



BURNIE HERITAGE PROJECT

ARCHAEOLOGICAL SENSITIVITY ASSESSMENT & MANAGEMENT ADVICE FOR BURNIE CITY COUNCIL

Anne McConnell February 2010



*Photos (top – bottom): Remains of VDL Co building & Oakleigh Park, Burnie; and Hampshire Hills Station and artefacts.
[photos – A. McConnell, Oct 2008].*

DISCLAIMER

In preparing this cultural heritage report, the consultant has taken all reasonable measures to undertake the assessment and reporting within the scope of the project requirements, and to provide sound advice with respect to cultural heritage management in relation to the project. However, there may be sources of information which were not identified, and other development or management issues may arise which were not foreshadowed during this study. The consultant therefore disclaims liability in the event that additional heritage or relevant background information in relation to the project is identified, or where new development or management issues arise.

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1 INTRODUCTION

Background to the Report

This report has been prepared as part of the Burnie Heritage Study being undertaken by GHD. It provides an assessment of the archaeological values of the Burnie Municipality and advice on the management of those values. For the purposes of this report, 'archaeological values' are taken to be known or potential essentially subsurface remains that derive from the European (non-Aboriginal) history of the area. These remains may be structural remains (eg, foundations, pipes, old road formations), cultural deposits (eg, earth with artefacts mixed in, accumulations of artefacts, earth that has been deliberately placed), artefacts (individual historical items), and burials (human remains).

The key management advice developed from the assessment has been included in the Burnie Heritage Study volume 2 report – *Burnie Heritage Project: Managing Burnie's Heritage*.

This report has been prepared as a stand alone report to provide a record of the assessment, and to include information on the sources and methods used to develop the archaeological management advice, in particular the archaeological zoning. It should be regarded as a reference document for understanding the management advice provided as part of the Burnie Heritage Study, and for further developing the archaeological management advice in the future.

The archaeological assessment has been undertaken and this report prepared by consultant archaeologist, Anne McConnell.

General Approach to the Assessment

The general approach taken by this assessment largely conforms to the standard approach to assessing archaeological values, which is as follows:

1. Review of existing archaeological data and assessments for the district.
2. Review of historical information, in particular maps and plans.
3. Compilation of a map/s showing the location of archaeological values (which may recognise different types and/or levels of archaeological values).
4. Review of the presence and likely presence of archaeological remains given post-formation ground disturbance (eg, from new developments).
5. Assessment of the cultural significance of the known and likely remains (usually in relation to their historical significance, likely importance to the community, and the ability of the archaeology to provide information about the past that is not obtainable through other sources).
6. Presentation of the above findings as a map or set of maps showing different levels of 'archaeological potential' (relating to archaeological attributes such as the likelihood of archaeology occurring, the likely density of archaeological remains and/or the assessed significance of the archaeological remains) and accompanying advice for managing the known and potential archaeological values in each zone.

Due to the time and funding constraints of the broader Burnie Heritage Study, the present archaeological assessment has been somewhat restricted and cannot be considered a comprehensive assessment. The main limitations are in relation to the scope of the historical background research (ie, this was restricted to existing studies and historical information available to the broader project); and the scope of the disturbance history research (ie, limited to personal knowledge through consultation and field inspection).

Because of the quality and nature of the archaeological information, the present assessment has taken an approach to the zoning which recognises different heritage places with known or

potential significant archaeology, and provided management advice for each site, in this study referred to as a zone (refer maps 1-3 and accompanying table with management advice for each zone (place)). The zoning included both urban and rural areas. The available data was not considered amenable to the more standard treatment of defining a small number of zones on the basis of probable heritage significance and/or likelihood of archaeological values. The management advice provided has been tailored to the Burnie municipality context. It recognises the limited historical mapping and issues of accuracy; the unique history of the Burnie municipality and the significance of many events and early developments; and the mid 20th century to present intensive development history of the city.

It should be noted that as well as this assessment which focuses on the currently known and identified potential, significant archaeological values, all known archaeological values are included in the broader Burnie Heritage Study Inventory of Places (Appendix F of Volume 3 of the study - *Burnie Heritage Project: Heritage Inventory*).

