

AUSTRAL TASMANIA

Arthur Highway, Eaglehawk Neck

Archaeological Method Statement

Final Report prepared for Transport Infrastructure Services,

Department of State Growth

AT0303

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Archaeological &
Heritage Consultants
ABN: 11 133 203 488

333 Argyle Street
North Hobart 7000
GPO Box 495
Hobart Tasmania 7001

T/F: (03) 6234 6207
www.australtas.com.au

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EXECUTIVE SUMMARY

Introduction

A planning permit has been received for the upgrade of the Arthur Highway across Eaglehawk Neck on the Tasman Peninsula. The Tasmanian Heritage Council's decision requires the preparation, approval and implementation of an Archaeological Method Statement (AMS) in advance of these highway works. This AMS has been prepared in fulfilment of this condition. For the purposes of this report, the AMS addresses the Guard Station Complex, and in particular two sites of historic development: the commissariat store and a possible sentry box. This AMS proposes test excavations to determine if there is any significant archaeological material within the highway upgrade footprint, and if so, how it will be managed within the construction context.

Archaeological Potential and Significance of the Study Area

The existing highway corresponds in part with areas of archaeological potential related to the commissariat store and a possible sentry box. Such evidence may include structural and artefactual material.

Past road works are likely to have resulted in some disturbance to archaeological features or deposits. These disturbances are likely to be limited to the upper 30cm, or the typical depth that can be expected for the road base. Archaeological material may continue to exist at depths greater than 30cm below the road surface. Archaeological evidence outside of the existing highway reserve may exist at shallower depths than 30cm.

The commissariat store and possible sentry box form part of a broader place known as the Eaglehawk Neck Military Station. It is a place of State heritage significance and included on the Tasmanian Heritage Register. It is also a designated Historic Site under the *Nature Conservation Act 2002* and *National Parks and Reserves Management Act 2002*.

Design Review and Archaeological Impact Statement

A Design Review has been carried out to quantify the extent of possible impacts to areas of archaeological potential. The total extent of possible impacts to the site of the commissariat store and its buffer zone is estimated at 415m², or 44% of the total area zoned for this feature. The remaining 56% is outside of work zones and will not be impacted.

From the review of the proposed development, the assessment concludes that the development has the potential to result in variable levels of archaeological impact across the areas zoned as having archaeological potential. Generally, the risk of archaeological impacts are lower on the eastern side of the highway and greater on the western side.

Archaeological Strategy

The archaeological strategy for this project consists of four components:

1. The collection of surface bricks for curation.
2. Archaeological monitoring of two small areas on the eastern side of the highway.
3. Carry out three test trench excavations up to a depth of 500mm at the predicted location of the commissariat store within the highway upgrade footprint to determine its subsurface archaeological potential. Where archaeological potential is confirmed, an engineering 'hold point' will be carried out to determine if the archaeological features can or cannot be retained as part of the highway upgrades. Depending on the outcomes, further archaeological excavations may be required.
4. Where no substantial or significant archaeological material is identified during testing works, further excavation for construction purposes can proceed without archaeological supervision, provided unanticipated discovery protocols are in place.

Archaeological Method Statement

The AMS sets out, in practical terms, the recommendations for establishing the archaeological potential of the study area and providing direction for its future further management within the

context of highway upgrades. It contains the recommended strategy for managing archaeological potential, overarching statutory and operational requirements, and the archaeological methods for excavation and recording, artefact collection and analysis, and reporting. A research design is included.

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1.0 INTRODUCTION

1.1 Client and project details

The Department of State Growth has proposed upgrades of the Arthur Highway across Eaglehawk Neck. The development has received a planning permit which requires archaeological management in advance of works.

The Tasmanian Heritage Council consent requires the preparation of an Archaeological Method Statement (AMS). This report is prepared to address the specified permit condition and be in accordance with the Tasmanian Heritage Council's Practice Note 2: *Managing Historical Archaeological Potential in the Works Process* (Version 4: November 2014). This AMS proposes test excavations to determine if there is any significant archaeological material within the highway upgrade footprint, and if so, how it will be managed within the construction context.

1.2 Tasmanian Heritage Council Notice of Heritage Decision

The Tasmanian Heritage Council's Notice of Heritage Decision¹ includes the following archaeological condition:

1. Prior to the commencement of any works involving ground disturbance:
 - (i) An Archaeological Method Statement (AMS) must be prepared by a qualified professional historical archaeologist; and
 - (ii) The AMS must include a method for sorting, assessing, discarding, curating and interpreting any identified materials; and
 - (iii) The AMS must be submitted to and endorsed by Heritage Tasmania's Works Manager and, once endorsed, the archaeological processes that are recommended in the AMS will form part of this approval and must be implemented; and
 - (iv) A report detailing the findings of the archaeological investigations must be submitted to the Heritage Council in digital format within three (3) months of the completion of excavations for the approved works.

This AMS has been prepared in accordance with conditions 1(i)-(iii) above.

1.3 Authorship

This report was written by Justin McCarthy and James Puustinen and reviewed by Alan Hay.

1.4 Limitations and constraints

This report is limited to consideration of historical archaeological values within a scope defined by the *HCHA 1995* (and associated guidelines). The assessment of Aboriginal archaeological and cultural values, built heritage and social values is beyond the scope of this study, or being separately managed.

Whilst every effort has been made to gain insight to the historic heritage profile of the subject study area, Austral Tasmania Pty Ltd cannot be held accountable for errors or omissions arising from such constraining factors.

All maps are oriented with North at the top of the page unless otherwise assigned.

1.5 Acknowledgements

The assistance of the following people and organisations is gratefully acknowledged:

- Environment and Development Approvals section, State Growth;
- Mr David Spiers, State Roads, State Growth;
- Ms Mary O'Hare, State Roads, State Growth;
- Dr Richard Tuffin, University of New England;

¹ Tasmanian Heritage Council, Notice of Heritage Decision, DA 65/2020, 6308, 5610, 7 September 2020

2.0 EXTRACTS FROM THE HISTORIC HERITAGE ASSESSMENT

2.1 Introduction

An Historic Heritage Assessment (HHA) report was prepared for the proposed upgrades in 2019.² The report identified 32 sites or features within the study area. With regard to the proposed highway upgrades, the works have relevance to the complex of features termed the ‘Eaglehawk Neck Military Station – Guard Station’.³ This site consisted of a number of surface and subsurface archaeological deposits and the landscape formation of the dog line cutting across the Neck. Twenty-one sites or features were recorded in this area, varying from individual bricks or brick scatters, and subsurface archaeological sites. Buffer zones were established surrounding subsurface sites in response to the paucity of accurate historic plans.

Of these, the highway upgrades have relevance to the following eleven sites:

- 2.06 Commissariat Store Site;
- 2.07 Commissariat Store Site - 5m buffer zone;
- 2.08 Unknown Building Site - Sentry Box?;
- 2.09 Unknown Building Site - Sentry Box? 5m buffer;
- 2.12 Brick scatter;
- 2.13 Brick scatter;
- 2.14 Brick scatter;
- 2.15 Brick scatter;
- 2.16 Brick scatter;
- 2.17 Brick scatter;
- 2.18 Brick Scatter;

The locations of these sites is shown in the following Figure.

² Austral Tasmania Pty Ltd, *Arthur Highway, Eaglehawk Neck: Historic Heritage Assessment*, Final report prepared for Transport Infrastructure Services, Department of State Growth, AT0257, 23 May 2019

