

# EXTENT

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THE ASIA PACIFIC



## Briody Drive West, Torquay Subdivision and Development

### Cultural Heritage Management Plan (FP- SR# 16746)

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Prepared for Briody Drive Projects Pty Ltd

Final August 2021

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## Title page

Project:	Briody Drive West, Torquay Subdivision — Cultural Heritage Management Plan
FP-SR #:	16746
Desktop, Standard and Complex Assessment for Medium-Sized Activity - <b>ABORIGINAL CULTURAL HERITAGE PRESENT (VAHR 7721-1431 and 7721-1260)</b>	
Client:	Briody Drive Projects Pty Ltd
Heritage advisor(s):	Sarah Janson
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## Document control

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1	S. Janson	30 August 2019	Technical
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3	E. Hawksley	19 May 2021	Revision
4	E. Hawksley	10 July 2021	RAP Evaluation Amendments

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**Wadawurrung**  
Traditional Owners  
Aboriginal Corporation

3<sup>rd</sup> of September 2021

*Aboriginal Heritage Act 2006 Section 63*

**Cultural Heritage Management Plan – Notice of Approval**

The Wadawurrung Traditional Owners Aboriginal Corporation acting as the Registered Aboriginal Party hereby approve the cultural heritage management plan referred to below:

*Briody Drive West, Torquay  
Subdivision and Development*

**Cultural Heritage Management Plan number: 16746**

**Sponsor: Briody Drive Projects Pty Ltd**

**Heritage Advisor: Sarah Janson**

**Authors: Elizabeth Hawksley, Sarah Janson and Alistair Hobbs**

**Date: August 2021**

**Pages: Cover Page, i-vi, 1-131**

**Received for Approval: 4<sup>th</sup> of August 2021**

Pursuant to s.64 (1) of the Act this cultural heritage management plan takes effect upon the granting of this approval and once a copy is lodged with the Secretary of DPC. \*

Paul Davis  
CEO

Stephanie Frydas  
RAP Heritage Unit Manager

\*This notice of approval should be inserted after the title page and bound with the body of the management plan.

PLEASE NOTE: THIS REPORT CONTAINS PICTURES OF AND  
INFORMATION ABOUT PEOPLE WHO MAY HAVE PASSED AWAY



## Executive summary

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

Briody Drive Projects Pty Ltd (the sponsor) commissioned Extent Heritage Pty Ltd (Extent Heritage) to undertake a cultural heritage management plan (CHMP) in support of the proposed subdivision and development. This includes subdivision of land and residential development, including upgrade of adjoining road reserves, retirement village, as well stormwater and drainage management to Deep Creek, to service the subdivision at Briody Drive West, Torquay. The activity area comprises 36.1 hectares (ha) of land, bounded by Messmate Road, Grossmans Road, Illawong Drive and Briody Drive. A Notice of Intent (NOI) to prepare the CHMP was lodged with Aboriginal Victoria (AV), now First Peoples – State Relations (FP-SR) on 14 August 2019 and was issued a project number 16746. At the time this project commenced the Registered Aboriginal Party (RAP) for the region within which the activity area is located is Wadawurrung Traditional Owner Aboriginal Corporation (WTOAC). WTOAC formally advised the sponsor in writing that they would evaluate the CHMP on 14 August 2019 (Appendix B). The CHMP was prepared in accordance with the requirements of the *Aboriginal Heritage Act 2006* and associated regulations and guidelines issued by FP-SR regarding preparation of CHMPs.

A search of the Victorian Aboriginal Heritage Register (VAHR) undertaken as part of a desktop assessment identified 423 registered Aboriginal places within the geographic region, the majority of which comprise artefact scatters, low density artefact distributions (LDAD) and shell middens. The distribution of registered Aboriginal places within the geographic and local region indicates a moderate density of Aboriginal places located along and adjacent to watercourses and the coastline. The search identified areas of cultural heritage sensitivity and one registered Aboriginal place within the activity area - an LDAD comprising two stone artefacts (**VAHR 7721-1260**). Two Aboriginal places recorded within 200m of the activity area. One contains an artefact scatter, VAHR 7721-0634 (Briody Drive 1) and the another a scarred tree VAHR 7721-0764 (Duffields Road).

A standard assessment undertaken on 25 October 2019 confirmed that parts of the activity along the road reserves of Grossmans and Messmate Road, as well as Illawong and Briody Drive had been subject to disturbance and therefore had nil-low potential to contain Aboriginal cultural heritage. The location of the proposed stormwater outfall was considered to be relatively undisturbed and therefore retained a moderate level of potential for Aboriginal cultural heritage. As a result, complex assessment of this location was required.

The complex assessment was undertaken between 17–18 February 2020, with subsurface testing comprising of one 1m x1m manually excavated test pits, three 1m x 2m mechanically excavated test trenches and three 50cm x 50cm shovel test pits (along selected road reserves). The excavated material was sieved through a 5mm screen. The total area excavated was 7.75m<sup>2</sup>. Thirty-two stone artefacts were recovered from a clayey silt A horizon in trenches on the alluvial plain landform adjacent to the southern bank of Deep Creek.

The assemblage is registered as Aboriginal place **VAHR 7721-1431 Briody Drive West, Torquay**.

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## Part 1: Cultural heritage management conditions

These conditions become compliance requirements once the 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* (Vic.). The CHMP must be readily accessible to the sponsor and their employees and contractors when carrying out the activity.

# 1. Management conditions

## 1.1 Basis for conditions

The conditions of this CHMP are made in accordance with:

- section 61 of the Aboriginal Heritage Act 2006 (Vic.);
- the Aboriginal Heritage Regulations 2018 (Vic.);
- the results of desktop, standard, and complex assessment documented in this report;
- the impact of proposed development within the activity area; and
- the views of the Aboriginal community represented by the registered Aboriginal party (RAP).

## 1.2 Conditions

These conditions become compliance requirements once the CHMP is approved.

The following conditions are made in accordance with section 61 of the Aboriginal Heritage Act for management of Aboriginal heritage.

These management conditions must be followed to appropriately manage any Wadawurrung cultural heritage within the activity area. The Sponsor is responsible for undertaking all management conditions and contingencies herein, including payment to undertake these items. This responsibility may be delegated in writing to the Sponsor's agent where required.

The Sponsor or delegated representative 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 will require either an amendment to the CHMP or the preparation of a new CHMP.

All references to the WTOAC relate to the Wadawurrung Traditional Owners Aboriginal Corporation, or any future name of that organisation.

### Condition 1: Notification of commencement of the activity

The Sponsor must provide Wadawurrung with at least two weeks' notification before the commencement of works. This notification should be provided via email to [rap@wadawurrung.org.au](mailto:rap@wadawurrung.org.au).

### Condition 2: Copy of cultural heritage management plan to be retained onsite

A hard copy of (at least) the following parts of this approved Cultural Heritage Management Plan



(CHMP) must be held onsite at all times during works for the activity.

#### PART 1 – Cultural Heritage Management Conditions

- Specific management conditions
- Contingency plans

#### PART 2 – Assessment

- Introduction
- Activity description
- Extent of activity area covered by the Management Plan.

This information must be readily accessible to those undertaking works detailed within this document and must be able to be provided upon request. The Sponsor, site supervisor and all relevant personnel must read the information and be aware of the legal management conditions and contingency plans concerning Aboriginal cultural heritage within the activity area. The Sponsor or delegated person 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 information from the approved CHMP.

### Condition 3: Cultural heritage induction

A cultural heritage induction must be conducted with all site workers/contractors undertaking ground disturbing works by a Heritage Advisor and WTOAC prior to those site workers/contractors undertaking any ground disturbance works. The cultural heritage induction must be conducted by a representative of the WTOAC with the assistance of a Heritage Advisor. The Heritage Advisor will be responsible for developing and providing an Induction Booklet summarising the details to be presented as part of the cultural heritage induction. Additional staff required to undertake ground disturbance works under this CHMP additional cultural heritage induction(s) will be required to be completed prior to their participation in ground disturbance works.

The cultural heritage induction must be booked at least 2 weeks prior to the commencement of any ground disturbance works. The best contact email for booking the Cultural Heritage Induction can be requested from [rap@wadawurrung.org.au](mailto:rap@wadawurrung.org.au). A booking form will need to be submitted to confirm the Cultural Heritage Induction.

The purpose of the cultural heritage induction is to:

- describe and demonstrate the Aboriginal cultural heritage relevant to the activity area or the locality for personnel engaged in the construction of activity works
- create an awareness of Aboriginal cultural values, and
- inform personnel about the specific conditions of Part 1 of the management plan and the procedures set out for reporting any suspected Aboriginal cultural heritage that may be discovered or uncovered.

The cultural heritage induction will include information concerning:

- a brief history of the Aboriginal occupation of the activity area and broader region
- a summary of the assessments undertaken within the activity area during the preparation of the management plan
- specific details of all Aboriginal cultural heritage identified during the management plan assessments
- a summary of the management conditions and contingency plans contained within the management plan, and
- a discussion of the compliance responsibilities of the Sponsor and all personnel involved in work within the activity area and the requirements of the Aboriginal Heritage Act 2006.

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.

Information detailing the CHMP management conditions and contingency plans must be incorporated into any job safety, tool-box meetings or Environmental Management Plans developed for the activity.

This Cultural Heritage Induction must be organised by the Sponsor.

## Condition 4: Management of Briody Drive West, Torquay Artefact Scatter (VAHR 7721-1431)

Impact to Briody Drive West, Artefact Scatter (VAHR 7721-1431) within the activity area cannot be avoided or minimised by the proposed activity as the location of the Aboriginal place will be heavily impacted by the stormwater outfall. Therefore, a targeted subsurface salvage program designed to mitigate the impact of development on archaeological and Aboriginal cultural values must be undertaken (see Figure 1).

### Condition 4.1 Subsurface salvage excavation

1. The Sponsor must engage a suitably qualified heritage advisor to undertake salvage excavations, post excavation analysis, and reporting in line with the research design and methodology described below.
2. Prior to the salvage excavation occurring, the exact location of the existing water pipeline service must be clearly marked out on the ground by a professional surveyor to be engaged by the sponsor. For health and safety reasons, salvage excavation must not occur within 1m of this pipeline.

3. Salvage excavation must be confined to the registered site extent of VAHR 7721-1431. This subsurface excavation must not occur in areas already disturbed by excavation during the complex assessment. See Figure 1 for indicative salvage location.
4. Salvage excavation must be undertaken prior to commencement of any ground disturbance works within the stormwater outfall reserve area north of Briody Drive. If the salvage has not occurred yet and works within 100 metres of the salvage area have started, then the artefact scatter must be fenced off and a no-go zone until the salvage has occurred.

### Condition 4.2 Salvage excavation methods

1. A minimum of 9m<sup>2</sup> must be excavated manually (using appropriate hand tools, i.e. shovels, hand picks and trowels) in accordance with proper archaeological practice. If practical, excavation should be focused adjacent to high artefact densities encountered in the complex assessment [between MTT 1, Radial (W) & Radial (NW)] and TP1 (see Figure 1) for locations and Table 12 for trench co-ordinates).
2. Flexibility must be built into the excavation methodology to allow for any physical constraints; in particular, a lack of space due to the presence of the existing water pipeline. If space will not permit the excavation of a contiguous 3m x 3m salvage unit, the salvage area can comprise spatially discrete individual 1x1 m units if required. The exact placement of the test pits will be determined by the RAP field representatives in consultation with the heritage advisor on site.
3. The area will be subdivided into 1m x 1m spatial units and 10cm vertical units (spits). Excavation must continue until a culturally sterile soil layer is reached.
4. All soils must be sieved through a 5mm table sieve. Any artefacts shall be collected off the screen and will be stored in plastic clip lock bags with the unit provenance details clearly marked.
5. If high-density stone artefact deposits (exceeding ten artefacts per m<sup>2</sup>) or suspected significant archaeological features or deposits such as hearths or knapping floors are encountered during salvage excavations, this will trigger an additional excavation of a 4m<sup>2</sup> area in order to explore the nature of these deposits.
6. Aboriginal representatives from the RAP must attend the salvage fieldwork.

### Condition 4.3: Sampling

1. If Indigenous Australian faunal remains are found during the excavations, a faunal (or archaeozoology) specialist will be engaged to identify and analyse any shell, fish bone and animal bone recovered during excavation. The analysis will aim to determine:
  - a. Faunal species represented at the site;
  - b. Evidence of butchery, burning or other use of animal, shellfish or fish remains;
  - c. Likely sources of the species; and

- d. Evidence of changes in Aboriginal diet/subsistence/occupation through time.
2. If suspected buried Aboriginal hearths are identified during the excavations, samples of suitable charcoal must be recovered and submitted for C14 radiocarbon dating. The sample must be submitted to a suitably qualified radiocarbon dating lab and determinations made. Suitably qualified specialists will be engaged to undertake analysis of environmental samples if suitable evidence is recovered and considered likely to inform any of the research questions.
3. Samples will be subject to the appropriate analysis techniques. The results of analysis will be incorporated into a detailed report and will be included into the main salvage report.

#### Condition 4.4: Post excavation analysis and reporting

1. A suitably qualified archaeologist or archaeological consultancy must undertake post-excavation analysis and prepare reporting on the results of the excavation, dating and analysis as described below. The Sponsor must pay the costs associated with undertaking the analysis and reporting set out in the conditions below.
2. The artefacts recovered from the subsurface salvage shall be analysed and catalogued by a suitably qualified stone artefact specialist, and a post-excavation analysis report shall be prepared that specifically addresses research questions (see point 6 a-c below). The analysis will aim to determine the following, at a minimum:
  - a. quantity of stone, by counts and weight;
  - b. identification of the artefacts;
  - c. interpretation of finished implements among the artefacts, including function of the implements and what they indicate about how the makers lived;
  - d. patterns in spatial and chronological distributions of the artefacts;
  - e. age of the artefact.
  - f. The presence/absence of usewear and any evidence for residues. If appropriate samples are identified, a use wear/residue analysis of a sample of stone tools from the recovered assemblage will be undertaken by a specialist analyst.
3. The results of the salvage excavations will be documented in an excavation report following completion of post-excavation analysis. The report must specifically address (at a minimum) the research questions established below.
  - a. What was the nature of Aboriginal occupation within VAHR 7721-1431, and how does it compare/relate to the broader landscape of the geographic region?
  - b. Are any datable deposits located within the Aboriginal Place? If so, can dating of these deposits be used to develop a chronology of site-use and can we discern more about

distinct phases of occupation that may be represented? How old are the cultural sequences identified?

- c. How much spatial integrity do the archaeological deposits retain? Can potential intact knapping events or occupation floors be discerned within the assemblage?
4. Reporting will be consistent with the best practices and in accordance with all relevant FP-SR guidelines. The excavation and analysis report must be submitted to FP-SR and the RAP within six months of the completion of the salvage excavation. The excavation and analysis report and all relevant spatial data must be submitted to FP-SR for lodgement on the VAHR. The heritage advisor engaged by the sponsor must prepare Place Inspection/Object collection forms documenting the work and lodge the forms with the VAHR.

## Condition 5: Management of Briody Drive West 1 (VAHR 7721-1260)

No specific management measures are required for VAHR 7221-1260 as the two artefacts identified have been collected as part of the complex assessment undertaken as part of CHMP 12805. Reburial/repatriation of the collected artefacts must adhere to Condition 6.

## Condition 6: Reburial/repatriation of Aboriginal cultural heritage

The 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:

- The Heritage Advisor must fully document, package, and securely store all recovered cultural material until it is repatriated to the WTOAC.
- The 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.
- Within six months after the completion of the activity the Heritage Advisor must contact WTOAC to arrange the burial/repatriation of all cultural material recovered within the activity area.

At the completion of the Activity all Aboriginal Cultural Heritage found during the course of the assessment and/or the completion of the Activity, should the RAP choose, must be reburied in accordance with the following procedure.

- A reburial location must be identified in the Activity Area, and this location must be in an area which is protected from future development or disturbance;
- Cultural material to be reburied must be placed in a durable container as approved by WTOAC;

- A separate container is to be manufactured for each Aboriginal Place to be reburied;
- Where an Aboriginal Place is comprised of a large amount of cultural material it will be necessary to manufacture a number of containers to rebury the cultural material;
- The contents of the container must include the cultural material to be reburied, a catalogue of the cultural material to be reburied both on paper and on an archive quality storage medium, and a copy of the relevant sections of the CHMP under which the reburial is being performed;
- A smoking ceremony must be performed prior to the reburial of cultural material;
- The reburial must be attended by Wadawurrung representative(s) and a Heritage Advisor, who is responsible for organising the excavation of the required reburial location; and
- Once reburied, the reburial location must be recorded to sub-metre accuracy by a HA; Flagging tape should be laid within the hole, at a depth of 30cm above the reburied cultural material to identify that cultural material is buried below the flagging tape;
- The relevant VAHR site record card must be updated and an 'object collection' component form must be completed by the HA and lodged with the VAHR;
- The cost of all aspects of the reburial must be borne by the Sponsor.

At the completion of the activity all Aboriginal cultural heritage found during the course of the assessment and/or the completion of the Activity must be repatriated to WTOAC in accordance with their requirements (which will be determined via email correspondence). 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. All relevant recording and documentation, including submission of object collection forms to the VAHR, must be undertaken by the Heritage Advisor.

The Sponsor is responsible for all costs associated with this repatriation.



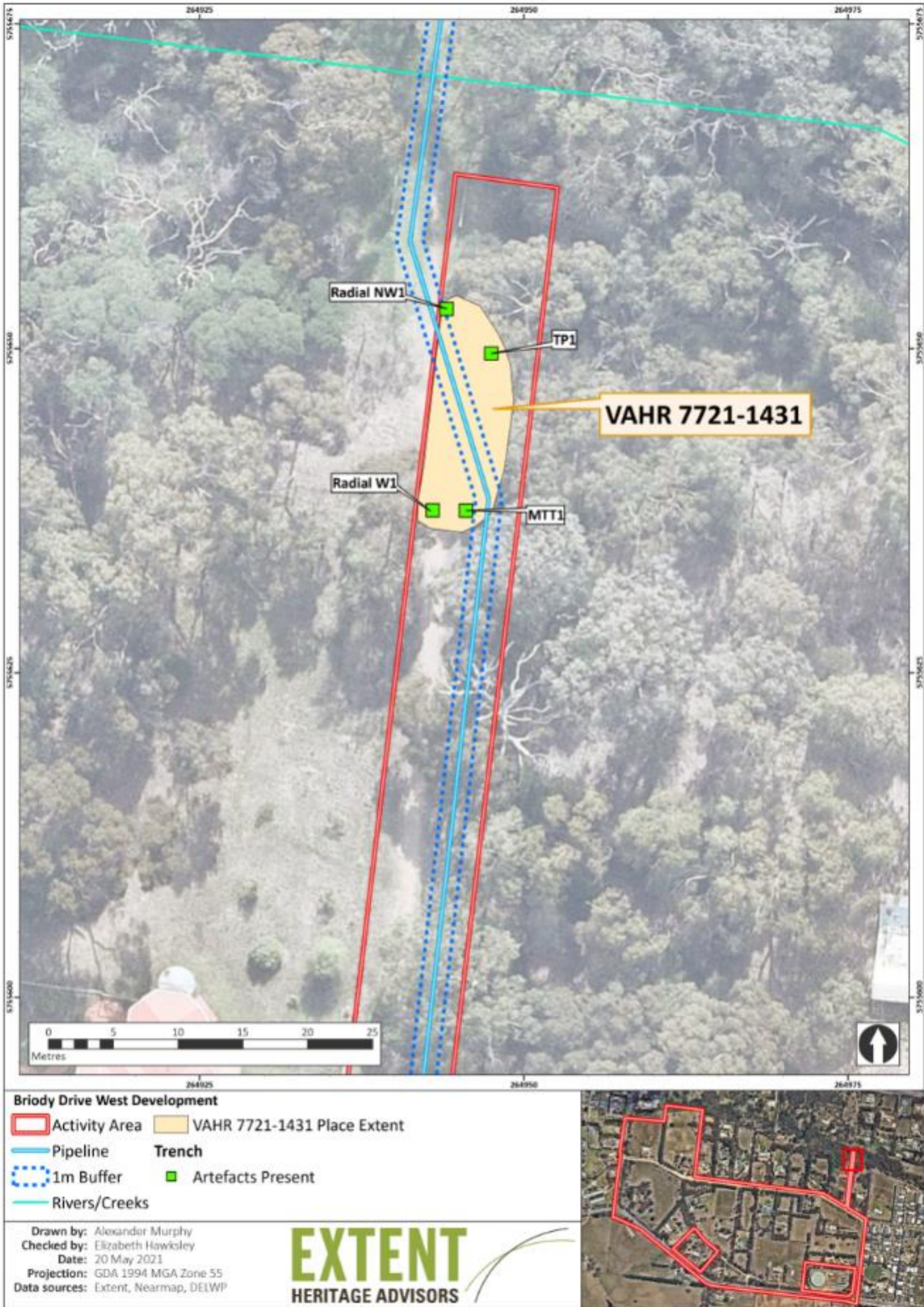


Figure 1. Map of Salvage Area of VAHR 7721-1431 (Briody Drive Artefact Scatter).



## Condition 7: Heritage compliance inspections

Heritage compliance inspections will be undertaken by Wadawurrung representatives to monitor the progress of the activity and observe whether management conditions and the contingency plan contained within this CHMP are being followed. A total of three heritage inspections are to be undertaken during the course of the activity. Heritage inspections must occur at the following times:

- At the beginning of the activity, after initial ground stripping;
- At the midpoint of groundworks for the development,
- Within two months of anticipated completion of activity

If Aboriginal cultural material is located during any Heritage Inspection, the relevant contingency measures detailed in Contingency 5 below must be enacted.

WTOAC must be notified two weeks in advance of the required inspections.

A Wadawurrung representative will conduct the inspection and complete the compliance checklist under Contingency 10 of this CHMP

If the inspection reveals suspected non-compliance of the CHMP, then the procedure outlined in Contingency 10 will be initiated by the Sponsor. This procedure must be organised by the Sponsor.

## Condition 8: Protocol for handling sensitive information

With the exception of publicly available information, there shall be no communication or public release of information concerning Aboriginal cultural heritage without the written permission of the WTOAC. No photographs or information concerning Aboriginal cultural heritage is to be circulated to the media or via social media without the written permission of the WTOAC.

## Condition 9: Notification of completion of activity

WTOAC must be notified at the completion of all works associated with the activity. This notification must include reference to the completion of the CHMP conditions, including all relevant dates. This notification must be provided via email to [rap@wadawurrung.org.au](mailto:rap@wadawurrung.org.au).

## 1.3 Contingencies

The following contingencies must be implemented during the activity. A compliance checklist has been provided below to assist the sponsor in this process (Table 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.

## Contingency 2: Matters Referred to in Section 61 of the Aboriginal Heritage Act

If Aboriginal cultural heritage is unexpectedly discovered during the activity, the following contingencies (which take 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 delegate.

## 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 WTOAC 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, WTOAC 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 WTOAC must arrange for authorised representatives to be present at the meeting.
4. At the meeting, the authorised representatives of both WTOAC 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 WTOAC 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 WTOAC and Sponsor.
- b. Be supervised by a WTOAC representative.
- c. Occur in accordance with the instructions of the WTOAC representative, providing they are consistent with the agreed correction activities.

WTOAC 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 WTOAC 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 WTOAC 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 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.

#### Contingency 4: Discovery of Human Remains

If any suspected human remains are found during any activity, works must cease. The Victoria Police and the Coroners Court of Victoria should be notified immediately. If there are reasonable grounds to believe that the remains are Aboriginal, the Coronial Admissions and Enquiries hotline must be contacted on 1300 888 544. 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. Discovery:*

- If suspected human remains are discovered, all activity in the vicinity must stop.
- The remains must be left in place and protected from harm or damage.

## 2. Notification:

- Once suspected human skeletal remains have been found, the Coroners Court of Victoria and Victoria Police must be notified immediately.
- If there are reasonable grounds to believe that the remains are Aboriginal Ancestral Remains, the Coronial Admissions and Enquiries hotline must be immediately notified on 1300 888 544.
- All details of the location and nature of the human remains must be provided to the relevant authorities.
- 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.

## 3. Impact mitigation or salvage:

- 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.
- 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 FPSR.
- Appropriate management measures must be implemented to ensure the Aboriginal ancestral remains are not disturbed in the future.

## Contingency 5: Discovery of Aboriginal cultural heritage material other than human remains

If Aboriginal cultural heritage material other than human remains is identified within the registered Aboriginal place VAHR 7721-1431 at any time before, during or after the activity, the Sponsor must fulfil the following conditions:

1. At any time during construction, if suspected Aboriginal cultural heritage materials, features and/or deposits are found in the activity area, all construction that could potentially harm the suspected cultural heritage must cease, and a 10m buffer must be

established around the potential find. The area must be protected from harm through the installation of temporary (mesh and wire, above ground) fencing. Only construction that is required to comply with occupational and environmental health and safety standards and/or to protect the cultural heritage can occur within this buffer zone.

2. If any Aboriginal cultural heritage material and/or deposits are found as above, a suitably qualified and experienced archaeologist must be engaged to investigate the extent, nature, and significance of the deposit with the involvement of representatives from WTOAC (to be organised by Heritage Advisor), record in detail the location and context of the material, notify FP-SR and WTOAC, and update and/or complete and submit the relevant VAHR documentation.
3. In order to fulfil Section 61 requirements, the Sponsor must seek to avoid harm to any Aboriginal cultural heritage. This may include adjustments to the proposed Activity design, to avoid the extent of the site. If not possible to avoid harm, the Sponsor must seek to minimise harm to Aboriginal cultural heritage. This may include minimising depth of impact, adjusting the activity footprint to avoid a section of the Aboriginal cultural heritage, or utilising alternative construction techniques. If not possible to avoid or minimise harm, the Sponsor must work with WTOAC to determine appropriate mitigation measures. Any mitigation measures must be agreed to in writing by WTOAC. Any salvage must involve the recording, collection (labelled and packaged according to provenance), and analysis of the Aboriginal cultural heritage. The archaeologist must use a DGPS (<1 m accuracy) when mapping the cultural material. Any salvage must also include, where possible and appropriate, collection of samples suitable for dating.
4. Construction may recommence when WTOAC and the archaeologist have deemed appropriate damage avoidance action or salvage has occurred. This agreement must be documented in writing.
5. In the case of a dispute, dispute resolution contingencies are presented in Contingency 3.
6. It must be reiterated that in accordance with the Aboriginal Heritage Act, all cultural heritage material identified within the activity area must be reported to the Secretary, FP-SR and WTOAC, and a Heritage Advisor must be engaged to suitably record it and submit relevant documentation to FP-SR. Significant fines occur for failing to do so, and even greater penalties exist for harming Aboriginal cultural heritage.
7. Any cultural materials associated with the protocols listed above must be subject to repatriation or reburial, following the requirements of the WTOAC.
8. The Sponsor is responsible for all costs relating to the process detailed above.

### Contingency 6: Custody of cultural heritage

This contingency relates to the unexpected discovery of any material recovered from within the activity area during works.

Any Aboriginal cultural heritage material unexpectedly discovered within the activity area during works must be temporarily stored with the supervising archaeologist (see Section 1.2.1) until analysis can be undertaken. Once analysis is complete, custody of all Aboriginal cultural heritage material must be assigned following the hierarchy listed below:

1. With WTOAC;
2. Reburial within a suitable part of the activity area;
3. Any relevant registered native title holder for the land from which the Aboriginal heritage is salvaged;
4. Any relevant native title party (as defined in the AH Act) for the land from which the Aboriginal heritage is salvaged;
5. Any relevant Aboriginal person or persons with traditional or familial links with the land from which the Aboriginal heritage is salvaged;
6. Any relevant Aboriginal body or organisation which has historical or contemporary interests in Aboriginal heritage relating to the land from which the Aboriginal heritage is salvaged.

VAHR records must be updated by the Heritage Advisor to reflect the location of the collection once the above custody arrangements have been executed.

## Contingency 7: Communication

Sufficient time must be given for written correspondence to reach parties and for a response to be composed and sent (3 working days each way for mail, 1-2 days each way for express mail, and 1 day for email). Phone notification must be given when written correspondence has been posted and where possible communication should occur by phone and email. Response to any communication must occur within 3 working days, unless otherwise agreed by all parties concerned (but only up to a period of 10 working days).

Heritage Advisor Contact Details:

To be provided to the Sponsor and WTOAC prior to the commencement of the Activity.

### **RAP Contact Details:**

Wadawurrung Traditional Owners Aboriginal Corporation

Phone: (03) 4308 0420

Email: [rap@wadawurrung.org.au](mailto:rap@wadawurrung.org.au)

### **Sponsor Contact Details:**

YourLand Pty Ltd

Email: [melbourne@yourland.com](mailto:melbourne@yourland.com)

### Contingency 8: Access to works site

If the Heritage Advisor and/or WTOAC wishes to enter the activity area at any stage, this must be facilitated by the Sponsor. The Heritage Advisor and/or WTOAC must provide the Sponsor with at least 3 days day notice prior to the time they wish to enter the activity area. The Sponsor must ensure that the Heritage Advisor and/or WTOAC is aware of any job safety restrictions or dangers and is suitably protected, and the Heritage Advisor and/or WTOAC must comply with any job safety protocols required by the Sponsor and their contractors (if relevant). These access protocols end following completion of construction.

### Contingency 9: Sensitive information and distribution

The location and nature of cultural heritage material is sensitive information and must be dealt with accordingly and kept confidential.

Copies of the approved CHMP must be distributed to the following parties:

- Secretary, Department of Premier and Cabinet (DPC);
- WTOAC;
- All owners/managers of land encompassed by the activity area;

Additionally, a copy of this CHMP must be kept on site during construction activity.

All Aboriginal place coordinates and details must be removed from this CHMP prior to its distribution to all parties other than those listed above, and relevant planning authorities.

### Contingency 10: Compliance review

In the event that the conditions or contingencies set out in this CHMP are not adhered to, all works must cease, and WTOAC contacted immediately. A record of the breach must include the reasons for non-compliance. All acts of non-compliance must be reported to both WTOAC and First Peoples - State Relations, which may result in an investigation by an Authorised Officer or Aboriginal Heritage Officer. The Sponsor or nominated representative must take immediate action to remedy non-compliance in accordance with the relevant condition or contingency, including organising a meeting with WTOAC to discuss the non-compliance if requested to do so. Any remedial actions will be subject to written approval by WTOAC; any dispute during this process will be treated in accordance with Contingency 3.

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 WTOAC or First Peoples - State Relations.

Table 1. Compliance checklist (before commencement of activity).

Requirement	Completed	Signature
Engagement of a suitably qualified HA		
Facilitate the appropriate involvement of the RAP (includes nomination of an authorised project delegate by the sponsor/development proponent and by RAP)		
Notification of commencement of the activity as per Condition 1		
Cultural inductions completed as per Condition 2		
A copy of the approved CHMP must be available on site for the duration of all works, as per Condition 3		
Completion of archaeological salvage excavations as per Condition 4		
Curation and management of artefacts protocol as per Condition 5		

Table 2. Compliance checklist (after commencement of activity).

Requirement	Completed	Signature
Completion of post-excavation analysis and reporting on the results of salvage excavation within six months		
Reburial of artefacts at keeping place and recording of the place by the HA/RAP		

Table 3. Contingency compliance checklist.

Requirement	Completed	Signature
Any suspected human remains managed in accordance with Contingency 1		
The appropriate authorities must be notified on the discovery of Aboriginal cultural heritage, in accordance with the Act and with Contingency 2		
Any previously undiscovered Aboriginal cultural heritage managed in accordance with Contingency 2		
Custody of Aboriginal cultural heritage must be managed in accordance with Contingency 3.		
Compliance with Conditions and Contingencies must be managed in accordance with Contingency 5.		

## Part 2: Assessment



## 2. Introduction

### 2.1 Preamble

Briody Drive Projects Pty Ltd (the sponsor: ABN 83 630 511 849) has commissioned Extent Heritage Pty Ltd to undertake a complex cultural heritage management plan (CHMP) in support of proposed subdivision and development at Briody Drive West, Torquay. This includes subdivision of land and residential development, including upgrade of adjoining road reserves, retirement village, as well stormwater and drainage management to Deep Creek, to service the subdivision at Briody Drive West, Torquay. The activity area comprises 36.1 hectares (ha) of land, bounded by Messmate Road, Grossmans Road, Illawong Drive and Briody Drive (Figure 2).

A Notice of Intent (NOI) to prepare the CHMP was lodged with Aboriginal Victoria (AV), now First Peoples – State Relations (FP-SR), on 14 August 2019 (Appendix A). AV issued a project number 16746. At the time at which this project commenced the Registered Aboriginal Party (RAP) for the region within which the activity area is located is the Wadawurrung Traditional Owner Aboriginal Corporation (WTOAC). WTOAC formally advised the sponsor in writing that they would evaluate the CHMP on 14 August 2019 (Appendix B).