Current Archaeological Knowledge for the Burnie District

Very little analysis of the historical archaeological values, in particular the subsurface archaeological values of the Burnie municipality, has been undertaken to date.

The earlier studies are mainly a small number of small scale environmental impact assessments which have largely confined themselves to above-ground archaeological evidence and are based on field assessment with no apparent historical research having been undertaken except in one study (McConnell & Scripps 2000). These assessments were mainly undertaken for new state government roads and re-alignments. Few of these studies identified sub-surface archaeology or archaeological potential. These studies include an assessment of the Ridgley Main Road options from Pigeon Hill to the Bass Highway (Ross & Scotney 1990, Parham 1993); an assessment of the proposed Burnie truck route (new Ridgley Main Road in the Burnie area) (Searle 1996); an assessment of Stowport and Letteene Roads for Telstra (Sim 1997), and an assessment of the Bass Highway & River Road Junction, Wivenhoe (McConnell & Scripps 2000).

A small number of historic heritage impact assessments, which included consideration of archaeological values, have also been carried out in the Burnie area in relation to the laying of Powerco gas pipelines (McConnell 2003, 2005, 2006). This work included historical background research and some questioning of members of the Burnie Historical Society, and the identification of areas of known and potential archaeology based on this information. These studies were restricted to the following urban and suburban area of Burnie – Burnie south of the CBD to Upper Burnie, Upper Burnie, Brooklyn, Havenview, Romaine and Downlands, and areas between.

There are two main archaeological studies which apply to the non-urban areas. These are the *North West Tasmania Historic Sites Inventory Project* (Scripps 1990) and the *Van Diemen's Land Company Sites Conservation Management Plan* (Austral Archaeology 2002). Again, both studies have concentrated on places with above ground remains rather than on in-ground archaeological sensitivity assessment.

The Austral Archaeology study is a detailed management oriented investigation of the sites associated with the VDL Co. operations, but is restricted geographically to the Hampshire and Surrey Hills. Only the Hampshire Hills block occurs within the Burnie municipality. This is a relatively small part of the municipality, essentially that area south of Hampshire and west of Valentine Peak.

The North West Tasmania Historic Sites Inventory included all of the Burnie Municipality, but because it was primarily focussed on identifying historic heritage in State forest, most of the identified sites are outside urban areas. Also, the site information was primarily derived from historical research and oral information, so is not comprehensive; and the majority of sites identified were not (and still have not) been inspected. The exception is the majority of the VDL Co. sites.

As it was beyond the scope of the Burnie Heritage Study to inspect and document all identified sites, or to conduct archaeological surveys, the present study has not been able to contribute substantially to the archaeological knowledge base for the municipality. A few previously undocumented sites however were inspected (refer Inventory, Appendix F, Volume 3 of the *Burnie Heritage Project* report).

In spite of the shortcomings of the sources available for this archaeological assessment, the available information is considered sufficient to identify most significant known archaeology and areas likely to have significant archaeological remains in the district.

2 ARCHAEOLOGICAL POTENTIAL OF THE BURNIE AREA

The present archaeological assessment identifies only archaeology and potential archaeology considered to be of cultural significance.

Based on the history of the Burnie municipality, significant archaeology in the municipality is considered to be related to –

- Early settlement in the district up to the late 1800s, primarily that associated with the VDL Co., but also early agriculture, transport and other services (eg, water supply). This type of archaeological resource will be located mainly in the city of Burnie around the port area in Burnie Proper, South Burnie and Upper Burnie, and in areas owned and managed by the VDL Co. throughout the municipality.
- Key historic services (eg, port, rail, roads, electricity and water supply) up to c.1920. Archaeology relating to these historic activities will be mostly concentrated within Burnie, but will also occur in corridors along the main early road and railway routes.
- Historic primary and secondary industries (eg, related to mining, forestry, processing) up to c.1920. A number of historic mining and forestry related sites are known to occur throughout the Burnie municipality in the Burnie hinterland, while some historic resource extraction sites (eg, stone quarries) and early industries occurred within Burnie.
- Historic cemeteries & other human burials, all of which have high social values, and in some cases historical and scientific values. A small number of cemeteries and other burial areas are known to occur in Burnie and elsewhere in the municipality, mainly in small townships (note: the present study considers only burial areas that are not recognised cemeteries as recognised cemeteries are included in the Burnie Heritage Study Inventory).