³ *Ibid*, data sheet 2, pp.76-80

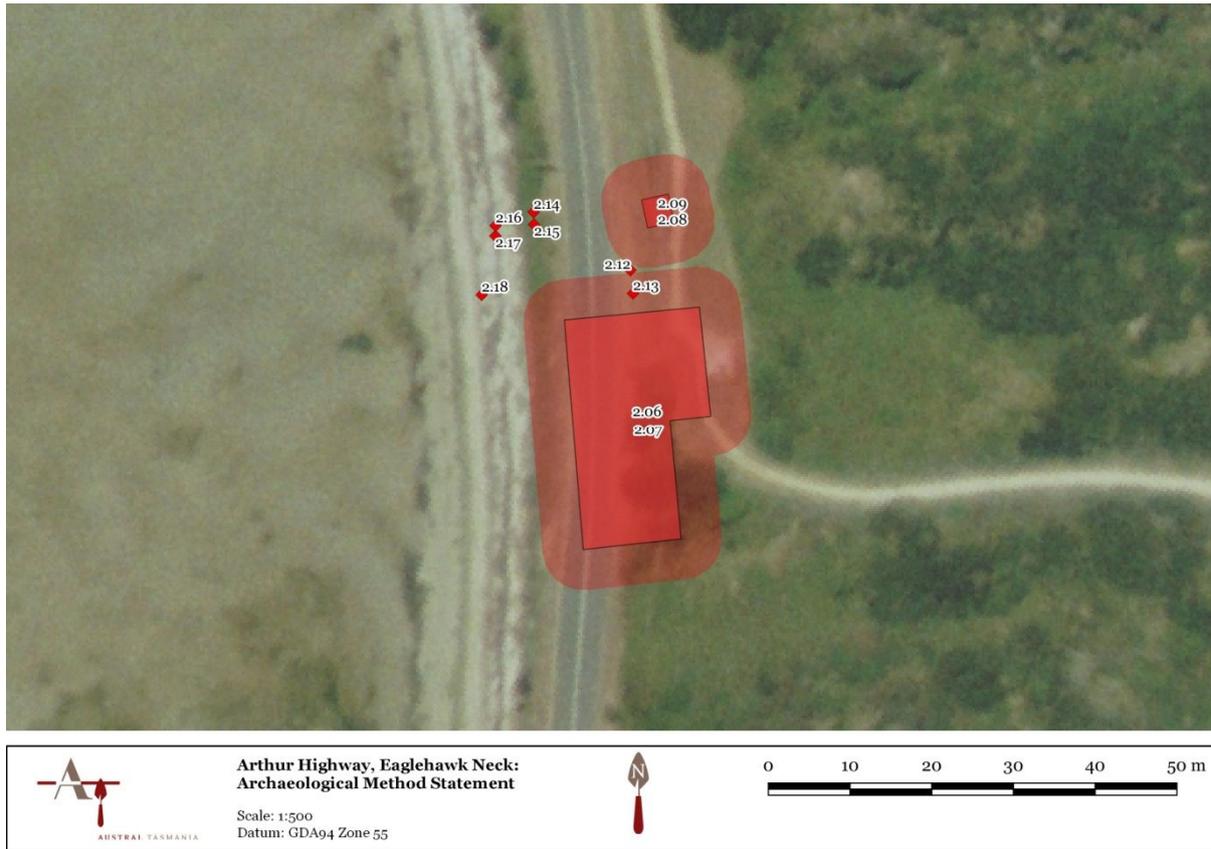


Figure 1: Sites at the Eaglehawk Neck Military Station – Guard Station with relevance to the Highway Upgrades (LISTMap © State of Tasmania).

2.2 Summary History

The Guard Station Complex formed the central part of the Eaglehawk Neck Military Station. It was established in 1832 to secure the approaches to the Tasman Peninsula and capture convicts escaped from Port Arthur.

The noise of the surf and topography of sand dunes made guarding Eaglehawk Neck a difficult exercise. In response, a cutting was made across the dunes and a line of guard dogs and lamps (with the ground covered in shells to reflect light) was extended across the cutting, with dogs even being positioned on platforms within Eaglehawk Bay to sound the alarm of any convicts attempting to wade or swim across. Initially, between six and nine dogs were used, although the numbers changed over the decades.

A number of buildings and other infrastructure was constructed at the dog line including the commissariat store, guard house, and boats crew hut to the north, while a semaphore mast and operators hut were built on top of the sand dune (and outside of the study area). A number of portable sentry boxes were positioned around the site, providing shelter for the personnel. Within Eaglehawk Bay, a long jetty was constructed, extending several hundred metres into the water, in response to the very shallow conditions.

With regard to this current project, the highway upgrades have relevance to the commissariat store which was located at the end of the jetty and had been erected by 1836, with a footprint of some 10.3m x 5.1m and with a shingle roof. Commissariat stores had functions of supplying and storing food and other items for the settlement on Eaglehawk Neck. Internally, it was designed as single open space, with a shed to the rear. Alterations were proposed in 1836 to internally divide the commissariat store and to use part of it to accommodate 13 prisoners working on Eaglehawk Neck. The building was being used for this dual purpose by 1841, with a report noting that it was divided by a 'hollow double wooden partition', which was thought insufficient to prevent prisoners from entering the store and stealing items. The commissariat functions of the building were transferred to Norfolk Bay in 1843.

A smaller building was also located to the north, possibly a sentry box.

Security arrangements began to be scaled back in 1873-74, and had ceased by 1877 with the closure of Port Arthur. The former boats crew hut, commissariat store and guard house remained extant until the late nineteenth, early twentieth century, but were removed shortly afterwards.⁴

2.3 Description of Features

The following features are relevant to the proposed highway upgrades. The commissariat store (2.06) was a rectangular building facing Eaglehawk Bay with an open shed attached to its rear. Noting the limitations in the accuracy of plans showing this building, overlays suggest that this building is located within the highway reserve and under what is now the highway alignment. Historic photographs do suggest that this is the likely location, with the building located above the beach. A 5m buffer zoning has been placed around the site (2.07). There is no surface evidence of this building. Likewise, there is no indication of the location of a possible sentry box shown on the 1838 plan (2.08-2.09), and located to the north of the commissariat store. Minor evidence of historic building fabric is located within the gravel highway reserve, on the eastern side of the highway, with two surface scatters (approximately 20 x 50cm) of crushed brick fragments (2.12, 2.13), most pieces being less than 2cm in diameter.

More intact brick fragments are located on the western side of the highway, on Eaglehawk Bay, which have progressively fallen out of the embankment and on to the beach. Kee (1991) recorded a scatter of waterworn bricks and ochre located at the high water mark and extending for a distance of approximately 70m. The beach and high water mark was covered in dense seaweed at the time of inspection in February 2019 and the extent of the scatter recorded by Kee could not be discerned. However, a scatter of bricks over an area of approximately 230m² was recorded opposite the dog line, consisting of numerous worn brick fragments, in eight concentrated groups. Brick scatters 2.14-2.18 have relevance to the highway upgrades.

2.4 Assessment of Archaeological Potential

The existing highway corresponds in part with areas of archaeological potential related to the commissariat store and a possible sentry box. Past road works are likely to have resulted in some disturbance to archaeological features or deposits. These disturbances are likely to be limited to the upper 30cm, or the typical depth that can be expected for the road base. Archaeological material may continue to exist at depths greater than 30cm below the road surface. Archaeological evidence outside of the existing highway reserve may exist at depths shallower than 30cm.

Such evidence may include structural and artefactual material related to the commissariat store and the possible sentry box to the north.

2.5 Assessment of Significance

The Eaglehawk Neck Military Station and dog line played a remarkable role in the operation and history of Port Arthur and the Tasman Peninsula and are recognised as a unique element in the history of convictism in Australia.

The dog line at Eaglehawk Neck has entered the folklore of Port Arthur, Tasmania and Australia as a remarkable element in our convict history.

The site of the dog line has major associational significance with the control and management of convicts.

The Eaglehawk Neck Military Station and dog line is a rare place of convict security, where the combination of topography and use of dogs and lamps created a unique and notorious element in controlling convict movement on the Tasman Peninsula.

Although partly disturbed through highway construction, the Eaglehawk Neck Military Station and dog line has subsurface research potential related to the new information it could provide about one of Tasmania's most notorious places of convict management. This includes the dune cutting itself, and the locations of the several buildings and the jetty which were located towards the middle of the isthmus. Subsurface archaeological investigation of these places could provide information related to the design and construction of military buildings and changes over time, and the working life of those personnel stationed at Eaglehawk Neck.

⁴ Austral Tasmania, *op. cit.*, p.76

The social significance of the place has not been assessed, but is likely to be important at a State level to the broader Tasmanian community as a key site of Tasmania's convict heritage combining attributes of a distinctive topographical landmark and unique system of securing the site through the dog line.

The Eaglehawk Neck Military Station and dog line has important aesthetic characteristics. It is a dramatic cultural landscape in which the combination of topography and historic sites is evidence of, and evokes the past uses and associations of the place, which remain legible landscape elements.

3.0 DESIGN REVIEW AND ARCHAEOLOGICAL IMPACT STATEMENT

3.1 Design Review

A Design Review is a means of quantifying the extent of possible impacts to areas of archaeological potential. It does so by identifying areas and depths of proposed excavation and how these may correspond with locations of archaeological potential. This assists in determining an archaeological strategy and management techniques.

This description should be read in conjunction with the following Figures. The proposal is for the upgrade of the Arthur Highway across Eaglehawk Neck. This will involve widening of the road on its western side.

With regards to sites of archaeological potential, works between chainage 4270 and chainage 4320 have relevance to the Guard Station Complex. The extent of excavation varies along this length.

At chainage 4320, the eastern verge will be cleared and grubbed to accommodate a fill batter to a depth of 300mm. At the northern end, a small area of 4.98m² will be grubbed to this depth and corresponds with the buffer zone of site 2.09, the site of possible sentry box. In the south, an area of approximately 14m² will be grubbed to this depth over an area of approximately 14.72 m² corresponding with the site of the commissariat store (2.06) and its 5 metre buffer (2.07).

