area, as part of the development of new local government planning policies. The assessment involved desktop research, examination of private artefact collections, and field survey.

No previously unrecorded Aboriginal cultural heritage places were identified during the field survey carried out for the project. Marshall attributed this lack of sites largely to a combination of the survey's limited nature in terms of area and landform coverage, and a general lack of ground surface visibility and exposure. However, based on desktop review, Marshall identified patterns in Aboriginal archaeological site distribution throughout the Frankston municipality, with stone artefact scatters and midden sites occurring most frequently along the coast and across inland sand dune landforms, and scarred trees occurring most frequently on low-lying sandstone areas in the north of the municipality, particularly along parts of the former Carrum Carrum Swamp where remnants of old growth eucalypt forest survive.

Marshall proposed that the concentration of Aboriginal archaeological deposits on dune sands was most likely due to the attractiveness of such areas for camping due to factors such as:

- The proximity of the dunes to specific resources such as fish resources along the coast and food resources in wetland and heath environments;
- The elevated nature of the ridges of inland dunes, providing a vantage point from where the surrounding landscape can be viewed;
- The inland dunes extend across the area from the north-west to the south-east and would have provided a dry route through the surrounding lowland areas.

Frankston Bypass, Carrum to Mount Martha, desktop cultural heritage assessment (Schlitz 2007)

In 2007, Schlitz prepared a cultural heritage review and risk assessment for the proposed Frankston Bypass, extending from Carrum Downs to Mount Martha, through the western extent of the current geographic region. The assessment was primarily desktop based; however, several site inspections were carried out for landform verification purposes.

Based on background research and analysis, Schlitz concluded that the most likely Aboriginal archaeological sites to occur within 5 km of the proposed Frankston Bypass alignment were scarred trees, particularly throughout Lyndhurst area, and stone artefact scatters, with sites most likely associated with the following landscape features:

- various topographic features adjacent to watercourses, but specifically river and creek flats, terraces, levee banks, and sandy rises and hillslopes within 100-500 m of watercourses;
- former swamp margins and waterway junctions.
- dune formations and rises associated with the Cranbourne Sand formation;
- the tops and sides of ridges not necessarily associated with watercourses, sometimes at distances of greater than 500 m from water;

- Mature eucalypts in remnant vegetation communities, especially lowland forest, heathy woodland, swamp scrub woodland, and grassy woodland.

5.3.2 Local-scale assessments

Nine CHMPs involving standard and complex assessments have been undertaken within the geographic region over the past twelve years and are summarised below. Only two of these CHMPs resulted in the identification of Aboriginal cultural material, including one stone artefact scatter and one low density artefact distribution (LDAD). All of these CHMPs have been conducted within areas of the Cranbourne Sand dune landform, identified as having high Aboriginal archaeological sensitivity. This relative paucity of evidence for large and complex Aboriginal archaeological deposits within the Skye area has generally been attributed to a combination of historical ground disturbance and land use practices, and the absence of major fresh water resources in the local area.

CHMP 10015 – Proposed Frankston Bypass, Mornington Peninsula (Long, Mathews, O'Reilly, Feldman & Howell-Meurs 2009)

In 2009, Long *et al.* prepared a CHMP (10015) for the proposed construction of approximately 25 km of bypass road from the Mornington Peninsula Freeway at Carrum Downs to the Mornington Peninsula Freeway at Mt. Martha. The northern section of the bypass road route passes alongside the western extent of the current activity area.

The bypass road route crosses three distinct geomorphological areas including Carrum Swamp margins in the north, Skye-Langwarrin sand hills / Cranbourne Sand dune formations between Seaford and Frankston, and the Baxter sand plain from Frankston to Mt. Martha.

The section of the bypass road route closest to the current activity area falls within the Skye-Langwarrin sand hills unit. Of all three geomorphological units, the Skye-Langwarrin unit was considered to have the lowest Aboriginal archaeological potential. This unit was determined to be unlikely to reveal a complex pattern of occupation due to the relative absence of significant waterbodies in the area, and the relatively early phase of dune building activity, during which the local environment would have been hostile to human habitation.

A total of eleven 1 x 1 m test pits and 630 shovel test pits were excavated to a maximum depth of 700 mm during the complex assessment; resulting in the identification of twenty-six stone artefact scatters in twenty-one testing areas. The majority of Aboriginal cultural heritage places were identified on elevated sandy rises overlooking major water sources of Devilbend Creek and Carrum Swamp. A sequence of two optically-stimulated luminescence (OSL) dates from one Aboriginal cultural heritage place overlooking Devilbend Creek revealed that dated to the late Holocene (c. 1,700-3,900 years ago).

In comparison to these landforms, areas adjacent to minor wetlands and drainage lines, and the higher relief and drier sand hills between Carrum Swamp and the Baxter Sand Plain – including the Cranbourne Sand formations closest to the current activity area – were found to be generally devoid of cultural heritage, with the exception of low density artefact scatters.

One testing area excavated during the complex assessment falls within the current geographic region. A total of twenty shovel test pits were excavated in the area, revealing a relatively consistent soil profile of grey silty sand A horizon up to c. 1000 mm depth overlying a brown-grey soft fine sand B horizon between c. 1-1.4 m depth. One Aboriginal cultural heritage place was identified in this testing area, within the current geographic region – a low density stone artefact scatter, registered as VAHR 7921-1111. This site consists of one surface quartzite flake and one subsurface silcrete flake located on a low rise on the west bank of an artificial channel of Tamarisk Creek.

CHMP 15594 – Proposed warehouse / office development, 4 Daniel Drive, Carrum Downs (Burch 2018b)

In 2018, Burch prepared a CHMP (15594) for a proposed commercial / industrial development at 4 Daniel Drive, Carrum Downs; a generally flat, undeveloped allotment situated within Cranbourne Sand landform close to Boggy Creek and the margin of the former Carrum Carrum Swamp, c. 900 north-west of the western extent of the current activity area.

A total of three 1 x 1 test pits and three shovel test pits were excavated during the complex assessment, resulting in the identification of a subsurface stone artefact scatter; registered as VAHR 7921-1725 "Daniel Drive AS."

The soil profile across the site was generally consistent and typical of Cranbourne Sand formation, comprising dark grey humic silty sand A1 horizon up to c. 400 mm deep; brown fine-grained silty sand A2 horizon between 400 mm to 900 mm / 1 m deep; dark brown compact "coffee rock" Bh horizon between c. 900 mm / 1 m to 1.2 m deep; dark yellowish brown and extremely compact clay C horizon occurring at c. 1.2 m depth.

The subsurface stone artefact scatter was found to extend across the entire activity area, recovered primarily from A2 horizon and upper B horizon sediments between 500-950 mm deep. The vast majority of stone artefacts (80%) were found within a single test pit (TP3) in A horizon deposit at depths of between 500-600 mm.

The artefact scatter consisted of forty-nine stone artefacts of silcrete (63.3%), quartzite (28.6%), and quartz (8.1%). The silcrete artefacts included two bidirectional cores, one multidirectional core, ten complete flakes, twelve broken flakes, one angular fragment / debris, and five complete tools including four geometric microliths and one utilised flake. The quartzite artefacts included two complete flakes, eight broken flakes, three angular fragments, and one complete tool – a geometric microlith. The quartz artefacts were all complete flakes.

It was concluded that the range of artefact types strong indicated that raw materials, particularly silcrete, were knapped on site, with the particular concentration of silcrete debitage suggesting that the majority of silcrete artefacts recovered were created during a single knapping event. The occurrence of bidirectional and multidirectional silcrete cores further suggested that a moderate to intense reduction strategy was applied to this raw material.

Salvage excavations were subsequently carried out by Brooke and Mathews (2020) of VAHR 7921-1725 at 4 Daniel Drive, Carrum Downs, as a compliance condition of CHMP 15594. The salvage excavations consisted of one manually excavated 1 x 1 m trench immediately adjacent to the test pit that yielded the highest density of artefacts (TP3), and five 0.35 m wide mechanically excavated trenches in the locations of proposed building footings, ranging in length from 1.06-6.23 m.

The soil stratigraphy was generally consistent in all salvage trenches and comparable to that noted during the complex assessment for CHMP 15594; comprising a dark greyish brown humic silty sand A1 horizon up to c. 190 mm deep; a dark grey silty sand A2 horizon between c. 190-310 mm deep; a brown fine-grained sand A3 horizon between c. 310-900 mm deep, overlying a dark yellowish brown compact mottled clay B horizon occurring at c. 900 mm deep.

A total of eighteen subsurface stone artefacts were recovered during the salvage excavation. These artefacts occurred in two of the 0.35 m wide salvage trenches (Trench 1 and Trench 3), with the majority (89%) from Trench 1. All artefacts were recovered from A horizon deposits between c. 400-750 mm deep, with the majority (89%) found between c. 450-550 mm deep. The average artefact

density across all the machine excavated trenches was 3.56 per m2, with the density varying slightly from 5.4 per m2 in Trench 3 to 7.34 per m2 in Trench 1.

Consistent with Burch's (2018b) findings, the majority of recovered artefacts were of silcrete (89%), with a much smaller quantity of quartz (5.6%). Interestingly, a tachylyte artefact was also identified; a raw material that is only known to come from Dja Dja Wurrung country, with the closest known source being c. 114 km northwest, near Lauriston. As such, this finding, while only a single artefact, shows some form of connection (likely an economic/trading one rather than *Bun wurrung* people physically travelling to Lauriston) between the *Bun wurrung* and *Dja Dja Wurrung* peoples.

Stone artefact types included complete and broken flakes (61.1%), complete and broken blades (16.6%), unidirectional cores (11.1%), angular fragments (5.6%), and a geometric microlith (5.6%).

Optically-stimulated luminescence (OSL) samples were collected at depths immediately above and below the densest artefact layer identified in TP3 during the complex assessment for CHMP 15594. The chronometric dating results allow for an absolute date to be associated with the main concentration of artefacts of 5,260 (±610) to 5,880 (±640) years BP, placing the main focus of activities at this Aboriginal place in the mid-Holocene. Interestingly, these dates are a little earlier than the phase most-commonly associated with intense microlithic artefact production (commonly quoted as commencing from 4,500-5,000 years BP).

CHMPs with negative findings

A further seven CHMPs have been conducted within the geographic region that did not locate any Aboriginal cultural material.

Two of these CHMPs (Ricardi, Canning & Thiele 2009; CHMP 10721, and Kaskadanis & Flynn 2014; CHMP 12950) have been carried out for proposed development within the Carrum Downs Police Station, 42 Ballarto Road, immediately adjacent to the current activity area. This site is situated on a lower dune slope in Cranbourne Sand landform, and the complex assessment for both CHMPs revealed a relatively consistent soil profile of dark brown humic sand A1 horizon up to c. 20-40 mm deep; light grey to light brown medium-grained sand A2 horizon to a depth of c. 1.2-1.3 m; a light grey-brown compacted sand between c. 1.3-1.4 m deep; overlying a light grey-brown degraded sandstone C horizon occurring at c. 1.4 m deep. A "coffee rock" Bh horizon was also observed in numerous shovel test pits, occurring at between c. 800-1.2 m deep. No Aboriginal cultural heritage places were identified during either CHMP; attributed primarily to the extensive amounts of historical ground disturbance.

One CHMP (Murphy & Morris 2010; CHMP 11095) was conducted for the construction of an access road and carpark in the Pines Flora and Fauna Reserve, located on the southern side of Ballarto Road c. 200 m east of the current activity area. The proposed development area extended over a Cranbourne Sand dune formation and soil profiles typical of this landform were revealed during complex assessment; consisting of grey sand A1 horizon up to c. 300 mm deep; light grey sand A2 horizon between c. 300-650 mm deep, and a dark grey-brown "coffee rock" Bh horizon occurring at c. 650-800 mm deep. However, the upper levels of the profile were found to be disturbed and mixed with introduced fill. The absence of Aboriginal cultural material was considered to be a combination of historical ground disturbance and the unlikelihood that the area would have been frequently occupied on a long term basis by Aboriginal populations due to the distance from major water sources.

The remaining four CHMPs were all associated with proposed re-development of existing residential and mixed use allotments situated within undulating and gently sloping Cranbourne Sand dune landforms situated between c. 285-950 m south / south-west of the current activity area. Three of

these CHMPS (Audy 2016; CHMP 13942, Matic 2016; CHMP 14241, and Mitchell 2020; CHMP 17184) identified soil profiles typical of the Cranbourne Sand formation; consisting of dark grey-brown silty sand A1 horizon up to 200-390 mm deep; a might to mid grey-brown sand A2 horizon between c. 200/390 mm – 600 mm/1 m deep; overlying a dark brown "coffee rock" Bh horizon occurring between c. 600 m to 1.1 m deep. The depth of soil horizons varied across sites according to the location within the dune formation; i.e. flat-lower slope to mid-upper slope.

However, one CHMP (Burch 2018a; CHMP 15498), situated within an area of Cranbourne Sands according to geological mapping, found non-typical soil profiles with remnant dark brown sandy loam A horizon deposits up to c. 490 mm, overlying an extremely compact dark brown clay B horizon, occurring at c. 450-490 mm deep. It was concluded that the area was mostly likely a localised former swamp within the sand dune landscape.

The complex assessments for all of these four CHMPs revealed evidence of widespread ground disturbance including topsoil stripping, grading, excavation for underground services, and deposition of fill, extending to depths of between c. 200-550 mm.

The absence of Aboriginal cultural material in each of these four sites was attributed to a combination of substantial historical disturbance, landform types unlikely to represent favourable camping locations – such as lower sandy slopes and swampy land, and the lack of freshwater sources in close proximity.

5.3.3 Registered Aboriginal cultural heritage places

The Victorian Aboriginal Heritage Register (VAHR) was accessed by Joseph Minter Brooke on 16 June 2021 for information regarding previous archaeological reports and sources, and the locations and details of Aboriginal places within the geographic region.

There are eight Aboriginal cultural heritage places registered on the VAHR within the geographic region – see Table 5-1 and Figure 5-8.

There are no registered Aboriginal cultural heritage places within the activity area.

The registered places within the geographic region are all stone artefact scatters (100%). However, it should be noted that seven of these artefact scatters were registered prior to the introduction of the LDAD definition in 2012 and would now be identified as LDADs (stone artefacts occurring at densities of up to 10 artefacts in any area of approximately 100 m^2). As such, the registered Aboriginal cultural places essentially consist of one artefact scatter (12.5%) and seven low density artefact scatters / LDADs (87.5%) – see Table 5-2.

Table 5-1 Aboriginal places registered within the geographic region

VAHR ID	Place Name	Place Type	Distance from activity area	Summary description
7921-0894	PINES 3	Artefact Scatter*	243.2 m	An isolated surface milky quartz flake located on lower dune slope in a Cranbourne Sand landform c. 150 m west of Tamarisk Creek. ** This place would currently be identified as a LDAD.*
7921-0896	PINES 5	Artefact Scatter*	293.7 m	An isolated surface quartzite retouched scraper located on a dune crest in a Cranbourne Sand landform c. 250 m from Boggy Creek. ** This place would currently be identified as a LDAD.*

VAHR ID	Place Name	Place Type	Distance from activity area	Summary description
7921-1111	FRANKSTON BYPASS J1	Artefact Scatter*	341.1 m	A diffuse stone artefact scatter located over an area 45 x 10 m on a gently inclined low rise in Cranbourne Sand landform on the west bank of an artificial channel of Tamarisk Creek. Artefacts include one surface quartzite flake and one subsurface silcrete flake. ** This place would currently be identified as a LDAD.*
7921-0895	PINES 4	Artefact Scatter*	361.8 m	A surface scatter of two stone artefacts located on a dune crest in Cranbourne Sand landform, on the edge of a modified wetland c. 200 m from Boggy Creek. Artefacts consist of a quartz flake and a quartz core. ** This place would currently be identified as a LDAD.*
7921-0893	PINES 2	Artefact Scatter*	411.8 m	An isolated surface milky quartz surface flake located on an undulating Cranbourne Sand landform, c. 100 m west of Tamarisk Creek. ** This place would currently be identified as a LDAD.*
7921-0897	PINES 6	Artefact Scatter*	449.6 m	An isolated surface quartz flake located on the lower dune slope in Cranbourne Sand landform, c. 300 m west of Boggy Creek. ** This place would currently be identified as a LDAD.*
7921-0892	PINES 1	Artefact Scatter*	561.7 m	An isolated surface quartz flake located on a lower dune slope in Cranbourne Sand landform, c. 100 m west of Tamarisk Creek. ** This place would currently be identified as a LDAD.*
7921-1725	Daniel Drive AS	Artefact Scatter	876.5 m	A subsurface stone artefact scatter consisting of sixty-seven artefacts located within a generally flat area of Cranbourne Sand dune landform close to Boggy Creek and the margin of the former Carrum Carrum Swamp. Artefacts were found within A2 and upper B horizon sand deposits between c. 500-950 mm deep; with a high concentration in a discrete area found in A horizon deposits between 500-600 mm deep. Raw materials were dominated by silcrete (76%), with small numbers of quartz, quartzite, and tachylyte artefacts. Artefact types comprised complete and broken flakes, unidirectional and bidirectional cores, angular fragments, and tools including utilised flakes, backed flakes, and geometric microliths. Based on artefact concentration, the scatter was considered likely to derive largely from a single knapping event. OSL dating revealed the artefacts were associated with occupation during the mid-Holocene, c. 5,260 to 5,880 years BP.