The above recognises historical, social and scientific values in determining what archaeology is likely to be significant. Scientific values include ability to provide information about the past, and includes consideration of the rarity of the type of archaeology.

3 BURNIE ARCHAEOLOGICAL SENSITIVITY ZONING

The basis for the zoning is outlined in Sections 1 and 2.

The zoning takes the form of maps that delineate all areas of known and identified potential (probable) archaeology that is considered to be of heritage significance. Each place or type of place is considered as a separate zone. In all there are 23 zones, with Zone 5 comprising 24 discrete areas (5a – x).

The zoning is presented as 3 maps to try and provide as detailed mapping as possible, yet include the whole municipality. In Table 1 the zones are listed by Map number.

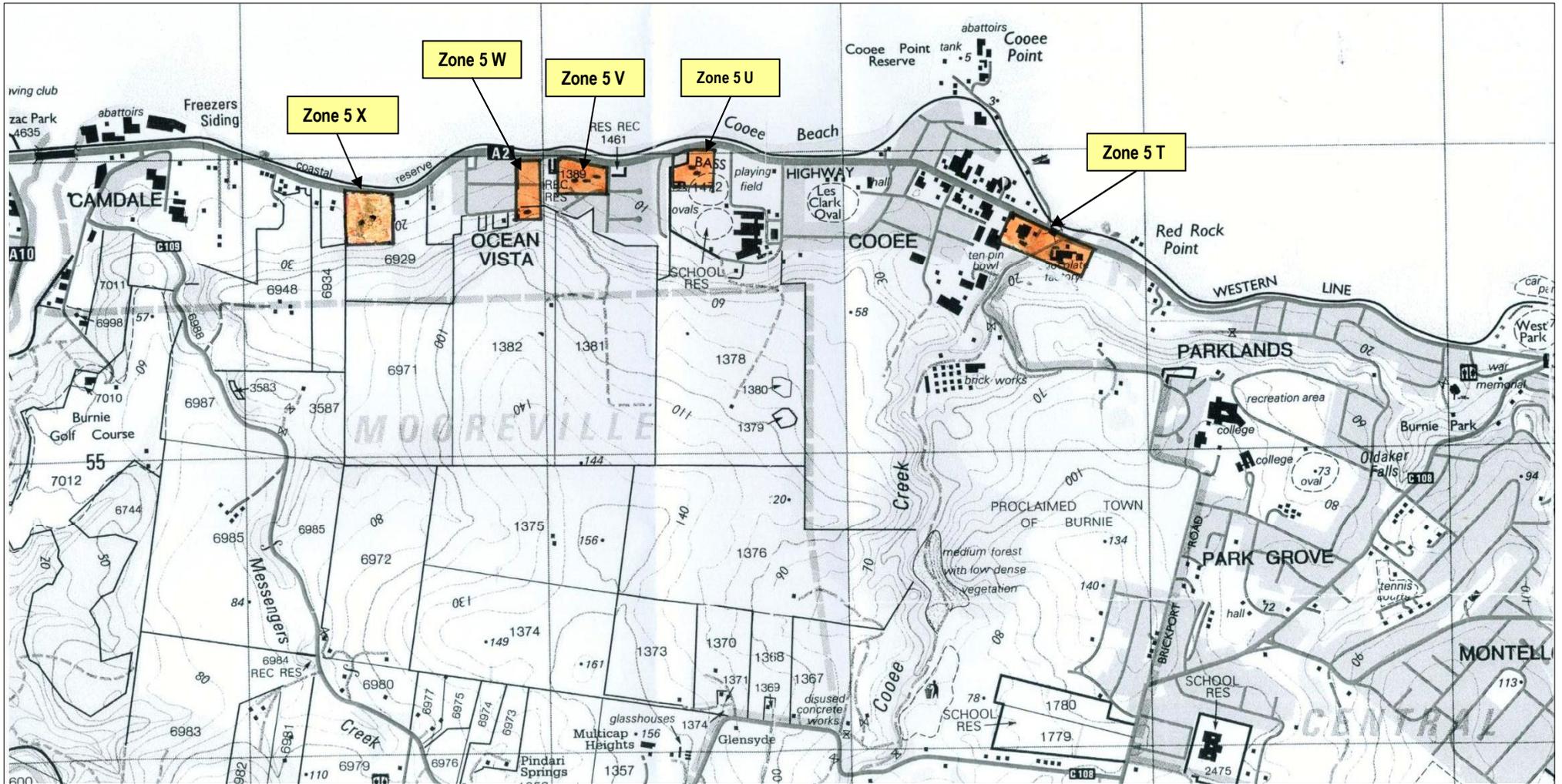
Different levels of sensitivity are recognised in the zoning. These are as follows:

- | | |
|-------------------|---|
| High (pink) | - areas considered highly likely to contain highly significant archaeological remains, which are high density or in a constrained area; |
| Moderate (orange) | - areas considered highly likely to contain highly – moderately significant archaeological remains, which are moderate density and extensive; |
| Low (blue) | - areas considered highly-moderately likely to contain moderately significant archaeological remains, which are low density and extensive. |

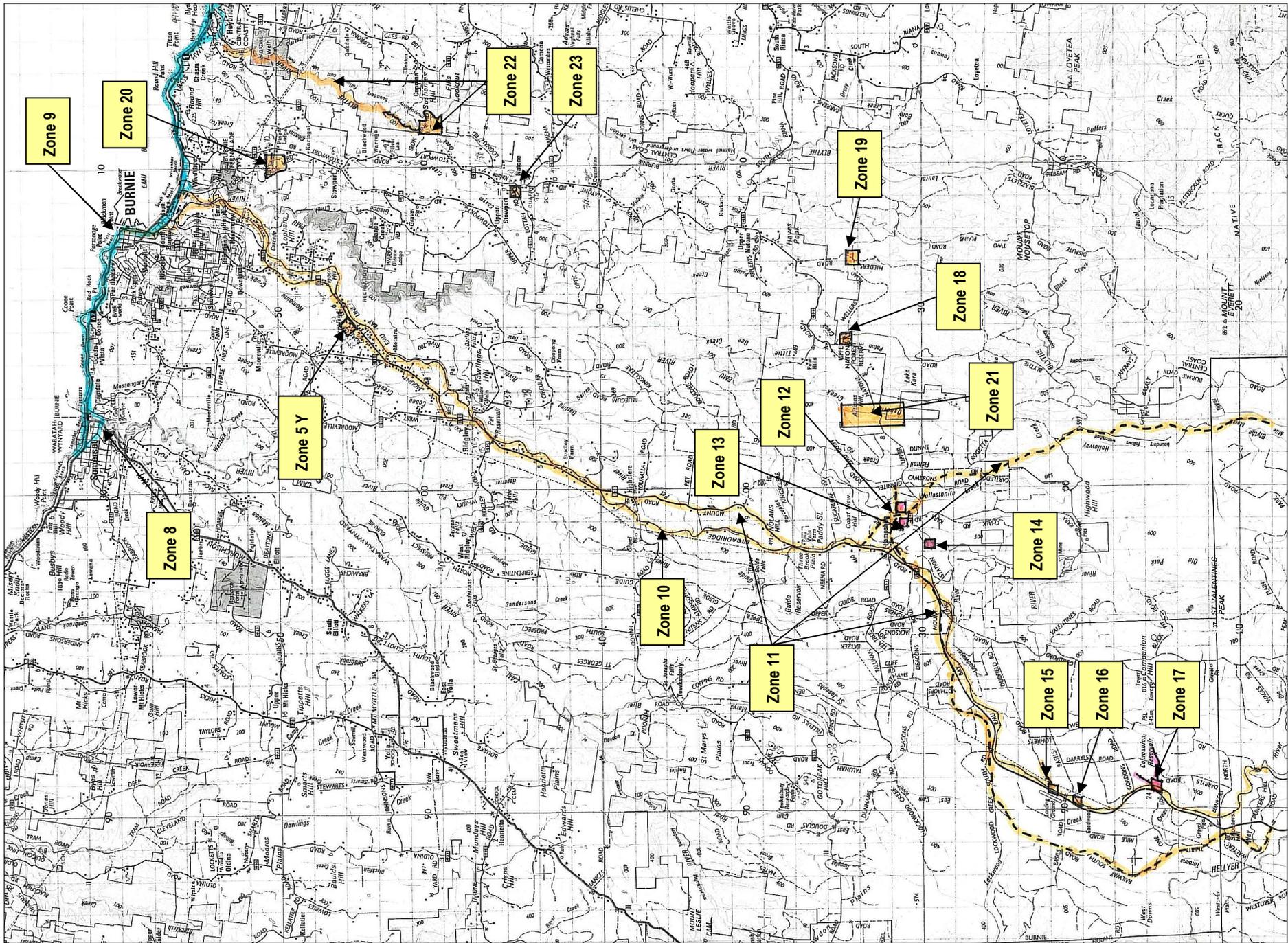
For each zone, the number (for map), name, level of archaeological sensitivity (see above), summary place information, and sources used are provided in Table 1