From the eastern verge to the road centre, the existing seal will be stripped and excavated to a depth of 150mm. At a distance 2m west from the current eastern road verge, excavations will occur over a 500mm width and 1,000mm deep trench to accommodate service relocation. From the road centre to the western verge (hinge of batter), the existing seal will be stripped and excavated to a depth of 450mm. From the hinge of the batter to the beach, the area will be cleared and grubbed, probably at a depth of 100mm, but to a maximum depth of 300mm. Finally, excavations will occur on the beach for the retaining wall, to a depth of 1,380mm from the beach surface. This excavation starts and finishes 4,150mm and 13,500mm west of the toe of the current batter on the beach.⁵

⁵ Spiers, D (State Growth) email to Puustinen J. (Austral Tasmania), 24 September 2020

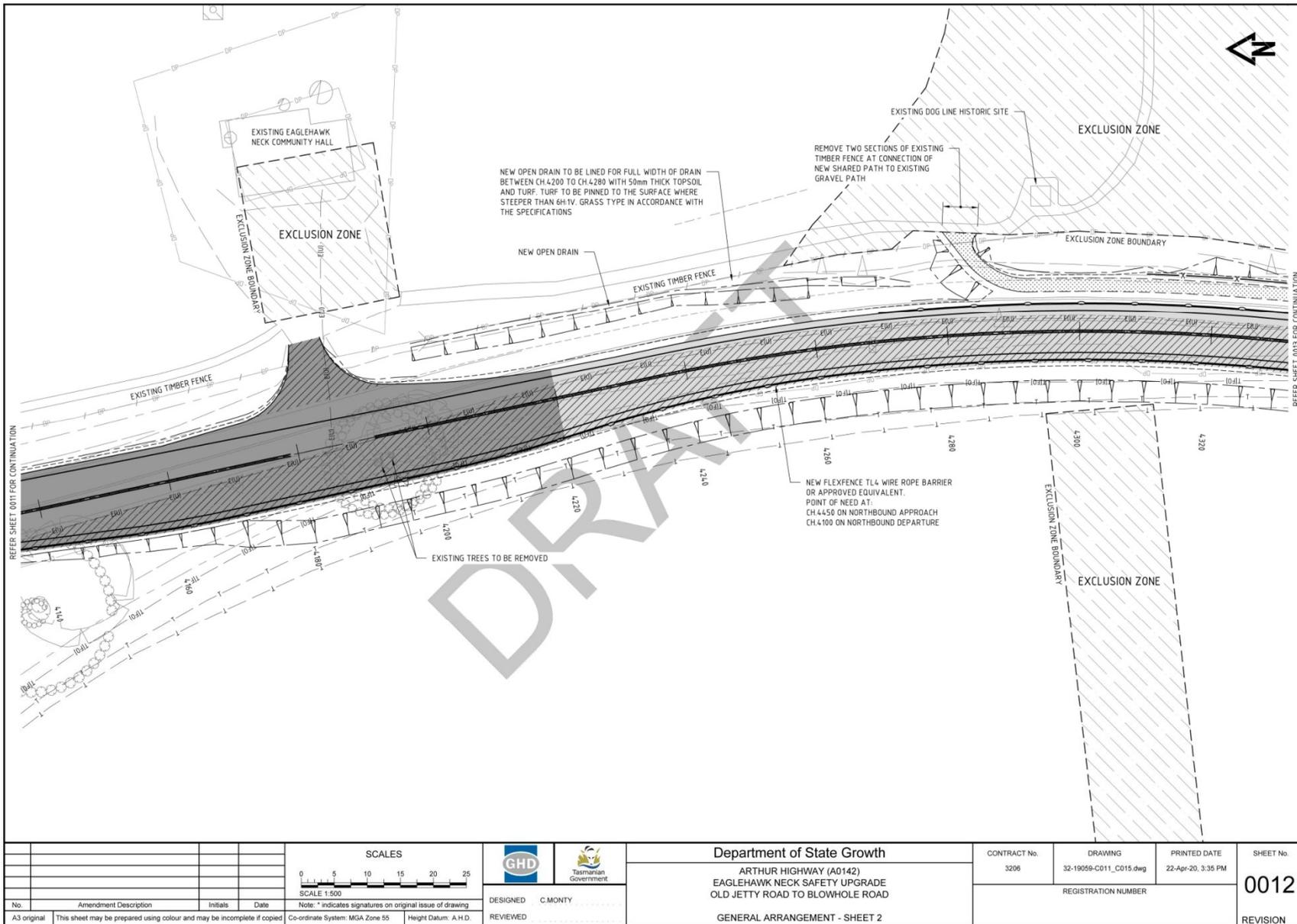


Figure 2: Sites General Arrangement Sheet 2. The Guard Station Complex is located between chainage 4270 and 4320 (GHD).

		<p>SCALES</p> <p>SCALE 1:500</p> <p>Note: * indicates signatures on original issue of drawing</p>			<p>Department of State Growth</p> <p>ARTHUR HIGHWAY (A0142) EAGLEHAWK NECK SAFETY UPGRADE OLD JETTY ROAD TO BLOWHOLE ROAD</p>		<p>CONTRACT No. 3206</p>	<p>DRAWING 32-19059-C011_C015.dwg</p>	<p>PRINTED DATE 22-Apr-20, 3:35 PM</p>	<p>SHEET No. 0012</p>
<p>No.</p>	<p>Amendment Description</p>	<p>Initials</p>	<p>Date</p>	<p>DESIGNED C.MONTY</p>	<p>REVIEWED</p>	<p>GENERAL ARRANGEMENT - SHEET 2</p>	<p>REGISTRATION NUMBER</p>		<p>REVISION</p>	
<p>A3 original This sheet may be prepared using colour and may be incomplete if copied</p>				<p>Co-ordinate System: MGA Zone 55</p>		<p>Height Datum: A.H.D.</p>				

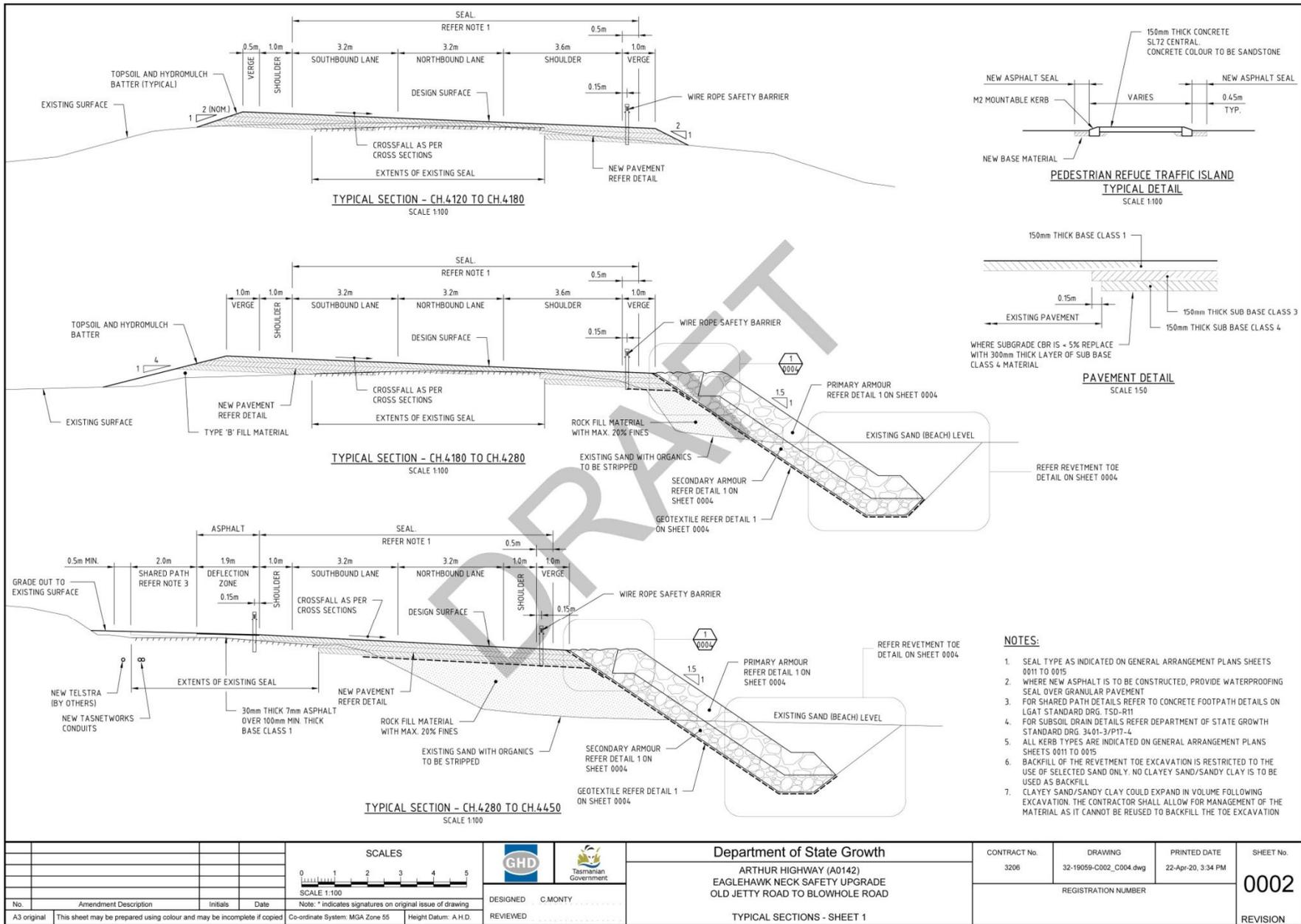


Figure 3: Typical sections. The bottom diagram showing between Ch.4280 to Ch.4450 has relevance to the Guard House complex (GHD).