Table 5-2 Summary of registered Aboriginal place types within the geographic region

Place Type	Total	%
Artefact Scatter	1	12.5%
Artefact Scatter* – low density artefact scatters that would fall under current definition of LDAD	7	87.5%
Total	**8**	**100%**

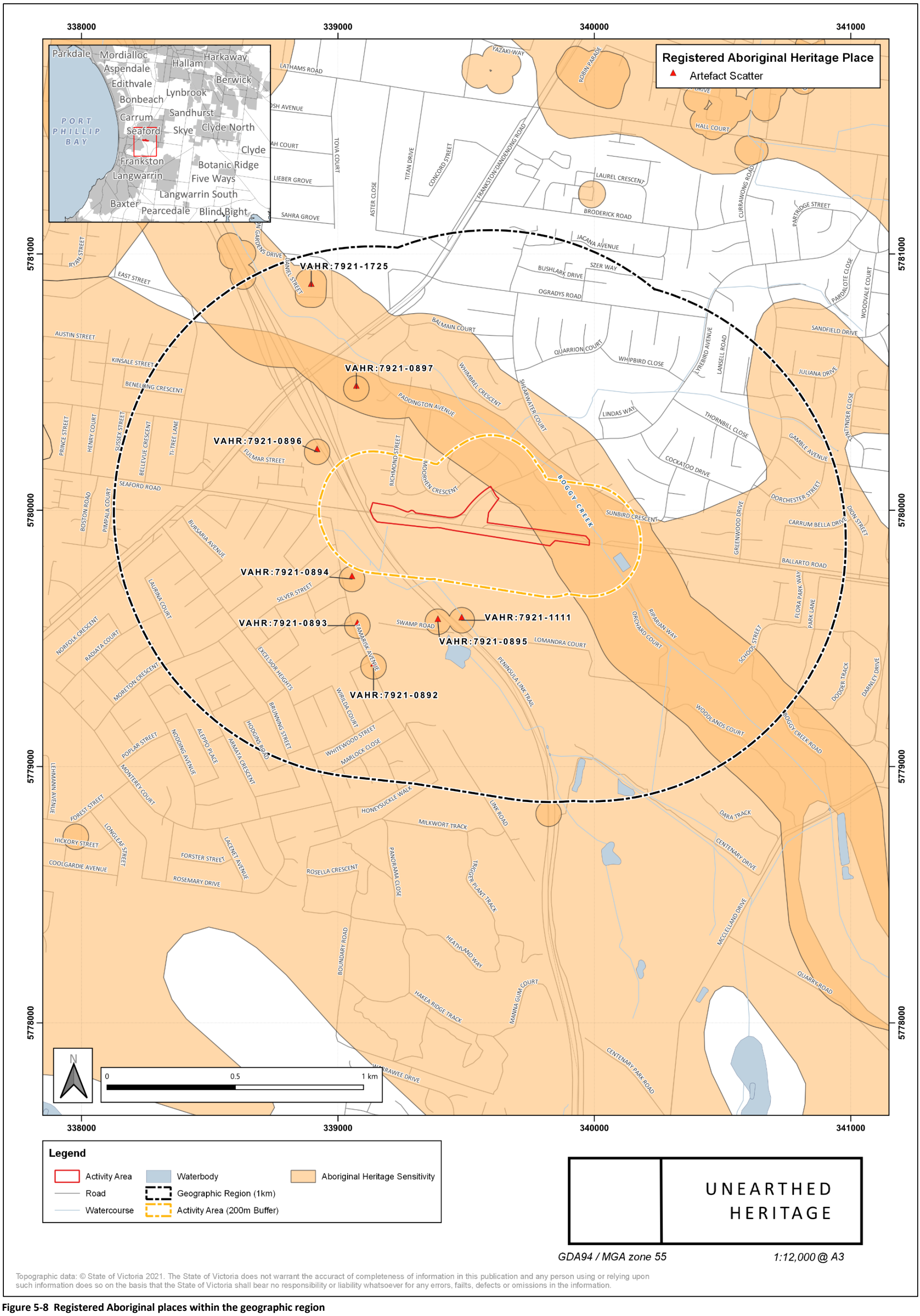

Figure 5-8 Registered Aboriginal places within the geographic region

5.4 Desktop assessment conclusions

The following key points can be made as a result of the desktop assessment:

- The activity area is situated within a geomorphic landscape of low-lying coastal plains characterised by a series of inland sand dunes, lunettes, and longitudinal north-west trending dune ridges. The surface geology consists entirely of inland dune deposits of siliceous sand, silt, and clay, known as the Cranbourne Sand formation. The soils within this coastal plain landscape generally comprise deep acidic sands with bleached subsoils and a dark brown "coffee rock" Bh horizon occurring at c. 800 mm depth. Prior to European land-use, the area would have been covered with a variety of heathy woodland and plains grassland vegetation communities. The natural environment within and adjacent to the activity area would have provided a range of resources to Aboriginal populations, including various plant and animal food resources;
- The activity area is located within the traditional lands of the *Mayune Balug* clan of the *Bun wurrung* (also called *Bunurong* or *Boonwurrung*) language group;
- There are no registered Aboriginal cultural heritage places within the activity area, however, there are eight registered Aboriginal places within the geographic region, all situated within the Cranbourne Sand landform;
- Registered Aboriginal cultural heritage places within the geographic region comprise eight surface and subsurface stone artefact scatters – seven of which are low density scatters. Subsurface stone artefacts have been found in A and upper B horizon deposits in Cranbourne Sand profiles at depths of between 550 mm to 950 mm below ground surface, with particular concentrations commonly occurring between depths of 500-600 mm. Artefact types primarily included complete and broken flakes, cores and microlithic tools, with raw materials dominated by silcrete. Almost all stone artefacts identified were relatively small in size (< 50 mm) and characteristic of the mid Holocene (9,000-4,500 years BP) Australian Small Tool Tradition (ASTT). OSL dating of one subsurface stone artefact scatter within the geographic region demonstrated that the artefacts were associated with occupation during the mid-Holocene, c. 5,260 to 5,880 years BP;
- Previous archaeological investigations within the geographic region have identified that the Cranbourne Sands landform has high potential for Aboriginal archaeological sites, with stone artefact scatters and scarred trees being the most likely site types to occur. Specific areas of high sensitivity with the potential to contain large and complex archaeological deposits include the upper slopes and crests of sandy rises and ridges, particularly those in close proximity to permanent fresh water sources, and elevated areas along the margins of rivers and swamps. Low density stone artefact scatters have been found to occur across all landforms in the region, with artefact density generally decreasing as distance from fresh water increases;
- Several CHMPs previously conducted in the geographic region have found that whilst the Cranbourne Sand landform is of high archaeological sensitivity, some areas – particularly localised swamps, areas greater than 500 m from permanent water sources, and sites subject to extensive historical ground disturbance – have been found to be largely devoid of Aboriginal cultural heritage. Nonetheless, some previous CHMPs have also demonstrated that Aboriginal cultural heritage can survive even in areas of historical ground disturbance,

due largely to the often sizeable depth of Aboriginal archaeological deposits in the Cranbourne Sand dune sediments;

- The activity area has been subject to varying degrees of ground disturbance and impact, due primarily to the mid-19th century establishment of Ballarto Road, and the continued maintenance, upgrade, widening, and improvement works carried out on the roadway in the years since, including levelling and grading, deposition of fill, road surfacing, drainage works, and installation of underground services along the road corridor. Areas alongside the roadway have also been subject to a range of historical of disturbance through mid-19th century pastoral land use, to late 19th to late 20th century farming and rural development, to late 20th to early 21st century increasing urbanisation and residential development. Nonetheless, sections of the activity area extend into landscapes that are likely to have been subject to lesser degrees of historical disturbance, particularly near Boggy Creek and in reserve areas along the southern side of Ballarto Road;
- As such, the activity area is predicted to have varying degrees of Aboriginal archaeological sensitivity. Areas and depths beyond the immediate roadway in the western and eastern extent of the activity area, situated within Cranbourne Sand landform and within close proximity to Boggy Creek and Tamarisk Creek, particularly on the southern side of Ballarto Road, are considered to be of moderate-high archaeological sensitivity and potential for surface and subsurface stone artefact scatters and LDADs. Areas and depths outside the immediate roadway towards the central section of the activity area further from the creeklines yet still within the Cranbourne Sand landform, are considered to be of moderate archaeological sensitivity for stone artefact scatters and LDADs; particularly in any elevated sections of potential remnant dune ridges and sandy rises. Areas of localised swamp and / or extensive historical ground disturbance are considered to have low archaeological sensitivity. Scarred trees may occur in any part of the activity area where remnant old growth vegetation survives.

Based on the above findings, it is reasonably possible that Aboriginal cultural heritage exists within the activity area. As such, according to r. 62 of the *Aboriginal Heritage Regulations 2018*, a standard assessment (field survey) must be undertaken to identify the presence, or potential occurrence, of Aboriginal cultural heritage within the activity area.

6 Standard Assessment

For the purposes of s.53 (2) of the AH Act, a standard assessment must include a ground survey of all or part of the activity area to detect the presence of Aboriginal cultural heritage in or associated with the activity area. This section presents information regarding the ground survey.

6.1 Aims

The desktop assessment surmised that small and diffuse scatters of stone artefact are the most likely Aboriginal place type to be located within the activity area. Therefore, the aims of the standard assessment were to:

- Identify and record any Aboriginal places within the activity area;
- Undertake consultation with the BLCAC field representatives;
- Identify any areas subject to proposed impacts that are likely to contain sub-surface archaeological deposits (that may require sub-surface testing);
- Document the extent of significant ground disturbance in the activity area.

6.1.1 Timing and Personnel

The field survey was conducted on 29 June and 30 July 2021. Table 6-1 summarises the field personnel involved in the field survey.

Table 6-1 Personnel involved in the standard assessment

Person	Project role	Organisation	Date(s)
Tom Kimber	Supervising archaeologist and heritage advisor	Unearthed Heritage Australia Pty Ltd	29 June and 30 July 2021
Cam Frost	Archaeologist	Unearthed Heritage Australia Pty Ltd	29 June and 30 July 2021
Minta Franks	RAP representative	BLCAC	29 June and 30 July 2021
Richard Cole	RAP representative	BLCAC	29 June and 30 July 2021

6.2 Archaeological Survey Methodology

The field survey was undertaken as an opportunistic survey with accessible land within the activity area traversed systematically by four people (see Table 6-1) spaced up to 3m apart, with particular focus on areas of ground surface visibility and/or areas of subsurface exposure. The field survey involved pedestrian transects running east/west along accessible portions of the road corridor, principally concentrating on nature strips along the road reserve and maintaining an appropriate distance buffer to live traffic. No mature native trees were present to inspect for signs of Aboriginal cultural scarring. In accordance with r.63 (3) of the AH Regulations, standard assessments must also document whether any cave, rock shelter or cave entrance is in the activity area and ensure that it is surveyed – none of these features occur within the activity area. The proportion of the ground surface that was visible was recorded. Notes were also taken on the vegetation, soils, areas and types of ground disturbance, and landforms.

Specific conditions (e.g. landform, potential archaeological sensitivity, visibility and disturbances) and features (e.g. Aboriginal places) encountered were documented using a differential Geographic Positioning System (GPS) Unit (Trimble Catalyst DA1) with real-time kinematic (RTK) submetre accuracy (c. 0.6-0.2 m accuracy).

6.3 Constraints / Obstacles

There were no constraints to undertaking the survey.

6.4 Results of the Survey

6.4.1 Overview

All of the activity area was surveyed on foot leading to 100% survey coverage (12% effective survey coverage). The majority of the activity area had grass and vegetation cover or sealed surfaces (e.g. footpaths) and had very low ground surface visibility (0-1%). The extent of survey coverage is shown in Figure 6-1. No Aboriginal cultural heritage was identified during the standard assessment. Although scarred trees may have previously existed within the activity area, none exist today, with most of the trees present being more recent in age likely dating to the post-contact era. No cultural scars were identified on trees and no caves, rockshelters or cave entrances are located within the activity area.

Areas of moderate and moderate-high disturbance were identified within the activity area, with areas of higher disturbance associated with roads, footpaths and utility corridors. this resulted in areas of low, and low-moderate archaeological potential rating for the activity area with the most likely site-type to be identified being stone artefacts occurring in lower densities (Figure 6-1).

Consistent with the results of the desktop assessment, the activity area was deemed to have a single landform:

- Undulating modified dune

6.4.2 Visibility, Exposure and Coverage

The activity area covers a total of approximately 5.5ha. All of the activity area was able to be subject to pedestrian survey (100% survey coverage). Ground surface visibility was generally very poor across the activity area, ranging from 0-1% generally due to hard surfaces, grass and vegetation cover (see Table 6-2, Figure 6-1 and Figure 6-4). Occasional clearances in the vegetation, especially around roadside trees (e.g. Figure 6-6) afforded some ground surface visibility, however it is probable that the entire ground surface and upper soil contexts of the area have been substantially disturbed during urbanisation and as such no effective archaeological visibility of the unmodified ground surface is present within the activity area, with the exception of Botany Park which likely retains a more undisturbed profile than the remainder of the activity area.

The ability to detect Aboriginal cultural material during survey is influenced by surface visibility (which varied depending on factors such as vegetation cover, natural erosion and anthropogenic disturbance) and the background effect (or presence of natural stone and other material that hinders the identification of surface archaeological material) (Witter 1990). Effective survey coverage is quantified to account for these limitations to survey coverage and gives an estimate of the proportion of the surface of the activity area investigated, accounting for these limitations. Effective survey coverage is calculated by multiplying survey coverage (the proportion of the land walked), by ground surface visibility, by background effect. A very low visibility resulted in a relatively low- (12% overall) effective survey coverage for surface Aboriginal place types (such as the most likely place type, flaked stone artefacts) for the standard assessment. The very low ground surface visibility conditions did not affect the investigation for more extrusive places, such as scarred trees (none were found). Table 6-2 presents survey coverage information.