The CHMP was prepared in accordance with the requirements of the Aboriginal Heritage Act and associated regulations and guidelines issued by FP-SR regarding the preparation of CHMPs. The overriding purpose of this CHMP is to document and assess the Aboriginal heritage values (archaeological and cultural) of the subject land, to assess the impact of the proposed development on those values, and to provide management procedures to minimise and mitigate impact before, during, and after development.

This CHMP overlaps with approved CHMP 12805 which was prepared for the re-subdivision and development of a substantial standard density residential area in accordance with the Surf Coast Planning Scheme in 2014. This CHMP is being prepared to add to the types of activities permitted to be undertaken in the activity area and include the addition of a retarding basin and stormwater outfall to service the subdivision.



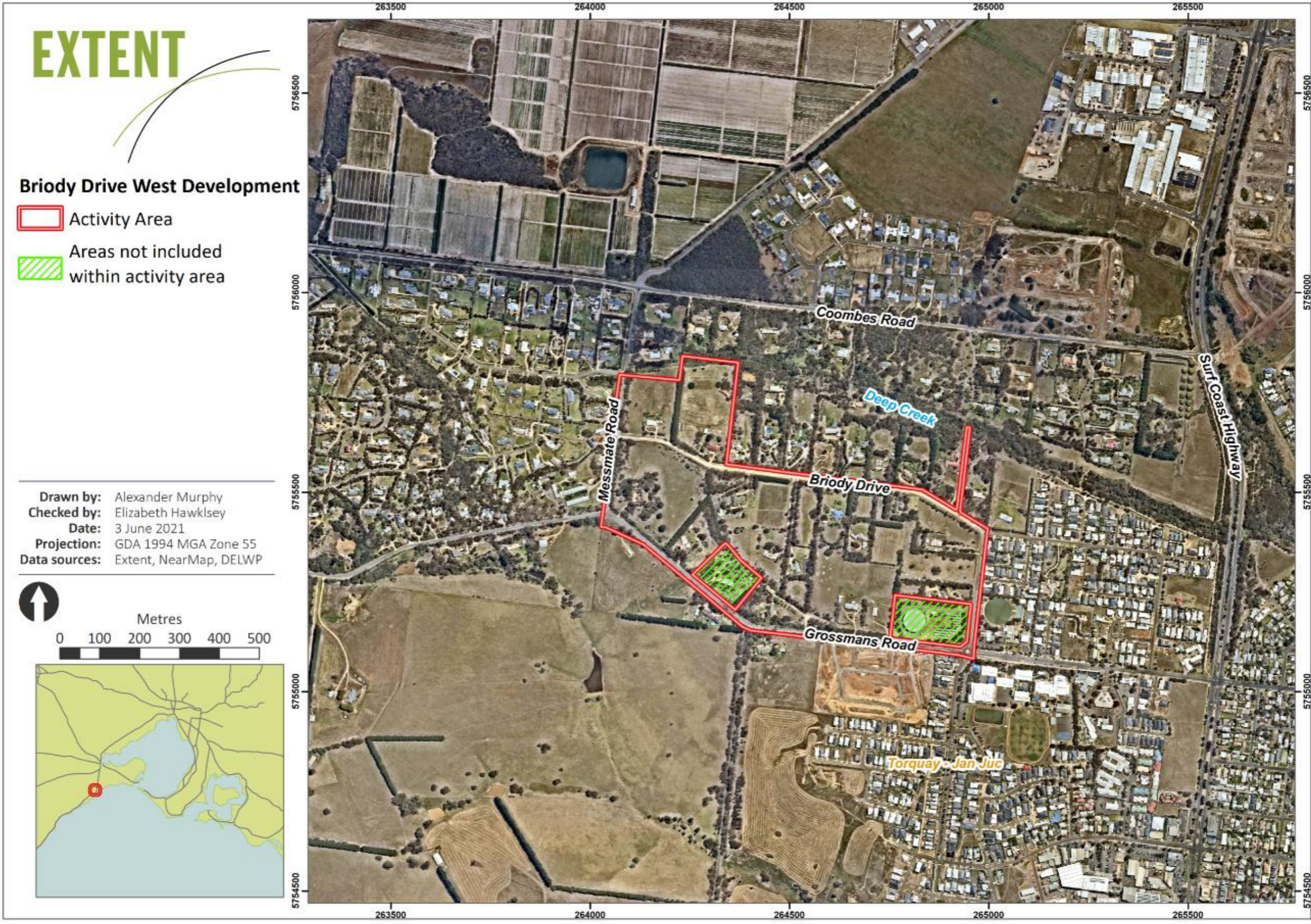


Figure 2. Location of activity area



## 2.2 Reason for the current study

The objective of this CHMP is to identify and assess the nature, extent, and significance of Aboriginal places, objects, and cultural heritage values within the subject land and to provide mitigation, protection, and contingency procedures to manage those values before, during, and after development of the land within the activity area.

Previously approved CHMP 12805 (Thomas, Collins and Turnbull 2014) covers activities relating to a residential subdivision at Briody Drive West, Torquay in accordance with the requirements and guidelines of Schedule 10 of the Development Plan Overlay of the Surf Coast Planning Scheme (Appendix E). However, a change in the proposed activity was required to include a retirement village, which was not listed as permitted activities in CHMP 12805. Additionally, minor changes to the extent of the activity area of CHMP 12805 were required to permit a retarding basin and stormwater outfall and drainage management to Deep Creek from the north-eastern part of the activity area. Because the five-year period for amendments of CHMPs has lapsed (section 66A of the Aboriginal Heritage Act), CHMP 12805 could not be amended, and therefore a new CHMP is required to ensure compliance with the Act.

The activity area is located within an area of *cultural heritage sensitivity* under regulation 25 and 26 and of the Aboriginal Heritage Regulations as it is within 200m of Deep Creek and within 50 metres of a registered cultural heritage place respectively.

The proposed activity is considered a *medium-size activity* under regulation 81 of the Aboriginal Heritage Regulations 2018 (Vic.). The works may also be defined as a 'high impact activity' under the following regulations.

- r.46(1)(b) (ii) a camping and caravan park;
- r.46 (1)(b)(xxi) residential building;
- r.46(1)(b)(xxiv) a retirement village;
- (xxvii)(C)— the use of the land for a utility installation with a length exceeding 100m and a pipe diameter not exceeding 150 millimetres.
- r.49 (subdivision of land)

In accordance with section 61 of the Aboriginal Heritage Act, this CHMP considers the following mandatory matters:

- Will the activity be conducted in a way that avoids harm to Aboriginal cultural heritage?
- If it appears to be impossible to conduct the activity in a way that avoids harm to Aboriginal cultural heritage, will the activity be conducted in a way that minimises harm to Aboriginal cultural heritage?
- Are any specific measures that are required for the management of Aboriginal cultural heritage likely to be affected by the activity, both during the activity and after its conclusion?

- Are any contingency plans required in relation to disputes, delays, and other obstacles that may affect the conduct of the activity?
- What are the requirements relating to the custody and management of Aboriginal cultural heritage during the course of the activity?

In addition, this CHMP also addresses matters set out in schedule 2 of the Aboriginal Heritage Regulations.

The specific aims of this CHMP are as follows:

- to identify any known Aboriginal places of cultural significance to the Aboriginal community within the subject land;
- to assess the potential for Aboriginal places buried below ground surfaces;
- to assess the Aboriginal heritage significance of Aboriginal places and areas of archaeological potential in partnership with the local Aboriginal community;
- to assess the impact of the activity on Aboriginal places and significance values; and
- to make appropriate conditions for the protection of cultural heritage and/or the mitigation of development impact, including contingency procedures, in consultation with the local Aboriginal community.

## 2.3 Authorship

This report was prepared by Elizabeth Hawksley (BA and MA Ancient History & Archaeology [Cardiff 2005]) and Christopher Clark (BA, M Heritage Management [UQ 2018]). The report includes contributions from Alexander Murphy (B. Applied Science Hons [RMIT 2018]) who completed the GIS mapping. The report was reviewed by Sarah Janson (BA Hons [USYD 2015], GDipMuseumSt [Deakin 2018]) and Alistair Hobbs (BA Hons [University of Sheffield 2008])

Elizabeth is a heritage advisor and archaeologist with fifteen years of experience working in commercial and research environments, both in Australia and overseas. She has worked on a large number of standard and complex level cultural heritage management plans and Aboriginal salvage works across Victoria over the last six years, including project supervision.

Sarah is a senior heritage advisor with Extent Heritage's Victoria team and the nominated heritage advisor for this CHMP. She has worked extensively in Victorian archaeology on a wide range of projects, including cultural heritage management plans for large infrastructure projects and residential developments., cultural values mapping and archaeological assessments.

## 2.4 Acknowledgements

The authors acknowledge the assistance provided by Naomi Scully (YourLand) on behalf of the sponsor and the important input and support provided by the representatives, Elders and staff of Wadawurrung Traditional Owners Aboriginal Corporation.

### 3. Activity description

The proposed activity includes subdivision of land and residential development, including upgrade of adjoining road reserves, retirement village, as well stormwater and drainage management to Deep Creek, to service the subdivision at Briody Drive West, Torquay. This will entail extensive excavation and earthworks that will remove topsoil and trees, trenching to install utilities and grading (prior to the construction of buildings and roads) across much of the activity area. It will encompass all activities legally permissible under the planning scheme and planning permit approval (see Appendix E). The activity area is currently classified as Residential 1 Zone (R1Z).

Development associated with the activity will include the following impacts:

- Grading of topsoils during road construction, residential subdivision development and other activities;
- Upgrading of existing roads within the activity area;
- Excavation and ground preparation for construction of a retarding basin and stormwater outfall drainage;
- Excavation for service trenches (gas, electricity, water) maximum 2m depth;
- Landscaping, including planting of trees, grassing, creation of outdoor open space and associated infrastructure; and
- any other activities permissible under the Development Plan Overlay of the Surf Coast Planning Scheme.

It is expected that the extent of disturbance will impact current and former land surfaces across the majority of the activity area. This will disturb or destroy Aboriginal sites or artefacts that may be located within the activity area.

At present, the schematics for the scope of works are waiting to be finalised and an indicative development plan is provided below (Figure 3).

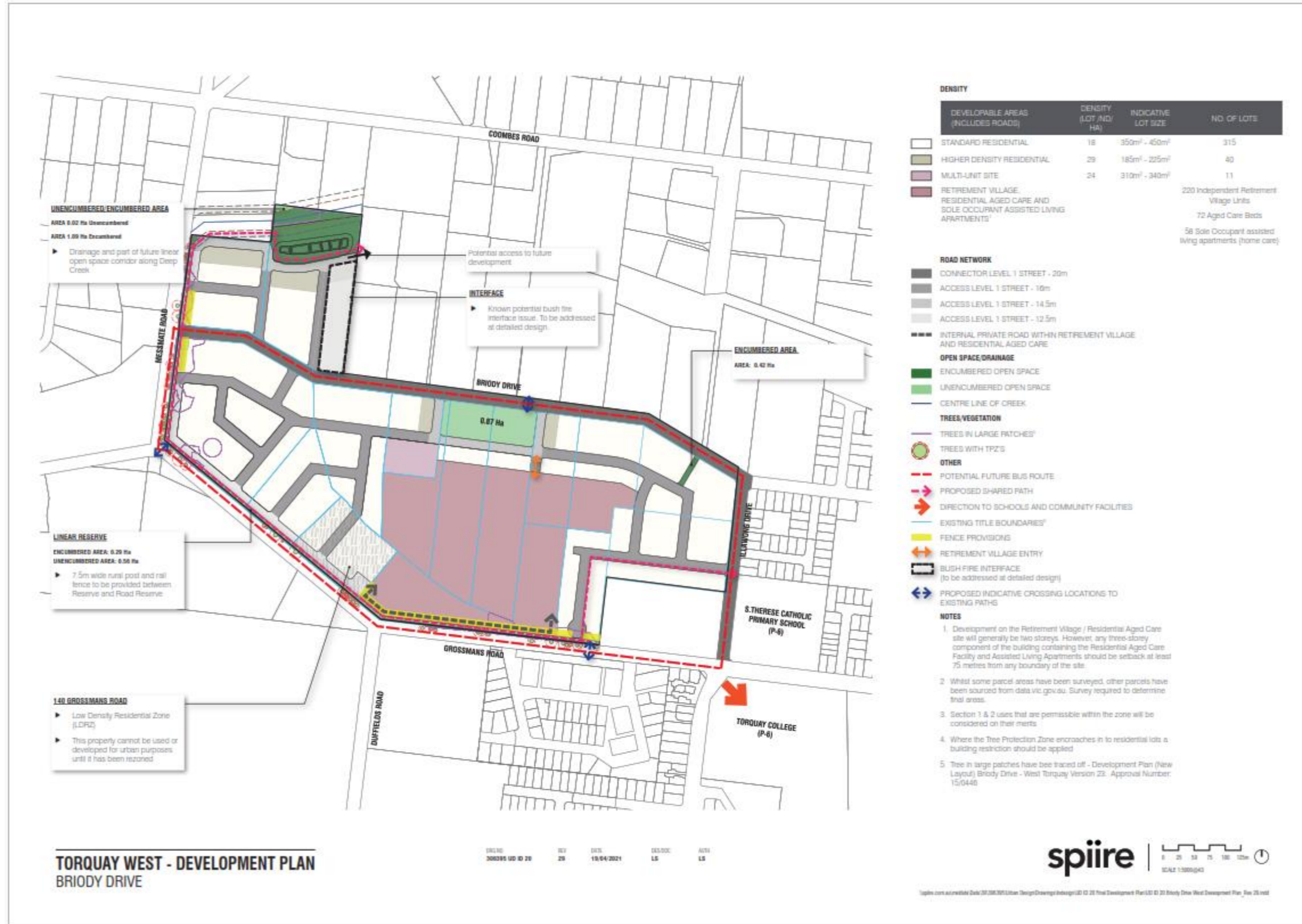


Figure 3. Draft development plan (note that the proposed stormwater outfall north of Briody Drive is not highlighted on this plan)

## 4. Extent of the activity area

The activity area is located approximately 1.9 km north-east of Torquay town centre and 79 km southwest of Melbourne CBD. The activity area comprises approximately 36.1 hectares (ha) of land, bounded by Messmate Road, Grossmans Road, Illawong Drive and Briody Drive (See Figure 4). The activity area also includes the relevant road reserves and an area of municipal reserve that will be utilised for a stormwater outfall to Deep Creek. Briody Drive Projects Pty Ltd (the sponsor) is the owner and occupier of all the properties listed within the activity area. The cadastral details for the activity area are listed below in Table 4.

Table 4. Location details of activity area.

Site	LGA	Locality	Parish	Address/Property Identifier
Briody Drive West, Torquay	SURF COAST	TORQUAY	PUEBLA	3A BLACKWATTLE MEWS TORQUAY 3228 - RES3\PS305011
				95 BRIODY DRIVE TORQUAY 3228 – Lot 3\LP204878
				105 BRIODY DRIVE TORQUAY 3228 – Lot 4\LP204878
				111 BRIODY DRIVE TORQUAY 3228 – Lot 2\PS338340
				119 BRIODY DRIVE TORQUAY 3228 – Lot 1\PS338340
				125 BRIODY DRIVE TORQUAY 3228 – Lot 3\PS645026
				129 BRIODY DRIVE TORQUAY 3228 – Lot 2\PS645026
				135 / 135a BRIODY DRIVE TORQUAY 3228 – Lot 1\PS645026
				150 BRIODY DRIVE TORQUAY 3228 – Lot 3\LP219180
				170 BRIODY DRIVE TORQUAY 3228 – Lot 4\PS604122
				90 GROSSMANS ROAD TORQUAY 3228 – Lot 6\LP204878
				96 GROSSMANS ROAD TORQUAY 3228 – Lot 5\LP204878
				120 GROSSMANS ROAD TORQUAY 3228 – Lot 3\PS531300
				150 GROSSMANS ROAD TORQUAY 3228 – Lot 1\PS531300
				170 GROSSMANS ROAD TORQUAY 3228 – Lot 1\TP208530
				15 ILLAWONG DRIVE TORQUAY 3228 – Lot 1\LP134716
25 ILLAWONG DRIVE TORQUAY 3228 – Lot 2\LP149563				



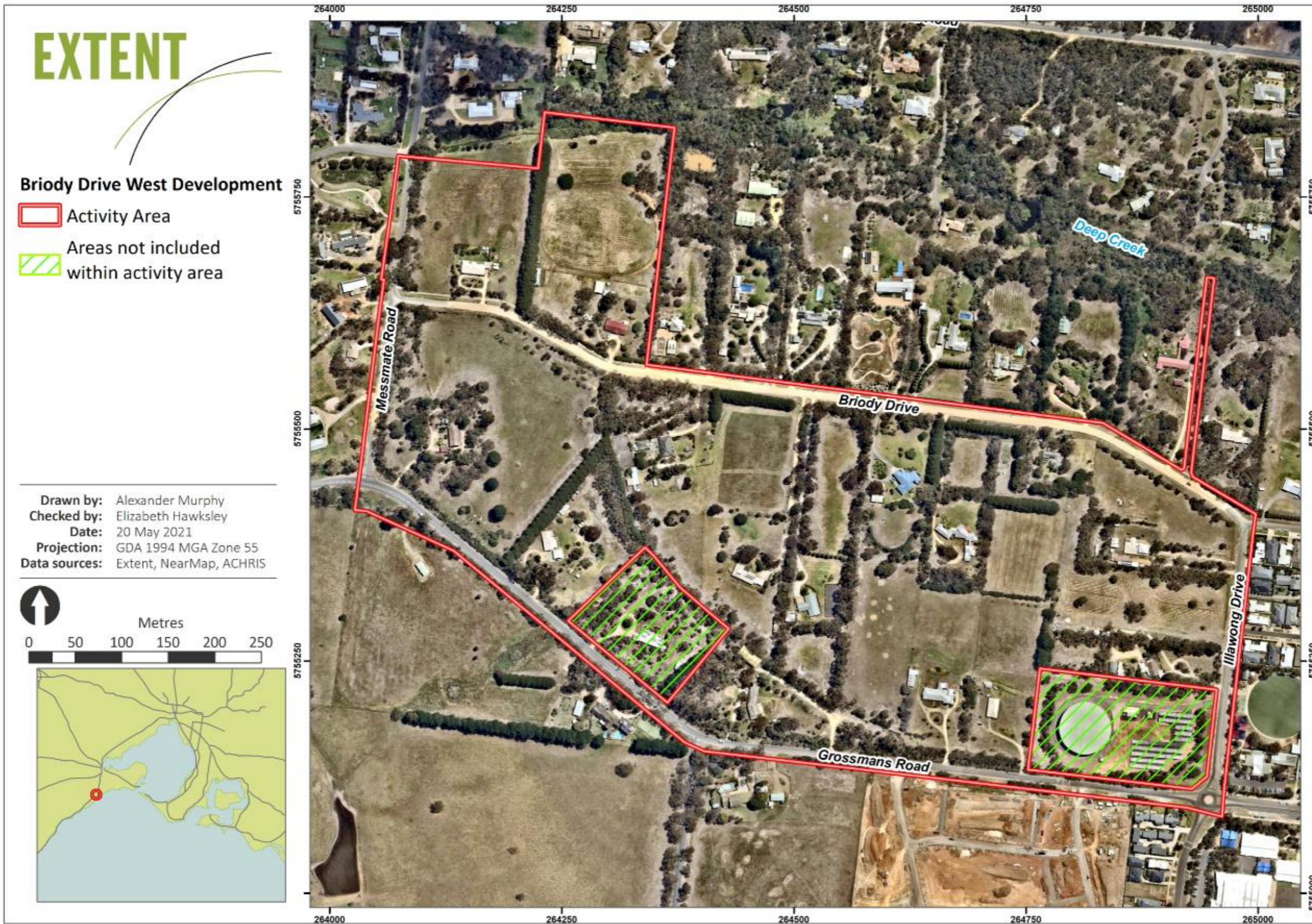


Figure 4. Extent of the activity area (with the exception of the stormwater outfall within council reserve on the NW corner of the activity area, this is unchanged from approved CHMP 12805)



## 5. Documentation of consultation

### 5.1 Development of consultation

The registered Aboriginal party (RAP) was involved in each stage of assessment completed during the development of this CHMP. A record of consultation with all parties is included in Table 5. The Registered Aboriginal Party (RAP) for the subject land at the time the Notice of Intent to prepare this CHMP was submitted was Wautharung Aboriginal Corporation (WTOAC). WTOAC were consulted during the cultural heritage assessment and in preparation of the management conditions. A record of consultation with all parties is included in Table 5.

Our approach to the Aboriginal community consultation has been to undertake all components of the study in partnership with WTOAC. We conducted an inception meeting with the WTOAC to discuss the scope of the proposed development and the results of the draft desktop assessment and to agree on a standard assessment methodology. Following the standard assessment, a further meeting was had to discuss complex testing methodologies. A results meeting was also held to discuss the findings of test excavation and collaborate on appropriate management conditions.

Please see Table 9 (Section 7) for a list of WTOAC representatives who attended the standard assessment, and Table 11 (Section 11) for attendees at the complex assessment. A record of consultation with all parties is included in Table 5.

Table 5. Documentation of consultation.

Date	Nature of Consultation	Method
14 August 2019	NOI LODGED	Email
14 August 2019	WTOAC CONFIRMATION	Email
3 September 2019	Draft desktop assessment sent to WTOAC	Email
10 September 2019	Inception Meeting (attendees Sarah Jason from Extent Heritage, Naomi Scully from YourLand, and Stephanie Frydas and Ilya Berelov from WTOAC)	Meeting
17 December 2019	Standard Assessment Results Meeting with WTOAC (attendees Liz Hawksley and Alistair Hobbs from Extent Heritage. Stephanie Frydas and Ilya Berelov from WTOAC)	Phone meeting in
16 March 2020	Complex Assessment Results Meeting with WTOAC (attendees Elizabeth Hawksley and Sarah Janson from Extent Heritage and Stephanie Frydas and BJ O'Toole from WTOAC)	Office Meeting
18 August 2020	Inception Meeting -Stage 2 (attendees Sarah Janson, Elizabeth Hawksley from Extent Heritage, Naomi Scully from YourLand and Stephanie Frydas from WTOAC)	Online meeting

Date	Nature of Consultation	Method
14 May 2020	Discussion with Stephanie Frydas from WTOAC about the cessation of Briody Drive-Stage2 works and the continued completion of original proposed works for CHMP 16746	Phone

## 5.2 Outcomes of consultation

The WTOAC were closely consulted throughout the development of the CHMP, including during the inception meeting and during Standard and Complex Assessments. WTOAC representatives were invited to discuss any tangible or intangible heritage values associated with the activity area during fieldwork.

### 5.2.1 Inception meeting

An inception meeting was held at the WTOAC offices on 10<sup>th</sup> September 2019. In this meeting, the HA's explained the nature of the proposed development, and the relationship between the current CHMP and previous CHMP 12805. Specifically, this CHMP was undertaken in order to permit specific additional activities that were not included in the previous CHMP. These included a camping and caravan park, retirement home and the construction of a retarding basin and stormwater outfall. The only change to the activity area extent was the stormwater outfall pipeline from Briody Drive to Deep Creek.

A key agreement in this meeting was that because the majority of the activity area had already been subject to comprehensive investigation during CHMP 12805, standard and complex assessment for the current CHMP would be limited to two areas not previously investigated. Specifically, these were the stormwater outfall location extending within a municipal reserve from Briody Drive to Deep Creek, and the road reserves of Briody Drive, Messmate Road, Grossmans Road and Illawong Drive.

A standard assessment was proposed to understand levels of disturbance in these areas of the site and ground truth the findings of the desktop assessment. The assessment would include augur excavation within the road reserves (if possible) and stormwater outfall locations.

### 5.2.2 Standard assessment results meeting

A meeting was held over the phone on 17 December 2019 to discuss the results of the standard assessment and agree a methodology for the complex assessment. Specific details discussed during the standard and complex assessment results meeting included:

- The standard assessment identified the road reserves of Briody Drive, Messmate Road, Grossmans Road and Illawong Drive had been heavily impacted by road construction and service installation and were unlikely to contain intact soil profiles.
- The stormwater outfall reserve from Briody Drive to Deep Creek retained ground visibility ranging from poor to good. It also did not appear to be subject to heavy ground disturbance. This area was considered to have the highest potential to contain Aboriginal culturally material.

- No Aboriginal cultural heritage was identified during the standard assessment.
- It was agreed that complex assessment would be undertaken within the two locations. Within the outfall reserve, WTOAC required a combination of mechanical and manual excavation techniques targeting undisturbed areas to the depths of the natural substrate. It was agreed that three 2m x 1m mechanical trenches and one 1m x 1m manual test pit would be excavated within this area. Within the road reserves, three 50cm x 50cm shovel test pits would be excavated in selected locations where disturbance levels appeared lower.

### 5.2.3 Complex assessment results meeting

A meeting was held at the WTOAC offices on 16 March 2020 to discuss the complex results and agree management conditions for the CHMP. Previously unrecorded Aboriginal cultural heritage was identified within the activity area (VAHR 7721-1431 -Briody Drive Artefact Scatter). It was agreed with WTOAC that management conditions would include impact mitigation in the form of salvage excavations within VAHR 7721-1431, as impact could not be avoided or minimised on this place. A cultural induction would also be undertaken prior to development commencing.

### 5.2.4 Inception meeting for Briody Drive, Torquay- Stage 2

A meeting was held on the 18 August 2020 to revise the activity area in order to incorporate a sewerage pipeline. The methodology for standard and complex assessment for Briody Drive—Stage 2 was discussed with WTOAC, where it was agreed that sub-surface testing methodology would remain in line with that undertaken during Stage 1 investigations. However, due to continued issues with the future placement of the sewerage pipeline, WTOAC was notified, via phone (dated 14 May 2021) that Stage 2 of the development was now to be placed on hold indefinitely. As per discussion with WTOAC it was agreed that the original CHMP activity area will be finalised and submitted to WTOAC for evaluation.

## 6. Desktop assessment

### 6.1 Preamble

This part of the report comprises the *desktop assessment* required by the Aboriginal Heritage Regulations. In accordance with the Regulations, this part of the report comprises the following:

- a documented search of the Victorian Aboriginal Heritage Register (VAHR) for information relating to the activity area, including the date(s) the VAHR was accessed;
- an identification and determination of the geographic region of which the activity area forms a part that is relevant to the Aboriginal cultural heritage that may be present in the activity area;
- a concise map, or maps, showing the relevant geographic region and the location of the activity area in that geographic region;
- a review of the registered Aboriginal cultural heritage places (Aboriginal places) in the geographic region;
- a review of reports and published works about Aboriginal cultural heritage in the geographic region, relevant to the activity area;
- a review of historical and ethno-historical accounts of Aboriginal occupation of the geographic region, relevant to the activity area;
- a review of the landforms or geomorphology of the activity area;
- a review of the history of the use of the activity area, including prior disturbances to ground surfaces and soil deposits if such information is available; and
- a conclusion, based on the desktop assessment, regarding the possibility of Aboriginal cultural heritage being located in the activity area.

The information obtained during the development of the desktop assessment assists us in determining the archaeological potential of the activity area in a number of ways. For example, the types of natural resources that may have been available within the study area or the local region can indicate why people were present in the area and what the potential physical traces of such a presence might be. We might consider whether an area contains certain types of stone used for artefact making, whether its trees have bark suitable for manufacturing certain items, or whether other known resources—plant, animal, or otherwise—may have drawn people to the area.

The literature associated with previously recorded archaeological sites in the region can point to the types of archaeological deposits and materials that may be present in the study area, or may once have been present, as well as their distribution. It can also provide comparative information that is essential to the task of assessing the archaeological significance of any previously unrecorded archaeological material or deposits.

Environmental and historical information (regarding past and present land use in particular) can indicate whether post-depositional processes have potentially altered or disturbed any archaeological deposits or materials that may once have existed, or may still exist, within the current study area.

In short, knowledge of the environmental, cultural, and historical contexts of the study area is crucial for understanding the archaeological potential and significance of that area.

## 6.2 Geographic region

The activity area is located within the Torquay region, approximately 79 km southwest of the Melbourne CBD. The activity area and surrounding region form part of the Western Plains, which reach from western Melbourne to the border of South Australia. The sedimentary plains in particular, mainly comprise the marine sands deposited by the retreating Pliocene sea and sometimes the older underlying Gellibrand Marl and Port Campbell Limestone is also exposed.

For the purposes of this report, the geographic region has been defined as a 2km radius around the activity area as a representative sample of this region (see Figure 4). As this is an extensive geomorphological landform, this provides a suitable region for study because it shares common and distinct topographic, drainage, geological and soil landscape characteristics and has been subject to recent archaeological studies.



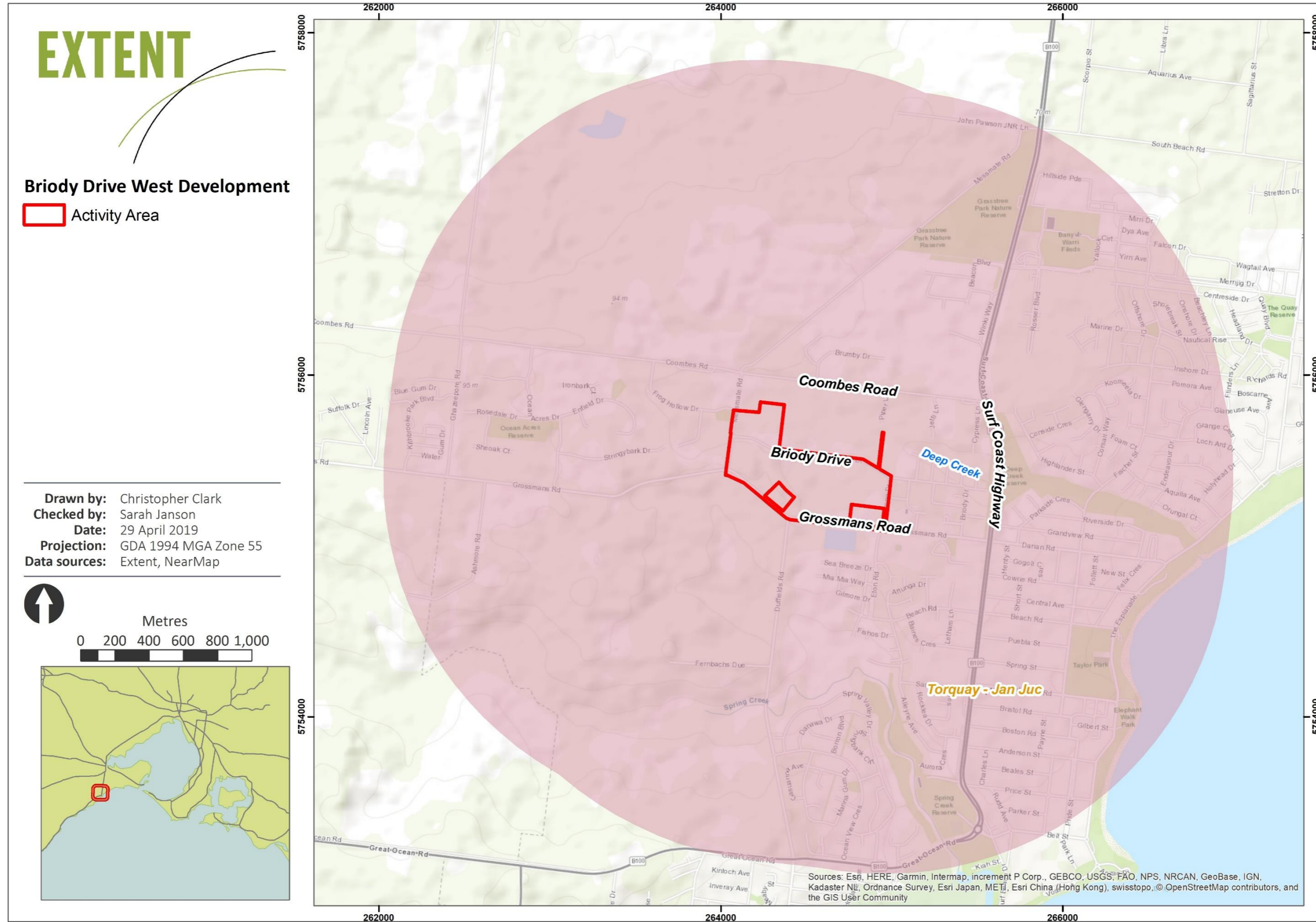


Figure 4. Geographic Region of Activity Area



## 6.3 Review of Aboriginal places in the Geographical Region

Extent Heritage conducted a search of the VAHR on 20 May 2021 and identified 423 registered Aboriginal places within the geographic region, comprising 619 components<sup>1</sup> (Table 6 and Figure 5). The majority of the Aboriginal places within the geographic region contain artefact scatters (n = 310) followed by Low Density Artefact Distribution (n = 204). Shell midden (n= 72), scarred trees (n = 8), earth features (including hearths, soil deposits and mounds, n= 4) are also present. There are also stone features (n = 2) and 2 (n=2) other places noted.