3.2 Assessment of Impacts to Archaeological Potential

From the review of the proposed development, the assessment concludes that the development has the potential to result in variable archaeological impacts across the areas zoned as having archaeological potential. Generally, the risk of archaeological impacts are lower on the eastern side of the highway and greater on the western side.

At the outset it should be noted that the total extent of possible impacts to the site of the commissariat store and its buffer zone is estimated at 415m², or 44% of the total area zoned for this feature. The remaining 56% is outside of work zones and will not be impacted.

The existing highway corresponds in part with areas of archaeological potential, and past road works are likely to have disturbed archaeological features or deposits. These disturbances are likely to be limited to the upper 300mm, or the typical depth that can be expected for the road base. Archaeological material may continue to exist at depths greater than 300mm below the road surface. Archaeological evidence outside of the existing highway reserve may exist at shallower depths than 300mm.

The varying depths of excavations for the highway upgrades results in variable impacts to areas zoned as having archaeological potential. The following Figures attempt to depict areas of potential impact according to low (green), moderate (yellow) and high (red) impacts. In summary:

- The clearing to a depth of 300mm at two locations on the eastern verge has moderate potential to cause impacts to site 2.09 and 2.07;
- The road works on the eastern lane of the highway are limited in depth to 150mm and have low potential to cause impacts to sites 2.06 and 2.07;
- A 1,000mm deep service trench running north-south has the potential to cause high archaeological impacts to site 2.06, and potentially the buffer zone 2.07.
- A relatively small area of excavations to a depth of 450mm has the potential to cause high archaeological impacts to site 2.06.
- A broader area representing the buffer zone 2.07 will be excavated to a depth of 450mm and has moderate potential to cause archaeological impacts.
- The brick scatters on the beach 2.14, 2.15, 2.16, 2.17 and 2.18 will be impacted by the expansion of the road and retaining wall onto the beach.

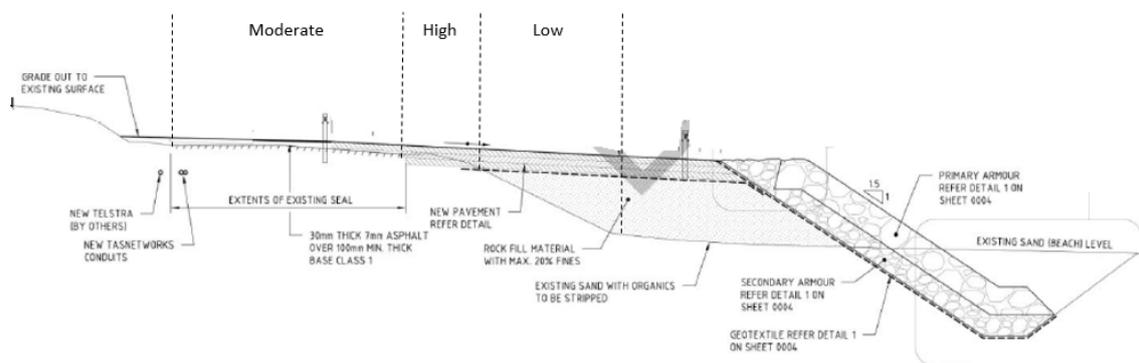
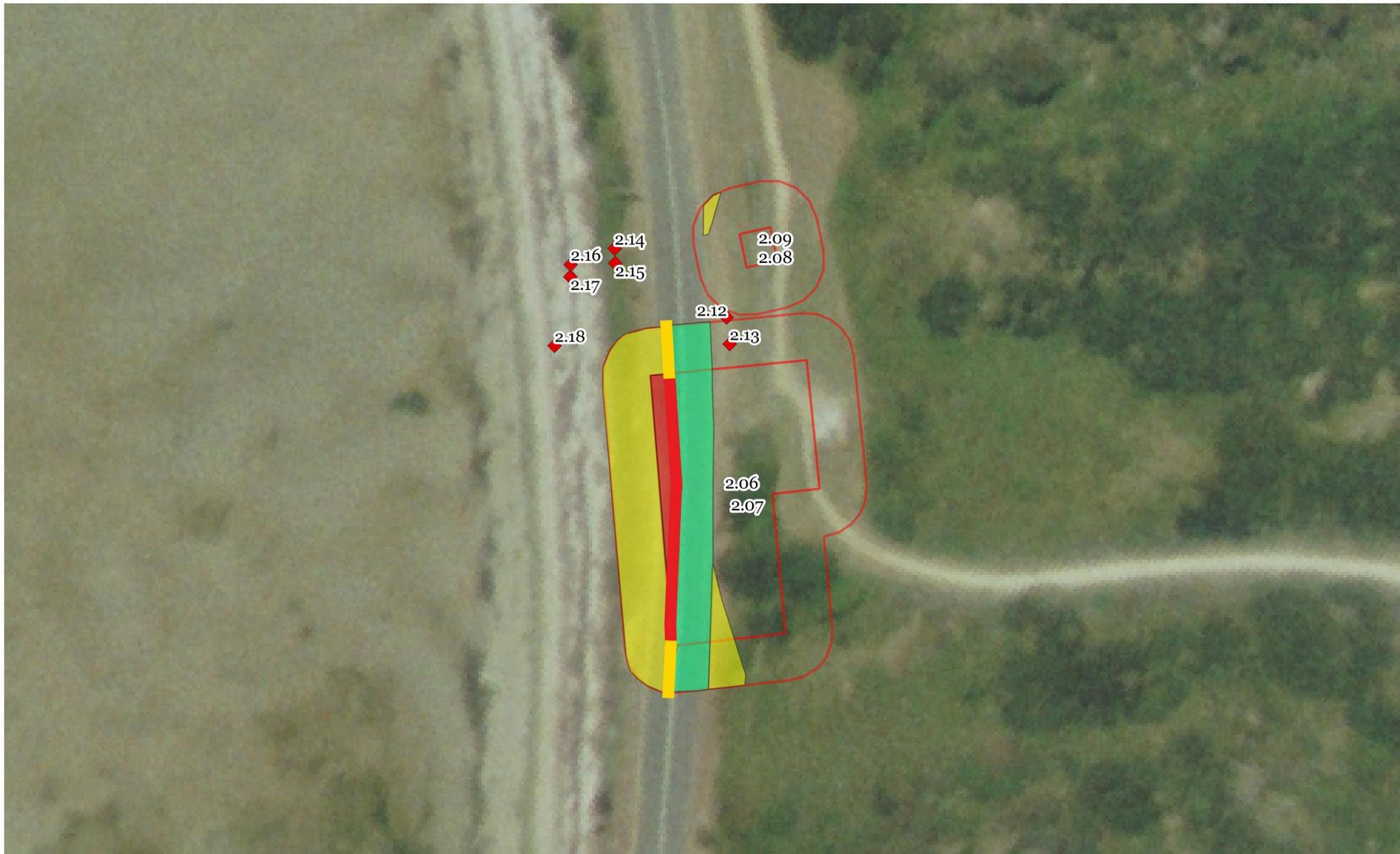


Figure 4: Cross-section showing potential for impacts.





**Arthur Highway, Eaglehawk Neck:
Archaeological Method Statement**

Scale: 1:500
Datum: GDA94 Zone 55





Figure 5: Potential for archaeological impacts: low (green), moderate (yellow) and high (red) impacts.