It should be noted that in most cases the zone boundaries are not highly accurate because of the limited accuracy of the historical mapping on which they are mainly based, the lack of rectification in enlarging them for the zoning, and/or the lack of detailed ground truthing. Because of this, the zoning has taken a cautious approach and included extra area as a buffer. The zoning could be improved and zone areas significantly reduced in some cases if the historical maps used in the zoning were rectified and matched to present locations by a surveyor.

The zoning could also be improved by undertaking more detailed historical research and on-ground survey. This would enable additional significant archaeological zones to be added and for some of the current zones to be better defined (and areas reduced).



BURNIE ARCHAEOLOGICAL ZONING - MAP 2



BURNIE ARCHAEOLOGICAL ZONING - MAP 3

TABLE 1: BURNIE MUNICIPALITY ARCHAEOLOGICAL SENSITIVITY ZONING – ZONE DESCRIPTION AND MANAGEMENT ADVICE.

Zoning Map No	Zone	Sensitivity	Potential Archaeology	Management Advice	BHP Report Inventory Reference (if applicable)	Sources (historical & research reports)
Map 1 1	Port of Burnie	Moderate (with localised high)	<ul style="list-style-type: none"> - Port development started in the 1820s with the establishment of Emu Bay by the VDL Co.; and has been ongoing with development over time reflecting the industrial development of Burnie, including as a rail head for the west cast mines from the late 1800s, and for the timber industry. - Known remnants of early piers; potential for remains of additional early piers, jetties, breakwaters, other structural remains, build foundations, and associated artefacts and equipment. - Significant disturbance has occurred from ongoing development. - Archaeology assessed as of high cultural significance. 	<ul style="list-style-type: none"> ▪ Prior to further disturbance undertake an archaeological assessment to fully assess the archaeological potential of this heritage site. 	Port of Burnie (Burnie)	<ul style="list-style-type: none"> Kentish Burnie 1843 Plan VDL Co. Estate, Emu Bay 1849 Map. VDL Co. Emu Bay 1852 Plan. c.1887 VDL Co. Chart 1. B. Rollins, P. Boxhall & R. Green, (pers comm)
2	VDL Co. Emu Bay Settlement	Moderate (with localised high)	<ul style="list-style-type: none"> - 1820s-1830s establishment of Emu Bay by the VDL Co. - Known burials (see below); potential evidence of foundations of VDL Co. offices, sheds, residences, other buildings, related artefacts and garden evidence. - Has suffered disturbance from later development (in particular the new highway), but substantial areas of intact archaeological remains are probable. 	<ul style="list-style-type: none"> ▪ Minimise ground disturbance in this zone. ▪ If ground disturbance cannot be avoided – <ol style="list-style-type: none"> 1. undertake archaeological test excavation in identified high sensitivity areas to be disturbed to determine archaeological potential and significance in the disturbance area; and 2. all ground disturbance should be archaeologically monitored in areas of identified moderate sensitivity. 	Portside (Burnie CBD)	<ul style="list-style-type: none"> McConnell (2006) Kentish Burnie 1843 Plan VDL Co. Estate, Emu Bay 1849 Map.VDL Co. Emu Bay 1852 Plan. c.1887 VDL Co. Chart 1. B. Rollins & P. Boxhall (pers comm)
3	VDL Co. Emu Bay Settlement Cemetery	High	<ul style="list-style-type: none"> - 1820s-1830s establishment of Emu Bay by the VDL Co. - Known human remains. - This cemetery is understood to have been partially disturbed by the construction of Portside in the 1940s and mid-late 1900s road construction (Bass Hwy). 	<ul style="list-style-type: none"> ▪ Avoid ground disturbance in this zone. ▪ If ground disturbance cannot be avoided, disturbance should be preceded by salvage excavation. Given the sensitive nature of this area, there will be a need for community engagement in this work. 	Portside (Burnie CBD)	<ul style="list-style-type: none"> B. Rollins & P. Boxhall (pers comm)