There was one previously recorded Aboriginal place within the activity area, a low density artefact distribution VAHR 7721-1260 (Table 7), and two Aboriginal places recorded within 200 m of the activity area (Table 8) (Figure 6). This was recorded during CHMP 12805, undertaken across most of the current activity area in 2014.

The distribution of registered Aboriginal places within the geographic and local region indicates a high density of Aboriginal places located along and adjacent to watercourses and the coastline. Eighty-two percent of this artefacts were located within artefact scatters and LDADs. Comparatively fewer Aboriginal places are located in areas farther away from creeks and rivers. The distribution of Aboriginal places within the region is likely due to a combination of factors, particularly the extent of previous archaeological investigation and the level of ground surface visibility. Patterning also reflects, to some degree, the nature and extent of past Aboriginal occupation and use.

Table 6. Aboriginal Places within the geographic region.

Component type	Count of Component Type	Percentage of Component Type
Artefact Scatter	310	50.08%
Low Density Artefact Distribution	204	32.96%
Shell Midden	72	11.63%
Object Collection	15	2.42%
Scarred Tree	8	1.29%
Earth Feature	4	0.65%
Other	2	0.32%
Stone Feature	2	0.32
Quarry	2	0.32
<b>Grand Total</b>	<b>619</b>	<b>100%</b>

<sup>1</sup> Registered Aboriginal places may contain more than one component; therefore, the total number of components may be greater than the total number of Aboriginal places.

Table 7. Aboriginal places within the activity area.

VAHR number/ name	Place type	Contents
7721-1260 Briody Drive West	LDAD	Comprises of 2 flakes. one quartzite flake complete with plain platform and plunge termination. The second flake-distal, backed (geometric microlith) with feather termination. Material unknown. Associated with CHMP 12805.

Table 8. Aboriginal places located within 200 m of the activity area.

VAHR number/ name	Place type	Contents
7721-0634 BRIODY 1	Artefact Scatter	Comprising of 1 silcrete flake.
7721-0764 Duffields Road	Scarred Tree	Species of tree uncertain, poor health. One scar (L): 0.35m (W): 0.15m (H): 1.6m. Associated with CHMP 10381





Figure 5. Registered Aboriginal cultural heritage within the geographic region (2km) of the activity area.



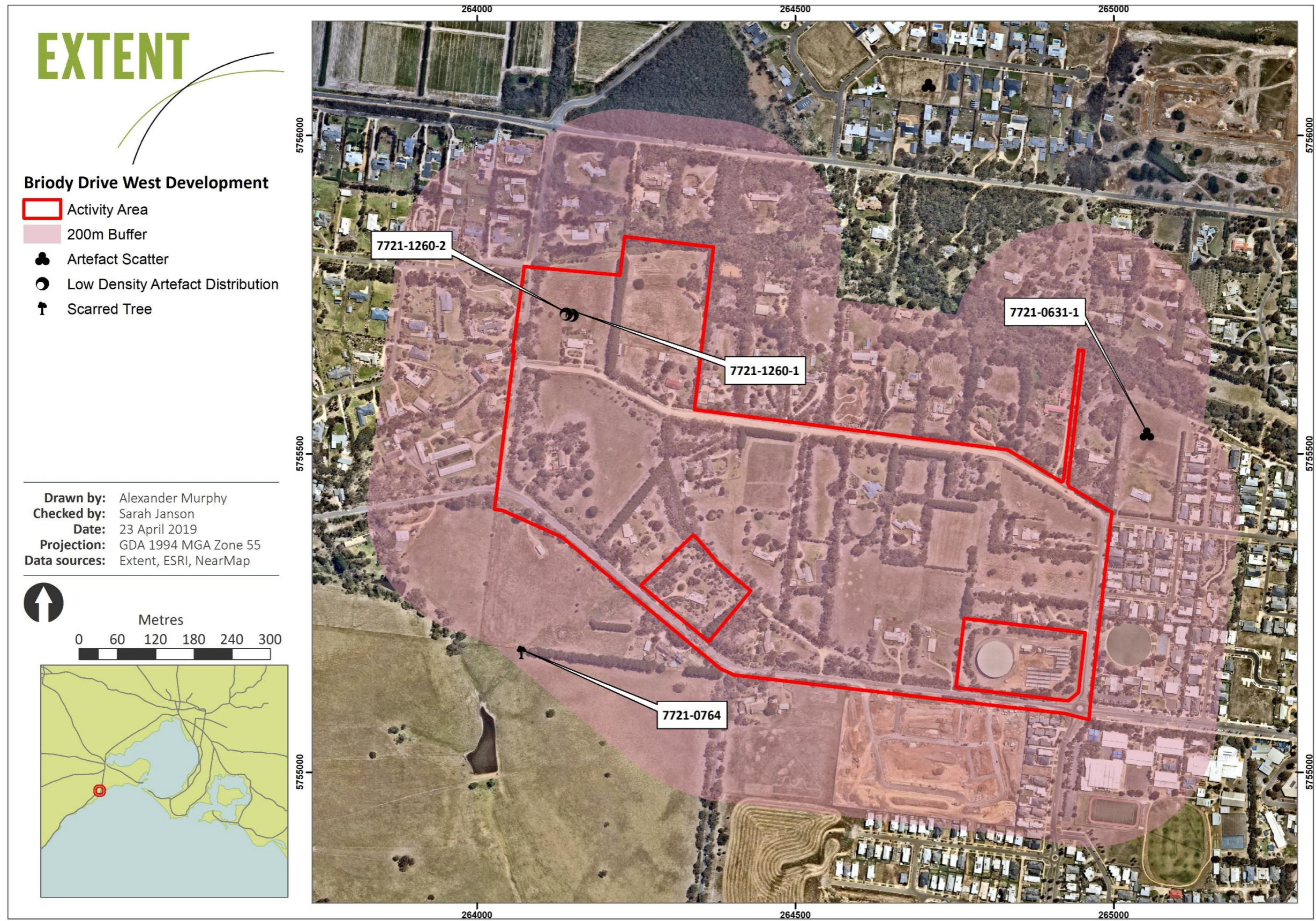


Figure 6. Distribution of Aboriginal places within a 200 m radius of the activity area.



## 6.4 Review of regional archaeological context (including reports and published works)

For the purposes of determining settlement and site-location patterns, archaeologists examine regional and local trends in the distribution of known sites in relation to environment and topography. This provides evidence about economic and social systems in the past and assists archaeologists to predict site types, site locations, and the nature of the archaeological resource in any given area.

### 6.4.1 Early occupation

Early occupation of the south-east coast of Australia has been subject to debate over recent decades (Burke 1990; Gallus 1976; Munro 1998; Tunn 2006). Analysis by Munro places Aboriginal occupation of the Keilor area at 40,000 BP, based on the re-analysis of an artefact assemblage excavated there in the late 1970s (Munro 1998, 33). Mulvaney and Kamminga note the presence of artefact remains in the region that are dated to ‘at least 30,000 years’ (1999, 137). Other archaeological sites in the region, such as a hearth re-dated by Tunn, show Aboriginal occupation of the Maribyrnong River Valley at approximately 15,800 BP (Tunn 2006). Similarly, Canning et al. dated charcoal from a hearth feature within the Keilor Terrace to within 13,500 to 15,000 BP (Canning, Griffin, Flynn, and Richard 2010).

Recent thermal luminescence dating of hearth-like deposits at Moyjil (Point Richie), a calcarenite outcrop at the mouth of the Hopkins River around 150km west of the current activity area, has suggested that humans may have been present on the current south coast of Australia between 100-130ka BP (Bowler et al. 2018).

These dates—along with the predominance of artefact scatters (described in Part 6.4.4) that contain microliths characteristic of stone tool technologies from the mid to late Holocene epoch—indicate that the region has likely been occupied by Aboriginal people from between thirty and forty thousand years ago up to the recent past.

### 6.4.2 Intensification during the Holocene period

The vast majority of dated sites in south-eastern Australia are less than five thousand years old. While this may be a result of how sites are sampled or post-depositional taphonomy, it has been argued that this represents population growth and ‘intensification’ of cultural activity during this period. The prevalence of such sites may also be related to the last significant rise in sea level, which occurred approximately six thousand years ago and would have submerged many older sites along the coastal fringe and forced Aboriginal groups westwards to the current coastline.

### 6.4.3 Stone artefacts and raw materials

Aboriginal stone artefacts are an important source of archaeological information, because stone is preserved for a long period of time. Organic materials, such as bone, shell, wood, and plant fibres, decay. Stone artefacts provide information about technology, economy, cultural change over time, and settlement patterning. Stone is also used to relatively date sites if direct methods, such as carbon dating, cannot be applied.

There is ongoing debate about the timing and nature of changes to stone-tool technologies in south-eastern Australia (Hiscock and Attenbrow 2002; 1988; Hiscock 2001). In general, however, there is evidence of a shift from large core tools and horsehoof cores and scrapers during the Pleistocene and early Holocene epochs towards ground-edged implements and small tools during the mid to late Holocene. In particular, small points, blades, and scrapers characterised by a distinctive form of re-touch known as 'backing' dominate many mid-Holocene assemblages.<sup>2</sup> There is also some evidence of a shift in the last 1,500 years towards bipolar reduction technology, ground-edged tools, and tools made from bone and shell. Particular forms, such as eloueras, have been cited as characteristic of this recent period.

Dominant raw material types in the region include silcrete, quartz, quartzite, and chert. Other materials, such as basalt, greenstone, and hornfels, are also present. A number of greenstone and silcrete quarries have been recorded in the region, indicating possible source locations for some of the raw material employed in the manufacture of artefacts (Webb 1995). Greenstone quarries include Dog Rocks Quarry (VAHR 7721-0001), Gleeson Hill (VAHR 7721-0002) and Georges Hill (VAHR 7721-0128), located at Fyansford and Batesford approximately 19 km and 25 km to the north of the activity area, respectively. The closest registered silcrete quarry (VAHR 7722-0034) is at Sutherlands Creek, west of the Brisbane Ranges, 42 km north-north-west of the activity area. Other sources of raw material include quartz from the Barwon River where it is found in the form of river cobbles and chert from the Moorabool River (Birch et al. 1997, 98-9; Webb 1999,103).

#### 6.4.4 General patterns

The VAHR site distribution patterns and the regional studies summarised in detail in Part 6.4.5 indicate that the dominant site types within the region are Low Density Artefact Distributions and artefact scatters, with smaller numbers of earth mounds and scarred trees. The region also has a low potential for burials (on aeolian and alluvial landforms with relatively deep soft soils).

The distribution, density, and size of known Aboriginal archaeological sites are largely dependent on environmental context, post-contact land use, and erosion or site formation processes. There is likely to be a correlation between the existence of fresh water sources and Aboriginal archaeological deposits. Numerous studies have indicated that a higher density and frequency of deposits exist in close proximity to water sources and the level of density and frequency increases with higher stream orders. It is likely that a higher density and frequency of archaeological deposits would exist in close proximity to former wetlands.

Other factors (as yet untested in the region) that may affect archaeological potential include the region's slope gradient, aspect, landform, vegetation, and soil landscape type.

Past disturbance is also likely to have affected the potential for and integrity of archaeological deposits in any given area.

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<sup>2</sup> This is known as Bondaian technology and includes formal types such as Bondi points and backed blades.



Many regional archaeological studies have focused on past Aboriginal exploitation of the waterways and have developed site distribution models for the permanent watercourses, such as Thomas, Collins and Turnbull (2014) and Wheeler et., al. (2010). The most influential of these are summarised below.

### 6.4.5 Regional studies

A number of regional archaeological studies have been undertaken that provide an indication of site types and patterning in the geographic region. Regional-scale studies (including studies of similar landscapes in other parts of Victoria) can be useful for identifying patterns of Aboriginal occupation and use across landscapes, but they are generally less useful for smaller site-specific or development-impact assessment investigations. A review of relevant regional studies is included below.

#### *Du Cros 1989 (Report 236)*

The first systematic survey of the western region of the Melbourne metropolitan area was undertaken by Hilary du Cros in 1989. Du Cros identifies specific and less specific areas of archaeological sensitivity and provides the following site prediction model for the western region:

- Burials, artefact scatters, isolated artefacts and scarred trees will be found on river or creek flats, terraces, or slopes within 100 m of a major water course.
- Artefact scatters are also likely to be found on points of vantage on the volcanic plains, such as eruption points (or extinct volcanoes or rises).
- Artefact scatters, isolated artefacts, and scarred trees are likely to be found close to large or permanent swamps and lakes on the volcanic plains.
- Sources or outcrops of silcrete and metamorphic stone are likely to have been quarried by Aboriginal groups if they were exposed 150 years or more ago.
- Shell middens are likely to be found along the terraces of the major rivers in places where no ploughing or disturbance has occurred.
- Stone arrangements are likely to be in areas that have suffered little in regard to rural activity. These areas are also likely to contain well-preserved examples of artefact scatters, quarries, and other archaeological sites that have not been disturbed by ploughing and clearing.
- Axe grinding grooves are likely to be elsewhere in the Werribee Gorge and possibly in nearby sandstone areas dissected by creeks.
- The ridge tops of the mountain ranges—and saddles in particular, where people could travel over the ranges—are the most likely places for sites. Any water sources, such as local springs, soaks, major rivers and creeks, are the most probable places for site occurrences.
- Sites with extensive sub-surface archaeological deposits containing burials, hearths, faunal material, and artefacts are most likely to be in areas with the best preservation—that is,

some sections of the major rivers where material has been covered by successive deposits of alluvium and caves or rock shelters in which soil is preserved from surface erosion.

- Contact sites are most likely to be located close to old homesteads or provision points. However, it is not unlikely that some Aboriginal groups wanting to avoid European contact stayed away from these places in remote and isolated areas.

The regional model produced by Du Cros is based largely on studies focused on the Werribee River, located east of the activity area but on broadly similar terrain to the current activity area.

#### *Du Cros 1990 (Report 268)*

Du Cros conducted an archaeological study of the Otways Region from western Torquay to Point Ronald near the mouth of the Gellibrand River. The current activity area is situated in the study's East Coast and Slopes geographic region.

Du Cros developed a site prediction model based on a review of archaeological publications, suggesting that larger artefact scatters are present at some distance away from beaches, and often on the border with other environments such as wetlands, creeks, estuaries and forests. Torquay was identified as within an area of archaeological potential.

#### *Du Cros 1991 (Report 247)*

Du Cros examined a corridor of land along the Werribee River. The investigation entailed a sample survey to further refine and test her predictive model of the Western Region. Areas where little or no previous archaeological investigations had been undertaken were specifically targeted for the survey. The Werribee and Little Rivers were determined to be the principal areas of archaeological sensitivity within the study region. Du Cros concluded that artefact scatters located on the Volcanic Plain may be the result of east–west traffic linking the Werribee to the Little River (31).

#### *Du Cros and Rhodes 1998 (Report 1320)*

Du Cros and Rhodes produced a report for Melbourne Water Corporation in 1998 that maps the sensitivity of waterways in Melbourne and its surrounds. A GIS database was constructed that grades waterways and floodplains into different levels of sensitivity. The predictive models indicate that many waterways in and around Melbourne should be considered as archaeologically sensitive (Du Cros and Rhodes 1998, 6). Sensitive areas that the report identifies include high ground near waterways, well drained floodplains, and areas containing mature eucalypts (14).

### 6.4.6 Local studies

A search of the *Aboriginal Cultural Heritage Register and Information System* (ACHRIS) undertaken on the 26 April 2019 indicated that twelve CHMPs have been undertaken within the geographic region. No previous assessments have been undertaken in the activity area. A review of the relevant CHMPs are included below.

*Wheeler et al (2010) - Duffields & Grossmans Roads, Torquay, Residential Subdivision, CHMP 10381*

In April 2008 a cultural heritage management plan (CHMP 10381) was prepared by Archaeological Management Solutions (AHMS) Pty Ltd for the proposed development at Duffields Road and Grossmans Road, Torquay. Subsurface testing was undertaken within the 57 ha activity area, approximately 350m south of the current activity area in advance of a proposed residential subdivision. A total of 77.3 m<sup>2</sup> was excavated using six 1 x 1 m manually excavated trenches and twenty-three 3 x 1.1 m mechanically excavated trenches (Wheeler et al, 2010, 6).

During complex testing a single Aboriginal place was identified (VAHR 7721-0932) within the activity area. A total of 607 stone artefacts were recovered from seventeen of the twenty-nine trenches – 545 from the subsurface excavations and 62 from a spoil heap derived from previous, unsupervised gorse clearance (Wheeler et al, 2010, 6). Flint and quartz formed the largest raw material types, accounting for over two-thirds of the assemblage. The assemblage is thought to date from the mid-late Holocene, due to the presence of geometric microliths, end scrapers, micro-blade flaking techniques and bipolar flaking technology. Despite the effects of bioturbation, the archaeological deposits were found to have some stratigraphic integrity, with possible evidence of increasing use of flint and decreasing use of quartz over time (Wheeler et al, 2010, 6).

The stone artefacts were recorded as part of an artefact scatter (VAHR 7721-0932). As the highest artefact densities were associated with creek flat landforms within 100 m of watercourses this landform was mapped as higher sensitivity and included as the place extent of VAHR 7721-0932 (Wheeler, 2010, 143).

The CHMP concluded that tool manufacture took place on site, using a variety of raw materials including coastal flint with VAHR 7721-0932 representing multiple phases of use of the place (Wheeler, 2010, 147-8). The place fits within the broader regional site prediction models which suggest a preference for areas close to water bodies in the hinterland behind the coastal fringe (Wheeler, 2010,151).

Salvage excavations of VAHR 7721-0932 as per the conditions of CHMP 10381 were undertaken in 2015, which identified an additional 2778 artefacts from subsurface excavations and 5774 artefacts from unstratified salvage of topsoil mounds. Due to the high density of artefacts located across the activity area, the Aboriginal cultural heritage of the site is considered to be of *high* significance.

*Stanin (2010) – Esplanade Road Widening – Deep Creek to Horseshoe Bend Road, Torquay, CHMP 10858*

Stanin undertook surface and subsurface assessment of Aboriginal cultural heritage in a small linear section of the Bass Strait coastline which included Spring and Thompson Creek and Breamlea. The activity area for CHMP 10858 is approximately 1.7km east of the current activity area.

The desktop assessment concluded that areas in association with water, namely creek banks, sand dunes along the immediate coastal strip and coastlines, are more sensitive to yield

Aboriginal cultural material than the low-lying ground behind dune ridges (salt-marsh and wetlands). The standard assessment targeted these areas, however no aboriginal cultural heritage was identified during the field survey.

The complex assessment involved the excavation of three 50x50cm test pits and one 1x1m test pit. No Aboriginal cultural heritage was identified during the complex assessment. Significant subsurface disturbance was identified during the complex assessment, likely linked to the construction of utilities and road construction. As a result, it was concluded that it was unlikely that remnant Aboriginal cultural material remains within the activity area.

*MacManus & Harbour (2012) – Residential Subdivision 30 Illawong Drive, CHMP 12010*

A 1 ha area was surveyed and assessed by MacManus and Harbour to the south-east of the current activity area in advance of a residential subdivision. The desktop assessment predicted that Aboriginal places were likely to occur in the activity area due to the prevalence of stone artefact scatters within 200 m of waterways in the region (MacManus & Harbour 2012: 27). Owing to ground surface visibility, no surface artefacts were identified during the standard assessment (MacManus & Harbour 2012: 32-3). During the complex assessment, one 1 x 1 m stratigraphic test pit and seventeen 40 x 40 cm shovel test. No Aboriginal cultural heritage was identified during the archaeological investigations (MacManus & Harbour 2012: 38-9). The authors concluded that, contrary to their site prediction model, the complex assessment had demonstrated that it was unlikely that Aboriginal cultural heritage would be found during the activity; any Aboriginal cultural heritage that might be found would most likely consist of isolated artefacts (MacManus & Harbour 2012: 51).

*Toscano and White (2017) – Surf Coast View Estate, Torquay, Pipeline and Bridge – CHMP 14123.*

Toscano and White undertook a surface and subsurface testing of two parcels of land (35 Duffields Road and 72 Eton Road, Torquay) approximately 1km south of the current activity area. This CHMP overlaps the area included in CHMP 10381 (see above).

The desktop assessment identified that it was highly likely that Aboriginal places would be present within the activity area, namely in association with previously recorded place VAHR 7721-0932 and in proximity to Spring and Deep Creek (2017, ii).

During the ground survey (standard assessment) three surface artefacts were recorded within the activity area of CHMP 14123 (2017: iii). Overall, ground surface visibility was poor within the majority of the northern side of the tributary due to the thick coverage of gorse bushes, which also restricted access to some areas. Heavy ground disturbance was noted in parts of the activity area (2017: iii).

The complex assessment comprised of one 1x1m test pit and fourteen 50cm x 50cm shovel test pits. Six of the fifteen excavated pits contained a total of 50 artefacts. The analysis of these artefacts further supports the conclusions drawn in Wheeler et., al (2010) that artefact manufacturing was undertaken within the Aboriginal place extent and that these artefacts likely date from the mid Holocene (last 5000 years).



#### 6.4.7 Studies within the activity area - Review of CHMP 12805

In March 2014, a cultural heritage management plan (CHMP 12805) was prepared by Ochre Imprints for the Briody Drive West Landowners Group for a re-subdivision and development at Briody Drive West, Torquay.

Initially, a desktop assessment was undertaken, and no previously registered Aboriginal places were known to exist within the activity area. At the time, one artefact scatter and one scarred tree (VAHR 7721-0634 and 7721-0764) were identified within 200m of the activity area. The desktop assessment had established that there was moderate potential for additional Aboriginal culture to be found within the activity area, due to its proximity to Deep Creek.

The previous studies of the region indicated the likelihood of cultural material to be found on the aeolian plain in areas to be low, especially in areas greater than 100m from major waterways and tributaries. Subsequently, it was agreed during the inception meeting with WTOAC that sub-surface testing would focus on areas less than 100m from Deep Creek, with more dispersed testing at locations further from the waterway.

The complex testing comprised of twenty 1m x 1m excavation pits (EP) and forty-eight 50cm x 50cm shovel test pits (STP). Ten (50%) of the EPs were located within 100 m of Deep Creek, with nine EPs sampling the land between 100-200 m from Deep Creek and one further EP establishing the soil profile in the eastern part of the activity area. Fourteen STPs were excavated to assess the spatial extent of the Aboriginal cultural heritage identified in EP5, while the remaining thirty-four STPs were used to test the rest of the activity area.

A generally consistent soil profile was identified in most of the test locations, comprising a shallow homogenised topsoil overlying natural B-horizon clay at a typical depth of between 10-25cm. Isolated pockets of deeper sandy deposits were identified in several areas.

A total of two Aboriginal stone artefacts were identified during the complex assessment, one in EP5 and one in the spoil heap of STP6. The stone artefacts originated within the topsoil plough-zone at depths of about 10-20cm, from locations less than 100m from Deep Creek. These subsurface stone artefacts were recorded as a low-density artefact distribution VAHR 7721-1260 Briody Drive West 1.

The complex testing concluded that the nature of the newly identified Aboriginal place is indicative of the accidental loss and/or deliberate discard of artefacts during movement across the landscape over time.

As discussed in section 2.2 above, CHMP 12805 covered activities relating to the establishment of a residential subdivision. The current CHMP was commissioned to incorporate changes to the activity to include a retirement village and caravan park into the design and as the statutory timeframe for amendment of a CHMP had elapsed. The extent of the activity area remains unchanged with the exception of road reserves and an outfall alignment in the northwest of the current activity area. The balance of the activity area has previously been subject to thorough and extensive complex level subsurface testing during the course of CHMP 12805, as described above. The Aboriginal place identified with this CHMP contains two artefacts within a disturbed context; it is therefore considered to be of a low significance.

## 6.5 Historical and ethno-historical accounts of Aboriginal occupation of the geographic region

This section presents a history of Aboriginal occupation and possible uses of the activity area based on documentary evidence and early ethnographic records. This information provides a context to archaeological investigations and assists in interpreting the results of any archaeological test excavations. It also aids in assessing the cultural heritage values of the area.

The lives of Aboriginal people in geographic region were severely disrupted by the establishment and expansion of European settlement. As a result, little information is available regarding their pre-contact lifestyle, and much of the available information is drawn from the accounts of European commentators. Major sources include the reminiscences of William Buckley (a convict who lived for over 30 years with the Wadawurrung), the diaries of George Robinson during his travel in the area, and William Thomas' accounts of the wider Port Phillip Region. These accounts are often problematic due to their obvious colonial perspectives. If they are read critically, however, these sources can assist in a reconstruction of the lives of Indigenous people in this geographic region.

### 6.5.1 Pre-contact

#### 6.5.1.1 Language groups and clans of the study area

The activity area is located within the area associated with the Wadawurrung language group. Wadawurrung territory is bounded by the Werribee River in the east and Mt Emu and Firey creeks in the west (Clark 1990, 311). It extends south to Aireys inlet, and north to roughly region surrounding Ballarat. Wadawurrung land lies adjacent to territory of the Djadja wurrung, Djab wurrung, Girai wurrung, Gadubanud, Woi wurrung and Bun wurrung language groups (Clark 1990, 311). These boundaries are, necessarily, tentative (see Tindale 1974, 131-132). The Wadawurrung language group was divided into twenty-five separate clans.

The “basic unit” of Kulin society was a patrilineal descent group whose members had an “historical, regligious and genealogical identify.” (Barwick 1984, 106). Clan names were demoted by the suffixes *-balluk* (‘people’) or *-willam* (‘dwelling-place’) (Barwick 1984, 106).

Based on mapping by Clark, the closest Wadawurrung clans to Torquay was the *Wada wurrung Gerarlture* clan who were documented in areas around Winchelsea, and the *Wadawurrung balug*, who were associated with land encompassing the wider Geelong and Barrabool Hills (Clark 1990: 311)

#### 6.5.1.2 Food resources

Although traditional food gathering practices and access to resources became restricted by European occupation of the region, ethnohistorical sources can provide information about Aboriginal exploitation of a range of plant and animal foods during the contact period. These sources can in turn provide some indication of what activities will have occurred before contact. Food resources in the region would have been comparatively plentiful across the region in the pre-contact period. Plant foods comprised an important part of the diet of the Wadawurrung, having the advantage over animal resources in that they provided a resource that was “more regular and reliable than that derived from hunting or fishing” (Presland 1983, 35).

Of the wide variety of plant foods commonly exploited, the tuber of the Yam Daisy, or Murnong, was recorded by European observers as providing a staple food resource (Dredge in Reed 2004, 97). Thomas records the Murnong as being eaten both when raw and after being cooked in the ashes of a fire when more mature and fibrous (Goulding 1988). Robert Smyth, in an anthropological work based largely on the diaries of William Thomas, emphasises the importance of the Murnong to Indigenous people in Victoria:

Murr-nong or Mirr-n'yong, a kind of yam...was usually very plentiful and easily found in the spring and early summer, and was dug out of the earth by the women and children. It may be seen growing on the banks of the Moonee Ponds, near Melbourne. The root is small, in taste rather sweet, not unpleasant, and perhaps more like a radish than a potato. (Smyth 1878, 209)

In his travels through Wadawurrung country, Chief Protector Robinson records meeting Wadawurrung women and children carrying “long sticks, 8 feet long, with which they dig up roots” (Robinson 1840, 43). Presumably these sticks were used to dig up Murnong in the area. Tubers such as that of the Yam Daisy provided a valuable source of carbohydrates for Indigenous populations of the region in spring and early summer. Murnong was complemented by other common plant foods such as the fern tree (bracken) pulp and “some parts of a thistle” (Presland 1983, 35).

The Wadawurrung would have also exploited the fresh and salt-water animal resources of the region. Eels were a plentiful supply of food during the summer, and were easily caught with the aid of a spear (Smyth 1878, 252). Fish were obtained through the use of nets and weirs. (Presland 1983, 33). Middens present both along the coastline and lining inland rivers and streams attest to the exploitation of shellfish as an additional food resource (Gaughwin and Sullivan 1984, 89). Local birdlife, reptiles and mammals also provided potential food resources for the Wadawurrung, with kangaroo and possum a popular staple (Presland 1983, 34).

One major source of ethnographic information about the Wadawurrung people is the account of William Buckley (Buckley 1837, SLV MS13483). Buckley escaped from a convict settlement at Sullivan Bay, Sorrento on Christmas Eve of 1803. Buckley and two companions moved on foot around most of Port Phillip Bay, surviving on shellfish and succulent plants. When Buckley’s companions abandoned him due to fear of starvation, Buckley continued into the territory of the Wadawurrung people, who took him for a reincarnated spirit of a dead kinsman (Buckley 1837, SLV MS13483). Buckley lived with the Wadawurrung for over 30 years, and his accounts provide invaluable information about the traditional practices of the group.

William Buckley’s later reminiscences provide detailed information about the food gathering practices of the Wadawurrung people. He recounts that he became an expert in “spearing the Kangaroo and taking fish” (Buckley 1837, SLV MS13483) and that the Wadawurrung people were accustomed to hunt “Kangaroo, Opossum, Bandicoot and Sugar Squirrel” (Buckley 1837, SLV MS13483). He also recounts their “great eagerness for the Hedgehog or porcupine”:

In order to obtain it from its hiding place they put in to the hole a young child with its legs foremost who feels how and where the animal is situated and reports accordingly in what part he is to be obtained by digging into the earth as the holes run under and parallel with the surface for some distance - their method of dressing it when obtained is this. They enclose it

entire in a piece of Bark and thus roast it - then taking off the skin again apply the body to the fire - thus dressed it is considered a great treat... (Buckley 1837, SLV MS13483).

#### 6.5.1.3 Other natural resources

The Aboriginal people of the region manufactured and employed a wide range of material culture, sourced from animal, plant and earth resources available locally, in addition to resources and implements acquired through trade with neighbouring clans. Plant resources were used in a wide variety of ways, with wood employed in the manufacture of tools such as boomerangs, spears and digging sticks, bark and reeds in the manufacture of string for bags and nets, and species of rushes in the manufacture of baskets (Smyth 1878, 343, Presland 1983, 35, 7). The bark of larger trees such as the Red Gum was used to make canoes and shields. Cherry Ballart, silver wattle, grass trees and stringybark are also key resources for sources of wood, tannins and resins.

Stone resources were employed in the manufacture of stone tools and are the most likely form of Aboriginal material culture to survive in the archaeological record today. Presland notes that the neighbouring Woi wurrung group used a range of what he calls "maintenance tools", usually of stone, which included hatchets, knives and scrapers (Presland 1983, 37). These tools were often employed in the production of other elements of material culture, including clothing and ornaments made from animal skin and bone (Presland 1983, 37).

#### 6.5.1.4 Land management practices

It is likely that Wadawurrung Country was subject to a range of Indigenous land management practices prior to colonial settlement. In *The Greatest Estate on Earth*, Bill Gammage contends that Indigenous groups managed the land of Australia prior to contact like a "single and universal" estate (Gammage 2011, 1). The chief mechanism of this land management practice was fire. The hypothesis that Indigenous groups carried out land management practices is supported by several colonial accounts. In 1770, during his voyage on the HMS Endeavour, the then Lt. James Cook expressed surprise about the sparse distribution of the flora of the East Coast of Australia. He observed:

"...the woods are free from underwood of every kind and the trees are at such a distance from one another that the whole country...might be cultivated without being obliged to cut down a single tree."(Cook 1770 in Gammage 2011, 5)

Cook's observations may reflect the Indigenous land management practice of frequent burning. Later, colonial observers such as Edward Curr emphasised the land management practices of Indigenous people. As Curr observed, "it may perhaps be doubted whether any section of the human race has exercised a greater influence on the physical condition of any large portion of the globe..." (Curr 1883, 189-90 in Gammage 2011, 1).

Robinson's accounts of the Ballarat region suggest that Wadawurrung groups employed these land management practices. Robinson describes "bare or bald hills" and "grassed open forest" throughout the region, which may suggest the management of vegetation through traditional burning practices (Robinson 1840, 48).



#### 6.5.1.5 *Moiety organisation*

Wadawurrung clans moved around the landscape and interacted with broad networks within the Kulin nation. Whilst identity was shaped by affiliation with a single clan or language group, it was also influenced by interactions with other groups. Marital and political ties were shaped by the overarching structure of patrilineal moiety organisation (Barwick 1984, 101). The groups of the Kulin identified with one of two 'moieties', waa (crow) or bunjil (eaglehawk) (Eidelson 2014, xv). The *Wada wurrung Gerarlture* clan's moiety is unknown, however the *Wada wurrung balug* belonged to the Bunjil moiety (Clark 1990, 333). Moiety affiliation was fixed at birth and patrilineal (Barwick 1984, 106). Marriage partners were obtained from the opposite moiety.