Table 6-2 Survey coverage and effective survey coverage of the activity area

Survey Method	Archaeological Sensitivity	Disturbance	Archaeological Potential	GSV	Area m^2	Survey Coverage	Effective Survey Coverage (m^2/%)
Pedestrian	Very Low Sensitivity	Moderate-high	Very Low Potential	0-5%	475	100%	11.8 / 2.5%
Pedestrian	Low Moderate Sensitivity	Moderate	Moderate Potential	25-50%	6180	100%	2317.5 / 37.5%
Pedestrian	Very Low Sensitivity	Moderate-high	Very Low Potential	0-5%	23665	100%	591.625 / 2.5 %
Pedestrian	Low Sensitivity	Moderate	Low Potential	5-25%	25553	100%	3832.95 / 15%
					55873	100%	**6753 .88 m2/ 12%**

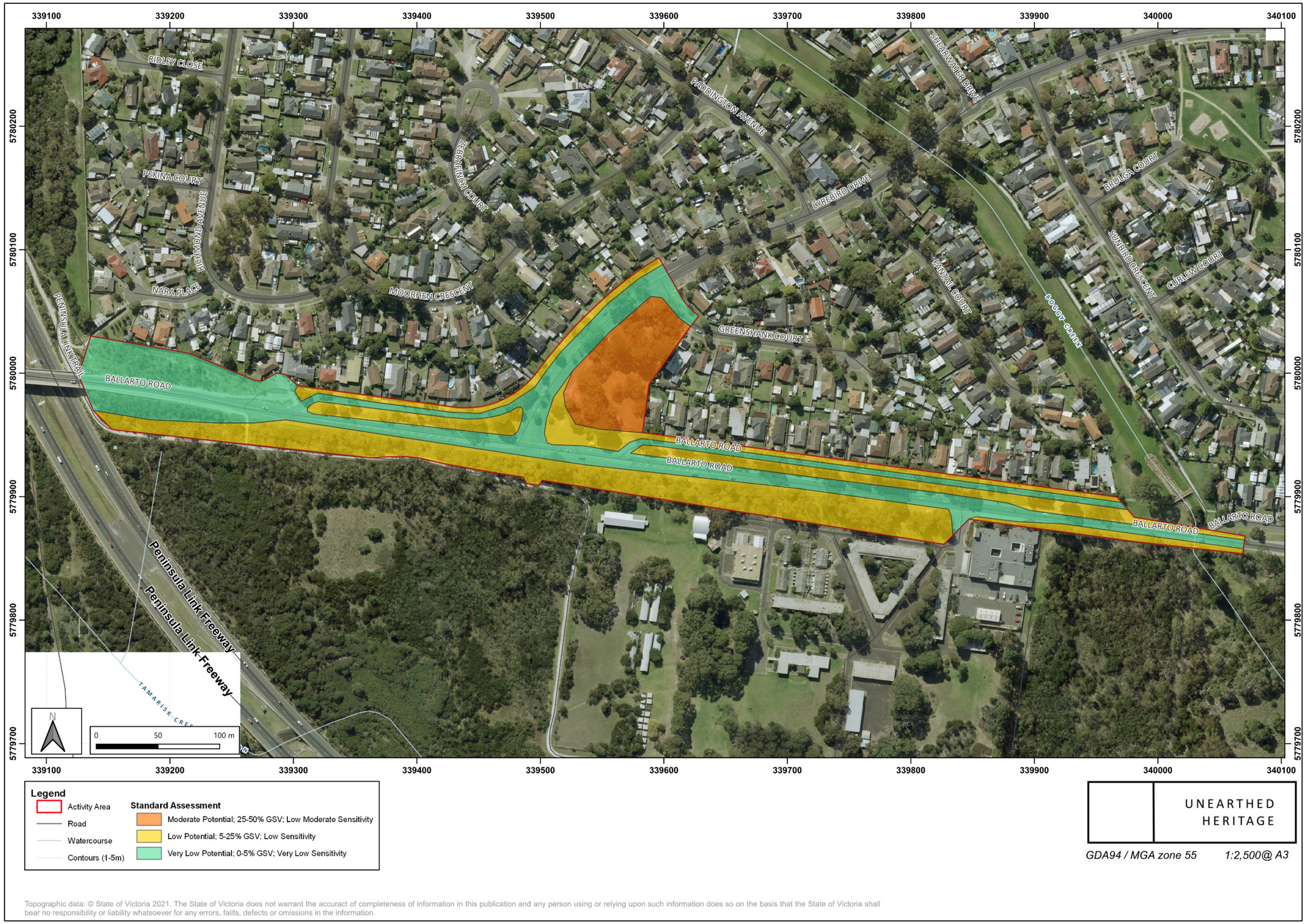

Figure 6-1 Results of the standard assessment including survey coverage, and ground surface visibility and archaeological potential

Figure 6-2 Locations of auger holes undertaken during Standard Assessment

6.4.3 Disturbances

Ground disturbance was generally as expected in a heavily urbanised roadside environment. Due to the lack of variability in landform or disturbance characteristics within the roadside environment, the activity areas were assessed as a single investigation area. The road reserves are highly disturbed from road construction including excavation adjacent to the road formation for substantial drainage and for buried services (including recycled water, telecommunications, gas, electricity and water) (see Figure 6-3 to Figure 6-6). Topography was gently undulating along the length of the alignment with gentle relief changes of approximately 1 – 2 metres across the road corridor. Due to the heavily modified nature of the area, the generally confined footprint of the activity and the extensive amount of disturbance associated with suburban development it is unlikely that *in situ* Aboriginal cultural heritage will occur within disturbed contexts.

Figure 6-3 Typical roadway in the activity area facing west (Ballarto Road service road)_T Kimber_29 July 2021

Figure 6-4 Typical ground surface visibility and existing footpath with services facing south east_T Kimber_ 29 July 2021

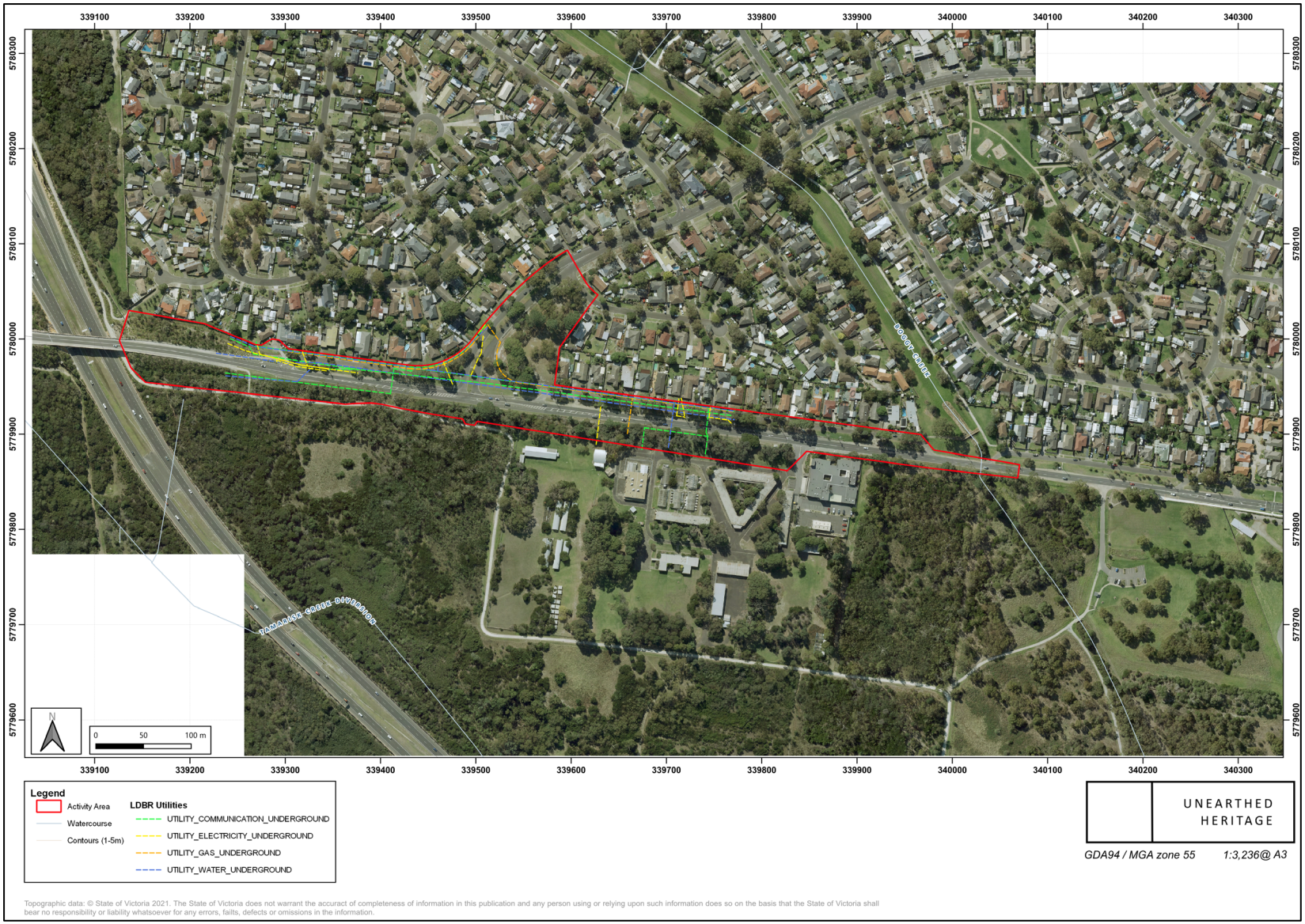

Figure 6-5 Utilities present within the activity area, based on dial before you dig plans

Figure 6-6 Visibility patches of the disturbed ground surface around roadside trees, facing east_T Kimber_29 July 2021

6.5 Aboriginal cultural heritage

No Aboriginal cultural heritage was identified during the standard assessment.

6.6 Auger Testing Program

Two auger tests were carried out during the standard assessment in order to provide some initial insight into subsurface soil profiles and also provide an indication of ground disturbance across the activity area (Table 6-3). The two augers were undertaken in areas that appeared, superficially at least, to have lower levels of disturbance (locations in Figure 6-2, e.g. Figure 6-7).

Auger 1 identified deep sandy soils on the dune present within Botany Park, in the northeast of the activity area. Auger 1 was undertaken to c. 1.8m depth with no clear transition to a culturally sterile B-Horizon, which is typical of Cranbourne Sands soil profiles on elevated parts (dunes) within Cranbourne Sands sand sheets. It should be noted based on the results of other studies nearby, that shallower soils are predicted for the less elevated parts of the sand sheet within the activity area. In contrast, south of Ballarto Road, Auger 2 presented shallow swampy A-horizon soils of only c. 200mm before encountering a firm clay B-horizon.

Disturbance of soils was evident in both Augers in the form of soil mixing and introduced fragments of modern materials, such as road gravels, metal, plastic and glass. The results of the augers suggested that the activity area has been subject to modification and ground disturbance to around 300-500mm in these two locations. Interestingly, Auger 2, showed disturbance continued into the B-horizon by c. 100mm.

These auger results provide confirmation of soil types within parts of the activity area that will be further explored through the complex assessment (Section 7).

Table 6-3 Auger details

ID	Context	Depth (mm)	Soil Horizon	Consistency	Texture	Munsell Colour	Soil Colour	Maximum Depth (mm)	Comments	Easting (MGA, GDA 94)	Northing (MGA, GDA 94)
Auger 1	1	0-1800	A	Friable	Silty Clay	10YR 5/2	Greyish brown	1800	Deep dunal deposit - no disturbance evident below 500mm – disturbance from 0-500mm in form of soil mixing and modern waste fragments (road gravels, glass, metal, plastic)	249618.388	5840242.838
Auger 2	1	0-200	A	Firm	Silt	10YR 5/2	Greyish brown	420	Humic; disturbance present in form of soil mixing and modern waste fragments (road gravels, glass, metal, plastic), Diffuse transition	249620.487	5840211.354
	2	200-420	B	Firm	Clay	10YR 4/3	Brown		Disturbance noted by presence of soil mixing and modern waste fragments (glass and plastic) to 300mm.		

Figure 6-7 Location of Auger 2 in the activity area, facing west_T Kimber_30 July 2021

6.7 Archaeological sensitivity and potential

Based on the predictions of the desktop assessment in conjunction with observations from the field survey, areas of lesser or greater archaeological sensitivity were assigned for areas that will be subject to impacts from the proposed roadworks. Generally, due to the high levels of urbanised disturbance present in the area, the activity was assessed as having either a low (roadside verge areas) or very low archaeological potential due to prior disturbances associated with the construction of the urban infrastructure present within the activity area (roads, flyovers, service trenches and buildings). It was considered that this prior disturbance rendered the chance of encountering archaeological material

at the depth of disturbance related to the proposed activity (approximately 600mm) to be slight. One discrete area of elevated significance was identified and assigned a moderate potential.

6.8 Conclusions from the standard assessment

Aside from built structures, all of the activity area was surveyed. No Aboriginal cultural heritage was identified during the standard assessment. The activity area has been subject to moderate to high levels of modification and ground disturbance associated with land clearance, agricultural activities, road and pathway construction. Due to this disturbance, the activity area has been assessed to be of a very low, low to low-moderate archaeological sensitivity resulting in an assessment of very low, low and moderate archaeological potential relative to the proposed depth of development. It should be noted that dunal deposits have the potential to retain archaeological material significantly deeper than the proposed 500mm development depth and while the disturbance within the activity area renders the probability of encountering an intact archaeological site lower, it is likely that dispersed archaeological material may be retained in the disturbed upper contexts, or in some locations, deeper deposits.

Based on the results of this standard assessment therefore, Aboriginal cultural heritage is considered possible to occur within subsurface contexts within the activity area (in disturbed contexts and in low densities). As it is not possible to identify the extent, nature and significance of Aboriginal cultural heritage in the activity area without subsurface investigations, in accordance with the AH Regulations (r. 64), a complex level assessment (test excavation) is required.

7 Complex assessment

Under s. 53 (2) of the AH Act, a complex assessment of an activity area is an assessment involving excavation of all or part of the activity area to uncover or discover Aboriginal cultural heritage.

The complex assessment was supervised by Eyad Malaeb on the 08 November 2021. Eyad[6] has over 3 years of experience in heritage management and archaeology and is qualified as both a heritage advisor and an archaeologist and is on the FP-SR list of Victorian heritage advisors. Eyad's previous archaeological experience also includes supervising archaeological excavations of a similar or larger scope and scale as this CHMP.

Therefore, Eyad has the qualifications and experience required (r.65 [3] of the AH Regulations) to supervise and undertake the archaeological excavation in this complex assessment

7.1 Aims

The aims of this complex assessment were to undertake test excavations to determine the existing conditions within the activity area by:

- Determining the nature and condition of the soil stratum;
- Establishing the presence of any subsurface Aboriginal archaeological deposits within the activity area;
- Undertake consultation with the BLCAC field representatives;
- Testing the archaeological sensitivity of the landforms within the activity area;
- Defining the nature and extent of any subsurface Aboriginal archaeological deposits within the activity area.

7.2 Timing and personnel

Complex assessment fieldwork was conducted on 30 March 2021. Table 7-1 summarises the field personnel and project roles as part of the complex assessment.

Table 7-1 Personnel involved in the complex assessment

Person	Project role	Organisation	Date(s)
Eyad Malaeb	Supervising archaeologist	Unearthed Heritage Australia Pty Ltd	08/11/2021
Cam Frost	Archaeologist	Unearthed Heritage Australia Pty Ltd	08/11/2021
Jungala Ellis	RAP field representative	BLCAC	08/11/2021
Kira Edwards	RAP field representative	BLCAC	08/11/2021

7.3 Excavation methodology

These methods and sampling approaches were decided upon in consultation and agreement with the RAP prior to commencing excavations (see Section 4). The general sampling areas were determined through discussions with the RAP prior to the fieldwork occurring with the precise location of test pits determined during the complex assessment through discussions between the supervising archaeologist and the RAP field representatives.

All excavation and sampling were undertaken with regard to FP-SR's *Practice Note: Subsurface Testing* and BLCAC's *Bunurong Land Council Procedures for Undertaking Archaeological Excavations*.

7.3.1 Sampling strategy

Consistent with discussions with the RAP and given the urbanised and developed nature of the activity area in terms of landform and disturbance, it was agreed to focus the subsurface testing in sections of

[6] Bachelor of Archaeology (Honours – first class) 2005, University of Calgary, Canada.

the activity area that would be impacted by the proposed works, and in areas that were been assessed to be potentially archaeologically sensitive.

A 1x1m test pit (TP) was excavated on the single landform present within the activity area (modified dune) to determine soil stratigraphy. Shovel test pits (STPs) (0.5x0.5m) were also selected as an appropriate testing method and were used to sample the subsurface deposits of the activity area.

7.3.2 Methodology

All TPs and STPs were excavated in a controlled manner, in spits not exceeding 100mm for TPs and not exceeding 50 mm for STPs. Excavations were carried out using hand tools, such as trowels and shovels – a fencing bar was used to break up compacted clays and mudstone encountered at the base of each test pit. All excavated soils were sieved using 5 mm gauge mesh.

TPs and STPs are ordinarily excavated to culturally sterile soil horizons, however a variation to this methodology was discussed and agreed to by BLCAC, according to which some excavations would terminate at the maximum impact depth of the proposed activity.

Where excavation of 1x1 m TPs could not be completed to culturally sterile soil horizons due to OH&S requirements, a sondage was excavated in the corner of the TP until basal sediments were identified.

Munsell colour charts were used to record soil colour, and pH test-kits were used to record pH of soil. The locations of each TP and STP were recorded using a real time kinetic (RTK) differential GPS unit (Arrow 100), providing real-time sub-metre accuracy (c. 0.2-0.5 m).

Photographic records were kept for each excavation and a sample section illustration of the 1x1m TP was undertaken.

7.4 Establishing soil stratification

In accordance with r.65 (4) of the AH Regulations, the soil stratification and general sub-surface nature of the activity area was established by controlled hand excavation. Stratigraphic information was recorded for all excavations.

One 1x1m test pit (TP1, Figure 7-1 and Figure 7-2) was excavated to examine the soil profile of the modified undulating dune landform.