4.0 ARCHAEOLOGICAL METHOD STATEMENT

4.1 Structure of this Archaeological Method Statement

The AMS has been structured into three key parts:

- The archaeological strategy, which outlines the overarching approach to this project in response to the proposed development and permit conditions (section 4.2);
- The general requirements for the project, addressing such matters as statutory compliance; objectives for the investigations; division of responsibilities between the Client and archaeological consultant; and operational matters related to work place safety, and site establishment (section 4.3); and
- The recommended archaeological methods for archaeological testing, controlled excavation and recording, artefact collection and analysis and reporting (section 4.4).

4.2 Archaeological Strategy

The archaeological strategy provides the general approach to the management of potential archaeology within the area of the Guard Station to be impacted, with detailed implementation recommendations included in the AMS.

This strategy has been determined on the following basis:

- The absence of detailed and accurate historic plans showing the Guard Station site. The depiction of zones of archaeological potential are indicative at best, and allowing for errors, a generous 5 m buffer zone has been placed around the key built sites, and with relevance to the highway improvements, the possible northern sentry box (2.08, 2.09) and the commissariat store building (2.06, 2.07).
- The variable potential for archaeological impacts across the area. Generally, lower risks of impacts exist on the eastern side of the highway where excavations will be 150mm deep and probably not through the existing pavement, with potentially greater impacts on the western side with excavations up to 450mm.
- The importance of the place and its archaeology within the broader Eaglehawk Neck Historic Site, and with formally recognised State level values.
- Strategies to manage potential impacts through a combination of archaeological monitoring, testing and progression to open area salvage excavation where the archaeological potential is proven and cannot be retained *in situ*.
- That any archaeological works must occur within an operating highway reserve.
- The policies of the draft 1992 *Eaglehawk Neck Military Station Conservation Plan*,⁶ and specifically:

Disturbance of significant or potentially significant archaeological features or contexts should only occur where essential for the conservation of the place of where unavoidable for operational reasons. In such cases investigation should be undertaken by an appropriately skilled archaeologist in accordance with an archaeological research design.

....

Provision should be made for adequate recording and post excavation/disturbance analysis of archaeological features, and the long term curation and management of artefacts and data recovered.⁷

The Conservation Plan recognises the Arthur Highway as a form of existing and continuing use. It notes that where conflict arises between conservation and other considerations, conservation issues

⁶ Godden Mackay, *Eaglehawk Neck Military Station Conservation Plan*, prepared for Department of Parks, Wildlife and Heritage, 1992 (draft)

⁷ *Ibid*, p.192

should prevail, except where adequate resources are not available, public safety is at risk or impacts are unavoidable for operational reasons.⁸ In this case, public safety and operational requirements for the Arthur Highway take precedence over conservation, and this has been formally recognised by the Tasmanian Heritage Council's Notice of Heritage Decision.⁹

The strategy has the following components:

1. The collection of surface brick scatters to be collected for curation.
2. The archaeological monitoring of the small areas on the eastern side of the highway that will be cleared and grubbed.
3. Archaeological test excavation, with the assistance of a small machine (1.8 - 3 tonne), of three test trenches up to a depth of 500mm within the area of greatest potential archaeological impacts on the western side of the highway. The purpose of the test trenches is to rapidly determine if there are substantial and significant subsurface archaeological remains within the highway upgrade footprint, and if so, how they will be managed within the construction context.
4. If the test excavations confirm the archaeological potential of the place, an engineering project 'hold point' will be carried out which will result in one of two outcomes:
 - i. The engineering assessment confirms that the archaeological features and deposits can be maintained in place with minimal or no further disturbance as part of the highway upgrades. Engineering and archaeological advice will be provided on protecting the archaeological material as part of the highway upgrades, including in areas beyond the test trenches. This may require additional archaeological excavation to accurately define the depth of these features and deposits within the works areas.
 - ii. The engineering assessment confirms that the archaeological features and deposits cannot be retained as part of the highway upgrades. This will result in the test trenches being expanded to open area excavations to salvage and record the evidence prior to being removed by highway works.
5. Where no substantial or significant archaeological material is identified during testing works, further excavation for construction purposes can proceed without archaeological supervision, provided archaeological advice will be sought by the contractor should unexpected archaeological material be found. Where substantial and significant archaeology is identified, works will need to progress to controlled salvage excavation prior to any proposed construction activities.

4.3 Overarching Requirements

4.3.1 Compliance with Planning Permit & Stakeholder Consultation

This AMS must be approved by the Works Manager, Heritage Tasmania, DPIPWPE before the commencement of works.

This AMS should also be provided to Parks and Wildlife Service, DPIPWPE and the Port Arthur Historic Site Management Authority for review and feedback prior to being finalised.

4.3.2 Coordination between Aboriginal and Historic Heritage Services

Liaison should occur between the Aboriginal archaeological consultant and the historical archaeological consultant to ensure coordination of approaches and avoidance of inadvertent impacts to either resource.

4.3.3 Objectives and Proposed Outcomes of the Proposed Works

The objectives of undertaking archaeological investigations within the study area are to:

- Establish the archaeological potential of the place through test excavations, with allowance to progress to controlled open area excavation where such potential is established and cannot be retained *in situ*;

⁸ Godden Mackay, *op. cit.*, pp.188-197

⁹ Tasmanian Heritage Council, Notice of Heritage Decision, DA 65/2020, 6308, 5610, 7 September 2020

- Determine the extent of archaeological impacts from the existing highway, and establish the depths at which archaeology exists beneath the road surface;
- Establish the nature of the archaeological materials present including structural materials, intactness and integrity;
- Derive from the material information about site formation and landscape modification, building modifications and form;
- Have in place appropriate control measures to manage unanticipated discoveries when the archaeological consultant is not present.

Where these objectives are achieved, the archaeological excavation program may:

- Provide an opportunity to compare the documented past with that presented by the archaeology for a complex cultural landscape;
- Provide information and artefactual material for interpretation of the history and heritage of the site; and
- Prepare the site for the highway redevelopment.

4.3.4 Client Liaison

Liaison between the Client, Contractor and Archaeological Consultant should occur prior to commencement of the project to establish clarity in the division of responsibilities. Generally the responsibilities are allocated in the manner set out below, but this is negotiable.

The Client and/or Contractor is usually responsible for:

- The hire of a suitably-equipped 1.8 - 3.0 tonnes machine excavator and operator;
- Provision of a site facilities (including toilet and washroom facilities);
- Preparation of a Traffic Management Plan and traffic control;
- Responsibility for all perimeter site fencing, signage and security;
- Engaging a surveyor to mark out the test pit locations;
- Provision of site datum coordinates with a differential GPS;
- Engaging a service locator to investigate each test pit location;
- Engaging a concrete cutter for any surface cutting required;
- Provision of appropriate Work Health and Safety guidelines for the identification and management of any toxic materials or deposits;
- The hire of a pump to remove water from trenches where cultural deposits exist below the ground water level, or following rain episodes; and
- Provision of a Water and Sedimentation Management Plan to manage water run-off from the site during excavations.

These works will be undertaken by a prequalified contractor engaged by the Department of State Growth organised by the Project Manager.

The archaeological consultant's responsibilities include:

- The preparation of a Safe Work Method Statement (SWMS) covering the duties and responsibilities of the archaeological consultant;
- The supply of archaeological excavation tools and equipment;
- Archaeological excavation of the test sites; and
- The survey of trench locations and key features revealed at the conclusion of excavation and reporting of results.

4.3.5 Limitations and Constraints

The following constitute circumstances or conditions that are likely to be beyond the control of the Archaeological Consultant and may affect the acquittal of excavations:

- Bad weather causing extended delays to the program through lost working days that cannot be addressed by re-scheduling or re-deployment of the archaeologist on other project related tasks;
- Contamination (including asbestos and hazardous compounds which have infiltrated the archaeological deposits) is encountered which poses a threat to the excavation team or public safety and cannot be economically or safely managed as part of normal archaeological processes;
- Live underground services precluding access to the target sites (or parts thereof);
- Unmanageable volumes of groundwater are encountered; and
- The discovery of Aboriginal cultural material and its management, including any permit requirements.

4.3.6 Expertise to be Employed During Works

The Archaeological Consultant shall hold suitable tertiary qualifications and a minimum of five years field experience in historical archaeology.

4.3.7 WH&S issues and Management

The Archaeological Consultant will prepare a Safe Work Method Statement (SWMS) for the archaeological component of the works. All archaeological staff must attend an induction based on the SWMS and sign a declaration that they have received an induction and read the SWMS. A copy of the SWMS will be forwarded to the Client for information and copies of the document shall be available on site for the duration of the excavation. Updates shall be circulated and accompanied by a directive to destroy earlier versions replacing them with the current version being supplied.

As a minimum, all staff must wear high visibility safety vests and steel capped boots on entering the work site. When working with machines and in trenches they must also wear a hard hat. Other protective measures appropriate to site conditions shall be adopted according to need and the requirements of the SWMS.