Moiety organisation extended Wadawurrung networks beyond a single geographic region, and "travel and trade with more remote areas were encouraged by the resulting web of kinship ties uniting all Kulin clans in a far-flung confederacy" (Barwick 1984, 105).

#### 6.5.1.6 *Movements, meetings and camps*

The Wadawurrung had a complex network of interactions with other language groups in the area. Occasionally, these interactions were hostile: Parker observed in 1841 that the Borumbeet balug, a Wadawurrung Clan, was in a state of hostility with the neighbouring Djadja wurrung group (Parker 1841, VPRS 12). Similarly, William Buckley participated in a number of violent clashes between the Wadawurrung and the Woi wurrung (Buckley 1837, SLV MS13483).

The Wadawurrung people would have also met peacefully with surrounding groups, often in big numbers. Several sources attest that the Melbourne and Port Phillip area was a focal point for these meetings. According to Thomas, part of the affiliation with other groups was through corroborees held at new and full moon, and intertribal meetings, which were held every few months (Thomas 1854 in Francis 1898, 97). Clans would have gathered during specific times of the year for resource gathering to enact social rituals, such as coming-of-age. These meetings were important congregations that fulfilled a myriad of social functions, including arranging marriages, discussing politics and resolving disputes. These meetings also served as a forum for the exchanging of goods between the different groups (Broome 2002). Robert Smyth, an early colonial observer, recounts a meeting of clans on land outside Melbourne, which included groups from Wadawurrung language group:

The groups were arranged indeed as if they had been set by compass. At a great encampment formed on a hill about three miles north-east of Melbourne there were assembled, more than thirty years ago, eight tribes - in all about eight hundred blacks... though each man has to supply his wants from the forest, where all is common property, there is seldom a dispute, and rarely is an angry word used. (Smyth 1878, 124)

Accounts such as Smyth's demonstrate the frequent peaceful interaction between neighbouring Aboriginal groups, as well as the strict social practices which governed their interactions. Furthermore, the Melbourne region was a focal point for groups such as the Wadawurrung to interact with other language groups and clans from the surrounding area.

Similarly, camps formed a major part of traditional life. Thomas describes the activities associated with constructing and inhabiting a camp:

...all are employed; the children in getting gum, knocking down birds etc; the women in digging roots, killing bandicoots, getting grubs etc; the men in hunting kangaroos, etc, scaling trees for opossums etc...in warm weather, while on tramp, they seldom make a miam – they use merely a few boughs to keep off the wind, in wet weather a few sheets of bark make a comfortable house. In one half hour I have seen a neat village begun and finished. (Thomas n.d. in Gaughwin and Sullivan 1984, 93)

Camps were generally established for a few days at a time. Campsites were mostly located on areas of higher ground, and often “on the banks of rivers and creeks” (Hovell 1826 7, 46).

Huts, or miams, are recorded in the region by several colonial observers. They are variously described as “well-constructed” (Robinson 1841 in Frankel and Major 2014, 140) or alternately “frail but answers well their purpose” (Thomas n.d. in Frankel and Major 2014, 141). Thomas also commented that a “village of good waterproof huts could be constructed in less than an hour” (Thomas n.d. in Frankel and Major 2014, 141). William Thomas describes the construction of native huts as follows:

...a few slats of bark cut in a few minutes...these slats of bark are about 6' long oblique raised to the angle of about 20 degrees windward, every alternate sheet is reversed so no rain can enter the sides are filled up with short pieces of bark and brush and a sheet of bark at the top...A good miam will hold 2 adults and 3 children- they are not permanent [they] are knocked down or burnt on breaking up the encampment. (Thomas in Gaughwin and Sullivan 1984, 94)

In his recent work *Dark Emu*, Bruce Pascoe synthesises accounts such as these and concludes that such a “welter of evidence” suggests that “housing was a feature of the pre-contact Aboriginal economy” that is often neglected by modern commentators (Pascoe 2014, 73). Thomas’ accounts confirm that Aboriginal groups in Victoria followed this pattern and constructed buildings that were “not just functional occupation centres but places of solace and comfort” (Pascoe 2014, 73).

## 6.5.2 Post contact

### 6.5.2.1 Early Encounters

Contact between the Wadawurrung people and European settlers began in the early 19<sup>th</sup> century. First contact in this region is likely to have occurred between Indigenous people and sealers and whalers operating off the coast (Coutts, Witter and Parsons 1977, 20). These encounters are not well documented, but it is reasonably likely that the Wadawurrung people would have encountered Europeans on the western shores of Port Phillip Bay. Contact occurred between the coastal Wadawurrung clans and Lt. John Murray from the *Lady Nelson* in 1802, and again when Mathew Flinders climbed the You Yangs in 1802 (Clarke 1990, 277). Another encounter is documented on the bay between parts of Lt David Collins’ survey and the Wadawurrung people in 1803 (Broome 2005, 5). Later, the same survey party clashed with 200 Wadawurrung warriors on the Werribee River. One Wadawurrung warrior was shot by a member of the survey party (Broome 2005, 5; Clarke 1990, 277).

In 1835, permanent European settlement began in the Port Phillip region. On the 6th June 1835, John Batman arranged the signing of a 'treaty' with spokespersons from Woi wurrung and adjacent clans, in order to purchase the land now occupied by Melbourne. It is unclear whether

the Aboriginal people involved understood the nature of the contract: it is likely that the Woi wurrung and Boon wurrung considered the transaction of goods to constitute a *tanderrum* ritual, which granted “permission for temporary access” to the area (Barwick 1984, 107). The treaty was declared invalid by the New South Wales colonial government only a few months later (Eidelson 2014, xvi).

These initial encounters were the beginning of a process of dispossession and settlement that caused devastating changes to the lives of Aboriginal groups throughout the region. During these initial colonial incursions, Aboriginal lands were “taken from them at the mere will of the British Government, and sold or let to strangers without any reference” to their needs (Dredge 1845, 29 in Broome 2005, 74).

#### *6.5.2.2 The Protectorate*

Throughout the nineteenth century and later, the lives of Aboriginal people in this geographic region were greatly impacted by various government policies of Aboriginal ‘protection’ and ‘management’. The first of these was the Port Phillip Aboriginal Protectorate, which sought to lessen the impact of European settlement on the Aboriginal people of the Port Phillip District (now Victoria). The Protectorate consisted of Chief Protector George Robinson and four Assistant Protectors. Their task was to physically protect Aboriginal and also to “civilize them, to teach them agriculture, house-building and other white employments, to educate them to a settled European life style and to convert them to Christianity”.(Robinson in Eidelson 2014, xvii). A letter from Sir George Grey appointing the four Assistant Port Phillip Protectors in 1838 provides an insight into the aims of the Protectorate:

“It will be your duty generally to watch over the rights and interests of the natives and to endeavour to gain their respect and confidence. You will, as far as you are able by your personal exertions and influence, protect them from any encroachments on their property and from acts of cruelty, oppression, or injustice.” (Sir George Grey to Assistant Protectors, 6 February 1838, PRO London CO 202/38.)

The Wadawurrung people were under the ‘protection’ of E.S. Parker, with C.W Sievewright representing the Geelong or Western Districts more generally. The Chief and Assistant Protectors travelled widely during their tenure, and their diaries provide some of the most detailed information about early Aboriginal life in the region. They also, however, convey the devastating effects of colonial settlement on the Indigenous groups in Victoria, including the Wadawurrung.

#### *6.5.2.3 Pastoralism and the colonial frontier*

Aboriginal dispossession was facilitated in this geographic region by the occupation and modification of the land by Pastoral settlers. Robinson observes that Wadawurrung land surrounding Ballarat was particularly suited to pastoralism: it could support cattle or sheep because it was “thickly covered with grass” (Robinson 1840, 46). Pastoral settlements were necessarily situated on fertile ground near watercourses: these were also the areas occupied by Aboriginal people (Karskens 2013, 106). Pastoralists both took land cleared by Indigenous burning practices, but also significantly cleared modified land themselves (see Gammage 2011, 2).

Whilst some pastoralists maintained friendly relationships with Indigenous groups, pastoral expansion often led to violent conflicts. Robinson's diaries from a journey into Wadawurrung country detail a number of robberies and more violent conflicts between Indigenous people and colonial settlers. The frequency and violence of these incidents in Robinson's accounts suggests that the breakdown of relations between Aboriginal people and settlers occurred soon after the "sudden ingress of pastoralists" (Ford and Roberts 2013, 138) in the area. Pastoral 'squatters' who claimed unoccupied land further intensified these conflicts. The squatters came to occupy so much land that Robinson suggested that the protectorate should establish additional reserves "to afford an asylum...from the wide-spreading encroachments and cupidity of the squatters" (Robinson to La Trobe, 12 December 1839).

Dispossession of the land by pastoralists caused structural changes within Aboriginal societies, affecting traditional lifestyles, living arrangements and social practices (Standfield 2015, 52). Robert Smyth, an early colonial observer, observed that:

"The ancient land marks were obliterated, the ancient boundaries had ceased to have any meaning, and the people, confused and half-stupefied by the new and extraordinary character of the circumstances so suddenly forced upon them, almost forgot the duties and their tribal laws imposed upon them when they were brought face to face with strange blacks." (Smyth 1878, xviii-xix).

Smyth's account reflects the extent to which dispossession and displacement deprived Indigenous people not only of their knowledge of the land, but their ability to make sense of their surrounding networks. Indigenous ways of knowing prior to contact were fundamentally shaped by "place and environment" (Horne and Sherington 2013, 367). As Gammage writes, these Songlines or ways of knowing are understood through land and "show the Dreaming's grounding in the land and its creatures." (Gammage 2011, 135). They are "also a map, compass and calendar" (Gammage 2011, 135). Removal from this land not only limited access to "sites of social, legal and cultural importance", (Banivanua Mar and Edmons 2013, 359) but also severed them from these ways of knowing.

Colonial settlement also had a devastating effect on the Wadawurrung population. Their population was estimated as 275 in 1837, 118 in 1842, and only 30 in 1852 (Broome 2005, 91). These estimates vary from source to source, although most sources estimate the Wadawurrung numbers to be approximately 300 at the time of contact (Clark 1990, 309). This constituted a 90% decline in population. This decline in population is likely to have been caused by violence, the destruction of food resources and the introduction of disease into the geographic area. As Robinson notes in his travels through Wadawurrung county:

"The blacks told Mr McCleod that there were no Murnong about Geelong. It was like Port Phillip, all gone. The Bulgany and sheep eat it all." (Robinson 1840, 46).

The destruction of traditional food sources due to pastoral activity would have severely disrupted the traditional lifestyles of the Wadawurrung people. Pastoralism also introduced a range of diseases to the area, against which the traditional owners would have had little immunity or defence. In 1839, Assistant Protector Dredge observed that much of the Indigenous population was "suffering dreadfully from destructive diseases" as a result of colonial settlement (Dredge (1839) in Macfarlane 1983, 428). Clearly, the disruption of traditional practices in this region had



a widespread and sometimes fatal effect on the Wadawurrung people. This process was only to be accelerated with the discovery of gold in the region in 1852.

#### *6.5.2.4 The Abolition of the Protectorate*

The Victorian Gold rush was closely preceded by the abolition of the Port Phillip Aboriginal Protectorate. The Protectorate had received widespread criticism for its expenditure and ineffectiveness throughout the 1840s. The widespread impression that the Protectorate had “done more harm than good” culminated in an official enquiry in 1849 by a Select Committee (NSW Legislative Council 1845, 15). It was concluded that the Protectorate had not achieved its stated aims, and in 1849 the Port Phillip Aboriginal Protectorate was dismantled (Christie 1979, 137).

The abolition of the Protectorate was followed by a decade of “almost complete government neglect” of the Aboriginal people of Victoria (Christie 1979, 136). In 1852 the colony spent only £1658 on Aboriginal affairs, compared with £7967 in 1842 (Christie 1979, 207). These figures exclude approximately £6000 spent on native police in the goldfields regions. In the place of planned policies, the Select Committee on Aborigines and the Protectorate decided that public money could be better spent promoting “the interests of religion and education among the white population in the interior” (NSW Legislative Council 1849). These recommendations reflect a widespread disenchantment with state assistance to Aboriginal people and an overwhelmingly *ad hoc* approach to Aboriginal policy.

#### *6.5.2.5 Wadawurrung on the goldfields*

As well as triggering widespread changes throughout colonial society, the Victorian Gold Rush also accelerated the dispossession of Indigenous people from their traditional lands (see Blainey 1969). As David Goodman observes, ““The gold rushes were, among other things, an extraordinarily effective invasion” (Goodman 2013, 170). In Wadawurrung country, the discovery of gold made areas such as the Ballarat region “the general rendezvous of a mixed multitude”, who proceeded to claim and occupy large areas of land for prospecting and mining purposes (La Trobe to Grey, 2 March 1852). In September 1851, there were 532 licensed diggers in the Ballarat area (Clark 1955, 78). By March 1853, this number had risen to 7,085 (Clark 1955, 78). In 1854, the population of Ballarat itself was 16,684, the largest of any goldfield district (Clark 1955, 79). Many of these prospectors and diggers would have further disrupted traditional life by occupying areas previously utilised by the Wadawurrung.

Gold mining would have also significantly modified the landscape of Wadawurrung Country. Gold mining required the earth to be “dug, washed for gold and left in barren mullock heaps” (Gaynor 2013, 282). Alluvial mining also required the modification and redirection of waterways (Davies, Lawrence and Turnbull 2015).

Whilst the Gold Rush was fundamentally an act of dispossession, there is emerging evidence that the Wadawurrung participated in and even benefited from gold mining. In a new work examining the experiences of Aboriginal people on the Victorian goldfields, Fred Cahir argues that “the importance of Aboriginal people’s participation on the goldfields cannot be overstated” (Cahir 2012, 2). For example, there is considerable documentary evidence that the Wadawurrung played an important role as guides to the goldfields or potential sites of new

discoveries (Cahir 2012, 39). The goldfields also facilitated a degree of cohabitation between Indigenous people and non-indigenous miners.

#### 6.5.2.6 *The Central Board*

Despite official disinterest in Aboriginal issues, a number of groups continued to propose reform during the 1850s. Following a public discussion on annual expenditure for Aboriginals in the Victorian Parliament, an editorial in the *Argus* charged that “this country has been shamelessly stolen from the blacks...an act of as mean and cowardly tyranny...as the world ever saw” (Argus, 16 March 1856, 4). The *Argus* proposed that the Victorian government should “feed and clothe every one of them” and establish “great centres for their concentration (Argus, 16 March 1856, 5). This approach was echoed by a number of religious groups advocating the establishment of indigenous missions or central training schools (Christie 1979, 151).

This public debate led to the creation of a new government body for the control of Aboriginal people in Victoria. In 1858 a Select Committee was appointed “to inquire into the present condition of the Aborigines of this colony, and the best means of alleviating their absolute wants” (Argus, 28 October 1858). This committee advocated for the isolation of Indigenous populations, the establishment of schools, and if necessary, the removal of children from their parents (Christie 1979, 155). In 1860, the Victorian Government introduced The Central Board for Aborigines to carry out a “co-ordinated Aboriginal programme” (Christie 1979, 155). The Central Board, on its establishment, stated that it aimed “to supply them with food and shelter; to protect them as far as possible from contact with the debased among our own people; and to provide instruction for the children, black and halfcaste” (Central Board for Aborigines 1862).

The Board carried out these aims with the establishment of reserves and missions throughout Victoria. In Wadawurrung country, the Board gazetted Aboriginal reserves at Steiglitz, Karngun and Mt Duneed (Clark 1990, 318). In 1863, the Coranderrk Aboriginal Station was established in the area of present-day Healesville on the land of the Wurundjeri-willam. The original occupants of the station were Woi wurrung and Daung wurrung speaking people, although later groups such as the Wadawurrung settled at the station (Barwick 1998, 8).

In the decades following the establishment of these reserves and missions, the Victorian Government established additional control over its Indigenous population using legislation. The Aboriginal Protection Act 1869 allowed the Victorian government to control over where Indigenous people could live and work, and regulated who they could marry or associate with (Museum of Australian Democracy 2001). Perhaps the most devastating attempt to regulate Indigenous Culture was the 1886 ‘Half-Caste’ Act. This Act ordered the removal and assimilation of ‘half-caste’ Aboriginals from reserves and missions into white society. This law, according to Christie, “aimed at removing the Aborigines as a distinct and observable group, with its own culture and way of life” (Christie 1979, 205).

#### 6.5.2.7 *The Duneed Aboriginal Reserve*

The Duneed Aboriginal Reserve (VAHR 7721-0903), comprising one acre of Government land along the northern branch of Armstrong Creek, was established on 29 June 1861 (Felton 1981, 199), 10 km north of the current activity area. The reserve was established as a means to stop Aboriginal people entering the township of Geelong, forcing them to remain within the Duneed Aboriginal Reserve. As J.M. Garratt, an Honorary Correspondent writes:

“the remnant of the Geelong or Barabool 'tribe' and a few of the Colac blacks used to come into Geelong every day but by regulation had to leave the town every evening at sundown for their camps near Mount Duneed” (McCann 1918: 190, cited in Clark 1990: 301-2).

The Duneed Aboriginal Reserve was revoked in 1906, although Hanrahan (1984: 8) indicates that the reserve was open until 1948 (Clark 1990: 307).

Currently, the Wadawurrung Traditional Owners Aboriginal Corporation (WTOAC) is the Registered Aboriginal Party for land encompassing the activity area, and has both a cultural and a legal role in cultural heritage decision making.

## 6.6 Environmental context (landforms and geomorphology)

Archaeological assessment reports include information about the environmental contexts of study areas because these contexts will have influenced both the type and availability of natural resources and the types of cultural activities that were carried out in any given area in the past. Determining the past environmental context of an area is essential to the development of accurate models of cultural activity, site distribution patterns, and archaeological potential. The environmental setting of the activity area is discussed below.

### 6.6.1 Landscape

The activity area lies within the drainage catchment of Deep Creek with a landscape comprising of low rises and partially cleared aeolian plains. It is utilised as pastoral land with a stables' exercise oval, private residences with landscaped gardens, modified drainage, internal fence lines and rows of non-indigenous evergreen and indigenous trees lining many of the property boundaries and driveways in the activity area. Significant alteration to the natural landscape has occurred from residential developments of the area, however a distinct slope towards Deep Creek is noted in adjacent CHMP 12805 (Thomas et al, 2014, 22).

### 6.6.2 Published geological information

Geological and soil landscape mapping provides a useful insight into the expected conditions within the activity area, but due to the scale of the mapping (1:50,000) it is not a reliable predictor of conditions on the ground at any given place. Ground truthing is usually required to confirm geological and soil types.

The activity area is wholly underlain by the Torquay Group (Nt) geological unit (Figure 7). The unit comprises sandstone, shale, then shallow-marine calcarenite; limestone, clayey limestone, marl and calcareous clay (Geoscience Australia, 2018). There are several greenstone quarry sites in the general region, including Dog Rocks Quarry, Gleeson Hill and Georges Hill.

### 6.6.3 Geomorphology and soils

The activity area is part of the Aeolian Plains and Plains with Low Rises (Duck Hole Plain, Irrewillipe, Hanson Plain) (6.2.4) geomorphological unit. This unit comprises sedimentary undissected sand plains with very low rises, often present in a 'window' through the volcanic

basalt plain. Associated soil types are generally infertile and include sodic and non-sodic mottled texture contrast soils, and pale or grey sandy soils with coffee rock or clay at depth.

Also present in the general area is the Dissected Plains (6.2.2) morphological unit, which refers to ridges and swales of strand lines left by the retreating late Tertiary sea. Associated soil types include acidic gradational soils, some sandy and some with high organic matter (Agriculture Victoria 2018).

### 6.6.4 Vegetation

Published information on vegetation, biodiversity, and ecological vegetation class (EVC) benchmarks is available on DELWP's website (2018a). It provides a good indication of the prevailing vegetation patterns prior to European occupation and clearance of the land, and comparison with current EVC mapping (Figure 8) (DELWP 2018b). The activity area is solely within the Grassy Woodland EVC (EVC 175).

The activity area is in an ecotone, situated within the Heathy Woodland/Sand Heathland Mosaic and Grassy Woodland EVCs.

The Heathy Woodland/Sand Heathland Mosaic is generally associated with nutrient-poor soils and quartzite gravel. This is a eucalypt-dominated low woodland (predominantly Stringybark), with sparse groundcover.

Grassy Woodland is defined as a variable open eucalypt woodland to 15m tall or occasionally Sheoak woodland to 10m tall over a diverse ground layer of grasses and herbs. The shrub component is usually sparse. It occurs on sites with moderate fertility on gentle slopes or undulating hills on a range of geologies. Tree canopy would have averaged around 15%, dominated by eucalypt and casuarina. Kangaroo and tussock grass would also have been present in the understory (DELWP, 2018).

The 2005 EVC mapping indicates that only a portion of native vegetation is likely remnant within the activity area, focussed along the Deep Creek embankment (Figure 8).

### 6.6.5 Fauna of the geographic region

The environment of the geographic region is supported a vast range of fauna: Macropodidae (kangaroos and wallabies); Phalangeridae (possums); Dasyuridae (quolls and marsupial mice); *Phascolarctos cinereus* (koala); *Vombatus ursinus* (common wombat); *Ornithorhynchus anatinus* (platypus); *Tachyglossus aculeatus* (short-beaked echidna); Peramelidae (bandicoots); Emballonuridae, Molossiadae, Pteropodidae, and Vespertilionidae (bats); Agamidae (lizards); Elapidae (snakes); and *Canis lupis dingo* (dingo) (Museum Victoria, n.d.). Numerous ethnohistorical sources identify the wide presence and extent of faunal species utilised by the region's Aboriginal population.

### 6.6.6 Climate

The climate of the geographic region has been relatively stable for the last five thousand years with warm, dry summers and mild, wet winters. Prior to approximately ten thousand years ago,



particularly at the end of the Last Glacial Maximum, conditions were cooler and drier than today (Museum Victoria, n.d.).

Victoria is within a Temperate Zone, characterised by a warm summer and cool winter; autumn and spring being the mildest seasons with short, occasional rainfall (Museum Victoria, n.d.). The mean maximum temperature is 26.3°C in January, falling to 13°C in July. The annual rainfall is 586 mm a year (BOM, n.d.).

These climatic conditions, in addition to historical climatic extremes, prevailing winds, and variation in water abundance, will have influenced settlement patterns (BOM, n.d.).

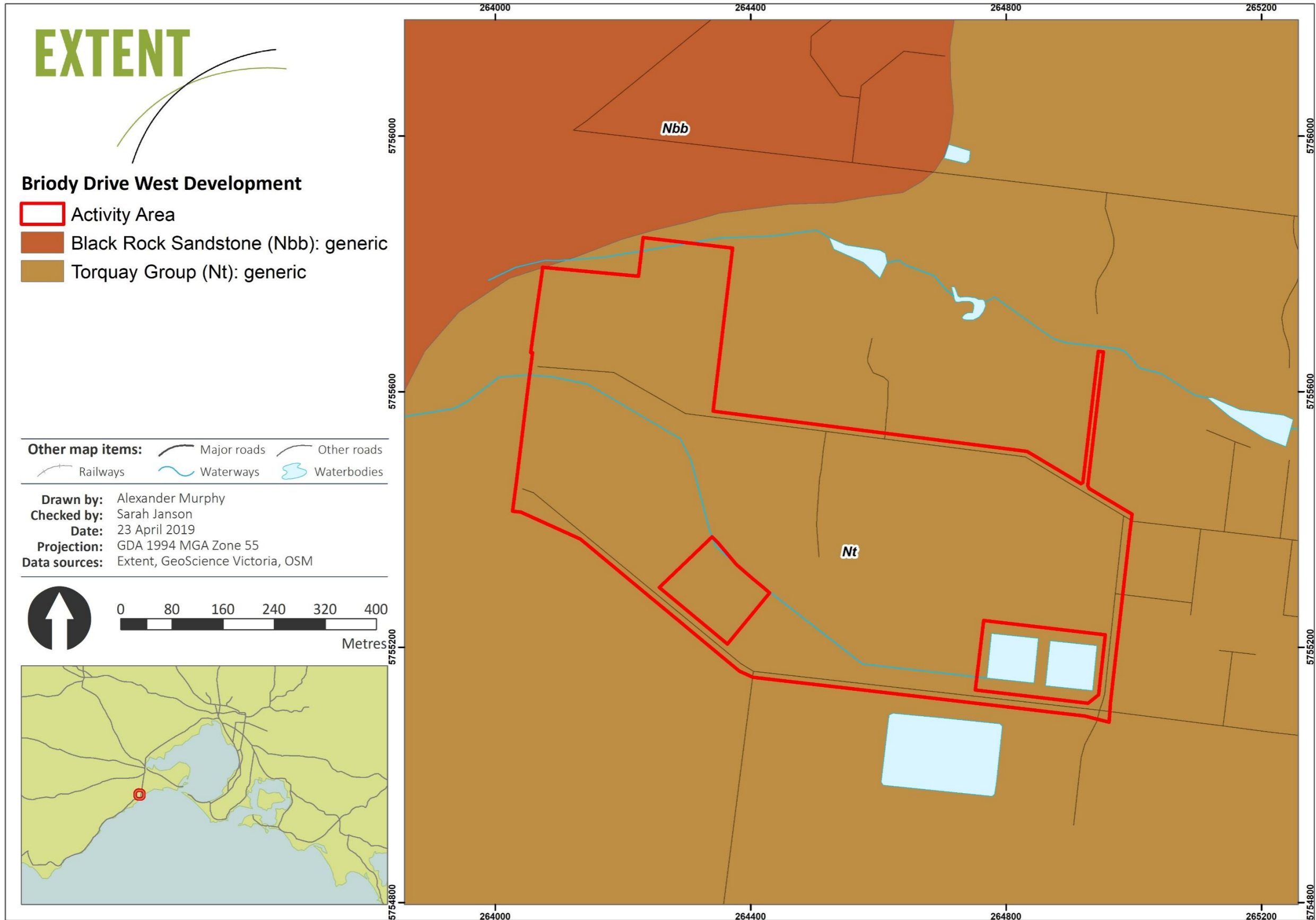


Figure 7. Published geological mapping.

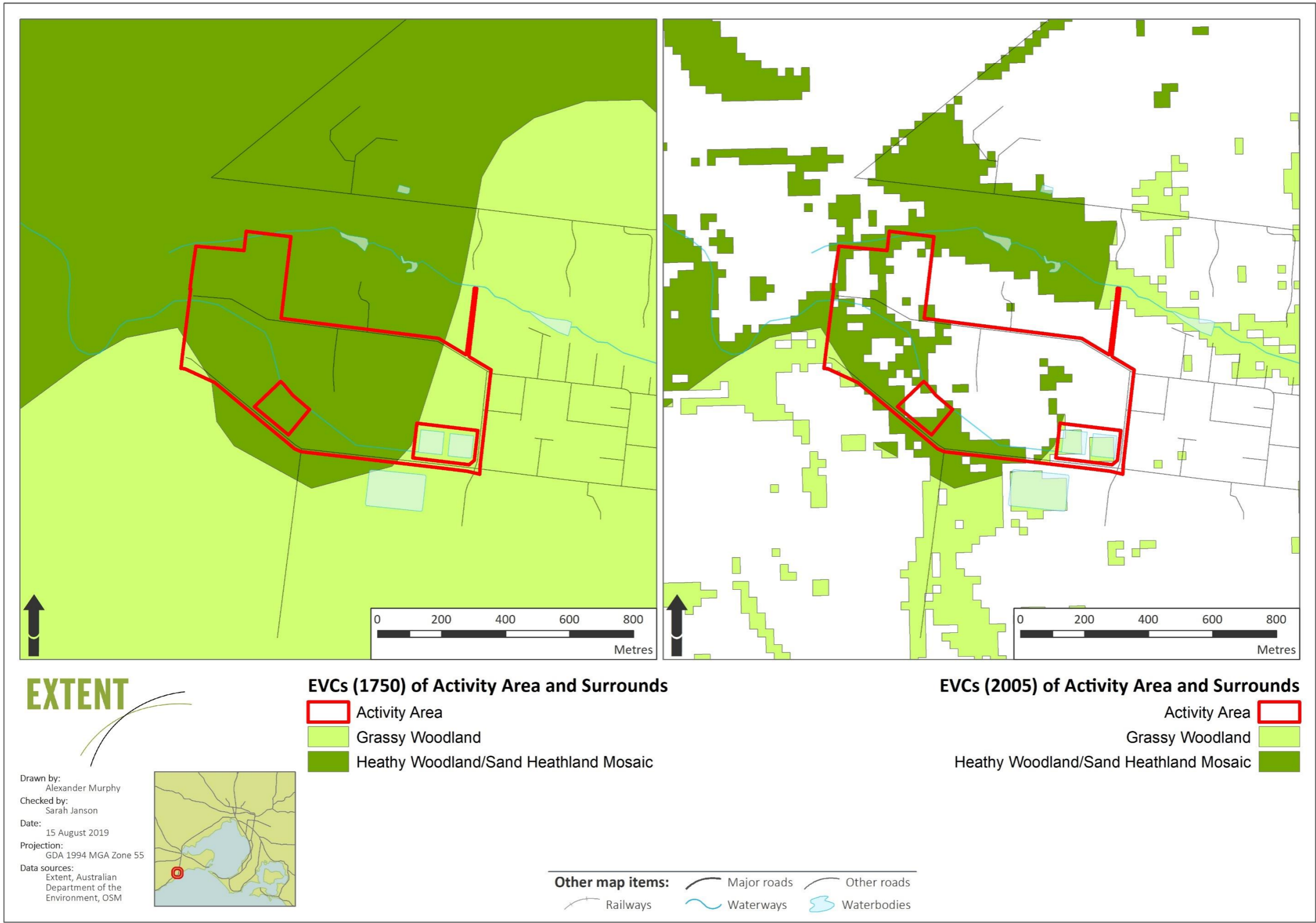


Figure 8. Pre-1750s and 2005 EVCs within the activity area (Source: DELWP 2018b).

### 6.6.7 European land use and disturbance history

Squatters entered the region surrounding what is now known as Torquay around 1834-37 after reports of a favourable landscape for sheep pasturage. Early maps indicate the activity area straddled the area between John Armstrong's sixteen square mile sheep station and the six square mile *South Beach* sheep station, established by North and Grass in 1838 (Spreadborough & Anderson 1983: 270). By 1857, *South Beach* been subdivided and the land where the activity area is located selected by James Gleeson (Figure 9). A map notation shows that at this time the area along Jaar-Nu-Ruc Creek (now Deep Creek) was still, "thickly timbered with Gum, Stringybark and She Oak".

The area remained on the outskirts of the growing settlement to the south along Spring Creek. The township had various early names, including Jan Guck (after Jan Juc Creek), Puebla and Spring Creek before officially being gazetted as Torquay in 1892 (Everist 2005, 143).

The activity area continued to be subject to pastoral and agricultural activities until after the mid twentieth century when the area became increasingly urbanised. Primary land uses within the activity area were pastoral and agricultural with some cultivation. Since then there has been an increase in residential development in the vicinity of the activity area, including the construction of and properties along Briody Drive. This has included the excavation and grading to create roads, install utilities and other subsurface services which will have significantly disturbed these areas.

The analysis of a 1947 historical image (see Figure 10), compared with those from high resolution current aerial photography, dated 2010 and 2019 (Figure 12 and Figure 13), confirm the wide-scale land disturbances of the activity area and its surrounding landscape. These images identify the clearance of vegetation, planting of introduced vegetation species along property boundaries and ground disturbance for development of houses, trackways and roads.