Soil stratification encountered was consistent with that expected for the landform within the activity area, and substantively consistent between excavations in this complex assessment.

The soil stratigraphy encountered for the stratigraphic test pit excavated on the **modified undulating dune** landform from TP1 was as follows (Figure 7-2):

1. The upper c 0-100 mm comprised a humic, **redeposited/fill** friable silty sand with modern small to medium inclusions (10YR 3/1; pH 6.5) gradually transitioning to a lens deposit 2;
2. 100-150 mm firm sand **fill** (10 YR 4/4; pH 6.5) with occasional rootlets and intrusive modern material. This subtly transitioned to a continued fill deposit 3;
3. 150 – 300 firm sand **fill** (10 YR 4/3; pH 6.5) with frequent gravel inclusions throughout. This was marked with an abrupt transition to the likely truncated natural soil profile 4;
4. 300 – 1200 friable sand (10YR 7/2 pH 6.5) – A2 horizon. Sondage from 840mm to 1200mm.

No definitively sterile clay base was encountered during the excavation of TP1, though this is not unexpected in an elevated dune context within the broader sand sheet landform.

Figure 7-1 Base of TP1_view west_Eyad_Malaeb_08 Nov 2021

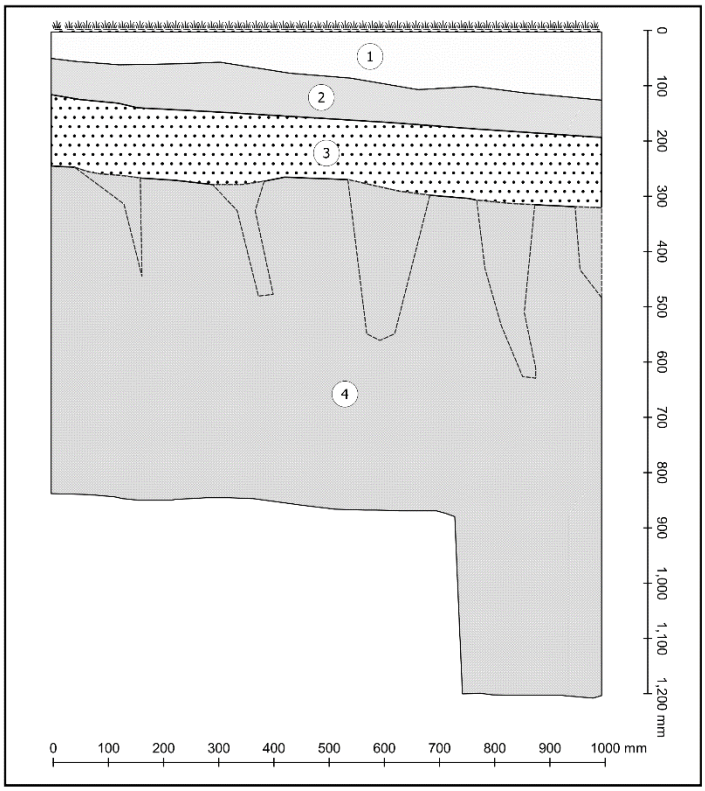

Figure 7-2 Stratigraphic drawing of soil stratification TP1; north face

7.4.1.1 Conclusions regarding soil stratigraphy

A small amount of recorder-bias may also be inherent due to varying light conditions throughout the day and due to changing cloud cover. Moisture content was consistent between most pits, being generally dry throughout. Soil stratigraphy in the area is generally deep – characteristic of sand sheet deposits, with no clay base reached at 1200mm depth. The overall maximum depth of excavation was 1200 mm. A detailed description of each excavation unit is provided in Appendix C.

Evidence of soil disturbance was evident within upper contexts, with introduced modern inclusions present such as gravels and construction materials (i.e., asbestos fragments in some upper contexts) to c. 300-500mm. Fill deposits were also present in the upper 400mm, and in one pit to a depth of 450-500mm (STP-3). Soil profiles were relatively homogenous across the activity area with excavation terminating c. 10-20cm below proposed depth of development in STPs and continuing for soil profiling to 1200mm for the 1m x 1m test pit, TP1.

7.5 Constraints / Obstacles

No constraints or obstacles were encountered during this complex assessment.

7.6 Results

7.6.1 Summary

A total of one TP, and 3 STPs were excavated, resulting in a total of 1.75m^2 being excavated (Table 7-2, Figure 7-3). Appendix C includes details of the test excavations undertaken as part of this complex assessment for the activity area, including the grid coordinates in MGA Zone 55 (GDA94). No artefactual material was identified in any excavation unit.

Table 7-2 Test pits excavated during the complex assessment (GDA 94, MGA Zone 55)

Name	Type of test pit	Artefacts (Yes/No)	Easting	Northing
STP1	0.5x0.5m shovel test pit	No	339530.9071	5779953.697
STP2	0.5x0.5m shovel test pit	No	339478.295	5779964.928
STP3	0.5x0.5m shovel test pit	No	339453.876	5779963.641
TP1	1x1m test pit	No	339523.317	5779954.756

7.6.2 Aboriginal heritage identified

No Aboriginal heritage was identified during the complex assessment.

7.7 Complex assessment summary and conclusions

The following key points can be made as a result of the complex assessment:

- A total of one 1m x 1m test pit and three 0.5m x 0.5m shovel test pits were excavated to a maximum depth of 1200mm.
- No archaeological material was identified during the complex assessment.

  Test excavations confirmed the moderate to high levels of disturbance had occurred across the areas selected for subsurface testing.

The results support the predictive model developed for the geographic region indicated that the landforms of the activity had low-moderate potential for Aboriginal cultural heritage to be present (with isolated or diffuse scatters of stone artefacts the most likely site type). Heritage objects are unlikely to be present in upper contexts due to extensive disturbance associated with the land use history, however the presence of deeper sand across the area retains a likelihood that dispersed Aboriginal cultural material may be present in the landform.

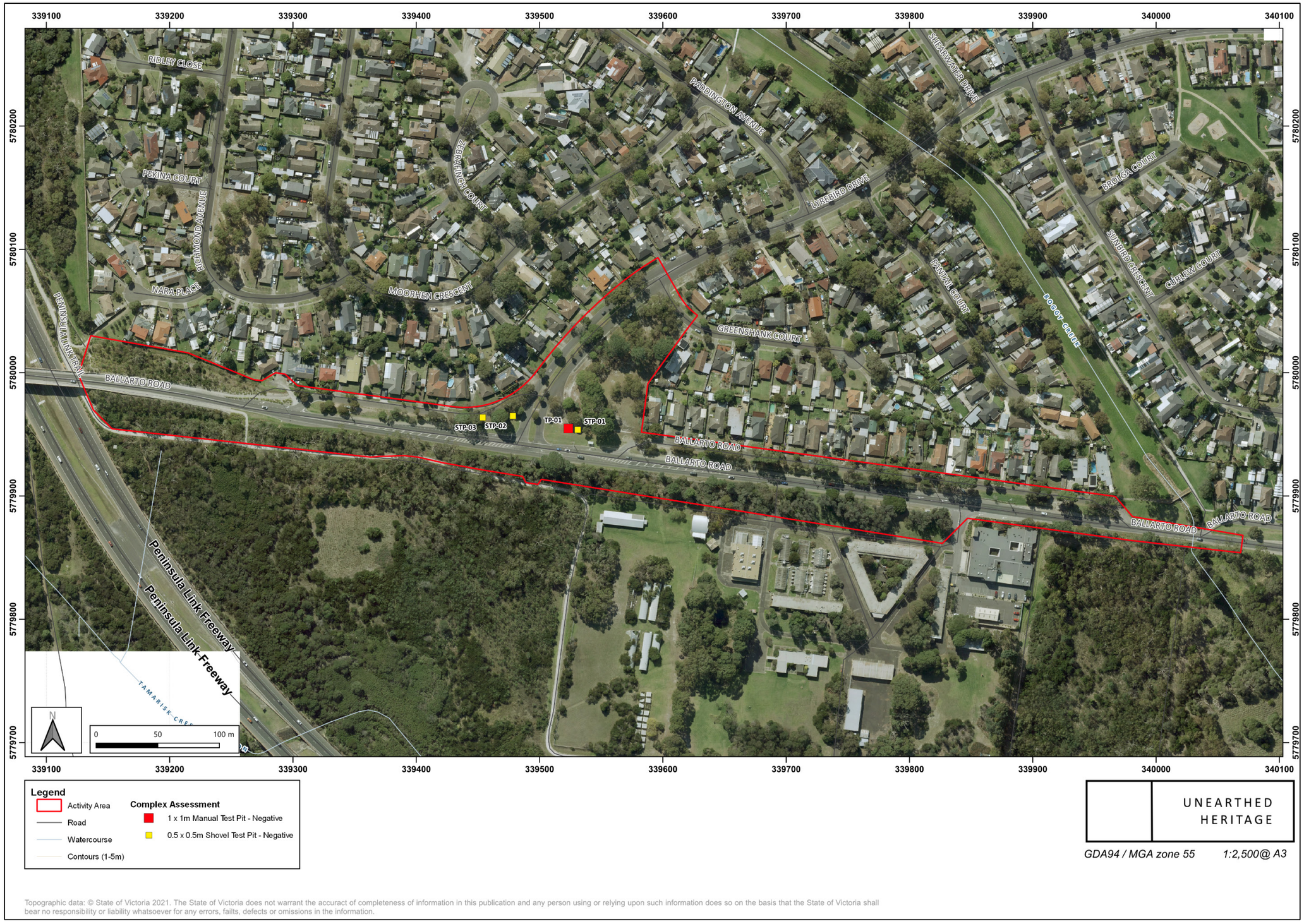

Figure 7-3 Locations and results of test excavations in the complex assessment

8 Consideration of s. 61 Matters – Impact of the Activity on Aboriginal Cultural Heritage

Section 61 of the AH Act states that when seeking approval of a CHMP certain matters need to be considered. All of these matters are addressed below. Contingency plans designed to manage the unexpected discovery of Aboriginal cultural heritage during the conduct of the activity is provided in Part 1 of this CHMP (Section 1.2.1, Section 1.2.2, Section 1.2.3).

Section 61 of the AH Act states that when seeking approval of a CHMP certain matters need to be considered. All of these matters are addressed below. All of these matters are addressed below.

Section 61a) Whether the activity will be conducted in a way that avoids harm to Aboriginal cultural heritage:

N/A – No Aboriginal cultural heritage was identified during the current CHMP assessment.

Section 61b) If it does not appear to be possible to conduct the activity in a way that avoids harm to Aboriginal cultural heritage, whether the activity will be conducted in a way that minimises harm to Aboriginal cultural heritage:

N/A – No Aboriginal cultural heritage was identified during the current CHMP assessment.

Section 61c) Any specific measures required for the management of Aboriginal cultural heritage likely to be affected by the activity, both during and after the activity:

No Aboriginal cultural heritage was identified within the activity during the current CHMP assessment. Part 1 of the CHMP does include general management conditions (e.g. cultural heritage induction) and contingency arrangements as measures to manage any Aboriginal cultural heritage that may be identified during or after the activity.

Section 61d) Any contingency plans required in relation to disputes, delays and other obstacles that may affect the conduct of the activity:

All contingency relating to disputes, delays and other obstacles that may affect the conduct of the activity area presented in Section 1.2. Note that where the AH Regulations (Schedule 2, 13(1)(b)) refer to dispute resolution it is in relation to any dispute arising between the Sponsor and the RAP, relevant details are presented in Section 1.2.4.

Section 61e) Requirements relating to the custody and management of Aboriginal cultural heritage during the course of the activity:

The contingency arrangements set out in Section 1.2 (Part I) of this CHMP detail the custody and management of Aboriginal cultural heritage should there be any unexpected finds.

8.1 Contingency plans

It is a mandatory requirement for the Sponsor to comply with the following contingencies.

In accordance with Section 61 of the AH Act, a CHMP must consider any contingency plans required in relation to disputes, delays and other obstacles that may affect the conduct of the activity. The contingencies and other considerations below are presented in Section 1.2 (Part I) of this CHMP:

- Unexpected discovery of Aboriginal cultural heritage during the activity, including custodianship;
- Unexpected discovery of human remains;
- Communication;
- Access to works site;
- Sensitive information; and,
- Compliance review and non-compliance.

8.2 Cumulative impact of the activity

No Aboriginal heritage was identified during the current CHMP assessment. The proposed works are occurring within an area that has already been subject to urban and residential development and as a result, a moderate to high degree of modification and disturbance has taken place to this area. As a consequence of the proposed activity there will be some impacts to the natural environment through development and construction, however as no Aboriginal cultural heritage was identified, there will be no cumulative impacts of the activity on Aboriginal cultural heritage within the region.

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Appendix A – Notice of Intent Form and RAP response

VICTORIA State Government | Premier and Cabinet

Notice of Intent to prepare a Cultural Heritage Management Plan for the purposes of the *Aboriginal Heritage Act 2006*

This form can be used by the Sponsor of a Cultural Heritage Management Plan to complete the notification provisions pursuant to s.54 of the *Aboriginal Heritage Act 2006* (the "Act").

For clarification on any of the following please contact Victorian Aboriginal Heritage Register (VAHR) enquiries on 1800-726-003.

SECTION 1 - Sponsor information

Sponsor:	Department of Transport		
ABN/ACN:	69 981 208 782		
Contact Name:	Jason Cheah		
Postal Address	12 Lakeside Drive, Burwood East, VIC 3151		
Business Number:	9313 1331	Mobile:	
Email Address:	Jason.Cheah@roads.vic.gov.au		

Sponsor's agent (if relevant)

Company:			
Contact Name:			
Postal Address			
Business Number:		Mobile:	
Email Address:	david@unearthedheritage.com.au		

SECTION 2 - Description of proposed activity and location

Project Name:	Ballarto Road/Lyrebird Drive Intersection Upgrade, Skye
Municipal district:	Frankston City Council

Clearly identify the proposed activity for which the cultural heritage managment plan is to be prepared (ie. Mining, road construction, housing subivision)

Roadway

SECTION 3 - Cultural Heritage Advisor

Joseph Minter Brooke	Unearthed Heritage	joseph@unearthedheritage.com.au
Name	*Company*	*Email address*

SECTION 4 - Expected start and finish date for the cultural heritage management plan

Start Date:	15-Jun-2021	Finish Date:	15-Jun-2022

Submitted on: 15 Jun 2021

VICTORIA State Government | Premier and Cabinet

SECTION 5 - Why are you preparing this cultural heritage management plan?

☑ A cultural heritage management plan is required by the Aboriginal Heritage Regulations 2007

What is the high Impact Activity as it is listed in the regulations?

Is any part of the activity an area of cultural heritage sensitivity, as listed in the regulations? 1

☐ Other Reasons (Voluntary)

☐ An Environment Effects Statement is required

☐ A Cultural Heritage Management Plan is required by the Minister for Aboriginal Affairs.

☐ An Impact Management Plan or Comprehensive Impact Statement is required for the activity

SECTION 6 - List the relevant registered Aboriginal parties (if any)

This section is to be completed where there are registered Aboriginal parties in relation to the management plan.

BUNURONG LAND COUNCIL ABORIGINAL CORPORATION

SECTION 7A - List the relevant Aboriginal groups or Aboriginal people with whom the Sponsor intends to consult (if any)

*This section is to be completed only if the proposed activity in the management plan is to be carried out in an area where there is **no Registered Aboriginal Party.***

SECTION 7B - Describe the intended consultation process (if any)

*This section is to be completed only if the proposed activity in the management plan is to be carried out in an area where there is **no Registered Aboriginal Party.***

SECTION 8 – State who will be evaluating this plan (mandatory)

The plan is to be evaluated by:

☐ Joint - Registered Aboriginal Party AND The Secretary

☑ A Registered Aboriginal Party

If checked, list the relevant Registered Aboriginal Party Evaluating:

☐ The Secretary

☐ Victorian Aboriginal Heritage Council

SECTION 9 – Preliminary Aboriginal Heritage Tests (PAHTs)

List the Reference Number(s) of any PAHTs conducted in relation to the proposed activity:

SECTION 10 - Notification checklist

Submitted on: 15 Jun 2021

VICTORIA State Government | Premier and Cabinet

Ensure that any relevant registered Aboriginal party/ies is also notified. A copy of this notice with a map attached may be used for this purpose.
(A registered Aboriginal party is allowed up to 14 days to provide a written response to a notification specifying whether or not it intends to evaluate the management plan.)