Due care should be taken by the archaeological consultant during all works on the discovery of potential contaminants at the site. Notification protocols should be in place to seek the advice of the Client's Environmental Consultant should contaminated material be identified or suspected during excavation works. The management of contaminated material may be a constraint on archaeological excavations at the site.

The SWMS will include measures in accordance with the Covid Safe Workplace Guidelines 'Building Construction and Construction Trade Services Industry'. The SWMS must include standards for managing risks to health and safety; cleaning and hygiene; restrictions on entry to the workplace; physical distancing at the workplace; providing instruction, training and supervision in respect to COVID-19; and responding to an incident of COVID-19 in the workplace.

4.3.8 Provision of Traffic Management Plan

The Client/Contractor should arrange for the preparation of a Traffic Management Plan to be implemented during works, inclusive of traffic control.

4.3.9 Live Services

Prior to the commencement of the excavation, the sites to be investigated will be inspected and marked out by a service locator. If, for whatever reason, services suspected of being live are encountered then these may (if required) be dealt with by a relevant tradesperson.

Live services are to be located prior to commencing works and be either disabled or redirected.

4.3.10 Fencing and Security

The Client/Contractor is responsible for the fencing and security of the works area and will ensure that it surrounds work and storage areas comprehensively. At a minimum, the fence will be a movable panel chain wire design inset to heavy, movable bases, 1.8 metres in height.

Given the public location of the site, additional security protocols may be required to prevent vandalism, theft or injury during evenings. These protocols may require the installation of additional secure fencing panels and security personnel.

4.3.11 Spoil Management

Spoil will be managed by temporary stockpiling on site. Separate stock piles may be required in response to soil contamination and disposal requirements. Spoil stockpiles will be monitored to ensure runoff and wind-borne dust hazards are appropriately contained. The removal of stockpiles from site will be in accordance with the Traffic Management Plan.

4.4 Archaeological Methods

4.4.1 Salvage of Surface Scatters of Bricks

The better-preserved brick fragments located on the beach and embankment (2.14-2.18) and shown on Figure 6 are to be collected by the archaeologist before works commence. They will be managed in accordance with the artefact collection recommendations contained below.

4.4.2 Archaeological Monitoring

The clearing and grubbing to accommodate fill batter to a depth of 300mm on the eastern side of the highway is to be archaeologically monitored and controlled. These sites are shown in Figure 6 below as Monitoring Area 1 and Monitoring Area 2. The discovery of significant archaeological features will constitute a 'hold point' as part of the works.

4.4.3 Archaeological Test Excavations

Test excavations will be carried out at the three sites shown in Figure 6. Test sites will be marked out by a surveyor, and as required, hard surfaces will be cut. Test excavations will include the use of both machine and hand excavation as required.

Three test trenches are proposed. The first, Trench 1, will be a long trench 1x3m long x 500mm deep, designed to intersect the western wall of the commissariat store. It extends from the road centreline, east to the hinge of the road batter, and is designed to intersect the north-south wall of the building, and determine its alignment and depth beneath the current road base. Trench 2 will be located towards the northern end of the building and Trench 3 will be located at its southern corner. Trenches 2 and 3 will be 2x2mx500mm deep. The precise locations of Trenches 2 and 3 may be repositioned based on the results of Trench 1. The size of these test pits has been determined to allow for greater interpretation of subsurface conditions. The reliability of the historic plans to geospatially locate this building are poor, resulting in a large surrounding buffer zone of 5m. It is unknown if the commissariat store was erected on brick piers or external perimeter footings and there is no certainty that the three test pits will intersect with these walls or piers.

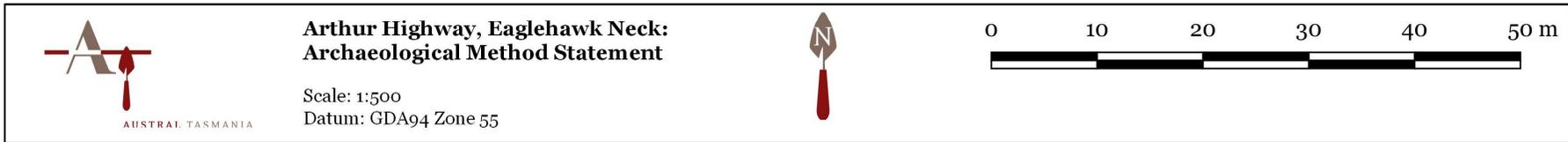


Figure 6: Archaeological monitoring, testing and salvage areas.

4.4.4 ‘Hold Point’ on the Discovery of Substantial and Significant Archaeology

Excavation works will temporarily cease on the discovery of substantial and significant archaeology. In this context, substantial and significant archaeology will be demonstrated by archaeologically intact footings of the commissariat store and possible subfloor deposits. The exposed features and deposits will then be cleaned up by hand and recorded by the archaeologist.

Where such discoveries are made, the Client’s engineer will inspect the site and determine if the archaeology can be retained *in situ* as part of the highway upgrades. Where this is possible, engineering and archaeological advice will be provided to protect the archaeological material as part of the highway upgrades. This will likely require the opening up of a long trench along the western boundary of the commissariat store building to expose its footings so its depth can be accurately determined. Features will be archaeologically recorded before being covered with geofabric textile. The site will then be handed to the Client’s engineer to re-design the road formation to avoid impacts to the archaeological features.

Heritage Tasmania, Parks and Wildlife and the Port Arthur Historic Site Management Authority will be informed when this scenario emerges.

4.4.5 Progression from Testing to Controlled Excavation where Archaeology cannot be Protected *in situ*

Where it is not possible to retain substantial and significant archaeology, the works program should transition from archaeological testing to controlled salvage excavation. Sufficient lead time should be provided for both test and possible full context based controlled open area archaeological excavations so as to avoid critical path complications with the construction program.

The extent to which the site is archaeologically excavated and recorded should be determined by the Excavation Director and be based on the intactness of the features and deposits and their ability to provide new important information regarding the history of the site.

Heritage Tasmania, Parks and Wildlife and the Port Arthur Historic Site Management Authority will be informed when this scenario emerges.

4.4.6 Excavation Methods

The Excavation Director in consultation with the supervising archaeologist will have complete and absolute discretion over the excavation, taking into account a range of factors which experience suggests are unquantifiable, and therefore subject to change. The intended methods are set out below.

Machine excavation will be carried out using a small machine 1.8 - 3.0 tonnes equipped with a range of flat-edged or ‘mud buckets’ (generally 300 to 600 mm wide) to remove the majority of consolidated deposits.

Excavation is intended to be acquitted as per the accepted, best-practice form of historical archaeological methods. Deposits and features will be removed in strict reverse order of deposition, with salient characteristics carefully recorded. Mechanical excavation will be undertaken via a series of shallow scrapes so that the exposed surface in the pit or trench is progressively reduced in a controlled manner. Where a feature or anomaly is noted, it will be investigated by hand. Small hand tools such as picks, shovels, pointing trowels, brushes and pans will be used in manual excavation for either cleaning up excavated areas or revealing exposed features or deposits. Mechanical excavation will cease on encountering *in situ* historical features and deposits that are the target of the excavation. The exposed features and deposits will then be cleaned up by hand and recorded.

4.4.7 Recording Methods

Basic, best practice, principles of stratigraphic excavation and recording will be adopted. Recording and documentation of archaeological contexts will conform to standard archaeological methods. The archaeological works will be recorded by way of measured drawings, surveys, photographs and written descriptions.

Measured plans will be prepared during the excavation. The site is to be recorded in such a way that excavated features and deposits can be related to each other and the whole site. Plans will be completed in a range of scales, utilising a variety of different methods: from site and feature plans, to elevations, sections and overlays.

Levels will be recorded as necessary throughout the course of the excavation. This data will be used to understand the relationship of the stratigraphy and features encountered.

All significant elements will be photographed with a scale bar. Digital media will be used for photographic recording.

In addition to the compilation of thorough field notes, provenance data and descriptions will be recorded on numbered context recording sheets. Documentary records of the excavation will be supplemented by the preparation of Context Schedules and a Harris Matrix for the excavation areas. The Excavation Director or the supervising archaeologist will keep a field journal and a visual diary, creating a written and photographic record of the daily progression of the excavation.

4.4.8 Artefact Collection and Post-Excavation Analysis

All artefacts recovered from significant or potentially significant *in situ* artefact bearing contexts are to be retrieved and retained for post-processing. Artefacts from imported fill deposits, disturbed contexts (including surface collections), and/or which are non-diagnostic will not be retained unless they are rare, and/or have a high interpretive value or are otherwise of significance. If extremely large amounts of artefacts are found priorities will be assigned in respect of the proportion of material to be analysed. All artefacts deemed worthy of retention will be catalogued.