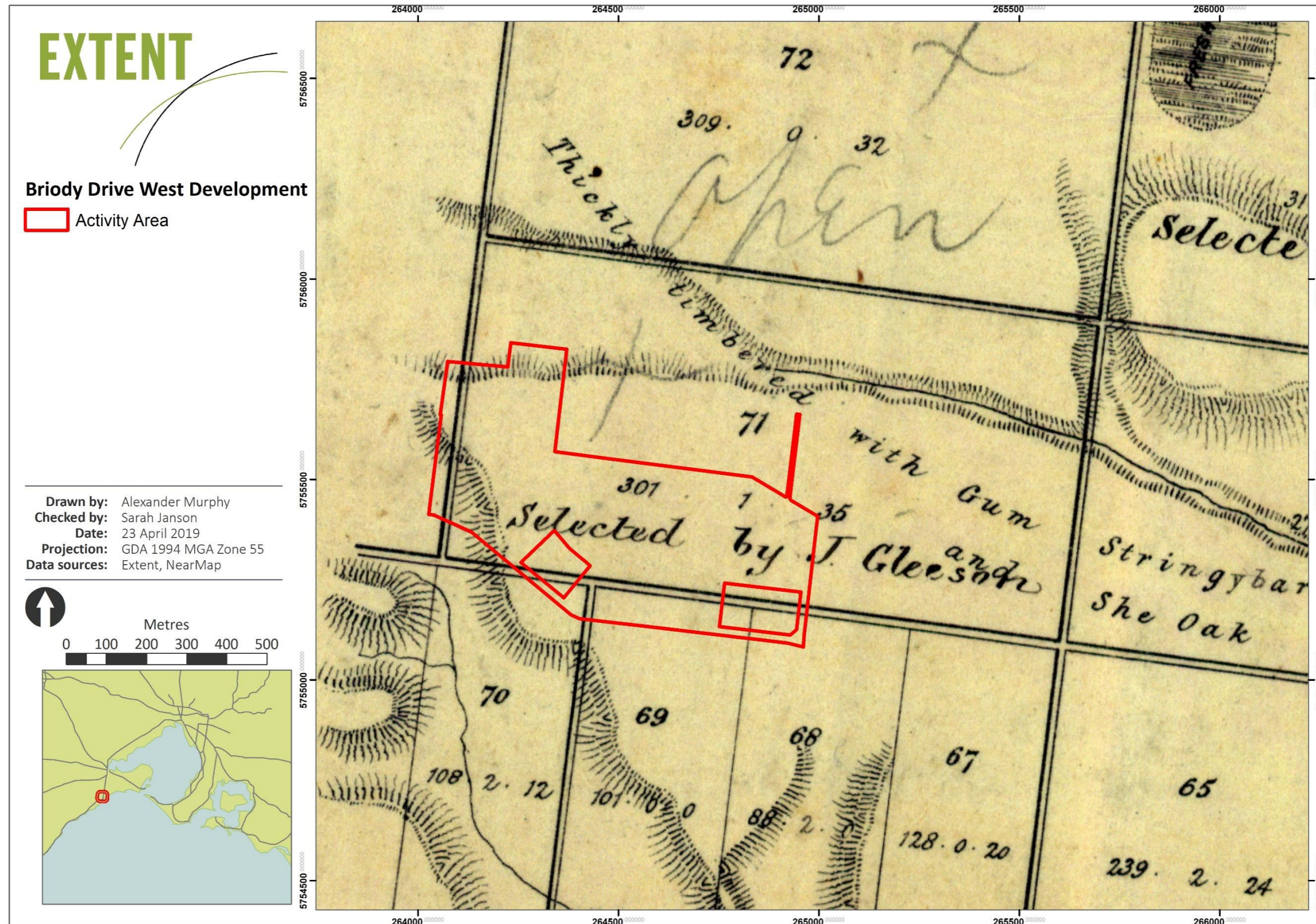


Figure 9. 1857 historical plan of allotments (Image source: 1857 Country lots in the Parish of Puebla, County of Grant, Victoria Surveyor General's Office).



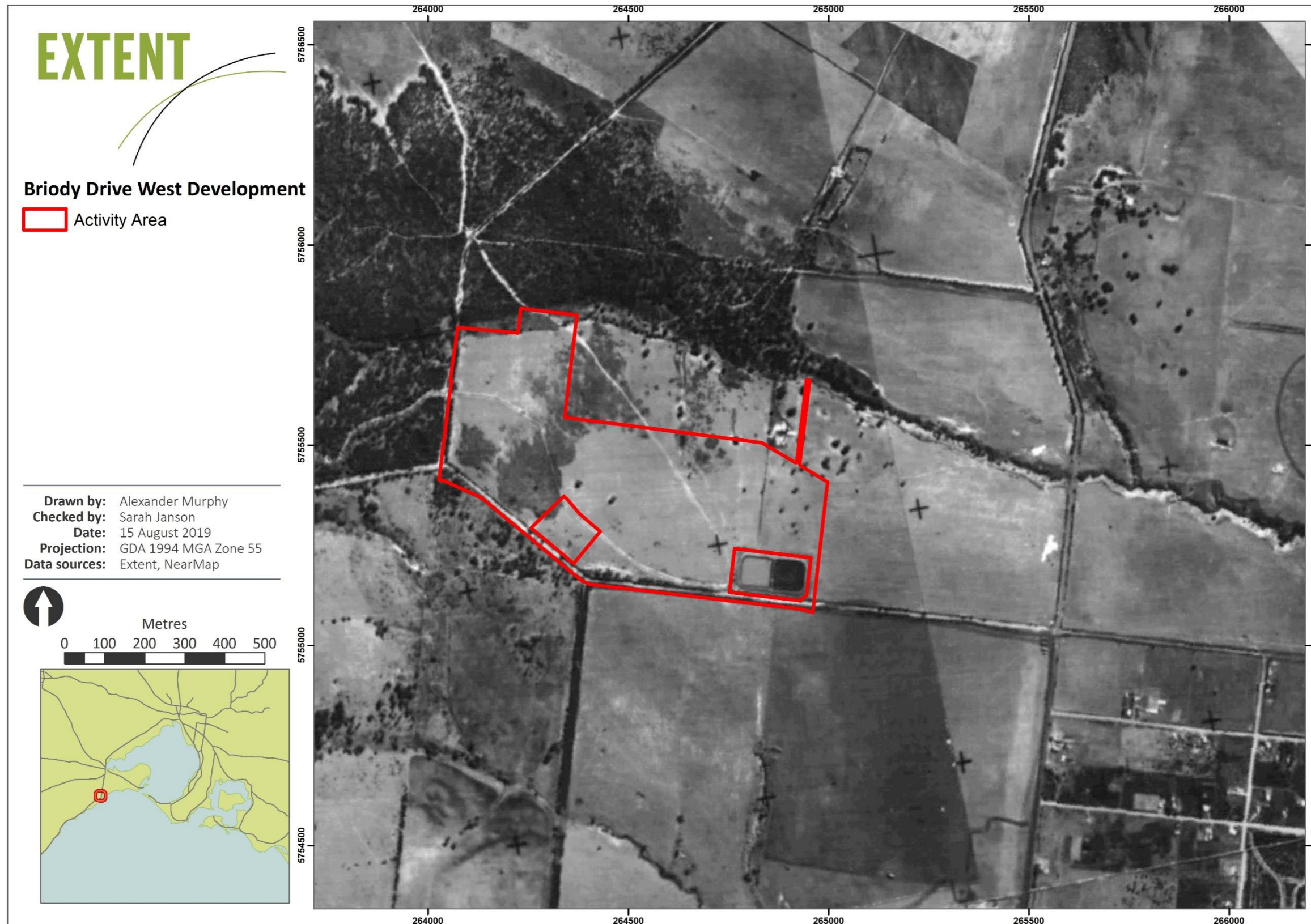


Figure 10.1947 historical aerial photography and conditions (Image source: Land Vic Project Ref. 7721S6 866/7 Run 4 Film 716 photo 93).



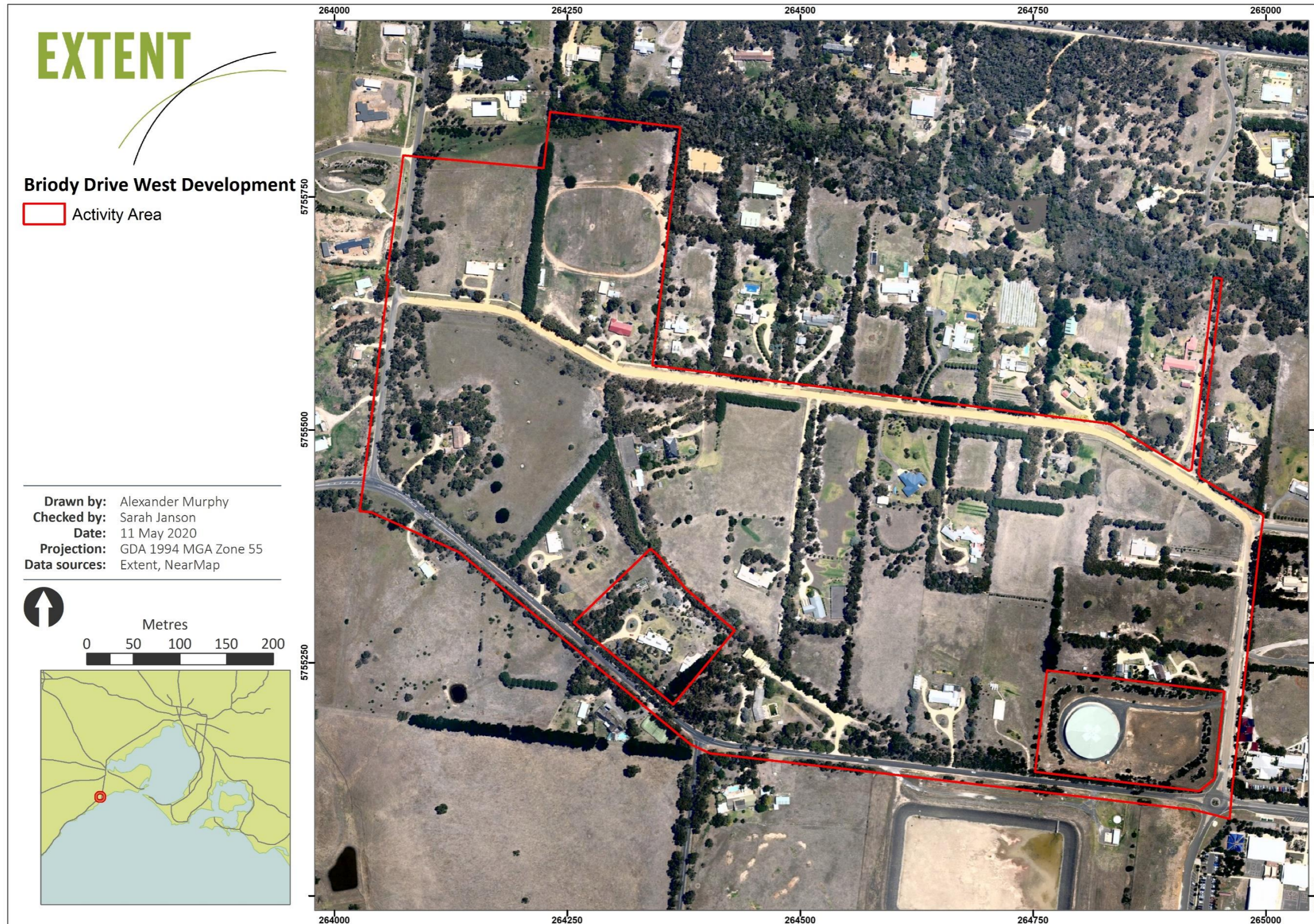


Figure 11. 2010 aerial photograph of the activity area.



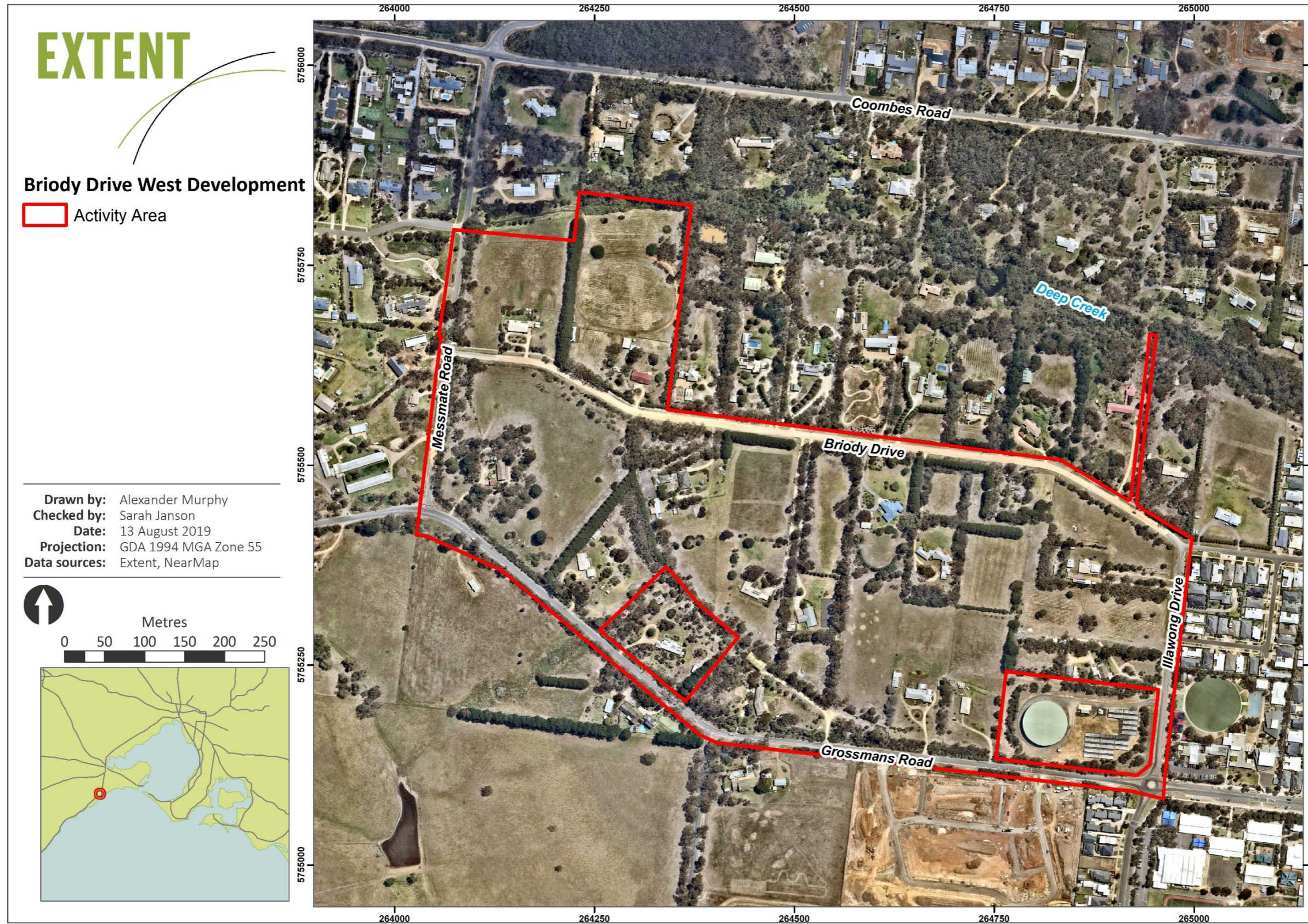


Figure 12. Recent aerial photograph (2019) of the activity area.



## 6.7 Desktop assessment conclusions and predictive statement

An archaeological prediction statement has been developed, based on the desktop assessment including a review of recorded Aboriginal places, archaeological context, environmental context, and the history of Wadawurrung occupation in the region. The site prediction statement targets landforms with archaeological potential that can be further investigated during a standard assessment. It identifies the following key points to be taken into consideration when designing the ground-survey strategy:

### *Water*

- The majority of registered Aboriginal places within the geographic region are located within 200m of a waterway.
- Aboriginal places have been recorded within 200m of Deep Creek and the activity area (VAHR 7721-0634, 7721-0536 and 7721-1260).
- There is a moderate to high potential for further Aboriginal places to be identified within 200m of Deep Creek on elevated land above the creek line.
- The density and complexity of artefact scatters and sub-surface deposits is likely to decrease with distance from water sources and wetlands.

### *Landform and slope*

- Aboriginal places that are within 200m of a waterway are also often found within elevated areas of nearby crests or spurs.
- Aboriginal archaeological places that are located further than 200m from a waterway are almost always on the upper slope or crest of a ridge or spur.

### *Geology*

- The activity area is underlain by the Torquay Group (Nt) geological unit. The unit comprises sandstone, shale, then shallow-marine calcarenite; limestone, clayey limestone, marl and calcareous clay.
- Soils are likely to be shallow deposits of sand and silty sand over a clay foundation.

### *Vegetation*

- One Aboriginal scarred tree has been registered within the geographic region, in what was Plains Grassy Woodland, or Heathy Woodland (EVCs 175 and 892).
- The majority of the activity area would have been associated with Grassy Woodland according to the pre-1750 vegetation models. However, recent aerial imagery indicates that most of the activity area has been stripped for agricultural purposes. Therefore, there is low potential for the presence of scarred trees within the activity area. This was confirmed by CHMP 12805.

### *Aboriginal place types*

- Low density artefact scatters are the most common Aboriginal place type within the geographic region.
- Vegetation removal would have caused sheet erosion and loss of topsoil. Artefacts in upper soil units may be removed or displaced.
- Isolated finds may be found anywhere across the landscape.
- There is the potential for Aboriginal artefacts, hearths and scarred trees to be found located within the activity area.

### 6.7.1 Conclusion

A review of previous reports, patterns of Aboriginal heritage in the area, geology, geomorphology, vegetation, landscape and land use history was undertaken in order to determine the potential of the activity area to contain Aboriginal cultural heritage.

Previous studies undertaken in the geographic region strongly indicate Aboriginal occupation was focused adjacent to permanent water, with a large number of Aboriginal Places identified within 200m of Spring Creek and its tributaries, located to the south of the activity area. Deep Creek, a lower-order waterway located adjacent to the activity area has been subject to only a limited number of previous studies, but three Aboriginal Places has been recorded along this waterway within 600 metres of the activity area.

In particular, CHMP 12805 was undertaken across most of the current activity area in 2014 as part of a similar proposed development as the current CHMP. This earlier study included extensive standard and complex-level investigation of the activity area and identified only a single low-density artefact distribution comprising two flaked artefacts from a shallow soil context within 200m of Deep Creek. The study concluded that the likelihood of further cultural material within the activity area was generally low, with any in situ deposits likely to be limited to the margins of Deep Creek. The land use history of the area includes removal of vegetation and extensive pastoral practice since European occupation which have likely resulted in erosion, surface and sub-surface disturbance and the consequential displacement of any Aboriginal cultural material that may be present.

In summary, the results of the desktop assessment indicate that it is possible that Aboriginal cultural heritage may be located within the activity area, as parts of the activity area are located within 200 metres of Deep Creek. The portion of the activity area most likely to contain cultural material is the proposed stormwater outfall, located within a council reserve within the north-eastern section. The place types most likely to be present within the activity area are artefact scatters and low-density artefact distributions (LDADs). The presence of culturally scarred trees is considered possible but unlikely due to previous land use practises.

*As it is reasonably possible for Aboriginal cultural heritage to be present within the activity area, as per r.62(1) of the Aboriginal Heritage Regulations, a standard assessment is required.*

## 7. Standard assessment

A standard assessment was conducted on 25 October 2019. The principle aim of the standard assessment was to assess landforms and disturbance levels across the activity area, whilst identifying any Aboriginal cultural material in a surface context. This information was used to assess the integrity (intactness) of natural soil profiles and identify any areas of archaeological potential. The standard assessment was conducted over a one-day period and was conducted in accordance with proper archaeological practice as set out in Regulation 63 of the *Aboriginal Heritage Regulations 2018*.

Extent Heritage staff and representatives of WTOAC who participated in the survey are listed below (Table 9).

Table 9. Personnel attending during the standard assessment.

Personnel	Organisation	Role	Date present
Elizabeth Hawksley	Extent Heritage	Project Supervisor/ Archaeologist	25 October 2019
Benjamin Bazley	Extent Heritage	Archaeologist	25 October 2019
Chloe Clarke	WTOAC	RAP representative	25 October 2019
Ash Skinner	WTOAC	RAP representative	25 October 2019

### 7.1 Methods

The standard assessment was conducted in accordance with the techniques described in Burke and Smith (2004) and prescribed by FP-SR. It was designed to comprehensively cover the relevant parts of the activity area, examining disturbance levels resulting from previous development and establishing potential for sub-surface testing. Digital photographs and field notes were taken during the survey in order to record ground conditions, specific locations and condition of areas of ground surface visibility and ground surface exposure, vegetation type, slope and potential Aboriginal place locations.

Mature indigenous trees were inspected for scarring, carvings or other modifications.

The scope of the standard assessment comprised of three components, which were agreed with the RAP during the inception meeting and are discussed in detail in Section 7.2 below;

1. Pedestrian survey of the Briody Drive stormwater outfall footprint;
2. A programme of auguring within the stormwater outfall footprint;
3. Vehicular and pedestrian survey of the road reserves of Briody Drive, Messmate Road, Grossmans Road and Illawong Drive

Note that because the majority of the activity area outside the road reserves and stormwater outfall had previously been subject to standard assessment during CHMP 12805, it was agreed with the RAP during the inception meeting that further survey in these areas was not warranted.

## 7.2 Coverage and Results

### 7.2.1 Stormwater Outfall footprint

The standard assessment in this area was completed by traversing the length of the proposed stormwater outfall area (located within a municipal reserve) by pedestrian survey (see Figure 13 and Figure 14). The outfall footprint was surveyed in order to identify exposed ground surfaces, disturbance levels and to locate any Aboriginal cultural material present. This part of the activity area comprised a narrow reserve approximately 220m in length and 8m wide, with a rough vehicular and pedestrian trackway extending down its length from Briody Drive northwards up to the edge of Deep Creek. Full survey coverage (100%) of the stormwater outfall footprint was undertaken with the team walking less than 2 m apart.

Table 10: Effective survey coverage during assessment of the stormwater outfall footprint

Survey Unit	Area surveyed (m <sup>2</sup> )	Area surveyed (%)	Ground surface visibility (%)	Effective Coverage (m <sup>2</sup> )
Aeolian plain	1706	100	40	682.4

The stormwater outfall area is characterised by a single plain landform, with a gradual decline of slope at the northern extent of the area, towards Deep Creek. The elevation of the outfall footprint ranges from 43.54m AHD to the south, to 38.39m AHD to the north, adjacent to Deep Creek. The reserve is predominantly covered in light scrub and grasses throughout the length of the area with an average ground surface visibility (GSV) level of 40%. The central part of the reserve has been heavily trampled from continuous pedestrian and vehicular usage, leaving it with a generally higher GSV of 80% along with parts of the western side of the area adjacent to a wire fence-line (see Figure 15 and Figure 16). A water pipeline was located during the DBYD; however, it was not identified during the standard assessment.

Ground disturbance of the outfall activity area appears minimal with general pedestrian trampling, along the centre of the access area (used as a public right-of-way); however, an imported clay fill has been imported in order to create a vehicle track over the creek. The most significant ground disturbance noted on along the stormwater outfall activity area is imported earthworks to provide a road surface over Deep Creek (as discussed further in 7.3.3); see Figure 17.

No Aboriginal cultural heritage was identified along the length of the municipal reserve in which the proposed stormwater outfall is located.





Figure 13. View north of Briody Drive stormwater outfall field survey.



Figure 14. View south of Briody Drive water outfall field survey.





Figure 15. Image of east fence line in public access area, showing low ground surface visibility levels.



Figure 16. Image of west fence line in public access area showing higher ground surface visibility levels adjacent to fence line.





Figure 17. Images of Deep Creek bridge (clockwise from upper left) of north, east and west views of Deep Creek.

### 7.2.2 Manual Auguring

Following discussions with WTOAC during the inception meeting, it was determined that manual auguring should be undertaken as part of the standard assessment, to inform our understanding of soil profiles and disturbance history within the stormwater outfall footprint. Five locations were chosen in consultation with the WTOAC field representatives along the public access path for the stormwater outfall (see Figure 18). A manual augur with 12cm wide drill blade was used, as per r.59(4)(f), to ensure compliance with FP-SR guidelines for auguring works during a standard assessment (Figure 19). All excavated material was sieved through a 5mm screen.

The soil profile in all five auger holes was a generally consistent mid-greyish brown loose silty clay A-horizon topsoil overlying a firm dark -brown B-horizon clay. The depths of the augers range from 25cm-35cm, becoming shallower near the creek. This soil profile is consistent with the profiles identified during complex assessment works undertaken by Ochre imprints for CHMP 12805. The auguring works confirmed the initial observations of the standard assessment survey; that the soil profile within the stormwater outfall area appeared to be largely intact and retained a moderate to high potential to contain Aboriginal cultural heritage. No Aboriginal cultural heritage was identified.



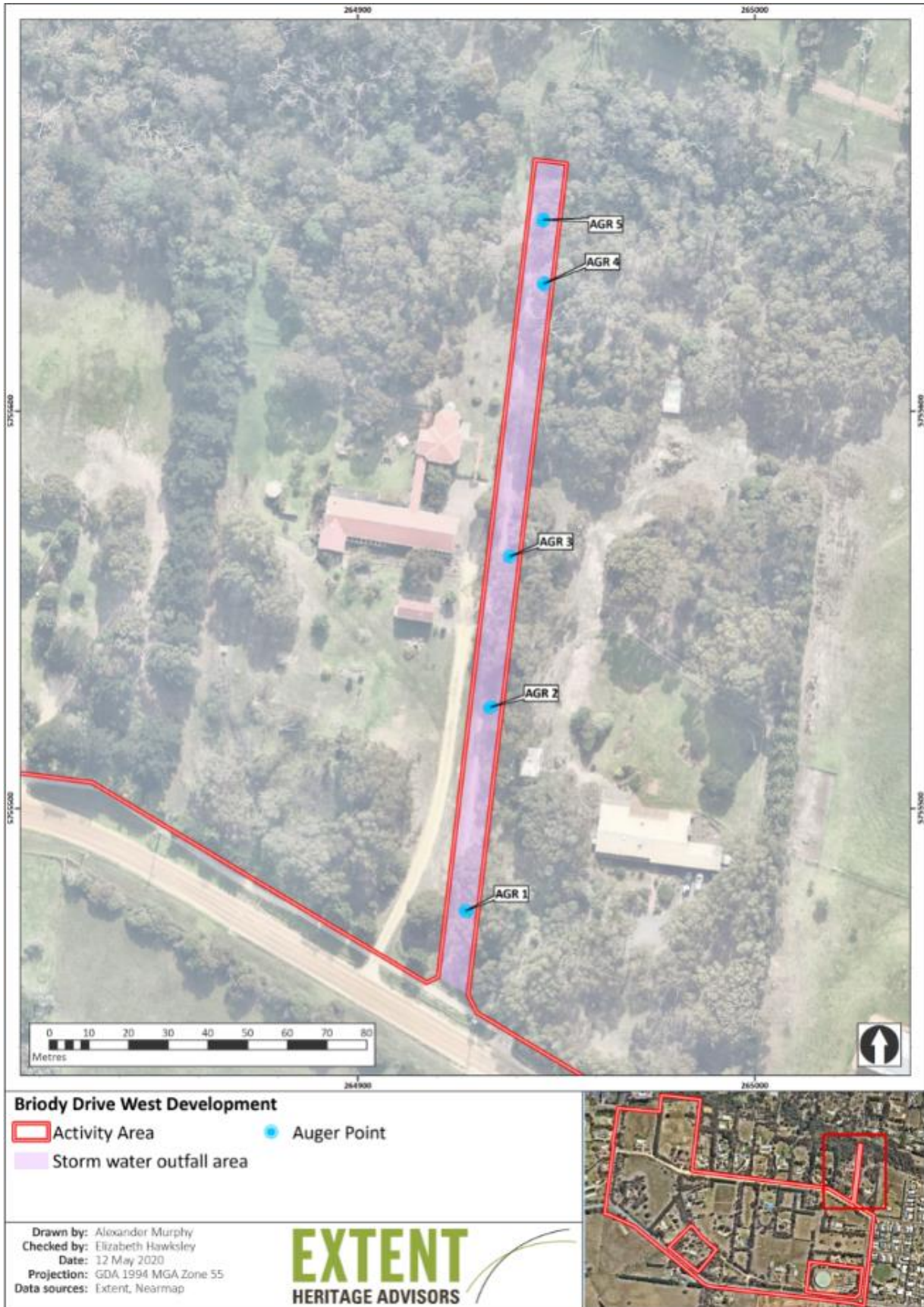


Figure 18. Location of auger holes and survey area along the stormwater outfall within the activity area



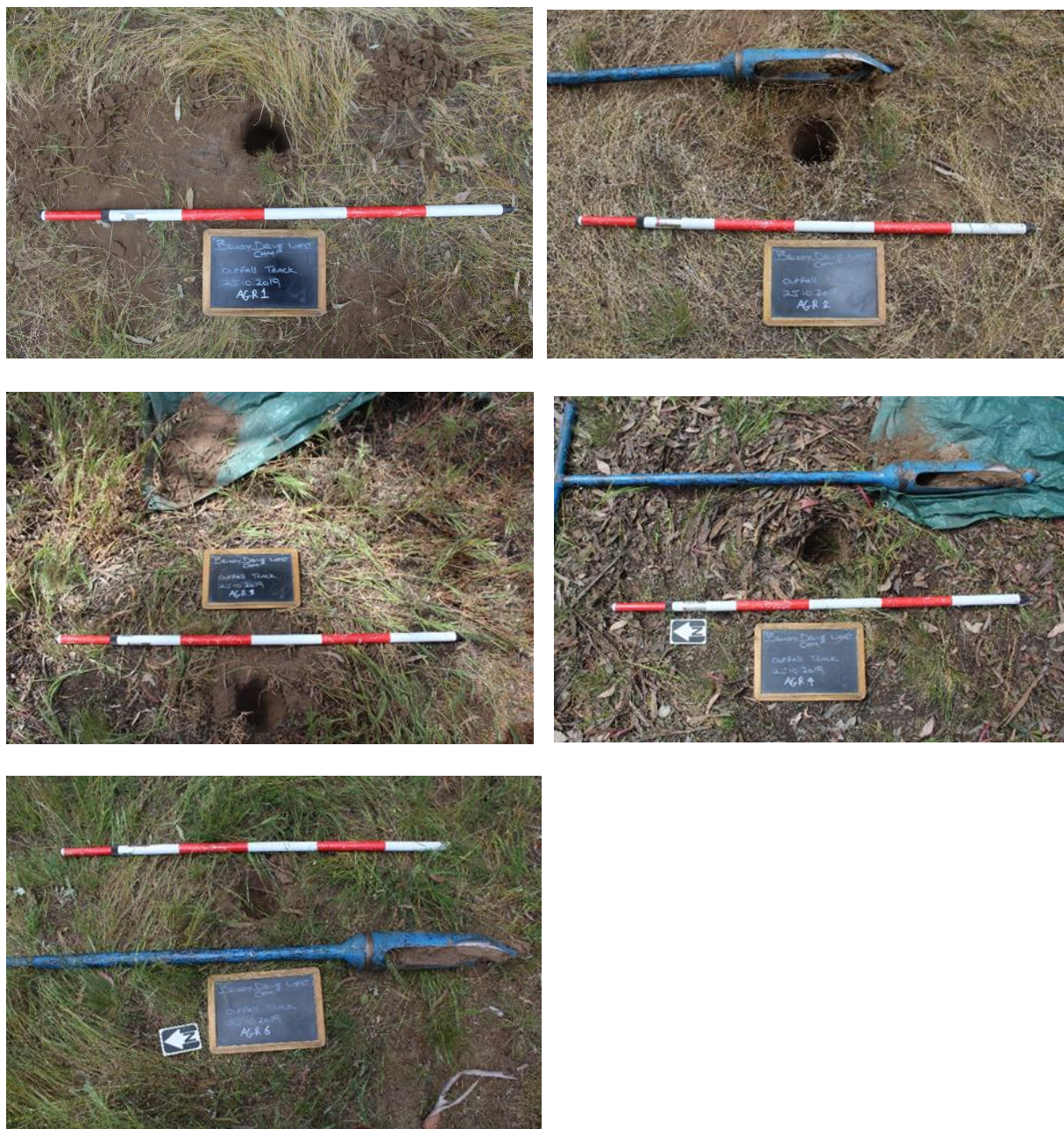


Figure 19. Augers (clockwise) 1-5 (note that augur 5 is wrongly recorded as augur 6).

### 7.2.3 Vehicular and pedestrian survey of road reserves

The third component of the standard assessment was to conduct a vehicular and pedestrian survey along the road reservations of Briody Drive, Messmate Road, Grossmans Road and Illawong Drive (see Figure 20-Figure 25). An attempt was also made to excavate augur holes at locations along the road reserves. This work was undertaken at the request of the RAP in order to attempt to establish the extent of disturbance levels and archaeological potential along these reservations.

Due to the extensive network of utility services and heavy disturbance levels along the road reservations of Briody Drive, Messmate Road, Grossmans Road and Illawong Drive, the road

verges were very difficult to auger, with all excavation attempts meeting refusal on the very compact introduced soil and gravel surfaces. In particular, at the junction of Messmate Road and Grossman Road on the southern part of the road, the activity area contained a combination of utilities and services entrances; water mains/culverts, electrical, fibre optic cables, telecommunications etc (see Figure 26). As the exact locations and extents of these services (approximately plotted against dial-before-you-dig search results) were unknown, attempts to excavate augur holes in these locations were ceased.

Along Grossmans Road there were stretches of steep slope along the southern side of the road reservation with dense scrub and trees that could not be safely accessed (see Figure 23). Observations, field notes and photographs of these survey areas were taken from adjacent accessible areas.

Extensive ground modification was noted primarily in the form of utilities lining the road reservations, along Briody Drive, Messmate Road, Grossmans Road and Illawong Drive as well as landscape modification associated with the construction of Briody Drive and Grossmans road. Ground surface visibility for the road reservations was generally very poor, averaging only 5%, with thick grasses and in some areas, dense shrubs and trees (see Figure 28). The only section to have high visibility levels was a stretch of Illawong Drive, on the far eastern part of the activity area.