In addition to notifying the Deputy Director and any relevant registerd Aboriginal party/ies, a Sponsor must also notify any owner and/or occupier of any land within the area to which the management plan relates. A copy of this notice with a map attached may be used for this purpose.

Ensure any municipal council, whose municipal district includes an area to which the cultural heritage management plan relates, is also notified. A copy of this notice, with a map attached, may also be used for this purpose.

Submitted on: 15 Jun 2021

Bunurong Land Council
ABORIGINAL CORPORATION

ABN: 66 129 413 297 ICN:3630
PO Box 11219, Frankston VIC 3199
336-340 Nepean Hwy, Frankston VIC 3199
Ph: (03) 9770 1273
www.bunuronglc.org

15 June 2021

To whom it may concern,

Notice to Evaluate Cultural Heritage Management Plan 18037 - Proposed Intersection Upgrade, Ballarto Road/Lyrebird Drive, Skye.

Your notification has been accepted and the Bunurong Land Council Aboriginal Corporation (BLCAC) advises that it intends to evaluate this plan when complete, in accordance with Division 4, Section 55 of the *Aboriginal Heritage Act 2006.* We also advise that during the preparation of this plan, the BLCAC wishes to:

- Consult with you in relation to the assessment of the area for the purposes of the plan.
- Participate in the conduct of the assessment.
- Consult with the sponsor in relation to the conditions to be included in the plan.

Please note that before any fieldwork program commences it will be necessary for your heritage advisor to participate in a Project Inception Meeting to discuss the project. It is preferable for the project sponsor to attend the Project Inception Meeting. As the Project Inception Meeting provides an opportunity for all parties to clarify the aims of the CHMP and methodology for any fieldwork program, it is helpful if you and/or your heritage advisor can bring along the following information to expedite these discussions:

- A clear map of the Activity Area.
- Aboriginal site location data within the geographic region.
- Site cards of any sites already recorded in the Activity Area.
- Any geotechnical reports undertaken for the Activity Area.

To organise a Project Inception Meeting please contact the office on 0455 559 727.

Please ensure that when sending this CHMP to BLCAC for evaluation that it **must** be accompanied with proof of the evaluation fee (receipt of payment) and a hard copy of the CHMP. Failure to do so will mean the evaluation period will not commence.

If you require any additional information about this advice, please contact Angela Thompson on 0425 308 256.

We look forward to meeting with you soon to discuss the project.

Yours sincerely,

Robert Ogden
Heritage Manager
Robert.Ogden@bunuronglc.org.au

Topographic data: © State of Victoria 2021. The State of Victoria does not warrant the accuracy or completeness of information in this publication and any person using or relying upon such information does so on the basis that the State of Victoria shall bear no responsibility or liability whatsoever for any errors, faults, defects or omissions in the information.

Appendix B – Glossary

Activity Area: The area to be used or developed for an activity.

Alluvium: Sediment laid down by flowing water

Angular Fragment: A piece of stone that can be identified as being a culturally flaked artefact, but does not have diagnostic features that allows it to be positively identified to a technological type.

Chert: A fine-grained stone composed of cryptocrystalline silica. It exhibits a range of textures and colours. Chert is easy to work and retain a sharp edge for an extensive period of time before re-sharpening is required. It has a low to medium fracture toughness and is hence used for flaked stone artefacts.

Devonian: A geological period spanning from about 419 million years ago to about 359 million years ago.

Exposure: Refers to the percentage of the sub-surface exposed, through actions such as erosion or in excavated areas.

Flake: A stone piece removed from a core by percussion (striking it) or by pressure. It is generally identified by the presence of a striking platform, a bulb of percussion, and/or several other features not usually found on a naturally shattered stone.

Granite: Hard igneous rock with that is granular in texture, mainly consisting of mica, feldspar and quartz.

Granodiorite: A similar igneous to granite, but darker.

Holocene: The Holocene epoch forms part of the late Quaternary period and extends from about 11,000 years ago to the present day.

Hornfels: A metamorphic rock that is hard and splintery and is often grey and dark brown to black.

Hydrolysis: A chemical weathering process affecting silicate and carbonate minerals. In such reactions, pure water ionizes slightly and reacts with silicate minerals, such as dissolving quartz.

Igneous: A rock of volcanic origin

In situ: A description of any cultural material that lies undisturbed in its original point of deposition.

Kaolinisation: A process whereby water acts as an acid to slowly breakdown granodiorite into sand and clay

Quartz: The second most abundant mineral on earth made up of a crystalline structure of SiO_4.

Pedogenic: Soil forming processes.

Pedogenesis: Soil formation

Scarred trees: Tree scars from Aboriginal cultural traditions are distinct from naturally occurring scars by their generally oval and/or symmetrical shape, and sometimes presence of steel or stone axe marks on the scar's surface. The size and shape of scars depends on the intended use of the bark removed. Bark was used for a variety of dishes and containers, shields, canoes, and construction of bark-slab huts.

Significant Ground Disturbance: Means 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 (to 60cm).

Silcrete: Soil, clay or sand sediments that have silicified under basalt through groundwater percolation. Silcrete ranges in texture from very fine grained, to quite coarse grained. At one extreme it is cryptocrystalline with very few clasts, with almost the appearance of chert. It is used for flaked stone artefact production, sometimes after heat treatment to increase the ease and predictability of its flaking.

Silurian: A geological period that spans between about 443 million years ago to 419 million years ago.

Spit: Refers to an arbitrarily defined depth unit of soil removed during excavation.

Stratification: The way in which soil forms in layers.

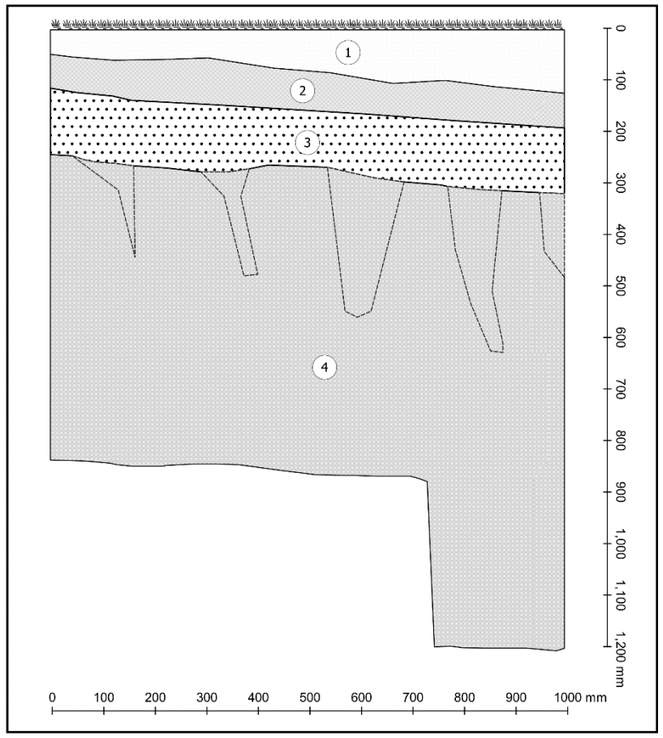
Stratigraphy: The study of soil stratification (layers) and deposition.

Tool: A stone flake that has undergone secondary flaking or retouch.

Visibility: Refers to the degree to which the surface of the ground can be observed. This may be influenced by natural processes such as erosion, the character of the extant vegetation, and/or by land use practices, such as ploughing or grading. It is generally expressed in terms of the percentage of the ground surface visible for an observer on foot.

Appendix C – Excavation data

TP1



Project: CHMP 18037

Date: 8 November 2021

Pit ID: TP1 (1x1m)

Landform: Modified undulating dune

Coordinates: 339523.317E/5779954.756N

Disturbance: Surface modification associated with roadway and streetscape construction

Context	Soil horizon	Depth range (mm)	Munsell Colour	pH	Texture	Moisture	Structure	Consistency	Inclusions	Boundary	Excavation comments	Artefacts
1	O	0-100	Very dark grey (10YR 3/1)	6.5	Silty sand	Dry	Granular	Firm	Modern context with rootlets, plastics and asbestos	Smooth clear	Soil was bulked out to approximately 150mm after asbestos was identified at a depth of approximately 50mm. A sondage was excavated in the southwest corner of the pit from 800mm, terminating at 1200mm depth.	No
2	N/A	100-150	Dark yellowish brown (10YR 4/4)	6.5	Sand/fill	Dry	Granular	Firm	Occasional rootlets	Smooth abrupt		
3	N/A	150-300	Brown (10YR 4/3)	6.5	Sand/fill	Dry	Granular	Firm	Highly frequent small to large gravel	Undulating		
4	B	300-1200	Light grey (10YR 7/2) with dark yellowish brown (10YR 4/6) and black (10YR 2/1)	6.5	Sand	Dry	Platy	Friable	Sandy iron nodules, mostly undulating coffee rock formation with occasional worms	--		

STP1

Project: CHMP 18037

Date: 8 November 2021

Pit ID: STP1 (0.5x0.5m)

Landform: Modified undulating dune

Coordinates: 339530.9071E/5779953.697N

Disturbance: Surface modification associated with roadway and streetscape construction

Context	Soil horizon	Depth range (mm)	Munsell Colour	pH	Texture	Moisture	Structure	Consistency	Inclusions	Boundary	Excavation comments	Artefacts
1	N/A	0-150	Very dark grey (10YR 3/1)	7	Silty sand	Slightly moist	Granular	Firm	Plastics, rootlets and asbestos	N/A (single context)	Excavation was aborted after identification of asbestos at a depth of approximately 100mm.	No

STP2

Project: CHMP 18037

Date: 8 November 2021

Pit ID: STP2 (0.5x0.5m)

Landform: Modified undulating dune

Coordinates: 339478.295E/5779964.928N

Disturbance: Surface modification associated with roadway and streetscape construction

Context	Soil horizon	Depth range (mm)	Munsell Colour	pH	Texture	Moisture	Structure	Consistency	Inclusions	Boundary	Excavation comments	Artefacts
1	O	0-150	Very dark grey (10YR 3/1)	7	Silty sand	Moist	Granular	Firm	Modern glass and plastic inclusions	Smooth clear	Excavation closed at impact depth of proposed activity	No
2	N/A	150-500	Dark yellowish brown (10YR 4/4)	7	Sand/fill	Dry	Granular to blocky	Firm	Fill with gravel and redeposited sandy clay nodules	Smooth gradual		
3	A	500-600	Light grey (10YR 7/2) and black (10YR 2/1)	6.5	Sand	Dry	Single grain	Weak	Sandy layer overlaying coffee rock context	--		

STP3

Project: CHMP 18037

Date: 9 November 2021

Pit ID: STP3 (0.5x0.5m)

Landform: Modified undulating dune

Coordinates: 339453.876E/5779963.641N

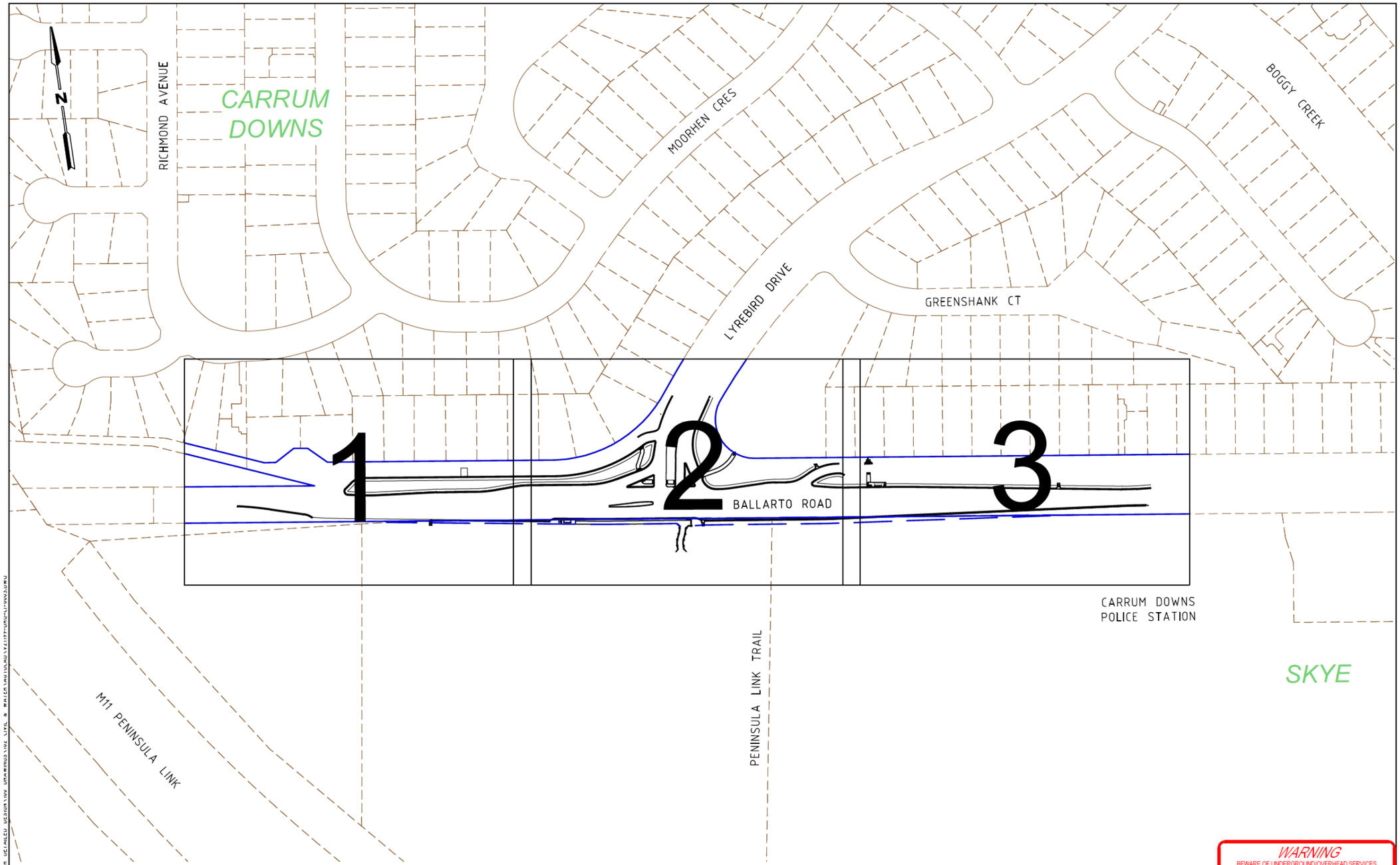
Disturbance: Surface modification associated with roadway and streetscape construction

Context	Soil horizon	Depth range (mm)	Munsell Colour	pH	Texture	Moisture	Structure	Consistency	Inclusions	Boundary	Excavation comments	Artefacts
1	O	0-150	Very dark brown (10YR 2/2)	7	Humic	Moist	Granular	Firm	Humic material comprising upper 50-100mm	Smooth Gradual	Excavation closed at impact depth of proposed activity	No
2	N/A	150-450	Dark greyish brown (10YR 4/2)	6.5	Silty sand	Dry	Granular to blocky	Firm	Fill with clay nodules, rootlets and occasional gravel	Smooth Gradual		
3	N/A	450-550	Black (10YR 2/1)	5	Silty sand	Dry	Granular to blocky	Firm	Fill with clay nodules, rootlets and occasional gravel	Smooth Clear		
4	A	550-630	Very dark greyish brown (10YR 3/2)	5	Sand	Dry	Single grain	Weak	Clean context	--		