Artefacts will be recorded with all standard information required to identify them. This information will include site name, area number, space (if required), unit (or context) number, date excavated and excavator's initials. If deemed necessary, some artefacts or artefact groupings may be recorded *in situ* (through inclusion on measured drawings or through survey) prior to their removal.

All artefacts will be cleaned (if appropriate), bagged in suitable polyethylene or paper bags, double-tagged with Tyvek (or similar) labels. The labels will be annotated using permanent ink pens. Analysis by a historical archaeological artefacts expert will then proceed. Advice will be provided on any specific storage or curatorial needs for the assemblage.

4.4.9 Permanent and Secure Storage of Artefacts

Following analysis and reporting, the artefact assemblage will be handed over to the Client. The Client may arrange for the collection to be permanently and securely housed by a stakeholder such as Parks and Wildlife, the Port Arthur Historic Site Management Authority or the Tasmanian Museum and Art Gallery.

4.4.10 Preparation of Test Excavation Report

An illustrated fully referenced test report will be produced on completion of the excavation and artefact analysis tasks. This will contain sections describing rationale and methods, historical context, description of findings (augmented by annotated plans and images), artefact analysis and interpretation of results.

The report will be made available to Heritage Tasmania, DPIPW, Parks and Wildlife, the Port Arthur Historic Site Management Authority and the State Library of Tasmania.

4.4.11 Public Benefit Recommendations

Within the context of excavations occurring within an operating highway environment, it is unlikely that the program can accommodate, or be sufficiently wide in scope, to achieve a meaningful public benefit during works.

Parks and Wildlife should consider future public site interpretation of the archaeological works where feasible and meaningful.

4.4.12 Protocol for Managing Unanticipated Historical (European) Archaeological Discoveries in Other areas of Works

This Archaeological Method Statement addresses excavations occurring within the Guard Station Complex which has been assessed as having archaeological potential. However, excavations occurring outside of this area may encounter unanticipated historical archaeological deposits.

In response to this risk, as a precaution, the project specifications should include notification protocols whereby archaeological advice is sought if features or deposits of an archaeological nature

are uncovered during excavation or where doubt exists concerning the provenance of any strata revealed during excavations. This may include but not be limited to the exposure of any structural material made from bricks, stone, concrete or timber and forming walls or surfaces, or the presence of more than five fragments of artefacts such as ceramic, shell, glass or metal from within an area of no more than 1 m².

In such instances, excavation should immediately cease pending attendance on site and receipt of advice from the archaeological consultant, at which point, depending on the findings, it may also be necessary to involve Heritage Tasmania and Parks and Wildlife in discussions.

5.0 ARCHAEOLOGICAL RESEARCH DESIGN

5.1 The Role of Research Designs in Australian Historical Archaeology

In order that the results of archaeological investigation can be meaningfully tied into local, state and national historical frameworks, it is essential that it be driven by a meaningful research design. This will ensure that any excavation will add to the existing corpus of archaeological and historical knowledge, maximising the information recovered from the otherwise destructive process of archaeology.

The formulation of a focused Research Design is a fundamental element in the process of archaeological investigation and is a necessity for the statement of meaningful research questions. In a heritage management context, such as that required for the current study area, this process will primarily be concerned with the salvage of historical and archaeological information from the site. However, the mere retrieval of information is not a sufficient outcome in terms of the mitigation of the impact of such development.¹⁰ Instead, the retrieval of data through archaeological investigation demands that such recovery be further justified by the provision of a meaningful contribution to understanding the past.

Accordingly, it is vital that a solid research framework is established from the outset of a project; one that includes a variety of questions and problems to focus investigation in a way that is both theoretically relevant and at the same time realistic and achievable. Such questions should encompass the full spectrum of human activity, ranging from local to regional questions, and further up the scale to the national and international perspectives.¹¹

In *The Archaeologists Field Handbook*, Burke and Smith define the initial movement of constructing a research design as defining a problem and determining its relevance. They state:

The most important first step in designing research is to outline the problem. This is essentially why you think your research is important, and how you think it will contribute to the discipline of archaeology. Some research problems might contribute new light on theories of human behaviour in the past, while others might contribute new methods for how we go about collecting or analysing archaeological data.¹²

The study area presents, therefore, two key avenues to define the research problems that can then form the basis of subsequent research questions. What can the material culture in the study area tell us about past human behaviour? And how can the material culture in the study area be used to develop more rigorous and insightful methodologies of use to the discipline of archaeology?

5.2 Framing Archaeological Research Questions

The approach to this research design has been derived from the Tasmanian Heritage Council's *Guidelines for Historical Archaeological Research Projects on Registered Places*.¹³ This document outlines approaches to undertaking research archaeology on registered places in Tasmania. As part of this, the guideline provides advice on the formulation of meaningful research questions.¹⁴ This stipulates that the archaeologist must consult widely in the process of defining their research design, in effect determining the archaeological significance of the site to be studied. The research questions themselves are to be developed in the context of a tiered structure of inquiry:

Tier 1: Research questions outlining the essential knowledge base. These have often been answered in the initial assessment phase and comprise questions on occupation timelines, phasing, activity type and area.

Tier 2: These site-specific research questions connect the archaeological evidence to recorded historical behaviour. In particular this includes what the archaeological evidence can tell us about historical lifeways on the site. Some examples include: how buildings and spaces were used, householder makeup, socio-economic status of the occupants and patterns of consumption.

¹⁰ Murray, T., Mayne, A., *Casselden Place Development Archaeological Works, Phases 1 & 2: Full Research Design*, Prepared for Godden Mackay Logan Pty Ltd in association with Archaeology Program La Trobe University and Austral Archaeology Pty Ltd, 2002, p. 3

¹¹ *Ibid*, p. 4

¹² Burke, H. Smith, C, *The Archaeologist's Field Handbook*, Allen & Unwin: Crow's Nest, N.S.W, 2004, p. 3

¹³ Tasmanian Heritage Council, *Guidelines for Historical Archaeological Research Projects on Registered Places*, 2009

¹⁴ *Ibid*, pp.4-5

Tier 3: This is the highest level of inquiry, through which the activity and behaviour at an individual site can be tied into broader social and cultural developments. Limited examples of such questions include: the early settlement of Tasmania, the spread of settlement, urbanisation in the two centres, the emergence of industrialisation, the role and representation of government, the changing nature of inner-city living.

The formulation of research questions does, in part, rely upon the presence of an overarching historical framework. Through such a framework, questions of relevance to wider historical and cultural processes can be composed. The presence of such a framework also ensures that all manner of work - from archaeological investigations to historical research projects - can be unified in their approach, significantly aiding the determination of significance. A brief summary of Tasmania's key historic themes is included in Heritage Tasmania's *Assessing historic heritage significance for Application with the Historic Cultural Heritage Act 1995*.

These guidelines note 14 areas of historical inquiry relating to a broad range of topics such as colonisation, contact and later migration; the convict experience; developing centres for trade, governance; patterns of domestic life and health and welfare; and human interaction with the natural environment.¹⁵

More detailed thematic frameworks have been developed specifically for archaeology. Recently Schacht has identified a 'preliminary thematic framework for Australian historical archaeology' as part of a broad review of themes in historical archaeological publications in Australia.¹⁶ As part of her work, Schacht identified several thematic groupings, and a wide range of research interest topics. Through understanding the history of the study area, multiple thematic groupings and research topics are likely to be relevant to the archaeology of the study area. The site presents some opportunities for exploring these arenas of investigation in a meaningful way. These are summarised in the following table:

Subject/Theme	Sub-Theme	Research Interest Topics
Settlement		
Immigration and settlement	Settlers and immigrants	<ul style="list-style-type: none"> Forced settlement and inter-colonial comparisons Settlement patterns
	Isolation	<ul style="list-style-type: none"> Strategies for overcoming physical isolation Identifying isolation in material culture
Cross-cultural encounters		<ul style="list-style-type: none"> Comparative studies of colonial societies Material culture of British colonisation and imperialism
Colonialism	Penal System and philosophy	<ul style="list-style-type: none"> Society integrated convictism Philosophy and practice of the penal system
Convicts and Incarceration	Prisons	<ul style="list-style-type: none"> Male convict prisons Convict material culture studies Convict exchange practices Convict life Architectural interpretations of prisons Identity and self-expression of prison inmates Institutional life Prison authority structures Convict resistance Power relations between convicts

¹⁵ Department of Primary Industries, Parks, Water and Environment, October 2011, *Assessing historic heritage significance for Application with the Historic Cultural Heritage Act 1995*, p.8

¹⁶ Schacht, I, 'Towards a Thematic Research Framework in Australian Historical Archaeology.' *Australasian Historical Archaeology*, No, 28, 2010, p. 61