No Aboriginal cultural material was identified, and the road reserves within the activity area were considered to have a very low potential to contain Aboriginal cultural material.



Figure 20. Briody Drive; view east of pathway and culvert. West view of culvert and dense vegetation.





Figure 21. Briody Drive; raised road surface, view of north and south road reservation.



Figure 22. Messmate Road; north view with utilities service entrance and south view of culvert and electricity power lines.



Figure 23 Grossmans Road; east view of steep slope and dense vegetation. West view of gas utilities.





Figure 24. Grossmans Road; view east and west of electrical points, power lines and culvert.



Figure 25. Illawong Drive; view south of electrical power lines and view north with pavement and compacted gravel surface.

### 7.2.4 Obstacles

Weather conditions at the time of the assessment were overcast and windy. Obstacles encountered during the standard assessment comprised generally very low ground surface visibility levels, and heavy disturbance levels across the areas of road reserve. However, during the pedestrian and vehicle survey of the road reservations the obstacles encountered ranged from electricity poles, gas mains, utilities services access points, water culverts, dense vegetation and inaccessible steep ditches which negated access to these areas. As noted above, augur-holes could not be successfully excavated within the highly compacted fill deposits along the road reserves.



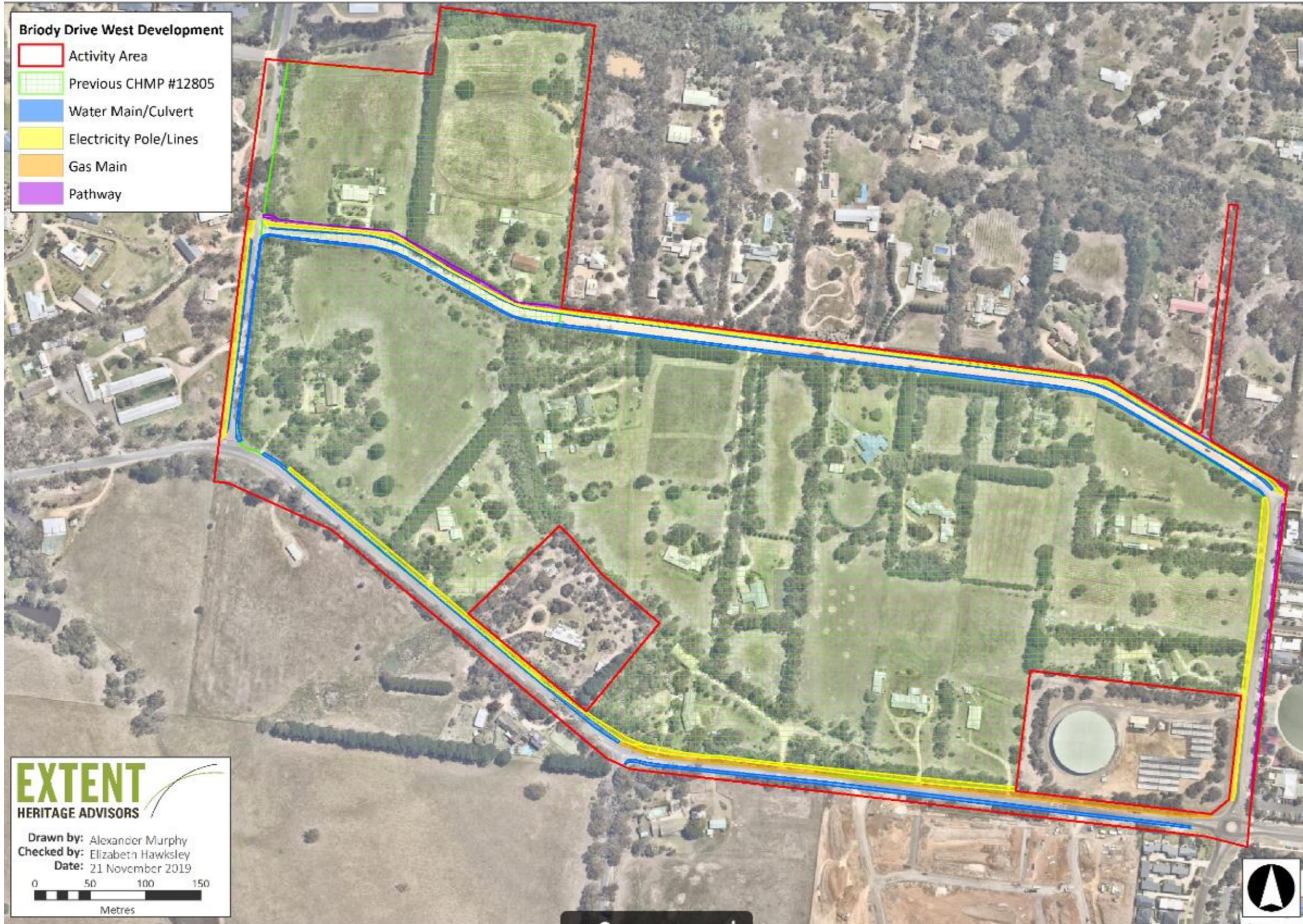


Figure 26. Map of existing utilities and services relevant to the standard assessment survey.



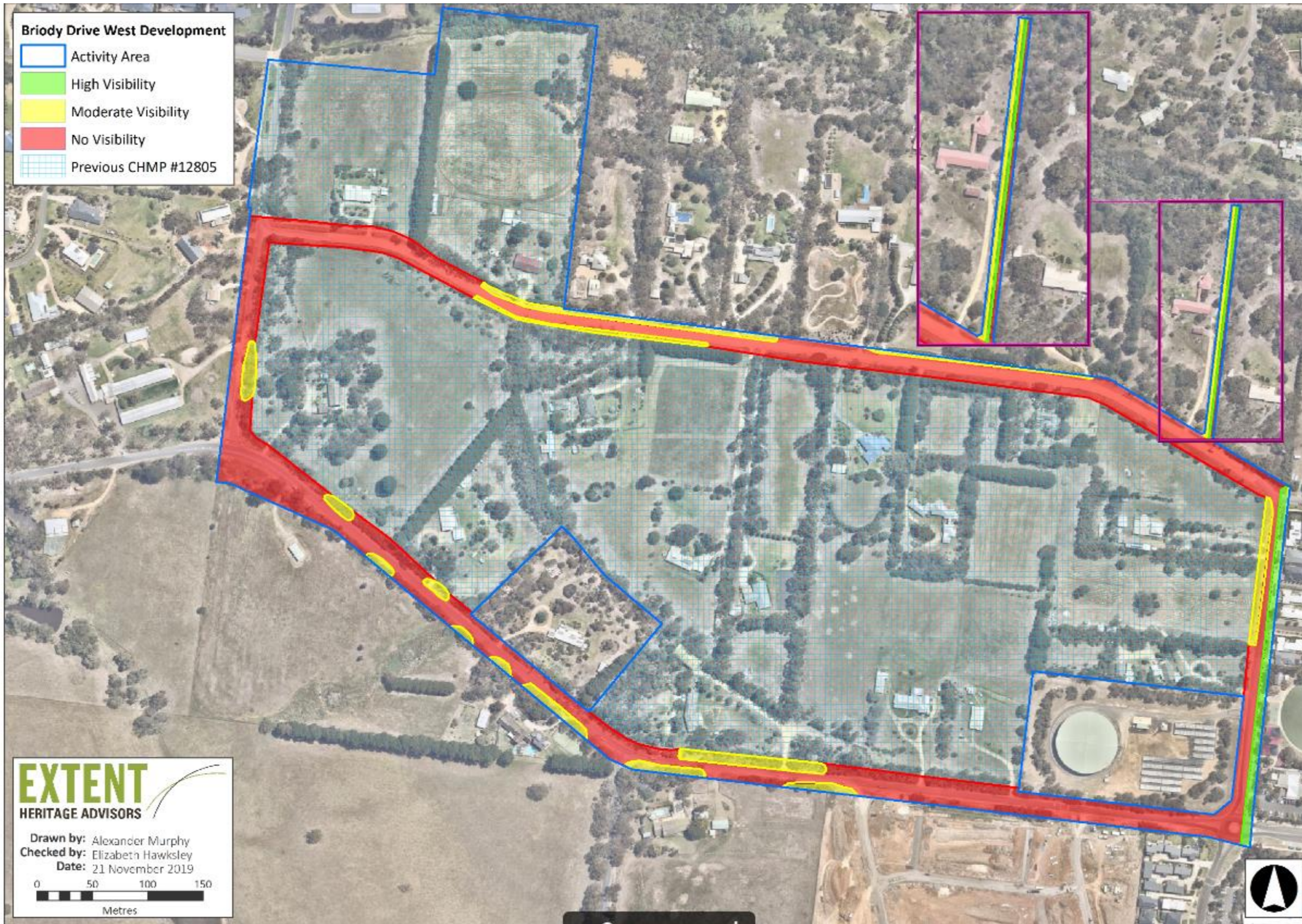


Figure 27. Map of ground surface visibility (GSV) during the standard assessment.



### 7.2.5 Mature indigenous tree species

No mature trees or trees exhibiting Aboriginal scarring were identified within the activity area.

### 7.2.6 Caves, rock shelters and cave entrances

No caves, rock shelters, or cave entrances were identified within the activity area.

### 7.2.7 Aboriginal places

No Aboriginal cultural heritage was identified during the standard assessment.

## 7.3 Standard assessment conclusions

Following consultation with the RAP, a standard assessment was undertaken across two distinct parts of the activity area that will be subject to impact; the storm water outfall of the Briody Drive stormwater outfall footprint (pedestrian survey and augur excavation) and the road reserves of Briody Drive, Messmate Road, Grossmans Road and Illawong Drive (survey only). The remainder of the activity area had been subject to standard assessment during previous CHMP 12805, and due to low visibility levels in these areas, it was agreed with the RAP that further survey was not warranted.

A combination vehicular and pedestrian survey was undertaken along the road reservations of Briody Drive, Messmate Road, Grossmans Road and Illawong Drives in order to assess ground visibility and disturbances levels in these areas. Visibility levels were typically very low (less than 5%) with only limited areas of increased visibility. Extensive ground modification was evident across almost all areas subject to survey, resulting from road construction and an extensive network of utilities installed within the road reserves. Due to the presence of disturbed ground, included introduced fill material, attempts to excavated augur-holes within the road reserves were ineffective. The road reservation areas are considered very unlikely to contain Aboriginal cultural heritage.

The stormwater outfall is a linear and narrow reserve corridor that leads from Briody Drive towards the edge of Deep Creek. Poor to average ground surface visibility levels were encountered during the standard assessment, which resulted in the surface survey being generally ineffective at determining the presence of Aboriginal places and cultural material. Five augur-holes were excavated to test the soil profile within the reserve in order to gauge sub-surface disturbance levels. The augur results indicated that the topsoil deposits appear to have been subject to only limited prior disturbance and remained largely intact. Therefore, in line with the conclusions of the desktop assessment, (Section 6.7 above) it is considered that the stormwater outfall area, in proximity to Deep Creek, retains a moderate potential to contain Aboriginal cultural heritage. *This area should be included in a program of subsurface testing during a complex assessment, pursuant with r.64(1) of the Aboriginal Heritage Regulations.*

## 8. Complex assessment

### 8.1 Preamble

The methodology and research design for the archaeological subsurface testing was developed taking into consideration the results of the desktop research and standard assessment as described in previous sections of this report as well as in consultation with Wadawurrung Traditional Owners Aboriginal Corporation (WTOAC).

### 8.2 Objectives and rationale

As discussed in detail above, the vast majority of the current activity area was previously subject to complex assessment during CHMP 12804<sup>3</sup>. During the inception meeting with WTOAC, it was agreed that further subsurface testing in these areas was not warranted, and that complex assessment would instead focus on two areas that were not subject to testing during the previous CHMP. These two areas (shown in Figure 31 and 32) were;

1. The stormwater outfall footprint between Briody Drive and Deep Creek;
2. The road reserves of Grossmans Road, Messmate Road, Briody Drive and Illawong Drive

The results of the desktop and standard assessments determined that there was a moderate to high potential for Aboriginal cultural heritage to be located on the landform within the stormwater outfall due to demonstrated lower ground disturbance levels and proximity to Deep Creek. During consultation, it was decided that a program of both manual and mechanical testing should be undertaken along the length of the stormwater outfall portion of the activity area.

It was assessed that the road reservations of Grossmans Road, Messmate Road, Briody Drive and Illawong Drive, had a low potential to contain cultural deposits. due to the heavy impact of road construction and utilities installations within these areas. It was agreed with WTOAC that a limited programme of sub-surface testing would be undertaken in these areas to confirm the disturbance factors identified in the desktop and standard assessments.

The sub surface testing had the following objectives:

- Identify and assess the nature, extent and significance of any Aboriginal cultural heritage and any prior sub-surface soil disturbances across the activity area and considered likely to obtain Aboriginal cultural heritage;
- Collect information that clearly and accurately represents any Aboriginal cultural heritage present and facilitates informed management of these values through the development process; and

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<sup>3</sup> A total of 33 square metres was excavated within the current activity area during CHMP 12805.



- Establish if the proposed activity is likely to cause harm to Aboriginal cultural heritage and assist in the development of appropriate heritage management conditions;

## 8.3 Excavation methodology

### 8.3.1 Preamble

The test excavation was undertaken on 17 & 18 February 2020. The excavation was undertaken by Extent staff and representatives of the Wadawurrung Traditional Owners Aboriginal Corporation (WTOAC) listed in Table 11 below.

Table 11. Personnel who participated in test excavation work.

Date	Name	Organisation	Role
17/02/20	Elizabeth Hawksley	Extent Heritage	Archaeologist
	Christopher Clark	Extent Heritage	Project supervisor
	Kyle O'Toole	WTOAC	RAP Field Representative
18/02/20	Elizabeth Hawksley	Extent Heritage	Project Supervisor
	Christopher Clark	Extent Heritage	Archaeologist
	Kyle O'Toole	WTOAC	RAP Field Representative

### 8.3.2 Excavation and recording methods

Excavation and recording methods used during the complex assessment are described below.

#### *Trench placement and survey*

The test trench locations were surveyed using a Leica GS08 RTK GPS unit. For each trench location an x, y, z datum was established and marked.

#### *Excavation*

A total of 7.75 square metres was excavated during the complex assessment (including radial test pit excavation). One 1m x 1m test pit (1m<sup>2</sup>) was manually excavated, using controlled methods including trowels and shovels. This test pit was positioned adjacent to the edge of Deep Creek on the aeolian plain in order to test the stratigraphy of this landform. The location of the manual trench was discussed and agreed with the RAP field representative present at the start of the complex assessment before machine testing commenced. This excavation would allow for conclusions to be drawn about the extent of soil disturbance, landscape use, and the nature and extent of the archaeological recourse of the landform.

Where natural sediments were encountered, excavation was undertaken in 10cm arbitrary spits within a 1m x 1m spatial unit. Representative soil samples were pH tested and soil descriptions were taken.

Three 1m x 2m test trenches were mechanically excavated, using arbitrary 10cm spits (Figure 28). The location of the machine trenching was determined with WTOAC during the post standard assessment meeting. The machine trenching was designed to target the less disturbed areas of the landform. All excavated trenches were backfilled following recording.

Three 50cm x 50cm shovel test pits were excavated within the road reserves of Briody Drive and junction of Grossmans and Messmate Road to test the levels of prior disturbance in these areas at the request of the RAP.

### *Sieving*

All excavated trenches and STP's were sieved through the mechanical sieve (a vibrating 5mm steel mesh which is used to sift through the excavated material in order to retrieve Aboriginal artefacts i.e. 100% material >5mm -see Figure 28).



Figure 28. Mechanical excavations and sieving of mechanical test trench (MTT) 2.

### *Recording*

A standard site recording form was used for each trench. Details included site name, date, site recorder, spit number, soil unit and depth, description of finds, description of soil and photo numbers.

A digital photographic record was kept of trench excavations, including scaled trench section photos. Scaled sections of each excavated trench were made.

### 8.3.3 Post-excavation analysis methodology

#### *Stone artefact analysis*

A descriptive recording of recovered artefacts was undertaken by Dr Christine Williamson (Christine Williamson Heritage Consultants - see Section 9). The analysis aimed to determine, at a minimum, the following.

- Determine the quantity of stone;
- Identify the artefacts and discuss their potential age;
- Provide an interpretation of the finished implements;
- Discuss the archaeological research potential and significance of the activity area;
- Describe the effects of post-depositional disturbance (i.e. predominantly the impacts of cattle trampling, ploughing and farm use);
- Provide an interpretation of landscape patterning across the activity area according to the distribution of artefacts; and



## 8.4 Excavation results

### 8.4.1 General summary

This section provides a summary of the subsurface testing program undertaken within the activity area on 17-18 February 2020.

The complex assessment was focused on two separate parts of the activity area that had not been subject to previous complex assessment during CHMP 12805 (see Section These were the stormwater outfall footprint between Briody Drive and Deep Creek and the road reserves of Grossmans Road, Messmate Road, Briody Drive and Illawong Drive.

### 8.4.2 Stormwater Outfall

Within the stormwater outfall footprint, a total of seven square metres was excavated (Figure 31 and 32). As agreed with WTOAC, three 1m x 2m mechanical test trenches MTT 1, MTT 2 and MTT 3) were excavated across this area, targeting the upper, middle and lower slope between Briody Drive and Deep Creek and one 1m x 1m manual test pit (TP 1) was excavated at the nearest point to Deep Creek at the northern end of the outfall footprint in order to establish stratigraphy. See Figure 31 for the layout of test pits and mechanical trenches along the stormwater alignment.

The excavation covered a single landform, a component of the broader aeolian plain landscape of the geographic region. A distinct and generally consistent soil profile was identified across this area comprising the following soil profile:

- A1 horizon: light greyish brown clayey silt; compacted with a small amount of bioturbation;
- A2 horizon: compact light grey-brown silty clay;
- B-Horizon mid-orangey brown hard sterile clay;

It was noted during the initial sub surface excavations for CHMP 12805 that the broader geological landform of the activity area is associated with the aeolian plains (comprising of sedimentary undissected sand plains with very low rises). Due to the close proximity of the stormwater outfall to Deep Creek, the soil profile in this location appears to contain a more silty alluvial contribution, in contrast to the more sandy deposits identified further to the west of the activity area.

During the initial excavations, Aboriginal cultural material (26 stone artefacts) was recovered from two locations - TP1 and MTT1 (see Figure 29). On completion of the initial testing, further radial shovel test pits (50cm x 50cm) were then undertaken around these trenches in order to identify a place extent for VAHR registration. Due to tight spatial restrictions caused by the narrow activity area extent, and proximity to a buried water pipeline directly adjacent to these trenches, only three 50cm x50cm radial test pits could be excavated in this area. These were located to the south, west and north-west of MTT1. A total of six additional artefacts were identified within two radial test pits. The excavations were undertaken to a depth between 20-35cm.

In total, thirty-two artefacts were located within the A1 horizon soil towards the northern end of the stormwater outfall. These artefacts have been registered as Briody Drive Artefact Scatter (VAHR 7721-1431). No archaeological features, shell, faunal remains or any other cultural material was identified.



Figure 29. Artefacts located in Mechanical Test Trench (MTT) 1, Spit 1.

### 8.4.3 Road reserves

It was agreed with WTOAC that three 50cm x 50cm shovel test pits (STPs) would be excavated at selected points along the road reservations of Briody Drive, and at the junction of Messmate and Grossmans Road, in order to confirm the impact and disturbance of the utilities and services within the road reserves. Figure 30 provides the locations of each of these test pits.

STP1 and STP2, located along Briody Drive, confirmed the extensive ground modification caused by the installation of utilities and services within the road reserves. The soil profile of STP 3 contained a similar stratigraphic profile as those in TP 1, MTT1, MTT2, MTT 3, although subject to higher disturbance levels. The soil deposits excavated from both these STP's contained a mixed orange-brown mottled silty clay with modern inclusions typically associated with redeposited soils. No Aboriginal artefacts were identified within the STP's excavated in these locations.

See Table 12 for the locations of all mechanical test trenches, test pits and shovel test pits.

Weather conditions were sunny and clear for the first day of excavations, then by midday of the second day, wet weather conditions set in and impacted excavation works. However, the

required excavations for the complex testing program were completed with no necessary variations required.

Table 12. Trench locations

Trench ID	Landform	Excavation Method and size (m)	Location	Artefacts Present?
TP 1	Aeolian plain	Manual 1x1m	N: 5755650 E: 264947	Yes
M.T.T.1	Aeolian plain	Mechanical 1x2m	N: 5755638 E: 264946	Yes
M.T.T.2	Aeolian plain	Mechanical 1x 2m	N: 5755556 E: 264936	No
M.T.T.3	Aeolian plain	Mechanical 1x2m	N: 5755465 E: 264925	No
STP 1	Aeolian plain	Manual 0.5x0.5m	N: 5755416 E: 264343	No
STP 2	Aeolian plain	Manual 0.5x0.5m	N: 5755460 E: 264882	No
STP 3	Aeolian plain	Manual 0.5x0.5m	N: 5755554 E: 264343	No
Radial (N.W.)	Aeolian plain	Manual 0.5x0.5m	N: 5755653 E: 264942	Yes
Radial (W)	Aeolian plain	Manual 0.5x0.5m	N: 5755638 E: 264943	Yes
Radial (S)	Aeolian plain	Manual 0.5x0.5m	N:5755631 E: 264945	No
<b>Total</b>		<b>7.75 sq m</b>		



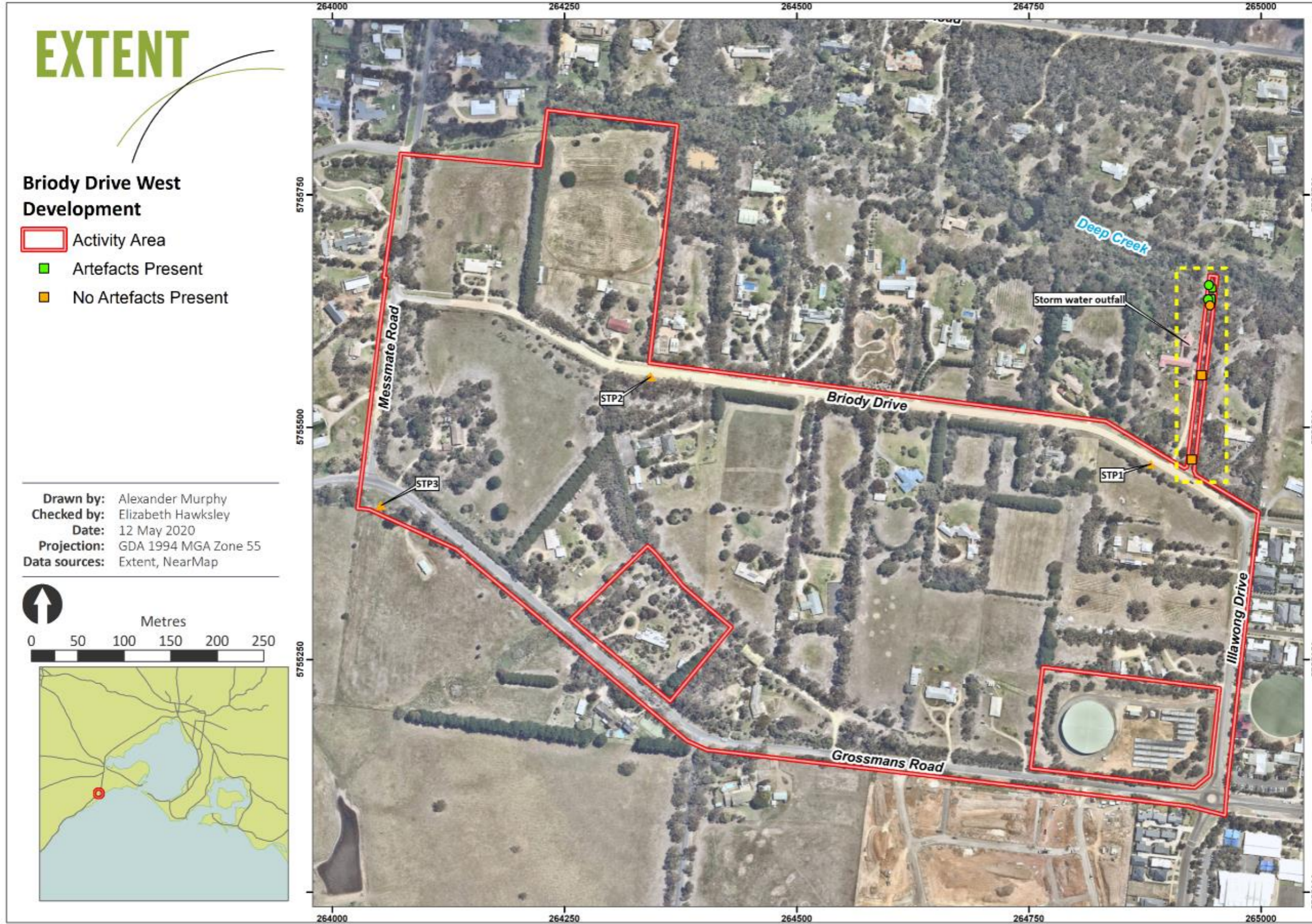


Figure 30. Location of test trenches and test pits within the activity area (stormwater outfall)



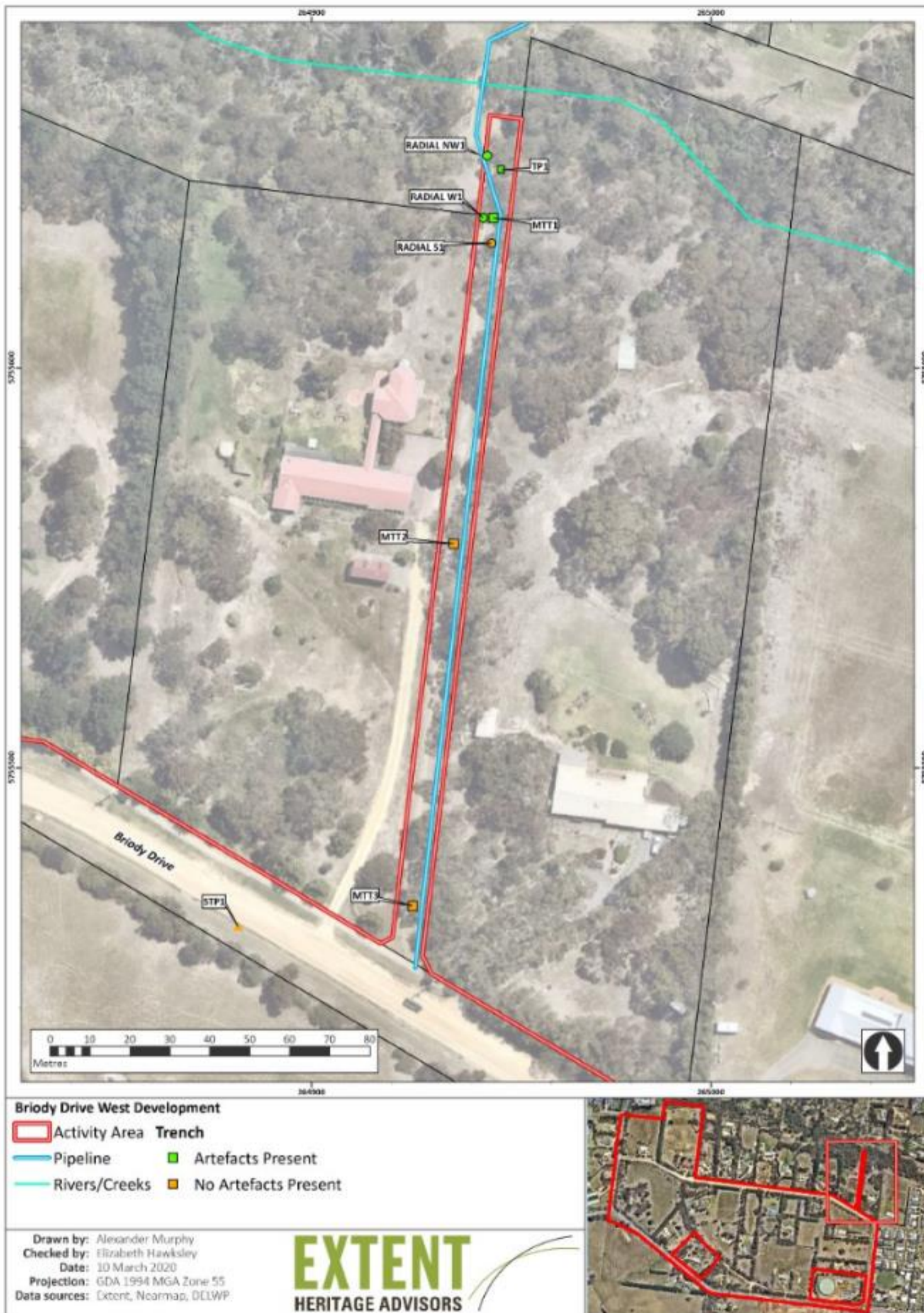






Figure 31. Map of trenches within the stormwater outfall area.

Trench Name		Test Pit 1	
Trench Location (GDA 94 Zone 55)	N: 575556 E: 264936	AHD: 38.317	
Landform	Alluvial Plain	Artefacts: Yes	
Profile Description	<p>Unit 1: 0-10cm. Short compacted grass topsoil with mid-greyish brown silt, friable. One quartz core artefact was located just below the ground surface. Evidence of bioturbation.</p> <p>Unit 2: 10cm-14cm. Pale brown silty clay, hard with rare small rounded pebbles &lt;5mm.</p> <p>Unit 3: 14cm+. B Horizon mid orangey brown undulations of sterile clay.</p>		
Section Photo (West, vertical scale 20cm, horizontal scale 20cm increments)			



Trench Name		Mechanical Test Trench 1	
Trench Location (GDA 94 Zone 55)	N: 5755638 E: 264946	AHD: 43.673	
Landform	Alluvial Plain	Artefacts: Yes	
Profile Description	<p>Unit 1: 0-8cm. Short compacted grass topsoil mid-greyish brown silt, friable with 9 artefacts located just below the ground surface. Evidence of bioturbation.</p> <p>Unit 2: 8cm-16cm. Light greyish brown clay silt, firm with some bioturbation. 16 artefacts were located within A1 Horizon.</p> <p>Unit 3: 16-25cm. Light whitish brown silty clay hard with no inclusions.</p> <p>Unit 4: 25cm. B Horizon mid-orangey brown undulations of sterile clay.</p>		
Section Photo (East, vertical scale 10cm, horizontal scale 20cm increments)			

Trench Name		Radial (W) MTT1	
Trench Location (GDA 94 Zone 55)	N: 5755638 E: 264943	AHD: 38.69	
Landform	Alluvial Plain	Artefacts: Yes	
Profile Description	<p>Unit 1: 0-4cm. Topsoil light greyish brown silt fine, friable with evidence of bioturbation and trampling. Heavily compacted w/ rare small-medium pebbles &lt;10mm. Four artefacts were located in the topsoil.</p> <p>Unit 2: 4-14cm. Light greyish brown clayey silt, compacted A1 with disturbance from bioturbation. One quartz flake was located in the A1.</p> <p>Unit 3:14-24cm. Mottled orangey brown silty clay with degraded wood and disturbance from bioturbation.</p> <p>Unit 4: 24cm. Mid-orangey brown mottled clay with disturbance from bioturbation B Horizon.</p>		
Section Photo (West, vertical scale 10cm, horizontal scale 20cm increments)			

Trench Name		Radial (NW) MTT1	
Trench Location (GDA 94 Zone 55)	N: 5755653 E: 264942	AHD: 39.136	
Landform	Alluvial Plain	Artefacts: Yes	
Profile Description	Unit 1: 0-6cm. Topsoil light brown sandy silt, friable with evidence of bioturbation. Unit 2: 6cm-27cm. Light brown mottled silty clay disturbance associated with impact of water pipeline. Unit 3: 20cm. B Horizon mid-orangey brown hard clay with evidence of bioturbation. One artefact located at the base of the pit.		
Section Photo (South East, vertical scale 20cm, horizontal scale 10cm increments)			

#### 8.4.4 Summary

In summary, the works undertaken during complex assessment comprised;

- i. One 1m x 1m manual Test Pit and three 1m x 2m machine test trenches was located within the proposed stormwater outfall adjacent to Deep Creek. Following the identification of Aboriginal cultural material, of the complex sub surface testing, an additional three radial STPs were excavated to establish the extent of Aboriginal Place.
- ii. Three 50cm x 50cm shovel test pits were located within the road reserves along Briody Drive and at the junction of Messmate Road and Grossmans Road.