Stratigraphic Data

Pit	Context	Spit	Depth	Consistency	Composition	Munsell	Colour	pH	Inclusions
TP-1	1	1	0-50	Firm	Silty sand	10YR 3/1	Very dark grey	6.5	Modern, asbestos (bulked out to ~150mm), rootlets ,plastics
		2	50-100						
	2	3	100-150	Firm	Sand/Fill	10YR 4/4	Dark yellowish brown	6.5	Occ rootlets. No charcoal, ants, worms, euro
	3	4	150-200	Firm	Sand/Fill	10YR 4/3	Brown	6.5	Highly frequent gravel (small-large). No charcoal, ants, worms, euro.
		5	200-250						
		6	250-300						
	4	7	300-350	Friable	Sand	10YR 7/2	Light Grey, dark yellowish brown and very dark brown	6.5	10YR 7/2, 4/6, & 2/1. Sandy iron nodules, mostly undulating coffee rock formation. No charcoal, ants. Occ worms.
		8	350-400						
		9	400-450						
		10	450-500						
		11	500-550						
		12	550-600						
		13	600-650						
		14	650-700						
		15	700-750						
		16	750-800						
		17	800-850						Sondage in SW corner to 1200mm depth.
		18	850-900						
		19	900-950						
		20	950-1000						
		21	1000-1050						
		22	1050-1100						
		23	1100-1150						
		24	1150-1200						
STP-1	1	1	0-50	Firm	Silty Sand	10yr 3/1	Very dark grey	7	Plastics, rootlets. Closed due to suspected asbestos found at approximately 100mm.
		2	50-100						
		3	100-150						
STP-2	1	1	0-50	Firm	Silty sand	10yr 3/1	Very dark grey	7	Modern inclusions; glass, plastics
		2	50-100						
		3	100-150						
	2	4	150-200	Firm	Sand/Fill	10yr 4/4	Dark yellowish brown	7	Highly frequency fill layer w gravel.
		5	200-250						
		6	250-300						
		7	300-350						
		8	350-400						
		9	400-450						
		10	450-500						Development impact depth
	3	11	500-550	Weak	Sand	10yr 7-2, 10yr 2-1	Light grey, black	6.5	Sandy layer situated above coffee rock context (see TP-1)
		12	550-600						
STP-3	1	1	0-50	Firm	Humic	10yr 2/2	Very dark brown	7	Humic ~50-100mm
		2	50-100						
		3	100-150						
	2	4	150-200	Firm	Silty sand	10yr 4/2	Dark greyish brown	6.5	Fill with clay nodules, rootlets, occ gravel.
		5	200-250						
		6	250-300						
		7	300-350						
		8	350-400						
		9	400-450						
	3	10	450-500	Firm	Silty sand	10yr 2/1	Black	5	Fill with clay nodules, rootlets, occ gravel.
		11	500-550						
	4	12	550-630	Weak	Sand	10yr 3/2	Very dark greyish brown	5	Development impact depth

Appendix D – Preliminary Development Plans



WARNING
BEWARE OF UNDERGROUND/OVERHEAD SERVICES
THE LOCATIONS OF UNDERGROUND/OVERHEAD SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

BG&E DRAWING NO.
CI-0003

DETAIL DESIGN

ISSUE	APP'D	DATE	AMENDMENT
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A	T.G	20.05.22	75% PRELIMINARY SUBMISSION

GENERAL NOTES
1. ALL DIMENSIONS ARE IN METERS UNLESS NOTED OTHERWISE.
2. DOT SUPPLIED SURVEY AND SERVICES SHOWN IS TO MGA94Z55 AND AHD.
3. DIMENSIONS ARE TO BE LINE OF KERB, UNLESS NOTED OTHERWISE
4. BALLARTO ROAD - DECLARED ROAD - 70Km/h
LYREBIRD DR - LOCAL ROAD - 50Km/h

BG&E

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BG&E
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APPROVED

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CITY OF FRANKSTON
KEY PLAN

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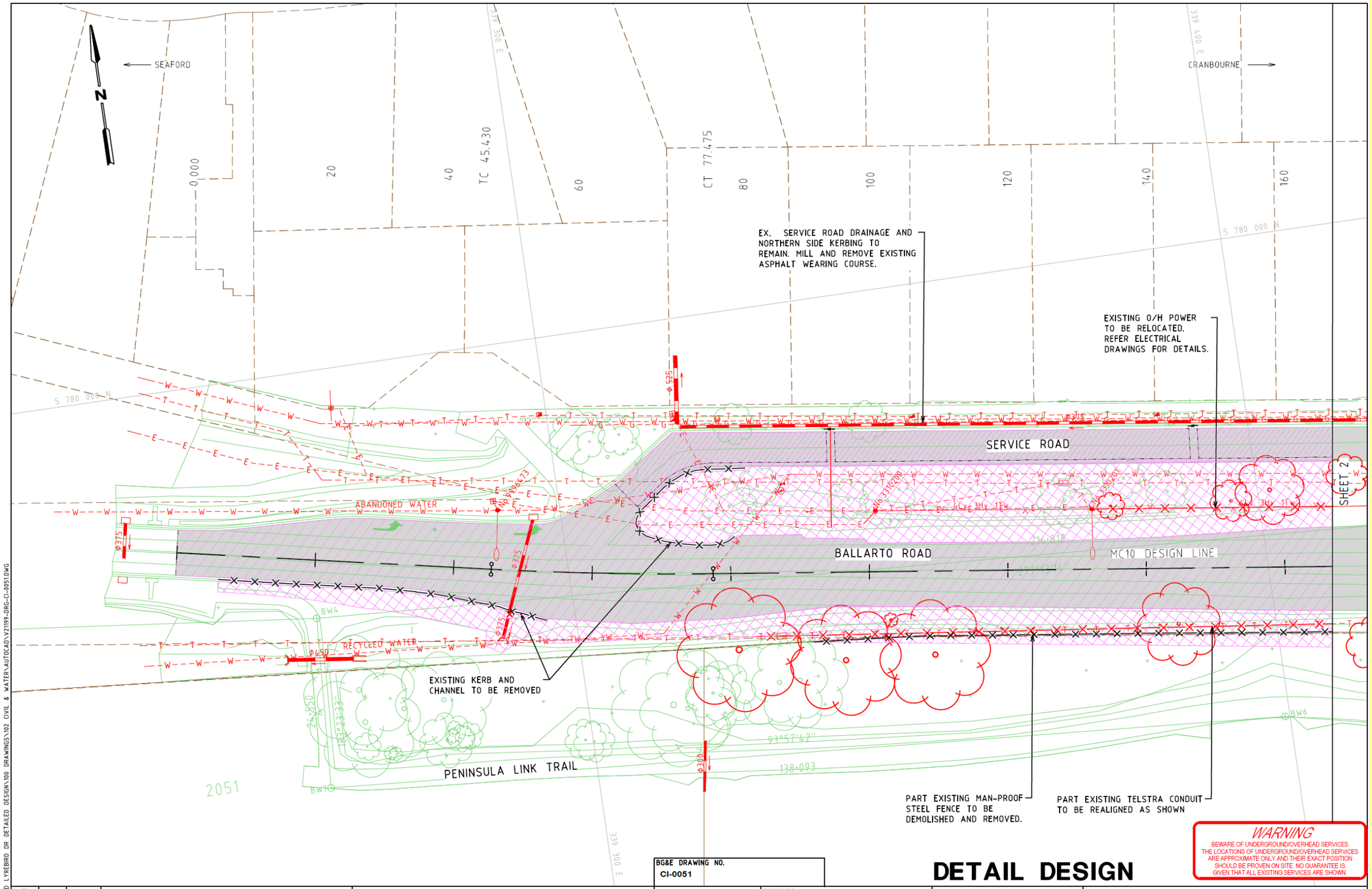

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CI-0051

DETAIL DESIGN

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2. DOT SUPPLIED SURVEY AND SERVICES SHOWN IS TO MGA94Z55 AND AHD.
3. DIMENSIONS ARE TO BE LINE OF KERB, UNLESS NOTED OTHERWISE
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LYREBIRD DR - LOCAL ROAD - 50Km/h

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CITY OF FRANKSTON
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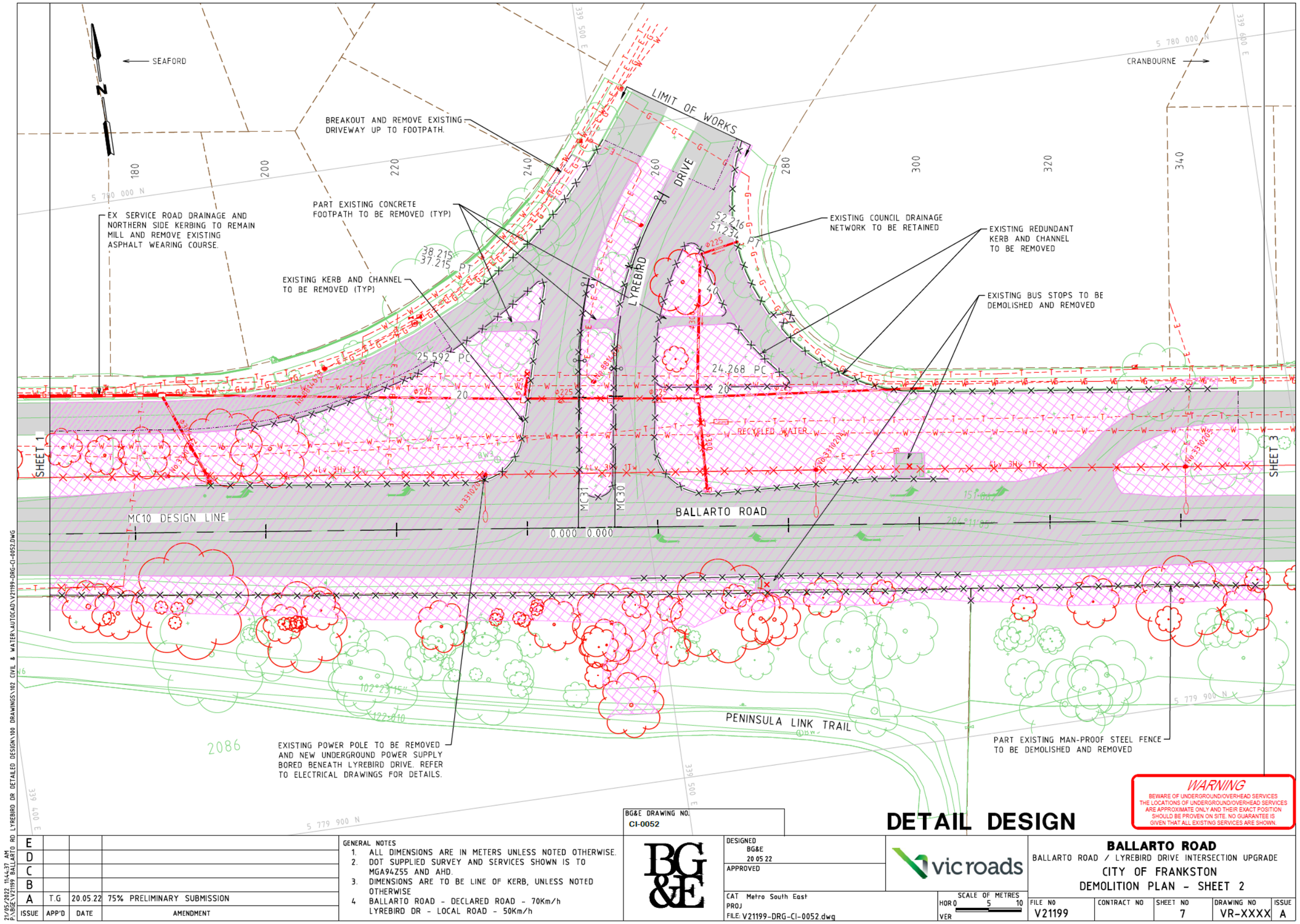
SEAFORD
CRANBOURNE
LIMIT OF WORKS
BREAKOUT AND REMOVE EXISTING DRIVEWAY UP TO FOOTPATH.
PART EXISTING CONCRETE FOOTPATH TO BE REMOVED (TYP)
EX SERVICE ROAD DRAINAGE AND NORTHERN SIDE KERBING TO REMAIN MILL AND REMOVE EXISTING ASPHALT WEARING COURSE.
EXISTING KERB AND CHANNEL TO BE REMOVED (TYP)
EXISTING COUNCIL DRAINAGE NETWORK TO BE RETAINED
EXISTING REDUNDANT KERB AND CHANNEL TO BE REMOVED
EXISTING BUS STOPS TO BE DEMOLISHED AND REMOVED
LYREBIRD DRIVE
BALLARTO ROAD
MC10 DESIGN LINE
MC31
MC30
RECYCLED WATER
PENINSULA LINK TRAIL
EXISTING POWER POLE TO BE REMOVED AND NEW UNDERGROUND POWER SUPPLY BORED BENEATH LYREBIRD DRIVE. REFER TO ELECTRICAL DRAWINGS FOR DETAILS.
PART EXISTING MAN-PROOF STEEL FENCE TO BE DEMOLISHED AND REMOVED
SHEET 1
SHEET 3
WARNING
BEWARE OF UNDERGROUND/OVERHEAD SERVICES
THE LOCATIONS OF UNDERGROUND/OVERHEAD SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.
DETAIL DESIGN
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2. DOT SUPPLIED SURVEY AND SERVICES SHOWN IS TO MGA94Z55 AND AHD.
3. DIMENSIONS ARE TO BE LINE OF KERB, UNLESS NOTED OTHERWISE
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LYREBIRD DR - LOCAL ROAD - 50Km/h
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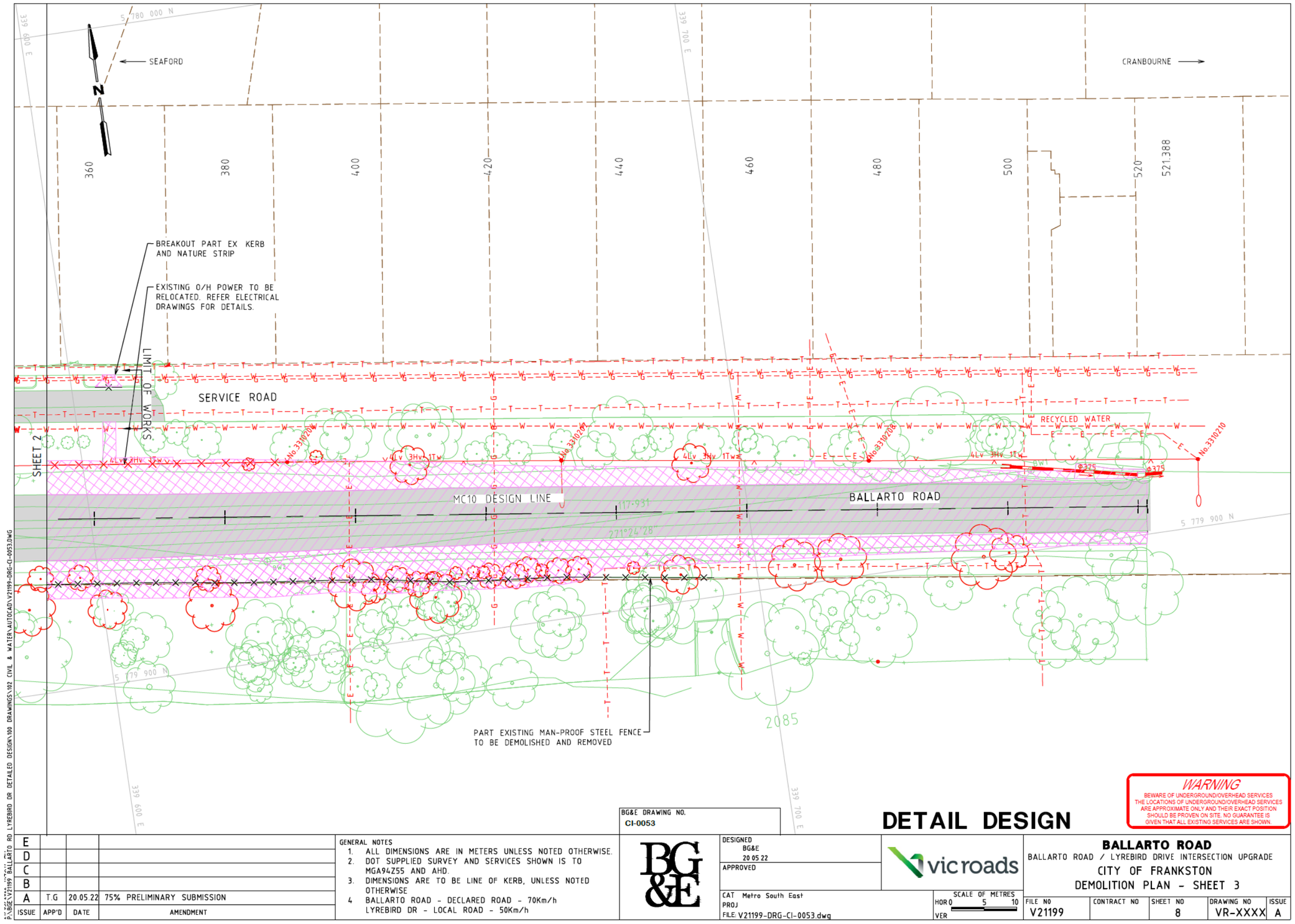
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BREAKOUT PART EX KERB AND NATURE STRIP
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LIMIT OF WORKS
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SHEET 2
RECYCLED WATER
MC10 DESIGN LINE
BALLARTO ROAD
PART EXISTING MAN-PROOF STEEL FENCE TO BE DEMOLISHED AND REMOVED
WARNING
BEWARE OF UNDERGROUND/OVERHEAD SERVICES
THE LOCATIONS OF UNDERGROUND/OVERHEAD SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.
BG&E DRAWING NO.
CI-0053
DETAIL DESIGN
E
D
C
B
A T.G 20.05.22 75% PRELIMINARY SUBMISSION
ISSUE APP'D DATE AMENDMENT
GENERAL NOTES
1. ALL DIMENSIONS ARE IN METERS UNLESS NOTED OTHERWISE.
2. DOT SUPPLIED SURVEY AND SERVICES SHOWN IS TO MGA94Z55 AND AHD.
3. DIMENSIONS ARE TO BE LINE OF KERB, UNLESS NOTED OTHERWISE
4 BALLARTO ROAD - DECLARED ROAD - 70Km/h
LYREBIRD DR - LOCAL ROAD - 50Km/h
BG&E
DESIGNED BG&E 20 05 22
APPROVED
CAT Metro South East
PROJ
FILE: V21199-DRG-CI-0053.dwg
vicroads
SCALE OF METRES
HOR 0 5 10
VER
BALLARTO ROAD
BALLARTO ROAD / LYREBIRD DRIVE INTERSECTION UPGRADE
CITY OF FRANKSTON
DEMOLITION PLAN - SHEET 3
FILE NO V21199
CONTRACT NO
SHEET NO 8
DRAWING NO VR-XXXX
ISSUE A
P:\BGE\V21199"BALLARTO RD LYREBIRD DR DETAILED DESIGN\100 DRAWINGS\102 CIVIL & WATER\AUTOCAD\V21199-DRG-CI-0053.DWG

Appendix E – Frankston Planning Scheme

32.08 GENERAL RESIDENTIAL ZONE

31/07/2018
VC148

Shown on the planning scheme map as **GRZ**, **R1Z**, **R2Z** or **R3Z** with a number (if shown).