4	VDL Co. Emu Bay Farm	High - moderate	<ul style="list-style-type: none"> - developed by 1849 as part of the early-mid 1800s establishment of Emu Bay by the VDL Co.; appears to have been the only VDL Co. owned and managed farm in the area - Potential house, cottage and farm building foundations, in-ground structures (eg, wells, cess pits), track formations, fence lines and artefacts. - Area significantly disturbed by urban and industrial development, but areas of intact archaeological remains are probable. 	<ul style="list-style-type: none"> ▪ Minimise ground disturbance in this zone. ▪ If ground disturbance cannot be avoided – <ol style="list-style-type: none"> 1. undertake archaeological test excavation in identified high sensitivity areas to be disturbed to determine archaeological potential and significance in the disturbance area; 2. all ground disturbance should be archaeologically monitored in areas of identified moderate sensitivity; 3. in identified low sensitivity areas all archaeological evidence located through works to be reported to Council and archaeologically assessed & reported. 	Portside (Burnie CBD)	<ul style="list-style-type: none"> McConnell (2006) VDL Co. Estate, Emu Bay 1849 Map.VDL Co. Emu Bay 1852 Plan. C.1887 VDL Co. Chart 1. B. Rollins & P. Boxhall (pers comm)

Zoning Map No	Zone	Sensitivity	Potential Archaeology	Management Advice	BHP Report Inventory Reference (if applicable)	Sources (historical & research reports)
(& Maps 2 & 3) 5 Map 1: 5a – s Map 2: 5t-x Map 3: 5y	Early Farm Settlement (several discrete zones)	Moderate	- Pre-1850 farmsteads associated with the development of tenant farming by the VDL Co. in the Burnie area (earliest farms in the municipality). - Potential for foundations of farmhouses, outbuildings, associated structures (eg, wells, fence lines) and artefacts. - Moderate disturbance considered likely from re-development of these sites	<ul style="list-style-type: none"> Minimise ground disturbance in this zone. If ground disturbance cannot be avoided, all ground disturbance should be archaeologically monitored. 	Cheshunt (Camdale)	McConnell (2005) VDL Co. Estate, Emu Bay 1849 Map. VDL Co. Emu Bay 1852 Plan.
6	Wivenhoe late 19 th century subdivision	Moderate - Low	- 1850s-90s Emu River edge subdivision and early road route. - Known early (c.1870s & later) bridge abutments potential for first main road formation and bridge abutments, foundations of residences, domestic outbuildings & other structures; domestic artefacts; and possible river edge retaining & reclamation structures. - Possible substantial disturbance from road works.	<ul style="list-style-type: none"> For works along the river bank require/undertake an archaeological assessment prior to any major ground disturbance. For other major ground disturbance in the area require a works heritage induction and all archaeological evidence to be reported to Council and archaeologically assessed & reported. 	-	McConnell & Scripps (2000)
7	Romaine Creek Water Supply System	Moderate - Low	- Early 1900s water supply system for Burnie and first constructed supply system – included two reservoirs and distribution pipeline (along creek and Emu Bay Railway line) - Known extant reservoir; second reservoir silted in; potential for distribution pipes and associated structures. - Appear to have been minimally disturbed	<ul style="list-style-type: none"> Minimise ground disturbance, in this zone. Prior to disturbance undertake an archaeological assessment to fully assess the archaeological potential of this heritage site. 	Romaine Creek Water Supply System (Burnie Regional)	McConnell (2005)
Map 2 (5 t-x)	see Early Farm Settlement above		<i>Map 2 comprises a zone related to the Cheshunt Property</i>		Cheshunt (Camdale)	
Map 3 5 (y) (see also maps 1 & 2)	Early Farm Settlement (several discrete zones)	Moderate	- Pre-1850 farmsteads associated with the development of tenant farming by the VDL Co. in the Burnie area (earliest farms in the municipality). - Potential for foundations of farmhouses, outbuildings, associated structures (eg, wells, fence lines) and artefacts. - Moderate disturbance considered likely from re-development of these sites	<ul style="list-style-type: none"> Minimise ground disturbance in this zone. If ground disturbance cannot be avoided, all ground disturbance should be archaeologically monitored. 	Cheshunt (Camdale)	McConnell (2005) VDL Co. Estate, Emu Bay 1849 Map. VDL Co. Emu Bay 1852 Plan.