During excavations a total of thirty-two artefacts were located within the northern end of the stormwater outfall area, adjacent to Deep Creek. These artefacts were registered as a single artefact scatter VAHR 7721-1431. The results of the complex assessment support the conclusions of the desktop and standard assessment, and indicate Aboriginal cultural heritage is more likely located within more intact soil profiles in proximity to higher order waterways such as Deep Creek. The road reserves contained a soil profile heavily modified by the construction of the roads and associated underground services.





## 9. Stone Artefact Analysis

### 9.1 Preamble

The aims of the analyses presented here are to:

- Describe the assemblage and establish the technological and typological characteristics of the stone artefact assemblage;
- Postulate what human and non-human activities and processes may have contributed to the composition of the stone artefact assemblage and any variability within the assemblage;
- Assess the impact of any post-depositional factors upon the stone artefact assemblage;
- Determine if there are any temporal indicators that may provide clues as to when the stone artefact assemblage, or components of the assemblage, were manufactured; and
- Explore the nature of stone reduction and artefact use by Aboriginal people in the past within the activity area.

#### 9.1.1 Methodology

All artefacts recovered from the activity area were recorded by Christine Williamson, who also wrote this artefact report. Table 1 lists the attribute fields recorded on the stone artefacts during analysis. The definitions of technological and typological terms follow those in Holdaway and Stern (2004) and the Aboriginal Victoria (2008) *Standards for Recording Victorian Aboriginal Heritage Places and Objects* and the artefact database includes all mandatory fields on the *Interim Guidelines. Recording Low Density Artefact Distributions on ACHRIS* (AV 2012). Artefacts were examined using hand lenses with 10x and 20x magnification and all artefact dimensions were measured with electronic callipers to one-hundredth of a millimetre. The artefact data was entered into an Excel database and a copy of this catalogue is included as Appendix F.

#### 9.1.2 Results

The assemblage comprises 32 sub-surface stone artefacts which were recovered from one manually excavated 1 x 1m pit, one mechanically excavated 2 x 1m pits and two 0.5 x 0.5m radials. All of which were located on the southern border of Deep Creek at the norther end of the stormwater outfall activity area. These artefacts have been grouped into a single artefact scatter, VAHR 7721-1431. Table 13 presents information on the artefact density of the artefact-containing excavation pits. The overall place artefact density is a low-moderate 9.14 artefacts per m<sup>2</sup> or 38.67 artefacts per m<sup>3</sup>. The greatest number and density of artefacts was recovered in Radial (W) of MTT1 (20 artefacts per m<sup>2</sup>) and the lowest artefact density was in Test Pit (1 artefact per m<sup>2</sup>).

Table 13. Number and density of stone artefacts (calculated as number of artefacts/volume and area of sediment) per artefact-containing excavation pit.

PIT	NUMBER OF ARTEFACTS	PIT SIZE (m)	PIT DEPTH (m)	Excavated artefact density (m <sup>2</sup> )	Volume of soil removed (m <sup>3</sup> )	Excavated artefact density (m <sup>3</sup> )
Test Pit 1	1	1 x 1	0.20	1.0	0.20	5.0
Mechanical Trench 1	25	2 x 1	0.25	12.5	0.50	50.0
Radial (W) of MTT 1	5	0.5x0.5	0.24	20.0	0.06	83.33
Radial (NW) of MTT 1	1	0.5x0.5	0.27	4.0	0.0675	14.81
<b>Activity Area Total</b>	<b>32</b>	<b>3.5m<sup>2</sup></b>		<b>9.14</b>	<b>0.8275</b>	<b>6.31</b>

The majority of the artefacts in the assemblage were manufactured from silcrete (71.88%). The silcrete in the assemblage is a microcrystalline/fine-grained material made up of a fine matrix, with grain sizes that are not visible or barely visible under low magnification, interspersed with a sparse scattering of small-sized quartz clasts that can be seen under low magnification. Most of the silcrete is pinkish-red; however, four grey and one creamed coloured piece were also identified. The pink-red artefacts of the same colour appear to be from the same core/block of raw material. Additionally, a single piece of quartzite was recovered from MTT1 and a quarter of the assemblage is made of quartz (see Table 14).

Table 14. Number and percentage of different lithic raw materials identified in each pit and in the totals stone artefact assemblage.

RAW MATERIAL	Test Pit 1		Mechanical Trench 1		Radial (W) of MTT1		Radial (NW) of MTT1		Total	
	#	%	#	%	#	%	#	%	#	%
Quartz	1	100	5	20	2	40	0		8	25
Quartzite	0		1	4	0		0		1	3.13
Silcrete	0		19	76	3	60	1	100	23	71.88
<b>Total</b>	<b>1</b>		<b>25</b>		<b>5</b>		<b>1</b>		<b>32</b>	





Figure 32. Silcrete, Quartz and Quartzite artefacts from spit 1 of Mechanical Test Trench (MTT) 1.

Cortex is a weathering rind that forms on the outside exposed surface of rocks. This surface is generally irregular and/or soft and crumbly and needs to be removed prior to the production of useable flakes. Cortex was identified on 21.9% of all stone artefacts in the assemblage (see Table 15), indicating that most of the artefacts in the sample were struck from cores that had previously been worked to the extent where the outside cortical surface had been removed.

The moderate proportion of cortical artefacts suggests that some initial core reduction and decortification of blocks of raw material was occurring outside the excavated locations – probably closer to the source from which these materials were being obtained – in order to maximise the amount of useable material being transported. This seems to be particularly the case for silcrete, as only four artefacts of this material retained any cortex on their surface. However, the presence of some cortical artefacts indicates that limited decortification was probably also occurring on-site.

Table 15. Percentage of cortex retained on the surface of stone artefacts.

Cortex%	Number of Artefacts	Percentage of total sample
0%	25	78.13
1-24%	5	15.63
25-49%	1	3.13
67-99%	1	3.13
100%	0	
<b>Total</b>	<b>32</b>	<b>100</b>

Although the sample sizes are small, quartz artefacts are more likely to retain cortex on their surface than artefacts made on silcrete. Quartz artefacts have crystal facet, pebble and rough/non-pebble cortical surfaces, indicating that they were struck from blocks which were probably sourced from an outcrop or quarry as well as pebbles collected from watercourses and associated alluvial deposits (Table 16). The silcrete artefacts also show a range of cortex types, including pebble, rough/non-cortical and a chalky weathering rind, indicating that silcrete was also being obtained from quarries/outcrops and as alluvial pebbles.

Table 16. Type of cortex identified on artefacts retaining some cortex on their surface.

Cortex Type	# Quartz	% Quartz With Cortex	# Quartzite	% Quartzite With Cortex	# Silcrete	% Silcrete With Cortex
Crystal Facet	1	12.5	0		0	
Pebble	1	12.5	0		1	4.34
Rough/Non-Pebble	1	12.5	0		1	4.34
Weathering	0		0		2	8.7
No Cortex	5	62.5	1	100	19	82.61
<b>TOTAL</b>	<b>8</b>		<b>1</b>		<b>23</b>	

The technological classification of the artefacts is shown in Table 17. The sample contains 25 complete and broken flakes and blades, two cores, two angular fragments and three retouched formal tools.

Table 17. Number and percentage of artefacts in each technological class and primary form category.

Technological Class	Primary Form	Number of Artefacts	% of Total Sample
Angular fragment	Flake Fragment	2	6.25
Cores	Core - Bidirectional	1	3.13
	Core - Multidirectional	1	3.13
Total Number of Cores		2	6.25
Flakes	Blade - Medial	1	3.13
	Flake - Complete	13	40.63
	Flake - Proximal	5	15.63
	Flake - Longitudinal Split	1	3.13
	Flake - Distal	2	6.25
	Flake - Medial	3	9.38
Total Number of Flakes		25	78.13
Tools	Backed Blade	1	3.13
	Backed Flake	1	3.13
	Steep-Angles, Straight-Edged Scraper	1	3.13
Total Number of Tools		3	9.38
<b>Total Artefacts</b>		<b>32</b>	

The two angular fragments are both pink/red silcrete and are clearly pieces of flakes. One lacks sufficient features for orientation and therefore cannot be classified as a broken flake. The other piece is a small segment that conjoins to the lateral margin of a proximal flake and is discussed further below.

Single cores of silcrete and quartz were identified, suggesting that some silcrete and quartz was probably being reduced at this location (see Table 18). The quartz core is bipolar and multidirectional and has at least three platforms (see Figure 33). Although the quartz core has been rotated, it has few flake removals and still retains some cortex, indicating that it had not been excessively worked. The silcrete core is bidirectional and also has weathering cortex remaining on the surface, suggesting that it too was lost or abandoned while it was capable of producing further flakes ( Figure 34). The presence of still viable cores in the assemblage suggests that there was no pressure to conserve raw material and it is likely that both quartz and silcrete were locally and relatively abundantly available.

Table 18. Description of the cores.

Artefact Number	BD001	BD032
Location	Test Trench 1	Radial (NW) of MTT1
Raw Material	Quartz	Silcrete
Core Type	Multidirectional	Bidirectional
Core Blank	Block	Flake
Bipolar	Yes	Indeterminate
Cortex	1-24% crystal facet	1-24% weathering
Number of Platforms	At least 3	2
Number of Complete Core Scars	2	3
Core Scar Shape	Elongate and intermediate	Elongate and intermediate
Maximum Dimension (mm)	27.73	42.07



Figure 33. BD001 Quartz Multidirectional Core.



Figure 34. BD032 Silcrete Bidirectional Core.

In addition to the bipolar core, clear evidence of bipolar reduction, where the core is placed on an anvil to steady it while working, was apparent on another four artefacts (two quartz and two silcrete) in the assemblage. This percentage is undoubtedly an underestimate as clear traces



of bipolar working, such as battering and crushing opposite the platform on cores and flakes or a clearly bipolar termination on flakes and blades, were necessary for assignment to this category and bipolar flaking features are often not apparent on broken flakes, retouched tools and angular fragments. However, these results suggest that bipolar reduction was being used to manufacture at least some of the quartz and silcrete artefacts recovered from this place. Bipolar reduction is an effective method for reducing small, irregularly shaped cores that would be difficult to hold and work using freehand technique and it is noteworthy that both the cores in the assemblage are small.

The average maximum dimension of the artefacts of different raw materials in the assemblage is shown in Table 19. The average size of the silcrete and quartz artefacts is similar, but the single quartzite piece is quite large. The size range of the quartz artefacts is more restricted than that of the silcrete artefacts, but there are no very small pieces of either materials present in the assemblage. In addition to the cores discussed above, another indicator of on-site knapping is the distribution of very small pieces of stone, which tend to be produced as waste when cores are reduced and are unlikely to have been moved from the place of initial production as they were too small to be picked up and used as implements. The proportion of small artefacts that might be expected is difficult to quantify as, even for a pristine assemblage that has experienced no artefact loss, the proportion of small debitage may vary significantly depending upon factors such as the initial size of the core being flaked (small cores can only produce small flakes), the method and purpose of reduction, the quality and/or nature of the raw material being flaked, etc. However, Shott (1994: 84-5) collated size data from experimental stone reduction that suggested that various types of core reduction will result in proportions of small artefacts (defined as artefacts between 1mm and 6.3mm in size) that range between 71.9% and 99.7%. While smaller artefacts would not have been retained by the sieves used during the excavation, there are no artefacts less than 10mm in maximum dimension in the assemblage. This suggest that minimal on-site knapping was occurring and/or that the location has been affected by post-depositional factors, such as water and wind movement, which tend to preferentially impact smaller items.

Table 19. Size and data on artefacts of different raw materials.

Raw Material	Number of Artefacts	Average Maximum Dimension (mm)	Maximum Maximum Dimension (mm)	Minimum Maximum Dimension (mm)
Quartz	8	21.73	30.02	14.62
Quartzite	1	35.92	n/a	n/a
Silcrete	23	20.9	42.07	12.83

Almost 80% of the assemblage is made up of flakes, which can be further broken down into complete (52%) and broken (48%) items. The flake sample includes one broken blade (excluding retouched items). Although blades, which are defined as flakes that are at least twice as long as they are wide and with parallel margins, can be produced fortuitously, blade technology in Australia is generally associated with the Australian Small Tool Tradition (ASTT), which appears in many parts of Australia from about 5000 years ago, although ASTT forms are generally rare in sites younger than 1000 years before present (Gould 1969: 235; Campbell

1982: 62; Hiscock 1994: 267, although for earlier suggested appearance of the ASTT see Hiscock and Attenbrow 1998 and Slack et al 2004).

Platform type was recorded on all complete flakes and blades as well as broken flakes and blades and retouched tools with identifiable platforms. The platform is a remnant of the core from which the flake was removed and can indicate the extent to which the core had been reduced prior to the flake being struck with cortical platforms indicative of initial core reduction when cortex is still present on the core surface, plain platforms (which only have a single flake scar) generally occurring relatively early in the core reduction sequence and flaked platforms (more than one scar) occurring later in the sequence. . Facetted platforms (with two or more flake scars that initiate on the platform) generally result from deliberate attempts to modify the shape of the platform, usually to facilitate the production of elongate blades.

Over half the flake platforms in the assemblage are plain (see Table 20). Six artefacts have crushed platforms, two have flaked platform and a single cortical platform was identified. These results suggest that, although the cores from which the flakes were struck had undergone primary decortification, they were still in the relatively early stages of reduction and had undergone few prior flake removals and little effort was being made to deliberately shape flake platforms.

Table 20. Platform Type on complete flakes, blades and broken flakes, blades and retouched tools retaining platforms.

Platform Type	Number of Artefacts	% of Total Platforms
Cortex	1	5.26
Crushed	6	31.58
Facetted	0	
Flaked	2	10.53
Plain	10	52.63
<b>Total</b>	<b>19</b>	

Evidence of platform preparation/overhang removal, which takes the form of a series of small, relatively even, usually step-terminating flake scars that initiate from the platform and extend behind the platform onto the dorsal side of the flake, was also recorded. These small flake scars result from the knapper removing the overhanging 'lip' that has formed on the core platform edge during previous flake removals in order to improve the platform angle and better control the shape of the next flake to be struck. This technique allows the production of larger flakes with smaller platforms, less curvature and smaller bulbs of force (Flenniken and White 1985: 135). The minimal evidence for platform preparation in the sample (only apparent on the large quartzite flake) supports the suggestion made above that most of the cores from which the flakes in the sample were struck were in the earlier stages of reduction as it indicates that the core platforms had not undergone sufficient prior removals to create a 'lip' on the platform edge that required overhang removal.

Termination type was also recorded on all complete flakes and blades as well as broken flakes and blades and retouched tools with identifiable terminations (Table 21). It has been suggested that feather, step and hinge terminations form stages along a directional sequence and the presence of each termination type is related to increasing platform thickness (Holdaway and Stern 2004: 132), with Pelcin (1997: 1111) arguing that termination type provides some indication of the degree of control that the knapper exercised, with step and hinge terminations indicating a thicker platform and an incorrect angle between the core platform and the hammerstone. Feather terminations are therefore optimal whereas hinge, step and plunge terminations are generally considered to be undesirable outcomes and may be related to the degree for which suitable platforms and platform angles are available on the core from which the artefact was struck.

The most commonly identified terminations in the sample are ‘normal’ feather types (37.5%). Bipolar terminations were also common (18.75%), and these were identified by the presence of crushing or step fracturing formed when the base of the core is rested on an anvil while the platform is struck with a hammerstone. The anvil acts like a second hammerstone and the flakes produced often have initiation features at both ends, such as crushing and dual bulbs of force. Few hinge, step or plunge terminations were identified, suggesting that knappers were generally able to control the direction of force through the cores, resulting in few less-than-optimal termination types (Table 21).

Table 21. Platform Type on Complete Flakes, Blades and Broken Flakes, Blades and Retouched Tools Retaining Terminations.

Termination Type	Number of Artefacts	% of Total Terminations
Axial	1	6.25
Bipolar	3	18.75
Feather	6	37.5
Hinge	1	6.25
Step	4	25
Plunge	1	6.25
<b>Total</b>	<b>16</b>	

Table 22 shows the breakage patterns identified on the flakes and blades, excluding those that had been retouched to form tools. Over half the flakes are complete, but broken flakes are also common. Breakage of flakes can occur during the manufacturing process, which typically results in the production of laterally split flakes but can also involve the accidental and deliberate production of medial breaks. There is only one split flake in the assemblage, suggesting that minimal flake breakage was an outcome of the core reduction process. However, breakage may also occur as a result of post-depositional factors such as movement through the soil profile caused by trampling or ploughing, which generally results in medially broken flakes but also may lead to small sections of the edge being broken off (Hiscock 1985). The presence of medial snaps may therefore be an indication of the degree of disturbance caused by human and possibly animal traffic that has occurred at a site, although the amount of breakage caused by these disturbances can be affected by the rate at which the artefacts were covered by sediment and the texture or ‘softness’ of those sediments (but note that these breaks may have also been caused by other post-depositional processes, such as ploughing). Medially snapped flakes



make up a 44% of the total flake and blade assemblage. This high proportion of medially snapped flakes indicates that overall the assemblage has probably been significantly affected by trampling and/or other post-depositional processes that cause flake breakage.

Table 22. Fragmentation of flakes and blades (excluding those classified as tools).

Proportion of Flake/Blade Remaining	Number of Artefacts	% of Total Sample
Complete	13	52
Proximal	5	20
Distal	2	8
Lateral	1	4
Medial	4	16
<b>Total</b>	<b>25</b>	

A total of three retouched tools are present in the assemblage: two backed items, both of which are silcrete, and a quartz scraper. Neither of the backed artefacts have any evidence of usewear but the quartz scraper has clearly been used. In this report 'tool' refers to those items that were deliberately modified in some way, either through retouch, pecking or grinding. The use of this terminology should not be taken as suggesting that other unmodified artefacts were not used as implements and, in addition to these retouched tools, a further eight non-retouched artefacts show clear evidence of use, one has probable usewear and two have chattering/edge damage that may be usewear or post-depositional damage.



Figure 35. BP023 silcrete flake with usewear.

The backed items are a backed flake and a backed blade (Figure 35 and Figure 36). The backed blade is complete but there is only a small section of backing on the angled distal section of the flake and it is possible that this piece was abandoned when the proximal section broke. The presence of these items suggests that backed tools were being manufactured at this location, although there is no evidence for their use.



Figure 36. BD016 Silcrete Backed Flake.



Figure 37. BD011-026, the backed blade is bottom left.

Backed forms are associated with the Australian Small Tool Tradition and would have been manufactured in the past 5000 years (see discussion above for timing of the ASTT). Cotterell and Kamminga (1987) have suggested that fine silcrettes were preferentially used for the manufacture of ASTT artefacts as they are suitable for fine flaking, have high edge-holding properties and can be repeatedly resharpened. The steep retouch along one margin of backed artefacts has generally been thought to have served to blunt the edge so that they could be hafted into a wooden weapon to form composite tools such as spears for hunting and ritual 'death spears' (Hiscock 1994; McDonald et al. 2007). Evidence for their use as components of hunting spears was identified on backed artefacts from Deep Creek (Robertson 2005 cited in Robertson 2011). The bone trauma and embedded stone artefacts identified on the 4000-year-

old skeleton of an Aboriginal man at Narabeen indicated that the 14 associated backed artefacts had been part of the composite weapons (either spears or knives) that were used to kill him (McDonald et al. 2007; Fullager et al. 2009). However, a number of researchers have suggested that backed items were used for a variety of purposes, not just as spear barbs, although most agree that they were hafted into composite tools. Hiscock (2002, 2008) has suggested that these composite tools were employed for any task at hand, similar to a Swiss army knife. Robertson (2011) undertook a residue and usewear analysis of backed artefacts from three sites in the Upper Mangrove Creek catchment and concluded that the artefacts had been used on a variety of materials and for a range of different task, particularly domestic activities and tool production, with only minimal evidence for their use in hunting and butchering animals. Microscopic and residue analysis of 33 backed blades (Bondi Points) from the Lapstone Creek rockshelter indicated that 72.7% of these artefacts had clear or probably evidence of hafting while the remainder had insufficient evidence (Robertson 2011). However, usewear and/or residues indicated a range of functions including incising, scraping, cutting, piercing and drilling plant materials and bone and several artefacts appeared to have been used for more than one task. Robertson (2011: 98) suggests that the backed artefacts in the sample were primarily used for craft activities, including the decoration and possibly maintenance of wood and bone implements.

The quartz scraper is made on a proximal flake and has a steep, straight retouched edge on one lateral margin (see Figure 38).

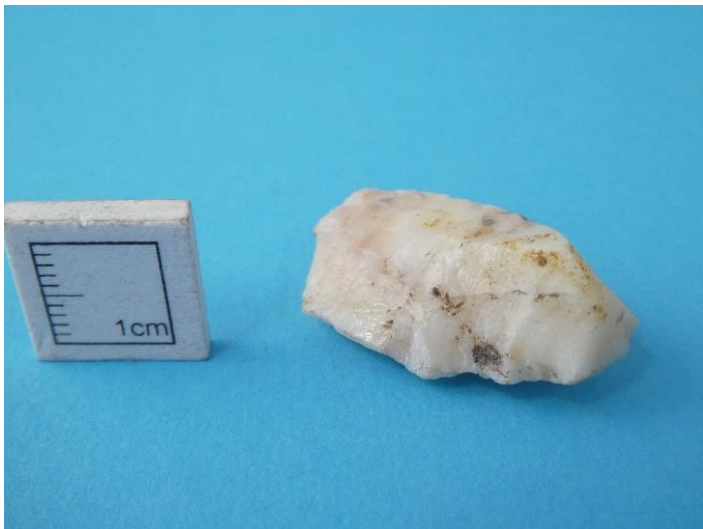


Figure 38. BD026 Quartz scraper with usewear.

A systematic search for conjoins was not made, however, during artefact recording two conjoining sets were identified (Table 23). One of these breaks is probably recent. However, the two pieces comprising Set 2 – a proximal flake and a small piece from the margin of that flake – have usewear that extends across the break and there is a divot at the break point, indicating that the break occurred while the piece was being used (Figure 40). The two pieces in this latter set were found in the same spit (as were the two pieces in Set 1), suggesting that deposits within the salvage area are relatively *in situ*.



Table 23. Conjoining sets.

Conjoining Set	Raw Material	Manufacture Type	Comments
Set 1	Silcrete	Proximal Flake	Break is probably recent/post-depositional
		Distal Flake	
Set 2	Silcrete	Proximal Flake	Flake has usewear that extends across the break
		Flake Fragment	



Figure 39. Conjoining set 1.



Figure 40. Conjoining Set 2 showing usewear.

None of the artefacts in the assemblage have clear evidence of having been burnt and none are rounded from weathering, suggesting that they were not exposed on the ground surface for a lengthy period but were covered over fairly soon after being discarded/dropped.

### *Conclusions*

The 32 stone artefacts recovered from the northern portion of the activity area form a discrete, low-moderate density cluster adjacent to the southern bank of Deep Creek. The artefacts were all located in shallow deposits that are likely to have been disturbed by past land use practices.

The majority of the artefacts are silcrete and use of this material appears to have involved the low intensity and often bipolar reduction of cores that had undergone some preliminary decortification outside the excavated area and probably closer to the raw material source. Some of the products of these cores were used at this location, and others were retouched to form backed artefacts. Some quartz was also being worked, generally on an anvil, and at least one larger piece was retouched to form a scraper that may have been used for woodworking and/or preparing animal hides. The single large quartzite flake may have been brought to this place following manufacture at another location on the landscape. As there was no artefacts less than 10mm in maximum dimensions in the assemblage, it is suggested that there was minimal on-site knapping was occurring.

The presence of backed artefacts suggests that the majority of the assemblage was deposited in the last 5000 years.

## 10. Aboriginal cultural heritage in the activity area

One Aboriginal place Briody Drive Artefact Scatter (VAHR 7721-1431) was identified during the investigations undertaken for this CHMP Another previously recorded place (VAHR 7721-1260) was recorded in the activity area during earlier CHMP 12805. A summary of the extent, nature and significance of these places is included in the following parts of the report. The site gazetteer in Appendix 3 presents a summary of these sites.

### 10.1 VAHR 7721-1431 Briody Drive Artefact Scatter

Table 24. Details of VAHR 7721-1431

Detail	
Primary grid ref	E;264945.63 N: 5755653.67
Location	Briody Drives West, Torquay
Landform	Aeolian Plain
Artefacts	32 lithic artefacts
Average artefact density per m <sup>2</sup>	9.14
Place extent	98.523m <sup>2</sup>
Place condition	Moderate
Place type	Artefact Scatter
Scientific significance	Moderate
Cultural significance	High



Figure 41. View of VAHR 7721-1431 looking south down the gradual slope of the alluvial plain of the stormwater outfall.





Figure 42. Retouched silcrete and quartz artefacts from Mechanical Test Trench (MTT) within VAHR 7721-1431

### 10.1.1 Nature

Aboriginal Place VAHR 7721-1431 is comprises an artefact scatter in a subsurface context. This place is located on a gently sloping landform adjacent to the south bank of Deep Creek. A total of thirty-two (32) Aboriginal stone artefacts were located within this place during the complex assessment. The majority of the artefacts in the assemblage were manufactured from silcrete (71.88%), in addition to quartzite and quartz. The assemblage contains three retouched tools: two backed items, both of which are quartz and silcrete and a single quartz scraper, twenty-five complete and broken flakes and blades (78.3%), two cores, and two angular flake fragments. This is a low-moderate density site, with overall place artefact density is recorded as 9.14 artefacts per m<sup>2</sup>.

The moderate density and variability of artefacts within close proximity to Deep Creek suggests this part of the creek line was utilized as a temporary camp focused on riparian resource procurement and stone tool manufacturing and/or maintenance.

### 10.1.2 Extent

Aboriginal Place VAHR 7721-1431 consists of 25 stone artefacts within a sub-surface context recovered from trenches MTT1 and TP1 and an additional seven artefacts from two radial 50x50cm test pits. The radial testing was partially used to define the extent of the Aboriginal Place, while the western extent is defined by the edge of the activity area. The place measures 98.523m<sup>2</sup> in size.

### 10.1.3 Significance

Briody Drive West Artefact Scatter (VAHR 7721-1431) has some local rarity as it has a greater density of artefacts than typically found in the geographic region. The place is of some research value due to the relatively high density of artefacts (which are sufficient to overcome small sampling biases) and the presence of a varied assemblage containing retouched tools (including used, unused and incomplete items) and cores that suggests that the place was used for tool manufacture and maintenance. It likely has some potential to provide more information regarding the nature of Aboriginal occupation of this section of Deep Creek when viewed in association with other nearby Aboriginal Places. The spatial integrity of the place has been affected by erosion and stock trample, vehicle movement and probable ploughing, but the presence of two refitting artefacts indicates some spatial integrity remains.

As a result of these factors, VAHR7721-1431 is assessed as having a moderate scientific significance at a local level.

## 10.2 VAHR 7721-1260-1-2 (Briody Drive West 1)

Table 25. Details of VAHR 7721-1260

Detail	
Primary grid ref	E;264149.26 N: 5755717.64
Location	Lot 4, PS604122
Landform	Aeolian Plain
Artefacts	2 lithic artefacts
Average artefact density per m <sup>2</sup>	n/a
Place extent	Low-density artefact distribution
Place condition	Poor
Place type	Low-density artefact distribution
Scientific significance	Low
Cultural significance	High

### 10.2.1 Nature

Aboriginal Place VAHR 7721-1260 comprises two stone artefacts (a complete flake and a distal flake manufactured from quartzite and coastal flint) identified in a sub-surface context during the complex assessment for CHMP 12805. This place was not re-inspected during the current CHMP, as it was outside of the areas of investigation agreed with the RAP.

### 10.2.2 Extent

As a low-density artefact deposit (LDAD), the extent of VAHR 7821-1260 is defined by the grid coordinates of its two components.

### 10.2.3 Significance

VAHR 7821-1260 was assessed in CHMP 12805 as being of low scientific significance due to the low density and low artefact variability (Thomas et al:64).



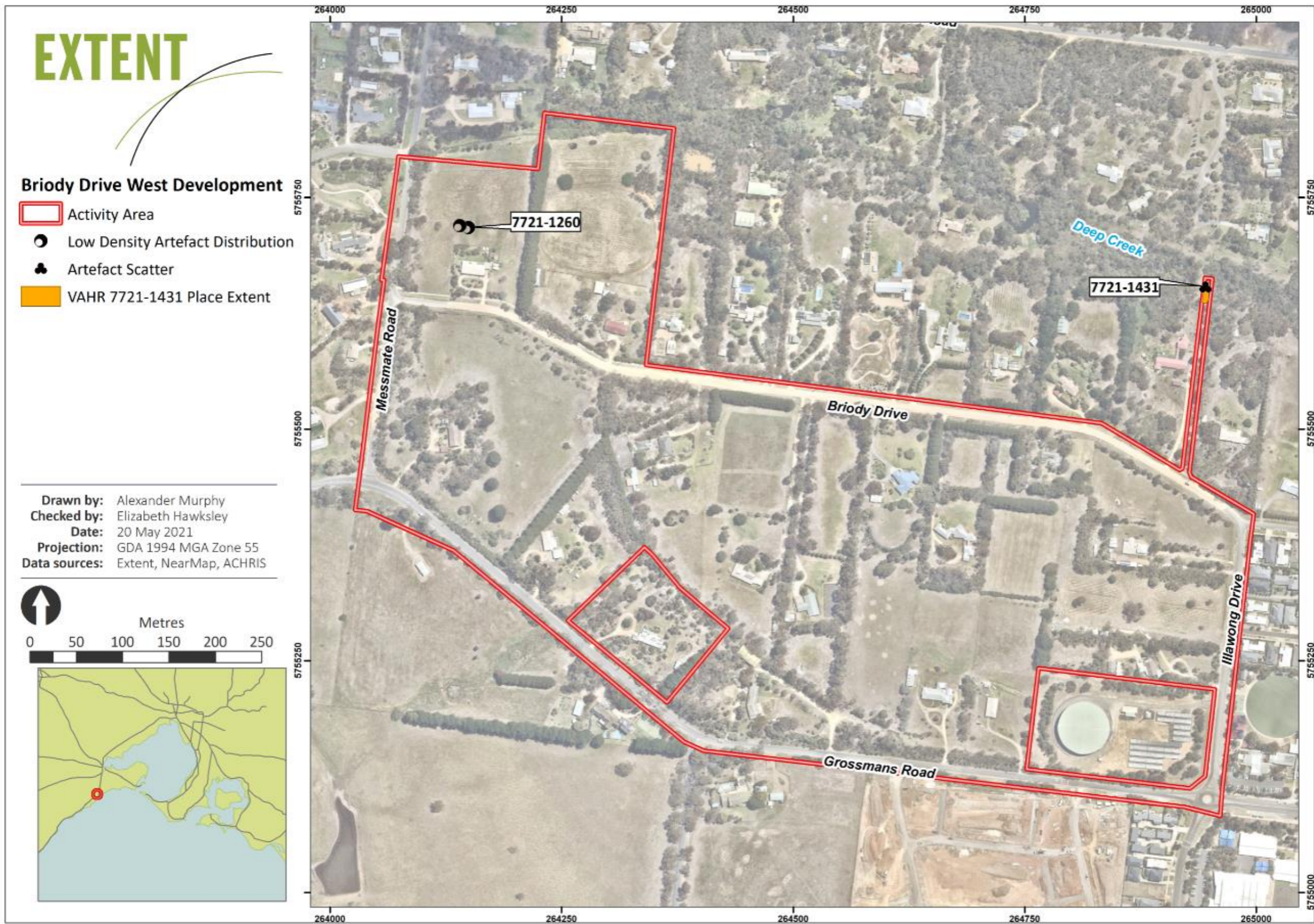


Figure 43. Aboriginal places VAHR 7721-1431 and 7721-1260 within the activity area.



## 11. Impact assessment (section 61 matters)

### 11.1 Proposed development

The proposed activity is considered a medium-size activity under regulation 81 of the Aboriginal Heritage Regulations 2018 (Vic.). The activity area is located within an area of cultural heritage sensitivity under regulation 25 and 26 and of the Aboriginal Heritage Regulations as it is within 200m of a named waterway (Deep Creek) and within 50m of a registered cultural heritage place indicated on ACHRIS sensitivity mapping.

The works are defined as a high impact activity under the following regulations.

- r.46(1)(b)(xxi) residential building;
- r.46(1)(b)(xxiv) a retirement village;
- (xxvii)(C)— the use of the land for a utility installation with a length exceeding 100m and a pipe diameter not exceeding 150 millimetres.
- r.49 (subdivision of land)

The development will involve the disturbance of surface and subsurface deposits across most parts of the activity area; including selected road reservations and the stormwater outfall area, during the proposed works.

## 11.2 Significance evaluation

Aboriginal places are assessed in terms of three significance criteria: archaeological (scientific), cultural (Aboriginal) and public significance. These criteria recognise that Aboriginal sites are valuable in a number of ways:

- to the Aboriginal community as an aspect of their cultural heritage and as part of continuing traditions;
- to the broader community, for educational, historical and cultural enrichment values; and
- to the scientific community for potential research value.