Purpose

To implement the Municipal Planning Strategy and the Planning Policy Framework.

To encourage development that respects the neighbourhood character of the area.

To encourage a diversity of housing types and housing growth particularly in locations offering good access to services and transport.

To allow educational, recreational, religious, community and a limited range of other non-residential uses to serve local community needs in appropriate locations.

32.08-1 Neighbourhood character objectives

27/03/2017
VC110

A schedule to this zone may contain neighbourhood character objectives to be achieved for the area.

32.08-2 Table of uses

20/01/2022
VC205

Section 1 - Permit not required

Use	Condition
Bed and breakfast	No more than 10 persons may be accommodated away from their normal place of residence. At least 1 car parking space must be provided for each 2 persons able to be accommodated away from their normal place of residence.
Community care accommodation	Must meet the requirements of Clause 52.22-2.
Dependent person's unit	Must be the only dependent person's unit on the lot.
Domestic animal husbandry (other than Domestic animal boarding)	Must be no more than 2 animals.
Dwelling (other than Bed and breakfast) **Home based business** **Informal outdoor recreation**	
Medical centre	The gross floor area of all buildings must not exceed 250 square metres. Must not require a permit under Clause 52.06-3. The site must adjoin, or have access to, a road in a Transport Zone 2 or a Transport Zone 3.
Place of worship	The gross floor area of all buildings must not exceed 250 square metres. The site must adjoin, or have access to, a road in a Transport Zone 2 or a Transport Zone 3.
Racing dog husbandry	Must be no more than 2 animals.
Railway	

VICTORIA PLANNING PROVISIONS

Use	Condition
Residential aged care facility	
Rooming house	Must meet the requirements of Clause 52.23-2.
Tramway	
Any use listed in Clause 62.01	Must meet the requirements of Clause 62.01.

Section 2 - Permit required

Use	Condition
Accommodation (other than Community care accommodation, Dependent person's unit, Dwelling, Residential aged care facility and Rooming house) **Agriculture (other than Animal production, Animal training, Apiculture, Domestic animal husbandry, Horse husbandry and Racing dog husbandry)**	
Car park	Must be used in conjunction with another use in Section 1 or 2.
Car wash	The site must adjoin, or have access to, a road in a Transport Zone 2 or a Transport Zone 3.
Convenience restaurant	The site must adjoin, or have access to, a road in a Transport Zone 2 or a Transport Zone 3.
Convenience shop	
Domestic animal husbandry (other than Domestic animal boarding) – if the Section 1 condition is not met	Must be no more than 5 animals.
Food and drink premises (other than Convenience restaurant and Take away food premises) **Grazing animal production** **Leisure and recreation (other than Informal outdoor recreation and Motor racing track)** **Market** **Place of assembly (other than Amusement parlour, Carnival, Cinema based entertainment facility, Circus, Nightclub and Place of worship)** **Plant nursery**	
Service station	The site must either: ▪ Adjoin a commercial zone or industrial zone. ▪ Adjoin, or have access to, a road in a Transport Zone 2 or a Transport Zone 3. The site must not exceed either:

Use	Condition
	▪ 3000 square metres. ▪ 3600 square metres if it adjoins on two boundaries a road in a Transport Zone 2 or a Transport Zone 3.
Store	Must be in a building, not a dwelling, and used to store equipment, goods, or motor vehicles used in conjunction with the occupation of a resident of a dwelling on the lot.
Take away food premises	The site must adjoin, or have access to, a road in a Transport Zone 2 or a Transport Zone 3.
Utility installation (other than Minor utility installation and Telecommunications facility)	
Any other use not in Section 1 or 3	

Section 3 – Prohibited

Use
Amusement parlour
Animal production (other than Grazing animal production)
Animal training
Brothel
Cinema based entertainment facility
Domestic animal boarding
Extractive industry
Horse husbandry
Industry (other than Car wash)
Motor racing track
Nightclub
Office (other than Medical centre)
Retail premises (other than Convenience shop, Food and drink premises, Market, and Plant nursery)
Saleyard
Transport terminal
Warehouse (other than Store)

32.08-3 31/07/2018 VC148

Subdivision

Permit requirement

A permit is required to subdivide land.

An application to subdivide land that would create a vacant lot less than 400 square metres capable of development for a dwelling or residential building, must ensure that each vacant lot created less than 400 square metres contains at least 25 percent as garden area. This does not apply to a lot created by an application to subdivide land where that lot is created in accordance with:

- An approved precinct structure plan or an equivalent strategic plan;
- An incorporated plan or approved development plan; or
- A permit for development.

An application to subdivide land, other than an application to subdivide land into lots each containing an existing dwelling or car parking space, must meet the requirements of Clause 56 and:

- Must meet all of the objectives included in the clauses specified in the following table.
- Should meet all of the standards included in the clauses specified in the following table.

Class of subdivision	Objectives and standards to be met
60 or more lots	All except Clause 56.03-5.
16 – 59 lots	All except Clauses 56.03-1 to 56.03-3, 56.03-5, 56.06-1 and 56.06-3.
3 – 15 lots	All except Clauses 56.02-1, 56.03-1 to 56.03-4, 56.05-2, 56.06-1, 56.06-3 and 56.06-6.
2 lots	Clauses 56.03-5, 56.04-2, 56.04-3, 56.04-5, 56.06-8 to 56.09-2.

VicSmart applications

Subject to Clause 71.06, an application under this clause for a development specified in Column 1 is a class of VicSmart application and must be assessed against the provision specified in Column 2.

Class of application	Information requirements and decision guidelines
Subdivide land to realign the common boundary between 2 lots where: ▪ The area of either lot is reduced by less than 15 percent. ▪ The general direction of the common boundary does not change.	Clause 59.01
Subdivide land into lots each containing an existing building or car parking space where: ▪ The buildings or car parking spaces have been constructed in accordance with the provisions of this scheme or a permit issued under this scheme. ▪ An occupancy permit or a certificate of final inspection has been issued under the Building Regulations in relation to the buildings within 5 years prior to the application for a permit for subdivision.	Clause 59.02
Subdivide land into 2 lots if: ▪ The construction of a building or the construction or carrying out of works on the land:	Clause 59.02

Class of application	Information requirements and decision guidelines
– Has been approved under this scheme or by a permit issued under this scheme and the permit has not expired. – Has started lawfully. ▪ The subdivision does not create a vacant lot.	

32.08-4 15/05/2018 VC143

Construction or extension of a dwelling or residential building

Minimum garden area requirement

An application to construct or extend a dwelling or residential building on a lot must provide a minimum garden area as set out in the following table:

Lot size	Minimum percentage of a lot set aside as garden area
400 - 500 sqm	25%
Above 500 - 650 sqm	30%
Above 650 sqm	35%

This does not apply to:

- An application to construct or extend a dwelling or residential building if specified in a schedule to this zone as exempt from the minimum garden area requirement;
- An application to construct or extend a dwelling or residential building on a lot if:
  - The lot is designated as a medium density housing site in an approved precinct structure plan or an approved equivalent strategic plan;
  - The lot is designated as a medium density housing site in an incorporated plan or approved development plan; or
- An application to alter or extend an existing building that did not comply with the minimum garden area requirement of Clause 32.08-4 on the approval date of Amendment VC110.

32.08-5 31/07/2018 VC148

Construction and extension of one dwelling on a lot

Permit requirement

A permit is required to construct or extend one dwelling on:

- A lot of less than 300 square metres.
- A lot of between 300 square metres and 500 square metres if specified in a schedule to this zone.

A permit is required to construct or extend a front fence within 3 metres of a street if:

- The fence is associated with one dwelling on:
  - A lot of less than 300 square metres, or
  - A lot of between 300 and 500 square metres if specified in a schedule to this zone, and
- The fence exceeds the maximum height specified in Clause 54.06-2.

A development must meet the requirements of Clause 54.

No permit required

No permit is required to:

- Construct or carry out works normal to a dwelling.
- Construct or extend an out-building (other than a garage or carport) on a lot provided the gross floor area of the out-building does not exceed 10 square metres and the maximum building height is not more than 3 metres above ground level.
- Make structural changes to a dwelling provided the size of the dwelling is not increased or the number of dwellings is not increased.

VicSmart applications

Subject to Clause 71.06, an application under this clause for a development specified in Column 1 is a class of VicSmart application and must be assessed against the provision specified in Column 2.

Class of application	Information requirements and decision guidelines
Construct an outbuilding or extend a dwelling if the development: Meets the minimum garden area requirement of Clause 32.08-4. ▪ Does not exceed a building height of 5 metres. ▪ Is not visible from the street (other than a lane) or a public park. ▪ Meets the requirements in the following standards of Clause 54: – A10 Side and rear setbacks. – A11 Walls on boundaries. – A12 Daylight to existing windows. – A13 North-facing windows. – A14 Overshadowing open space. – A15 Overlooking. For the purposes of this class of VicSmart application, the Clause 54 standards specified above are mandatory. If a schedule to the zone specifies a requirement of a standard different from a requirement set out in the Clause 54 standard, the requirement in the schedule to the zone applies and must be met.	Clause 59.14
Construct or extend a front fence within 3 metres of a street if the fence is associated with one dwelling.	Clause 59.03

32.08-6
20/12/2021
VC174

Construction and extension of two or more dwellings on a lot, dwellings on common property and residential buildings

Permit requirement

A permit is required to:

- Construct a dwelling if there is at least one dwelling existing on the lot.
- Construct two or more dwellings on a lot.
- Extend a dwelling if there are two or more dwellings on the lot.

- Construct or extend a dwelling if it is on common property.
- Construct or extend a residential building.

A permit is required to construct or extend a front fence within 3 metres of a street if:

- The fence is associated with 2 or more dwellings on a lot or a residential building, and
- The fence exceeds the maximum height specified in Clause 55.06-2.

A development must meet the requirements of Clause 55. This does not apply to a development of five or more storeys, excluding a basement.

An apartment development of five or more storeys, excluding a basement, must meet the requirements of Clause 58.

A permit is not required to construct one dependent person's unit on a lot.

VicSmart applications

Subject to Clause 71.06, an application under this clause for a development specified in Column 1 is a class of VicSmart application and must be assessed against the provision specified in Column 2.

Class of application	Information requirements and decision guidelines
Construct or extend a front fence within 3 metres of a street if the fence is associated with 2 or more dwellings on a lot or a residential building.	Clause 59.03

Transitional provisions

Clause 55 of this scheme, as in force immediately before the approval date of Amendment VC136, continues to apply to:

- An application for a planning permit lodged before that date.
- An application for an amendment of a permit under section 72 of the Act, if the original permit application was lodged before that date.

Clause 58 does not apply to:

- An application for a planning permit lodged before the approval date of Amendment VC136.
- An application for an amendment of a permit under section 72 of the Act, if the original permit application was lodged before the approval date of Amendment VC136.

Clauses 55 and 58 of this scheme, as in force immediately before the approval date of Amendment VC174, continue to apply to:

- An application for a planning permit lodged before that date.
- An application for an amendment of a permit under section 72 of the Act, if the original permit application was lodged before that date.

32.08-7 Requirements of Clause 54 and Clause 55

27/03/2017
VC110

A schedule to this zone may specify the requirements of:

- Standards A3, A5, A6, A10, A11, A17 and A20 of Clause 54 of this scheme.
- Standards B6, B8, B9, B13, B17, B18, B28 and B32 of Clause 55 of this scheme.

If a requirement is not specified in a schedule to this zone, the requirement set out in the relevant standard of Clause 54 or Clause 55 applies.

32.08-8 Residential aged care facility

26/10/2018
VC152

Permit requirements

A permit is required to construct a building or construct or carry out works for a residential aged care facility.

A development must meet the requirements of Clause 53.17 - Residential aged care facility.

32.08-9 Buildings and works associated with a Section 2 use

04/12/2020
VC180

A permit is required to construct a building or construct or carry out works for a use in Section 2 of Clause 32.08-2.

VicSmart applications

Subject to Clause 71.06, an application under this clause for a development specified in Column 1 is a class of VicSmart application and must be assessed against the provision specified in Column 2.

Class of application	Information requirements and decision guidelines
Construct a building or construct or carry out works where: ▪ The building or works are not associated with a dwelling, primary school or secondary school and have an estimated cost of up to $100,000; or ▪ The building or works are associated with a primary school or secondary school and have an estimated cost of up to $500,000; and ▪ The requirements in the following standards of Clause 54 are met, where the land adjoins land in a residential zone used for residential purposes: – A10 Side and rear setbacks. – A11 Walls on boundaries. – A12 Daylight to existing windows. – A13 North-facing windows. – A14 Overshadowing open space. – A15 Overlooking. For the purposes of this class of VicSmart application, the Clause 54 standards specified above are mandatory. If a schedule to the zone specifies a requirement of a standard different from a requirement set out in the Clause 54 standard, the requirement in the schedule to the zone applies and must be met.	Clause 59.04

32.08-10 Maximum building height requirement for a dwelling or residential building

26/10/2018
VC152

A building must not be constructed for use as a dwelling or a residential building that:

- exceeds the maximum building height specified in a schedule to this zone; or
- contains more than the maximum number of storeys specified in a schedule to this zone.

If no maximum building height or maximum number of storeys is specified in a schedule to this zone:

- the building height must not exceed 11 metres; and
- the building must contain no more than 3 storeys at any point.

A building may exceed the applicable maximum building height or contain more than the applicable maximum number of storeys if:

- It replaces an immediately pre-existing building and the new building does not exceed the building height or contain a greater number of storeys than the pre-existing building.
- There are existing buildings on both abutting allotments that face the same street and the new building does not exceed the building height or contain a greater number of storeys than the lower of the existing buildings on the abutting allotments.
- It is on a corner lot abutted by lots with existing buildings and the new building does not exceed the building height or contain a greater number of storeys than the lower of the existing buildings on the abutting allotments.
- It is constructed pursuant to a valid building permit that was in effect prior to the introduction of this provision.

An extension to an existing building may exceed the applicable maximum building height or contain more than the applicable maximum number of storeys if it does not exceed the building height of the existing building or contain a greater number of storeys than the existing building.

A building may exceed the maximum building height by up to 1 metre if the slope of the natural ground level, measured at any cross section of the site of the building wider than 8 metres, is greater than 2.5 degrees.

A basement is not a storey for the purposes of calculating the number of storeys contained in a building.

The maximum building height and maximum number of storeys requirements in this zone or a schedule to this zone apply whether or not a planning permit is required for the construction of a building.

Building height if land is subject to inundation

If the land is in a Special Building Overlay, Land Subject to Inundation Overlay or is land liable to inundation the maximum building height specified in the zone or schedule to the zone is the vertical distance from the minimum floor level determined by the relevant drainage authority or floodplain management authority to the roof or parapet at any point.