Zoning Map No	Zone	Sensitivity	Potential Archaeology	Management Advice	BHP Report Inventory Reference (if applicable)	Sources (historical & research reports)
8	Old North Coast Road (approx Bass Hwy)	Low	<ul style="list-style-type: none"> - First coast road linking the main towns of the north west coast, and first road (as opposed to the VDL Co inland track) link to the rest of the state, established in c.1870s; modified, including parts of the route, over time. - Known evidence of extant sections of old formation, old bridge abutments; potential for additional extant sections of old formation, old bridge abutments. - Some sections heavily modified but other sections are understood to have had relatively little modification. 	<ul style="list-style-type: none"> ▪ Minimise ground disturbance, in this zone. ▪ Where ground disturbance will occur require a works heritage induction and all archaeological evidence to be reported to Council and archaeologically assessed & reported. 	Old North Coast Road (Burnie Regional)	B. Rollins & P. Boxhall (pers comm)
9	Government Main Line Railway	Low	<ul style="list-style-type: none"> - First rail linking the north west coast to the rest of the state, enabling a linkage with the west coast; established in 1901, and extended to Wynyard in c.1913; included (with Emu Bay Railway) rail yards, a station, and workshops in Burnie, other stations, and the rail line and bridges. - Known extant above ground heritage (mainly buildings); potential for original cut and fill sections, formation, bridge remains, and associated artefacts and in ground track features, shed foundations, and sidings. - Significant above ground modification has occurred through regular upgrading and maintenance, but presumed to have had limited associated ground disturbance. 	<ul style="list-style-type: none"> ▪ Minimise ground disturbance, in this zone. ▪ Where ground disturbance will occur require a works heritage induction and all archaeological evidence to be reported to Council and archaeologically assessed & reported. 	Government Main Line Railway (Burnie Regional)	B. Rollins & P. Boxhall (pers comm)
10	Emu Bay Railway Line	Moderate - Low	<ul style="list-style-type: none"> - 1870s horse drawn timber tramway, upgraded to rail in the 1880s along essentially the same route; had associated stations, stables, huts, cottages, sheds and sidings. - Known evidence of historical use and construction and related use (eg, sawmills & spur tramways, water tanks, sidings, remnant timbers and associated artefacts); potential for bridge, cutting, fill, etc, remains, building foundations and associated artefacts - Although the railway has been regularly upgraded and maintained, there has been little substantial associated ground disturbance except in town areas. 	<ul style="list-style-type: none"> ▪ Minimise disturbance, including ground disturbance, in this zone. ▪ Where disturbance will occur, undertake prior archaeological survey. 	Emu Bay Railway (Burnie Regional)	Austral Archaeology (2002) (including B. Rollins map for location – refer appendix 1) McConnell (2005)