This part of our assessment includes an evaluation of significance to gauge the relative scientific and cultural (social) importance of Aboriginal places within the activity area in order to inform appropriate management of those values before, during and after proposed development.

### 11.2.1 Principles and evaluation criteria

'Heritage significance' and 'cultural significance' are terms used to describe an item's value or importance to our society. The *Australia ICOMOS Burra Charter, 2013* (Australia ICOMOS 2013, 2) defines cultural significance as:

aesthetic, historic, scientific, social or spiritual value for past, present or future generations.

This value may be contained in the fabric of the item, its setting and relationship to other items, the response that the item stimulates in those who value it now, or the meaning of that item to contemporary society.

The cultural significance of Aboriginal archaeological sites can only be assessed in consultation with relevant Aboriginal communities.

The archaeological significance of a site is generally seen as being directly linked to its scientific or research value. In general, this refers to the ability of the contents of a location to enable investigation of research questions, present and future. As future research questions and capabilities cannot always be predicted, archaeological significance is most often assessed in terms of the condition or integrity of deposits present at the location, and their representativeness and/or rarity (Burke and Smith 2004).

In Australia the concept of archaeological significance is commonly defined as a set of questions, originally proposed by Bickford and Sullivan (1984; Burke and Smith 2004, 250) that are used as a means of assessing the significance of an archaeological site:

- Can the site provide information not available from other sources?
- Can the site provide information not available from other sites?
- Can the site answer pertinent research questions?



### 11.2.2 Evaluation of Aboriginal cultural significance

This area of assessment concerns the relationship and importance of Aboriginal places to the Aboriginal community. Aspects of cultural significance include both people's traditional and contemporary links with a given site or landscape as well as an overall concern by Aboriginal people for sites and their continued protection.

Unmodified natural features in the landscape can signify sacred sites/places of significance. As such they are archaeologically invisible and can only be identified with the aid of Aboriginal interpretation. If such sites are known they may hold particular cultural significance to contemporary Aboriginal communities. Furthermore, sites of significance are not restricted to the period prior to contact with Europeans. Often events related to the contact-period may be so important to local Aboriginal communities that they have become significant. If these events relate to a specific place in the landscape, then that place may become sacred or highly significant to the local Aboriginal communities.

The cultural (Aboriginal) significance is a matter for the Wadawurrung Traditional Owners Aboriginal Corporation, the registered Aboriginal Party for the activity area, to assess and determine. The Wadawurrung Traditional Owners Aboriginal Corporation also specifically states that the artefacts have important cultural values as a link between their ancestors and ongoing tradition. In particular, the artefacts within the spoil heaps on site should be screened so that artefacts can be recovered prior to development works.

### 11.2.3 Evaluation of public significance

This category concerns an Aboriginal place's potential to educate people about the past. It also relates to the heritage value of particular sites as being representative examples of past lifestyles, why they are important, and why they should be preserved.

An assessment of public significance in part considers the ability of an archaeological deposit found during excavation to demonstrate aspects of past Aboriginal life. Therefore, a whole range of issues need to be considered including rarity (i.e. are there other resources that can demonstrate these aspects of Aboriginal life?), aesthetics, potential for conservation and potential for interpretation.

Physical evidence of Aboriginal occupation and use within the activity area comprises stone artefact deposits at varying densities across the landscape. This sort of archaeological evidence is difficult (from an interpretation and logistical viewpoint) to use in communicating aspects of past Aboriginal life. The most common approaches include presentation of artefacts and photographs of the excavation in an interpretive display and use of latex peels to show excavation trench sections in profile.

The Aboriginal cultural deposits across the activity area, when considered along with the cultural material identified across the broader geographic region have a general public significance as a demonstration of Aboriginal occupation and life prior to European colonisation. As such they show that a vibrant Aboriginal life existed in this area prior to dispossession. The deposits, and their distribution across the landscape, also provide an opportunity to demonstrate the nature of past Aboriginal use of different parts of the landscape prior to European settlement.

The vegetation and environmental context of the activity area has been altered by vegetation clearance and changes to hydrology that have created a modified European landscape. The original environmental context of the archaeological deposits has, therefore, been fundamentally changed, detracting from the public significance of the site and the reducing our ability to interpret and visualise the archaeological evidence in its original context.

#### 11.2.4 Evaluation of scientific significance

The objective of undertaking scientific significance assessment for a site is to determine its research potential in terms of contribution to knowledge about the past. Criteria used to evaluate scientific potential include condition/integrity, representativeness and rarity.

The results of test excavations within the activity area, indicates the existence of stone artefact deposits across an alluvial soil profile that overlies a broader aeolian landform of the surrounding area, adjacent to Deep Creek.

Briody Drive West Artefact Scatter (VAHR 7721-1431) has some local rarity as it has a greater density of artefacts than typically found in the geographic region. The place is of some research value due to the relatively high density of artefacts (which are sufficient to overcome small sampling biases) and the presence of a varied assemblage containing retouched tools (including used, unused and incomplete items) and cores that suggests that the place was used for tool manufacture and maintenance. It likely has some potential to provide more information regarding the nature of Aboriginal occupation of this this section of Deep Creek when viewed in association with other nearby Aboriginal Places.

The artefacts present within the Aboriginal place are generally common and representative, in terms of their materials and types, of artefact scatters found across the Surf Coast landscape. Though the archaeological deposits have been affected by past site formation processes, there appears to be some spatial integrity This place therefore may have potential to provide further information about past occupation and use patterns and patterns of change of time that may be representative of broader trends in Aboriginal occupation and use of the coastline.

As a result of these factors, VAHR 7721-1431 is assessed as having a moderate scientific significance at a local level.

### 11.3 Impact analysis

The assessment identified one Aboriginal place within the activity area; VAHR 7721-1431 (Briody Drive Artefact Scatter) comprising a low-moderate density artefact scatter. A previously recorded place, VAHR 7721-1260 (Briody Drive West 1) is also located in the activity area, which consisted of a low-density artefact distribution of two artefacts.

#### 11.3.1 VAHR 7721-1431 (Briody Drive Artefact Scatter)

##### 11.3.1.1 *Can harm to VAHR 7721-1431 be avoided?*

Harm to Aboriginal site VAHR 7721-1431 cannot be avoided as it is located within a narrow reserve of council land between private properties. This reserve is required for the construction

of a proposed stormwater outfall extending from a retarding basin adjacent to Briody Drive to Deep Creek. It is not feasible to relocate this activity.

#### *11.3.1.2 Can harm to VAHR 7721-1431 be minimised?*

Harm to Aboriginal place VAHR 7721-1431 cannot be minimised as the proposed activity design (stormwater outfall) will impact almost the entirety of the activity area.

Construction works in the area associated with these artefacts will include stripping, levelling and grading, followed by extensive construction works. Some areas will be subject to fill, rather than cutting construction techniques.

#### *11.3.1.3 Specific measures required for management of VAHR 7721-1431*

As harm to VAHR 7721-1431 cannot be avoided or minimized, specific management measures are required to mitigate impact to the Aboriginal place. This includes development of a salvage program that is to be conducted prior to any ground disturbance works commencing within the stormwater outfall area. Full details of the required salvage program are included in Condition 3 in Part 1 of this assessment.

### **11.3.2 VAHR 7721-1260 (Briody Drive West 1)**

#### *11.3.2.1 Can harm to VAHR 7721-1260 be avoided?*

Harm to Aboriginal site VAHR 7821-1260 cannot be avoided as it is located within an area to be subject to residential subdivision. Because the two artefacts were collected during previous CHMP 12805 further harm will not occur.

#### *11.3.2.2 Can harm to VAHR 7821-1260 be minimised?*

Harm to Aboriginal place VAHR 7821-1260 cannot be minimised for the reasons stated in Section 11.3.4 above.

#### *11.3.2.3 Specific measures required for management of VAHR 7721-1260*

No further management measures for this place other than reburial of the artefacts is required as per Section 6 of CHMP 12805.

#### *11.3.2.4 Section 61d any contingency plans required in relation to disputes, delays and other obstacles that may affect the conduct of the activity*

Contingency plans required in relation to disputes, delays and other obstacles (Section 61d) are addressed in Part 1, Section 2 of this CHMP.

#### *11.3.2.5 Custody and management of Aboriginal cultural heritage*

Custody and management of Aboriginal cultural heritage identified during the activity is addressed in Part 1, Section 2.

## **11.4 Cumulative impact statement**

The Surf Coast Shire, including, Torquay, has come under increasing development pressure in recent years, and the Aboriginal cultural heritage associated with these areas has correspondingly become an ever-decreasing resource. Coastal areas provide sought after



coastal views for residential developments and are often within culturally sensitive areas that have higher likelihood of containing evidence of aboriginal occupation. As a result, this can have a cumulative impact on the finite archaeological resource if these specific areas and associated landforms.

This cumulative impact also has the potential to affect tangible and intangible cultural heritage values that may comprise unmodified landscape features. The proposed activity will likely contribute to this impact on tangible aboriginal cultural heritage; however, this will be partially offset by an archaeological salvage program designed to contribute and increase our understanding of Aboriginal occupation of this landscape. Mitigation through a program of manual archaeological salvage will ensure that scientific information is collected, analysed and interpreted which will provide a comprehensive analysis of the archaeological record of the activity area. This information will contribute to the understanding of the wider region, and ultimately allow a greater narrative to be told about past Aboriginal occupation.

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## Appendix A. Notice of Intent

## 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: Briody Drive Projects Pty Ltd  
 ABN/ACN: 630511849  
 Contact Name: Naomi Scully  
 Postal Address: Level 2, 25 Ross Street, South Melbourne VIC 3205  
 Business Number: 0435111557 Mobile: \_\_\_\_\_  
 Email Address: naomi@yourland.com

### Sponsor's agent (if relevant)

Company: YourLand  
 Contact Name: Naomi Scully  
 Postal Address: Level 2, 25 Ross Street, South Melbourne VIC 3205  
 Business Number: \_\_\_\_\_ Mobile: \_\_\_\_\_  
 Email Address: naomi@yourland.com

### SECTION 2 - Description of proposed activity and location

Project Name: Briody Drive, Torquay Sub-division  
 Municipal district: Surf Coast Shire Council

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

Utility installation (not telco)

### SECTION 3 - Cultural Heritage Advisor

Sarah Janson	Extent Heritage Pty Ltd	sjanson@extent.com.au
<i>Name</i>	<i>Company</i>	<i>Email address</i>

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

Start Date: 14-Aug-2019 Finish Date: 14-Aug-2020

Submitted on: 14 Aug 2019



### 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?*  
 Utility installation (not telco)  
 Is any part of the activity an area of cultural heritage sensitivity, as listed in the regulations? Yes
- 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.*  
 Wathaurung 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: Wathaurung Aboriginal Corporation
- 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: 14 Aug 2019

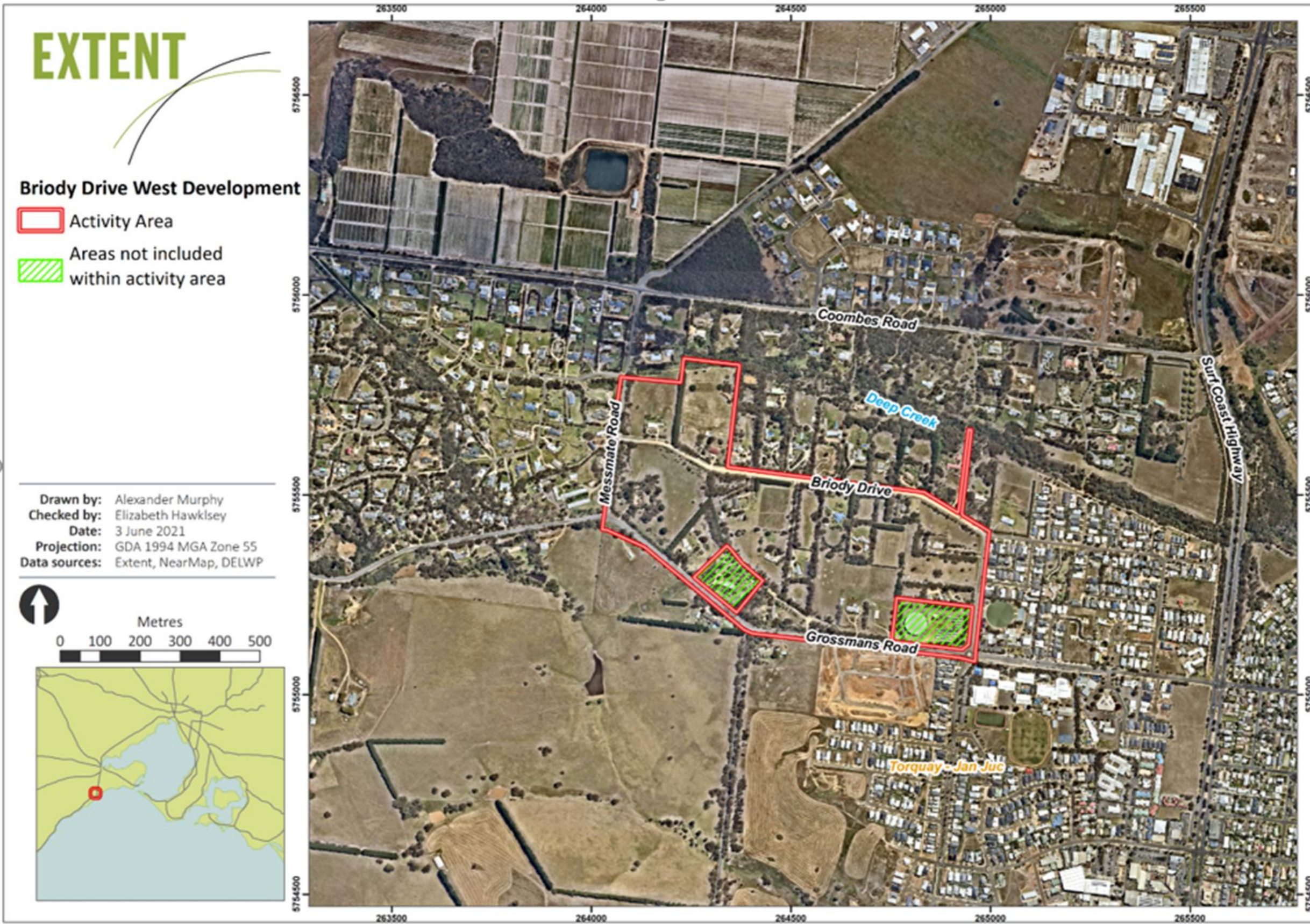
Ensure that any relevant registered Aboriginal party/ies is also notified. A copy of this notice with a map attached may be used for this purpose.  
(A registered Aboriginal party is allowed up to 14 days to provide a written response to a notification specifying whether or not it intends to evaluate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

In addition to notifying the Deputy Director and any relevant registered 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: 14 Aug 2019







## Appendix B. Response from WTOAC



**Wathaurung  
Aboriginal  
Corporation**

ICN 3330  
trading as Wadawurrung  
ABN 11 312 302 330

99 Moir Street East  
BALLARAT VIC 3350

P: 03 4308 0420  
F: 03 4308 0421  
[www.wathcorp.com.au](http://www.wathcorp.com.au)

14<sup>th</sup> of August 2019

Briody Drive Projects Pty Ltd

To Whom It May Concern,

**NOTICE OF INTENT TO PREPARE A CULTURAL HERITAGE MANAGEMENT PLAN**

I am writing to acknowledge your written notice of intention to prepare a management plan, received on the Briody Drive, Torquay Sub-division, CHMP 16746

Wathaurung Aboriginal Corporation (WAC) trading as Wadawurrung is the Registered Aboriginal Party (RAP) for the proposed activity area and will:

1. Evaluate the plan when it is completed and
2. Pursuant to s.60 of the Aboriginal Heritage Act 2006 give notice that the WAC will do all or any of the following-
  - (a) Consult with the sponsor in relation to the assessment of the area for the purposes of the plan.
  - (b) Consult with the sponsor in relation to the conditions to be included in the plan.
  - (c) Participate in the conduct of the assessment.

To aid in the development of the CHMP, the following process is requested as a minimum:

At least one pre-planning meeting with Sponsor and Heritage Advisor to determine process and methodology.

One post-investigation meeting to develop appropriate management recommendations.

And for the evaluation of the CHMP, the following is required:

1 hard copy, 1 electronic (PDF or word) copy and full payment to the Wadawurrung Office for evaluation.

Once all three are received the 30-day evaluation period will begin.

For further information regarding this advice, please contact

Ilya Berelov  
0433953966  
[admin@wathcorp.com.au](mailto:admin@wathcorp.com.au)

Yours sincerely,

**Ilya Berelov**  
**Director Cultural Heritage**  
Wathaurung Aboriginal Corporation  
Trading as Wadawurrung

## Appendix C. Gazetteer of Aboriginal places

VAHR number/name	Aboriginal place type	Primary grid coordinate (MGA/GDA 94 Zone 55)	Registered/reinspected
Briody Drive West 1: VAHR 7721-1260	Low-density artefact distribution	E 264149.26 N 5755717.64	



## Appendix D. Glossary of technical terms

Term	Description
Aeolian	Wind generated geological processes. In an archaeological context it usually refers to wind-blown deposits and sands.
Backed Artefact / Backing	A retouched tool (maybe a complete, distal, medial or proximal flake) that displays evidence of backing along one lateral margin. This backing may be initiated from the ventral surfaces or alternately may be an example of bidirectional backing initiated from both surfaces (Holdaway and Stern 2004, 259). There are four main types of commonly recognised backed artefacts, which include 'Bondi Points; geometric microliths (or 'Backed Blades'), Juan Knives and Eloueras'.
Bipolar	A method of removing flakes from a core, by striking a core against an anvil (Holdaway and Stern 2004, 11). This is often evidenced by crushing at the platform and/or at the termination of the flake; Bipolar flaking is also evidenced as crushing at the base (end opposite the platform) of a core.
Blade	A flake that is twice as long as its width.
Bulbar	Refers to a bulb of percussion produced during a conchoidal fracture
Chert	'a dense, extremely hard, microcrystalline or cryptocrystalline, siliceous sedimentary rock, consisting mainly of interlocking quartz crystals, sub-microscopic and sometimes containing opal (amorphous silica). It is typically white, black or grey, and has an even to flat fracture. Chert occurs mainly as nodular or concretionary aggregations in limestone and dolomite, and less frequently as layered deposits (banded chert). It may be an organic deposit (radiolarian chert), an inorganic precipitate (the primary deposit of colloidal silica), or a siliceous replacement of pre-existing rocks' (Lapidus 1990, 102).
Conchoidal	Where a force strikes the surface of a core forming a circular or 'ring' crack that bends back towards the surface of the core, forming a partial bulb of percussion. The fracture frequently moves towards the exterior surface of the core, detaching a flake (Holdaway and Stern 2004, 34).
Core	Andrefsky (1998, 80–81) states a core can be understood as 'an objective piece that has had flakes removed from its surface'; Holdaway and Stern (2004, 37, 5-8) provide further clarification 'artefacts that retain the negative flake scars of previous flake removals'.
Cortex	The outer layer of patination of rock is known as cortex. It is found on weathered stone (Holdaway and Stern 2004, 26-27). Cortex types (mostly rough, water worn or pebble) can indicate the source that stone material was obtained from.
Debitage	Small spalls and flakes produced during percussion, bipolar and pressure flaking.
Fine Grained Basalt	Basalt is a volcanic rock. See Volcanic below.
Flake	Depending on the completeness of the flake, a flake may have a number of common characteristics which may include: a platform, bulb of percussion, erailure (or bulbar) scar, point of force impact (PFI or umbo), dorsal ridge and ventral surface, fissures (or indentations), ripple marks (which radiate away from the point of force impact/umbo) and a termination.

Term	Description
	Not all of these features are typically found on every flake; however, they are attributes likely to be present from conchoidal fracture.
Negative Flake Scar	The negative indentation or scar left behind on a flake, core or tool when a flake is removed. The presence and abundance of negative flake scars can reveal information about the process of flaking. For example, negative flake scars on (a) cores can provide information on how intensely the core has been used, (b) on the dorsal surface of a flake can indicate how intensely the core was flaked before this flake was removed and/or that the core platform was cleaned off to start flaking again (platform rejuvenation), (c) along the edge of a flake can indicate retouch/backing (Holdaway and Stern 2004, 184).
Point	A term applied to certain formal types such as Bondi Points.
Platform	A striking platform or a platform is the surface from which a flake is struck from a Core (Holdaway and Stern 2004, 5); flakes retain part of the platform on their proximal end.
Quartz	'crystalline silica, SiO <sub>2</sub> . It crystallizes in the trigonal system, commonly forming hexagonal prisms. For cryptocrystalline varieties of silica see Chalcedony. Colourless and transparent quartz, is found in good crystals, is known as rock crystal. Varieties that are colours due to the presence of impurities may be used as gemstones, amethyst, purple to blue-violet, rose quartz, pink; citrine, orange- brown; smoky quartz, pale yellow to deep brown' (Lapidus 1990, 429).
Quartzite	'a metamorphic rock consisting primarily of quartz grains, formed by the recrystallization of sandstone by thermal or regional metamorphism; a metaquartzite and a sandstone composed of quartz grains cemented by silica; an orthoquartzite' (Lapidus 1990, 430).
Retouch	Modification of a flake or core prior to use. Retouch is the 'removal of a series of small, contiguous flakes' from the edges of the artefact (Holdaway and Stern 2004, 33). There are several different types of retouch which are identified as backing; stepped; scalar; invasive; notched and serrated retouch.
Reduction	By definition stone material is made smaller when it is struck to produce stone flakes and tools. This process is known as stone reduction.  'Modern stone artefact analyses use the reductive nature of stone artefact manufacture as the basis for reconstructing the processes by which artefacts were made. By analysing the size and form of artefacts, archaeologists can obtain information about how stone was acquired from its source, the form in which the stone was transported to campsites, how it was worked, and the way stone artefacts were use until discarded' (Holdaway and Stern 2004, 3).
Scarred Tree	A tree that has been marked as a result of bark being removed by Aboriginal people for cultural reasons or for use in making shields, containers, canoes etc. Some trees may also have marks caused by making toe holds for climbing up trees.
Scraper	'A minimal definition of a scraper is that it is a flake with one or more margins of continuous retouch'. It also indicates the stage of reduction the flake has reached (see Holdaway and Stern 2004, 227).

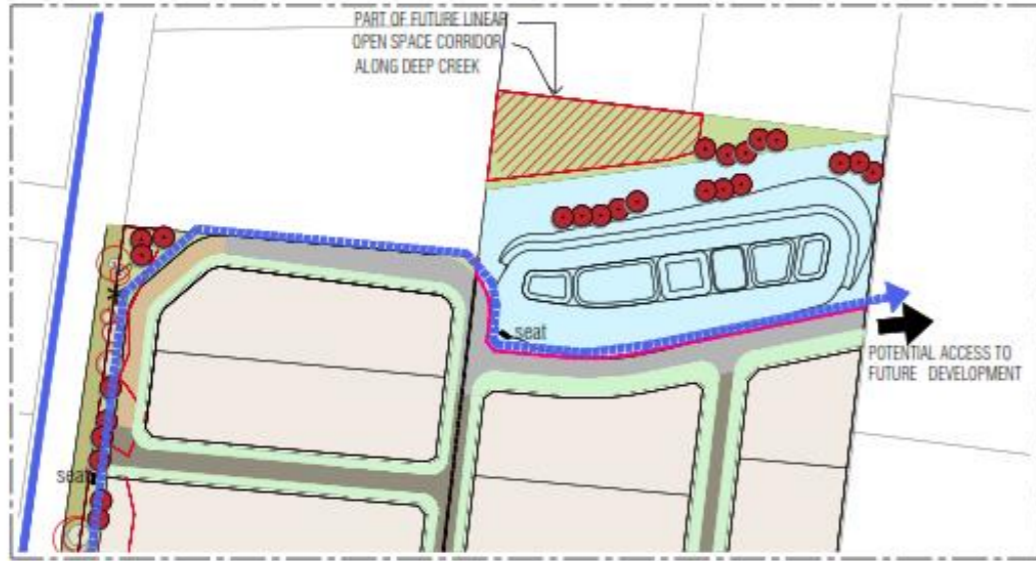
Term	Description
Silcrete	'a hard surface deposit composed of sand and gravel cemented by opal, chert and quartz, formed by chemical weathering and water evaporation in semi-arid climate. Extensive deposits of silcrete are found in S. Africa and Australia. Silcrete is a siliceous duricrust' (Lapidus 1990, 472).
Termination	There are a number of different flake terminations (or ends of a flake) which are possible through flaking stone material. The main types of flake terminations include step, hinge, feather and plunging. Flake terminations can provide information about how the flake was removed.
Tool	A tool is an artefact which shows evidence of modification (i.e. by retouch) or without modification (i.e. show signs of use-wear) (Holdaway and Stern 2004, 33, 39).
Tuff	'Pyroclastic rock composed mainly of volcanic ash (fragments <2 mm in diameter). Tuffs may be classified as crystal tuff if they contain a large proportion of crystal fragments, vitric tuff composed mainly of glass and pumice fragments and lithic tuff, containing mainly rock fragments. A consolidated mixture of lapilli and ash is a lapilli tuff' (Lapidus 1990, 519–520).
Use-wear	'Evidence of distinctive patterns of wear [which is] sometimes found on the edges of artefacts that were believed to have been used for specific purposes' (Holdaway and Stern 2004, 41). Several types of use-wear can be observed. Holdaway and Stern (2004, 41, 167) identify 'chattering' and 'edge damage' as one form of usewear.
Volcanic	'All extrusive rocks and associated high-level intrusive ones. The group is entirely magmatic and dominantly basic. Igneous lithic material generally dark in colour and may be glassy (like obsidian) or very fine-grained or glassy igneous rock produced by volcanic action at or near the Earth's surface, either extruded as lava (e.g. basalt) or expelled explosively' (Lapidus 1990, 535).



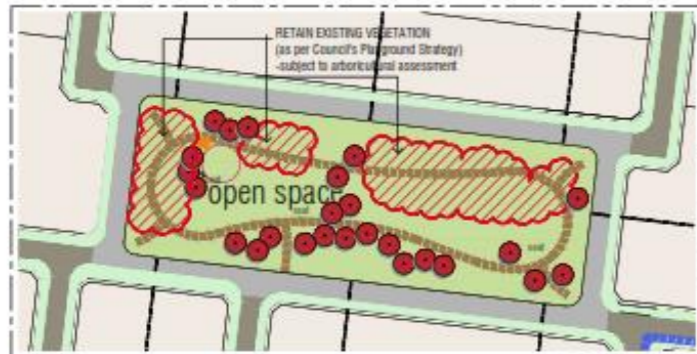
## Appendix E. Surf Coast Planning Scheme



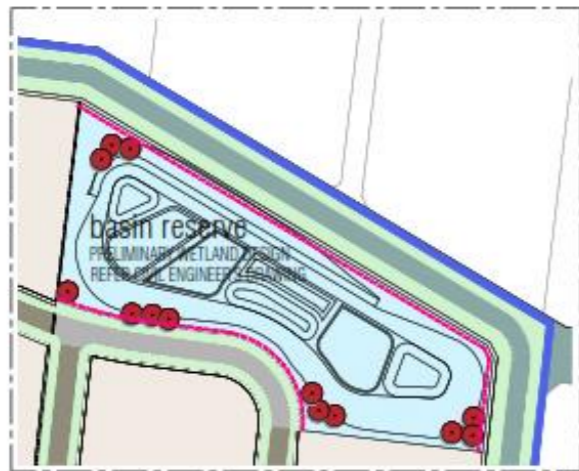




Open Space & Basin Reserve  
scale 1:1500 @ A1



Open Space Reserve  
scale 1:1500 @ A1

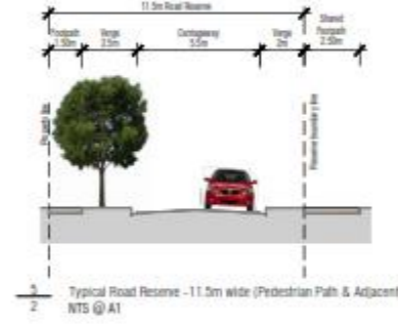
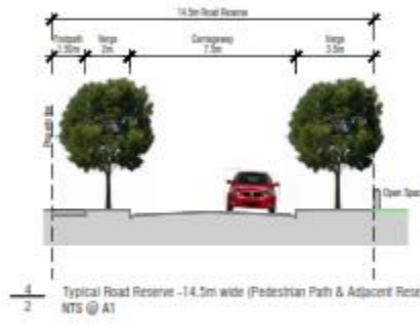
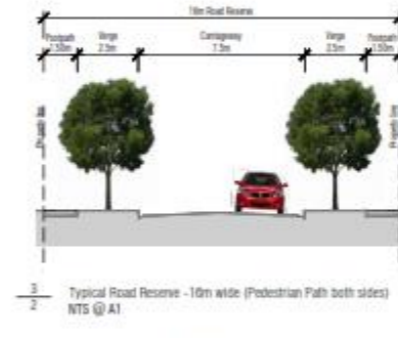
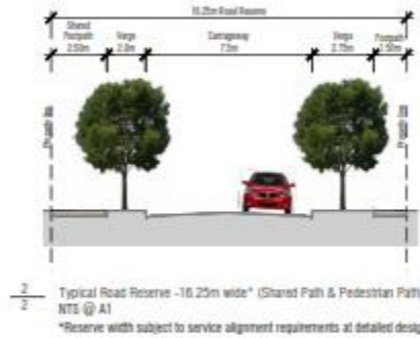
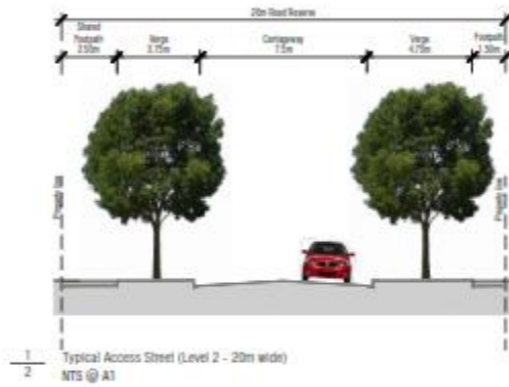


Basin Reserve  
scale 1:1500 @ A1

**Legend**

- Existing Mature Trees with Tree Protection Zone (Refer: 'Vegetation of Briody Drive, Torquay West' Mark Twiggsons Ecological Services, November 2013)
- Existing Mature Trees in large patches (Refer: 'Vegetation of Briody Drive, Torquay West' Mark Twiggsons Ecological Services, November 2013)
- Reserve trees (nominal locations)
 

Acacia implexa	Lightwood	6x4
Acacia melanoxylon	Blackwood	7x4
Allocasuarina verticillata	Drooping She Oak	6x5
Banksia marginata, tree form	Silver Banksia	6x3
Scalypsis leucostylon 'Toby Deal'		6x5
Scalypsis obliqua	Moonah	10x6
Melaleuca leucadendron	Moonah	2x4
- Existing Reserve Trees to be retained (Subject to Ecological & Arboricultural Assessment)
- Potential concrete shared path (2.5m wide)
- Existing shared path (2.5m wide)
- Existing Road Reserves
- Existing title boundaries
- Directional signage
- Picnic Area: Provide picnic facilities for one group, rubbish bin, table rack. Nominal location indicated.
- Reserve seating. Nominal location indicated.
- Local (Neighbourhood) Playground: Provide play equipment for two age groups, 3-8yrs minimum in accordance with Council's Playground Strategy, April 2011. Nominal location indicated.
- Reserve shared path (indicative only)
- Basin Reserve barriers (including maintenance access provisions) in accordance with Council's requirements.
- Basin Reserve: Access, fencing and other landscape details to be refined in the basin, as to be provided via the planning permit process.
- Access Street Level 2 - 20m wide
- Road Reserve - 11.5m wide
- Road Reserve - 16m wide
- Road Reserve - 14.5m wide



**Reserve Trees**



NO.	ISSUE	DATE
01	Issued to Council	30.11.2016
02	Issued to Council	21.06.2017
03	Issued to Council	05.12.2017

Client  
St Quentin Consulting

Project  
Briody Drive - West  
Torquay  
landscape masterplan



Designed  
G.M.  
v1 & E2

Date  
05.12.2017  
Project No.  
2807

PLANNING & ENVIRONMENT ACT 1987  
SURF COAST PLANNING SCHEME  
The Briody Drive West Development Plan complies with the requirements of Clause 43.04 of the Surf Coast Planning Scheme.

Approval Number: 150446  
Date: 7/12/2017 Sheet No 2 of 2

Digitally Signed by the Responsible Authority  
Bill Cuthbert

THIS IS NOT A BUILDING APPROVAL



## Appendix F. Stone Artefact Analysis

## Appendix G. Indicative Draft Plans for Development