Subject/Theme	Sub-Theme	Research Interest Topics
Environment		
Climate and Landscape		<ul style="list-style-type: none"> • Environmental factors affecting placement of historic sites
Development		
Defence	Fortifications and defences	<ul style="list-style-type: none"> • Convict labour at military sites • Chronology and function of defences • Cultural and symbolic role of defences • Strategic role of military defence sites • Defensive structures and strategies of frontier settlers
Infrastructure and transport	Labour	<ul style="list-style-type: none"> • Convict labour system
Built Environment		<ul style="list-style-type: none"> • Structure and layout of built environment • Structural development of built environment • Availability and supply of building materials • Building to suit Australian conditions • Building using Australian materials • Procurement and supply of building materials • Government buildings • Architecture of confinement • Functional analysis of the interior spaces of structures
Continuity and change		<ul style="list-style-type: none"> • Post-abandonment site-use
Continuity and change	Social continuity and change	<ul style="list-style-type: none"> • Social continuity in Australia of overseas cultures
People and Society		
	Power relationships and status	<ul style="list-style-type: none"> • Gaoler and prisoner power relations • Authority structures and social organisation

Table 1: A preliminary thematic framework for Australian historical archaeology relevant to the study area.¹⁷

5.3 Approaches to Investigating Convict Places

Frameworks for considering Australian convict sites have been developed over the previous decades. Gojak provided one of the first overviews in his 2001 article of New South Wales convict archaeology. To that time, the focus of research and archaeology had been on places of punishment and convict-built public works. Such a focus skewed the convict legacy and potential for archaeological investigation. Gojak aimed at providing a more holistic overview so that the research ‘gaps’ that still remained could be emphasised.¹⁸

The paper posed three areas of convict archaeology for discussion: firstly the convict experience itself, including the living conditions of convicts; secondly the archaeology of punishment and penal institutions; and thirdly, the nature of convict society, both within a social system, but also a society that was underpinned both socially and economically on transportation and labour. Within the context of the Eaglehawk Neck Guard Station, the potential archaeology falls most closely within the context of punishment and penal institutions.¹⁹

A range of places are associated within the theme of punishment and penal institutions, including primary and secondary places of punishment, stockades and barracks and work camps. Much work on

¹⁷ Taken from Schacht, I, ‘Towards a Thematic Research Framework in Australian Historical Archaeology.’ *Australasian Historical Archaeology*, No, 28, 2010

¹⁸ Gojak, D, ‘Convict Archaeology in New South Wales: An overview of the investigation, analysis and conservation of convict heritage sites’, in *Australasian Historical Archaeology*, 19, 2001, p.73

¹⁹ *Ibid*, pp.73, 76

this area has taken an architectural focus, although also identifying evidence of convict use such as graffiti and wear and tear. With some notable exceptions, the prison environment however was not generally conducive for archaeological evidence to survive that reveals more about the lives of convicts.²⁰

Gibbs published his first article on the subject also in 2001, with an examination of the convict system in Western Australia and developing a framework for study.²¹ It attempted to answer four fundamental aspects of convictism in the State: what were the convict places in Western Australia, and how did they relate to the operation of the system? Where were they located? What was the nature of these sites, the structures within and layouts? And, how many survive as either standing structures or archaeological sites.²²

He noted that the presence of convicts was marked by the parallel development of offices, houses and facilities for the administrators who managed the system.²³ Of key relevance to this project, Gibbs identifies places that were directly associated with the operation of the system, including places to house, punish, service or administer convicts. Commissariat buildings fall into this category.²⁴

A re-examination by Gibbs in 2012 of the convict system in New South Wales, noted that the direction of research had largely been associated with mitigation projects, and concentrated in the greater Sydney area, providing information on the convict urban landscape.²⁵

Gibbs noted the growing interest in convict history in the previous ten years since Gojak's paper, and analysis of convict labour in particular work situations, and how work was organised, managed and experienced and changed over time. However, the greatest interest had been in the nature of urban convict life, with exploration of convict industry an emerging area.²⁶

Most recent is the work by Tuffin, which considers the use of convict labour with a focus on public works, finding that a distinct group of settings exist in which convict labour was deployed.²⁷

From inception convict labour was appropriated in the extraction of raw materials, building construction and agricultural development, managed by both London based authorities, colonial administrators and the superintendent's of specific stations or works.²⁸

His article refers to previous work of Casella, and her summation of the three aims of incarceration – punishment, deterrence and reform. The Eaglehawk Guard station falls within the deterrence category, that is, the prevention of escape. Tuffin argues for a fourth aim of the convict experience, namely economy. During the 1820s and 30s attempts were made to reinforce the deterrence factor of transportation, but with increasing concern for its reformative value. This culminated in the 1838 Molesworth report which resulted in the overhaul of Tasmania's convict system from assignment to probation, and ultimately the complete cessation of transportation to New South Wales.²⁹

Tuffin argues that through documentary sources we are able to gain insight into the intentions of the administrator, why particular sites were established, who was meant to be held there and how the site should operate. The archaeological record allows this to be measured, with regard to the site's relationship to the natural environment, the siting of buildings and the patterns of material culture distribution. The same can be said with regard to the Eaglehawk Neck site, which was designed primarily as a facility for control and security that also utilised the unique natural landscape.³⁰

With regard to landscape, Tuffin proposes that common factors amongst the convict labour experience shaped its setting: organisation, the management and deployment of labour; supervision by staff and design of the establishment itself; and, economic production through extraction of a

²⁰ *Ibid*, p.76

²¹ Gibbs, M, 'The Archaeology of the Convict System in Western Australia', in *Australasian Historical Archaeology*, 19, 2001

²² *Ibid*, p.60

²³ *Ibid*, p.61

²⁴ *Ibid*, p.61

²⁵ Gibbs, M, 'The Convict System of New South Wales: A review of archaeological research since 2001', in *Archaeology Oceania*, 47, (2012), p.78

²⁶ *Ibid*, pp.79-80

²⁷ Tuffin, R, 'Australia's Industrious Convicts: a reappraisal of archaeological approaches to convict labour', in *Australian Archaeology*, Number 76, June 2013, p.1

²⁸ *Ibid*, p.1

²⁹ *Ibid*, pp.1-2

³⁰ *Ibid*, p.3

resource or development of goods. Certain aspects of this landscape approach hold true to Eaglehawk Neck.³¹

Tuffin's discussion of supervision is perhaps most pertinent to this argument in how convict labour was managed – the roles of staff; the physical structures which defined it; and the fences and walls which delineated and controlled space. The military were the most recognisable group charged with supervision of both convicts and asset security and the planning and creation of infrastructure.³²

The design of the built landscape varied, and was a direct reflection of the environment in which it was formed and evolved. Kerr's early work showed how architecture served to define, restrict, reform and contain the convict, with surrounding walls, and buildings arranged on principles of hierarchy and surveillance. Tuffin found that at the Tasman Peninsula Coal Mines, the buildings of administration were removed from those holding the convicts, with both being overlooked by the buildings of the military.³³ Certainly, a hierarchy and division of space existed at Eaglehawk Neck with military personnel housed to the north and at a high point overlooking the narrow isthmus which controlled movement.

5.4 Archaeological research questions

5.4.1 Tier 1 Research Questions

Many basic questions related to the Guard Station complex remain unanswered, and worthy of investigation:

1. Can a more precise spatial definition be provided for the commissariat store? Does it match its defined measurements of 10.3m x 5.1m?
2. Does evidence exist of the small building to the north and does this confirm that it was a sentry box?
3. At what depths are archaeological features present below the existing road surface and how has the road construction and its various iterations impacted the site?

5.4.2 Tier 2 Research Questions

4. What is the nature, extent and integrity of subsurface archaeological features and deposits within the study area? How and to what extent has subsequent disturbance affected the survival of archaeological features and deposits and their interpretation? Based on the evaluation of what has survived, what attributes have been lost?
5. How does the sequence of archaeological phases confirm or enhance what is already known from the historical record? Alternatively, does the archaeology represent original information of a phase or phases not described in any documented history and for which the archaeology comprises the only source?
6. Does evidence exist demonstrating the function of the place as a commissariat store, and later, housing for convicts or any other purpose?
7. Does evidence exist of the modifications made to the building in 1836 to accommodate convicts?
8. How do the construction methods and materials of the commissariat store compare with the officers' quarters?

5.4.3 Tier 3 Research Questions

9. What does the archaeology reveal about the function and spatial arrangement of the Guard Station complex within the broader Eaglehawk Neck Military Station?
10. Does the archaeology provide an insight to structures which define supervision, security and control at the Neck?
11. How does the site compare with other archaeological convict sites investigated in Tasmania?

³¹ *Ibid*, p.5

³² *Ibid*, p.8

³³ *Ibid*, pp.8-9

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