32.08-11 Application requirements

26/10/2018
VC152

An application must be accompanied by the following information, as appropriate:

- For a residential development of four storeys or less, the neighbourhood and site description and design response as required in Clause 54 and Clause 55.
- For an apartment development of five or more storeys, an urban context report and design response as required in Clause 58.01.
- For an application for subdivision, a site and context description and design response as required in Clause 56.
- Plans drawn to scale and dimensioned which show:
  - Site shape, size, dimensions and orientation.
  - The siting and use of existing and proposed buildings.
  - Adjacent buildings and uses.

- The building form and scale.
- Setbacks to property boundaries.

- The likely effects, if any, on adjoining land, including noise levels, traffic, the hours of delivery and despatch of good and materials, hours of operation and light spill, solar access and glare.
- Any other application requirements specified in a schedule to this zone.

If in the opinion of the responsible authority an application requirement is not relevant to the evaluation of an application, the responsible authority may waive or reduce the requirement.

32.08-12 Exemption from notice and review

26/10/2018
VC152

Subdivision

An application to subdivide land into lots each containing an existing dwelling or car parking space is exempt from the notice requirements of section 52(1)(a), (b) and (d), the decision requirements of section 64(1), (2) and (3) and the review rights of section 82(1) of the Act.

32.08-13 Decision guidelines

24/01/2020
VC160

Before deciding on an application, in addition to the decision guidelines in Clause 65, the responsible authority must consider, as appropriate:

General

- The Municipal Planning Strategy and the Planning Policy Framework.
- The purpose of this zone.
- The objectives set out in a schedule to this zone.
- Any other decision guidelines specified in a schedule to this zone.
- The impact of overshadowing on existing rooftop solar energy systems on dwellings on adjoining lots in a General Residential Zone, Mixed Use Zone, Neighbourhood Residential Zone, Residential Growth Zone or Township Zone.

Subdivision

- The pattern of subdivision and its effect on the spacing of buildings.
- For subdivision of land for residential development, the objectives and standards of Clause 56.

Dwellings and residential buildings

- For the construction and extension of one dwelling on a lot, the objectives, standards and decision guidelines of Clause 54.
- For the construction and extension of two or more dwellings on a lot, dwellings on common property and residential buildings, the objectives, standards and decision guidelines of Clause 55. This does not apply to an apartment development of five or more storeys, excluding a basement.
- For the construction and extension of an apartment development of five or more storeys, excluding a basement, the objectives, standards and decisions guidelines of Clause 58.

Non-residential use and development

- Whether the use or development is compatible with residential use.
- Whether the use generally serves local community needs.
- The scale and intensity of the use and development.

- The design, height, setback and appearance of the proposed buildings and works.
- The proposed landscaping.
- The provision of car and bicycle parking and associated accessways.
- Any proposed loading and refuse collection facilities.
- The safety, efficiency and amenity effects of traffic to be generated by the proposal.

32.08-14 Signs

26/10/2018
VC152

Sign requirements are at Clause 52.05. This zone is in Category 3.

32.08-15 Transitional provisions

26/10/2018
VC152

The minimum garden area requirements of Clause 32.08-4 and the maximum building height and number of storeys requirements of Clause 32.08-9 introduced by Amendment VC110 do not apply to:

- A planning permit application for the construction or extension of a dwelling or residential building lodged before the approval date of Amendment VC110.
- Where a planning permit is not required for the construction or extension of a dwelling or residential building:
  - A building permit issued for the construction or extension of a dwelling or residential building before the approval date of Amendment VC110.
  - A building surveyor has been appointed to issue a building permit for the construction or extension of a dwelling or residential building before the approval date of Amendment VC110. A building permit must be issued within 12 months of the approval date of Amendment VC110.
  - A building surveyor is satisfied, and certifies in writing, that substantial progress was made on the design of the construction or extension of a dwelling or residential building before the approval date of Amendment VC110. A building permit must be issued within 12 months of the approval date of Amendment VC110.

The minimum garden area requirement of Clause 32.08-3 introduced by Amendment VC110 does not apply to a planning permit application to subdivide land for a dwelling or a residential building lodged before the approval date of Amendment VC110.

36.01 PUBLIC USE ZONE

31/07/2018
VC148

Shown on the planning scheme map as PUZ with a number.

Purpose

To implement the Municipal Planning Strategy and the Planning Policy Framework.

To recognise public land use for public utility and community services and facilities.

To provide for associated uses that are consistent with the intent of the public land reservation or purpose.

36.01-1 Table of uses

20/01/2022
VC205

Section 1 - Permit not required

Use	Condition
Railway	
Tramway	
Any use listed in Clause 62.01	Must meet the requirements of Clause 62.01.
Any other use	The use must be for the purpose described in the table to Clause 36.01-6 which corresponds to the notation on the planning scheme map. The use must be carried out by or on behalf of the public land manager.

Section 2 - Permit required

Use	Condition

Section 3 - Prohibited

Use
Nil

36.01-2 Permit requirement

19/01/2006
VC37

A permit is required to:

- Construct a building or construct or carry out works for any use in Section 2 of Clause 36.01-1. This does not apply to navigational beacons and aids.
- Subdivide land.

36.01-3 Application requirements

19/01/2006
VC37

An application for a permit by a person other than the relevant public land manager must be accompanied by the written consent of the public land manager, indicating that the public land manager consents generally or conditionally either:

- To the application for permit being made.
- To the application for permit being made and to the proposed use or development.

36.01-4 Decision guidelines

31/07/2018
VC148

Before deciding on an application to use or subdivide land, construct a building or construct or carry out works, in addition to the decision guidelines in Clause 65, the responsible authority must consider, as appropriate:

- The Municipal Planning Strategy and the Planning Policy Framework.
- The comments of any Minister or public land manager having responsibility for the care or management of the land or adjacent land.
- Whether the development is appropriately located and designed, including in accordance with any relevant use, design or siting guidelines.

36.01-5 Permit not required

19/01/2006
VC37

A permit is not required to use land, or to construct a building or construct or carry out works on land, listed in a schedule to this zone, provided any condition in the schedule is complied with.

36.01-6 Table of public land use

20/01/2022
VC205

Shown on the planning scheme map	Purpose of public land use
PUZ1	Service & Utility
PUZ2	Education
PUZ3	Health & Community
PUZ5	Cemetery/Crematorium
PUZ6	Local Government
PUZ7	Other public use

36.01-7 Signs

20/01/2022
VC205

Sign requirements are at Clause 52.05. This zone is in Category 4 unless a different requirement is specified in the schedule to this zone.

Where a Transport Zone 2 or a Transport Zone 3 is the nearest adjoining zone, a permit is required to display a sign.

36.02 PUBLIC PARK AND RECREATION ZONE

31/07/2018
VC148

Shown on the planning scheme map as PPRZ.

Purpose

To implement the Municipal Planning Strategy and the Planning Policy Framework.

To recognise areas for public recreation and open space.

To protect and conserve areas of significance where appropriate.

To provide for commercial uses where appropriate.

36.02-1 Table of uses

03/02/2022
VC199

Section 1 - Permit not required

Use	Condition
Informal outdoor recreation	
Open sports ground	Must be conducted by or on behalf of the public land manager. Must not be on coastal Crown land under the *Marine and Coastal Act 2018*. Must not be costeaning or bulk sampling.
Any use listed in Clause 62.01	Must meet the requirements of Clause 62.01.
Contractor's depot **Heliport** **Office** **Retail premises** **Store** **Any other use not in Section 3**	Must be either of the following: A use conducted by or on behalf of a public land manager, Parks Victoria or the Great Ocean Road Coast and Parks Authority, under the relevant provisions of the *Local Government Act 1989*, the *Reference Areas Act 1978*, the *National Parks Act 1975*, the *Fisheries Act 1995*, the *Wildlife Act 1975*, the *Forest Act 1958*, the *Water Industry Act 1994*, the *Water Act 1989*, the *Marine Safety Act 2010*, the *Port Management Act 1995*, or the *Crown Land (Reserves) Act 1978*. A use specified in an Incorporated plan in a schedule to this zone.

Section 2 - Permit required

Use	Condition
Contractor's depot - if the Section 1 condition is not met	Must be associated with the public land use.
Heliport - if the Section 1 condition is not met	Must be associated with the public land use.
Office - if the Section 1 condition is not met	Must be associated with the public land use.
Retail premises - if the Section 1 condition is not met	Must be associated with the public land use.
Store - if the Section 1 condition is not met	Must be associated with the public land use.

Section 3 - Prohibited

Use
Brothel
Cinema based entertainment facility
Corrective institution
Display home centre
Funeral parlour
Industry
Saleyard
Transport terminal (other than Heliport)
Veterinary centre
Warehouse (other than Store)

36.02-2 03/02/2022 VC199

Permit requirement

A permit is required to:

- Construct a building or construct or carry out works. This does not apply to:
  - Pathways, trails, seating, picnic tables, drinking taps, shelters, barbeques, rubbish bins, security lighting, irrigation, drainage or underground infrastructure.
  - Playground equipment or sporting equipment, provided these facilities do not occupy more than 10 square metres of parkland.
  - Navigational beacons and aids.
  - Planting or landscaping.
  - Fencing that is 1 metre or less in height above ground level.
  - A building or works shown in an Incorporated plan which applies to the land.
  - A building or works carried out by or on behalf of a public land manager, Parks Victoria or the Great Ocean Road Coast and Parks Authority, under the *Local Government Act 1989*, the *Reference Areas Act 1978*, the *National Parks Act 1975*, the *Fisheries Act 1995*, the *Wildlife Act 1975*, the *Forest Act 1958*, the *Water Industry Act 1994*, the *Water Act 1989*, the *Marine Safety Act 2010*, the *Port Management Act 1995* or the *Crown Land (Reserves) Act 1978*.
- Subdivide land.

36.02-3 19/01/2006 VC37

Application requirements

An application for a permit by a person other than the relevant public land manager must be accompanied by the written consent of the public land manager, indicating that the public land manager consents generally or conditionally either:

- To the application for permit being made.
- To the application for permit being made and to the proposed use or development.

36.02-4 Exemption from notice and review

31/07/2018
VC148

An application to subdivide land which is consistent with an Incorporated plan is exempt from the notice requirements of section 52(1) (a), (b) and (d), the decision requirements of section 64(1), (2) and (3) and the review rights of Section 82(1) of the Act.

36.02-5 Decision guidelines

31/07/2018
VC148

Before deciding on an application to use or subdivide land, construct a building or construct or carry out works, in addition to the decision guidelines in Clause 65, the responsible authority must consider, as appropriate:

- The Municipal Planning Strategy and the Planning Policy Framework.
- The comments of any public land manager or other relevant land manager having responsibility for the care or management of the land or adjacent land.
- Whether the development is appropriately located and designed, including in accordance with any relevant use, design or siting guidelines.

36.02-6 Incorporated plan

19/01/2006
VC37

An Incorporated plan is a plan which shows the way the land is to be used and developed. An Incorporated plan may include the following information:

- Recognition of existing use and how the area is to be developed.
- The building envelope of any proposed buildings.
- Details of any proposed buildings or works.
- The location of pedestrian or vehicle access points or car parking areas.
- The location of any areas for specific uses or a schedule of specific uses which are allowed without permit.
- Topographic details including any proposed cut and fill.
- The location of existing and proposed features.
- The location of existing native and other vegetation and any proposed landscaping works or areas of vegetation to be added or removed.
- The identification of sites of flora or fauna significance (including, in particular, any potentially threatened species or significant habitat) or other places of cultural heritage or scientific value.

The Incorporated plan must be consistent with the intent of the public land reservation under any Act and make reference to relevant policies and guidelines.

An Incorporated plan may be prepared in parts or stages.

36.02-7 Use and development of land identified in a schedule

19/01/2006
VC37

Land identified in a schedule to this zone may be used and developed in accordance with the schedule or the specific controls contained in an incorporated document corresponding to the land, provided any condition in the schedule or incorporated document is complied with.

36.02-8 Signs

31/07/2018
VC148

Sign requirements are at Clause 52.05. This zone is in Category 4 unless a different requirement is specified in the schedule to this zone.

FRANKSTON PLANNING SCHEME

23/05/2019
C133fran

SCHEDULE TO CLAUSE 36.02 PUBLIC PARK AND RECREATION ZONE

1.0 Permit exemptions and conditions

23/05/2019
C133fran

Public land	Use or development	Conditions
None specified	None specified	None specified

2.0 Sign requirements

23/05/2019
C133fran

Land	Sign Category
Baxter Park, Baxter	Category 3
Lawton Reserve, Baxter	Category 3
Botany Park Recreation Reserve, Carrum Downs	Category 3
Carrum Downs Recreation Reserve, Carrum Downs	Category 3
Ballam Park, Frankston	Category 3
Bruce Park, Frankston	Category 3
Delacombe Park, Frankston	Category 3
Frankston Park, Frankston	Category 3
Peninsula Park (Frank St Reserve), Frankston	Category 3
Jubilee Park, Frankston	Category 3
Overport Park, Frankston	Category 3
Robinsons Road Reserve, Frankston	Category 3
Samuel Sherlock Reserve, Frankston	Category 3
Centenary Park, Frankston North	Category 3
Eric Bell Reserve, Frankston North	Category 3
Monterey Reserve, Frankston North	Category 3
Pat Rollo Reserve, Frankston North	Category 3
Lloyd Park, Langwarrin	Category 3
Belvedere Reserve, Seaford	Category 3
Frankston BMX Track, Seaford	Category 3
Kananook Reserve, Seaford	Category 3
North Seaford Reserve, Seaford	Category 3
Riviera Park, Seaford	Category 3
Seaford Reserve, Seaford	Category 3
Seaford East Reserve, Seaford	Category 3

Land	Sign Category
Skye Road Reserve, Skye	Category 3

3.0
23/05/2019
C133fran

Use and development of land specified in an Incorporated Plan

None specified.

36.04 TRANSPORT ZONE

20/01/2022
VC205

Shown on the planning scheme map as TRZ with a number.

Purpose

To implement the Municipal Planning Strategy and the Planning Policy Framework.

To provide for an integrated and sustainable transport system.

To identify transport land use and land required for transport services and facilities.

To provide for the use and development of land that complements, or is consistent with, the transport system or public land reservation.

To ensure the efficient and safe use of transport infrastructure and land comprising the transport system.

36.04-1 Table of uses

20/01/2022
VC205

Section 1 - Permit not required

Use	Condition
Railway	
Railway station	The combined leasable floor area for the selling of food, drink and other convenience goods and services must not exceed 800 square metres.
Tramway	
Transport terminal (other than Railway station)	The use must be carried out by or on behalf of a relevant transport manager.
Utility installation (other than Minor utility installation)	The use must be carried out by or on behalf of a relevant transport manager.
Any use listed in Clause 62.01	Must meet the requirements of Clause 62.01.
Any other use	The use must be for a transport purpose and carried out by or on behalf of a relevant transport manager.

Section 2 - Permit required

Use	Condition

Section 3 - Prohibited

Use
Nil

36.04-2 Permit requirement

20/01/2022
VC205

A permit is required to:

- Construct a building or construct or carry out works for any use in Section 2 of Clause 36.04-1. This does not apply to navigational beacons and aids.
- Subdivide land.

36.04-3 Application requirements

20/01/2022
VC205

An application by a person other than a relevant transport manager on land shown on a planning scheme map as TRZ1 or TRZ2 must be accompanied by the written consent of the Head, Transport for Victoria, indicating that the Head, Transport for Victoria consents generally or conditionally to either:

- The application being made.
- The application being made and to the proposed use or development.

36.04-4 Table of transport uses

20/01/2022
VC205

Shown on the planning scheme map	Purpose of transport use
TRZ1	State transport infrastructure
TRZ2	Principal road network
TRZ3	Significant municipal road
TRZ4	Other transport use

36.04-5 Decision guidelines

20/01/2022
VC205

Before deciding on an application, in addition to the decision guidelines in Clause 65, the responsible authority must consider, as appropriate:

- The Municipal Planning Strategy and the Planning Policy Framework.
- The effect of the proposal on the development, operation and safety of the transport system.
- Whether the development is appropriately located and designed, including in accordance with any relevant use, design or siting guidelines.

36.04-6 Signs

20/01/2022
VC205

Sign requirements are at Clause 52.05.

A permit is required to construct or put up for display a sign over a road carriageway or over land within 600 millimetres of a carriageway.

For all other land in this zone, the sign category which applies is the category which applies to the adjoining zone nearest to the land. If land is equidistant from two or more adjoining zones, the least restrictive category applies.