Zoning Map No	Zone	Sensitivity	Potential Archaeology	Management Advice	BHP Report Inventory Reference (if applicable)	Sources (historical & research reports)
11	VDL Co. Roads	Moderate - Low	<p>- 1820s-1830s roads built by the VDL Co., and the first made road in NW Tasmania.</p> <p>- Known evidence for remnant original road formation, cutting and bridges; potential evidence for additional original road formation, cut & fill, bridges, and camps and artefacts associated with construction and use.</p> <p>- Sections of the original routes/formations are disused and have not been disturbed for over 100 years; there has been some overprinting of parts of both road by forestry tracks and plantation development south of Hampshire, and the Ridgley Main Road to Hampshire has been upgraded over time, but the route is essentially the same.</p>	<ul style="list-style-type: none"> Minimise disturbance, including ground disturbance, in this zone, especially in areas of original disused road. Where disturbance will occur in areas of disused road, undertake prior archaeological survey and assessment. In other areas where disturbance will occur require a works heritage induction and all archaeological evidence to be reported to Council and archaeologically assessed & reported. 	Old Surrey Rd (Burnie Regional) VDL Co. Hampshire to Mayday Plains Road (Hampshire)	Austral Archaeology (2002) (including B. Rollins map for location – refer appendix 1) McConnell (2003) McConnell (2005)
12	Hampshire Hills Station	High	<p>- established in the late 1820s as the headquarters for the pastoral activities of the VDL Co. in the Hampshire Hills and Surrey Hills; the first inland residential development in NW Tasmania; occupied to the c.1850s-60s; was a major establishment with residence, workers cottages, barn, and other outbuildings, associated tracks, plantings, fences and areas of crop.</p> <p>- Known plantings, tracks, scattered building remains and artefacts; potential building foundations, in ground features (eg, wells, cess pits), tracks, paths, fence lines, and artefacts.</p> <p>- Part of the area has been significantly disturbed by forestry activities.</p>	<ul style="list-style-type: none"> Avoid ground disturbance in this zone. If ground disturbance cannot be avoided, undertake archaeological test excavation in areas to be disturbed to determine archaeological potential and significance in the disturbance area (possible outcomes are discontinuance of development, revising ground disturbance/ development proposal, salvage excavation, archaeological monitoring and salvage of finds, no constraints). 	Hampshire Hills Station (Hampshire)	Austral Archaeology (2002) (including B. Rollins map for location & sketch plan – refer appendix 1) THPI (8015:13)
13	Hampshire Hills Brick Pits	High	<p>- A pre-1903 VDL Co. related site; presumed to be associated with the late 1820s-1840s establishment of the Hampshire Hills Station (and possibly supplied some bricks to the VDL Co headquarters in Emu Bay).</p> <p>- Known brick pit, and brick firing (clamp) remains; potential additional brick pit and clamp remains, building foundations, water supply features from Emu River, track formations, and artefacts.</p> <p>- Part of the area has been significantly disturbed by forestry activities.</p>	<ul style="list-style-type: none"> Avoid ground disturbance in this zone. If ground disturbance cannot be avoided, undertake archaeological test excavation in areas to be disturbed to determine archaeological potential and significance in the disturbance area (possible outcomes are discontinuance of development, revising ground disturbance/ development proposal, salvage excavation, archaeological monitoring and salvage of finds, no constraints). 	Hampshire Hills Brick Pits (Hampshire)	Austral Archaeology (2002) (including B. Rollins map for location & sketch plan – refer appendix 1)

Zoning Map No	Zone	Sensitivity	Potential Archaeology	Management Advice	BHP Report Inventory Reference (if applicable)	Sources (historical & research reports)
14	Hampshire Silver Mine	High	<ul style="list-style-type: none"> - Late 1800s silver mine in VDL Co. Land that was worked by the Van Diemen's Land Mineral Company Ltd., a subsidiary of the VDL Co. - Known mine workings (adits, shafts, mullock heaps), other ground modification (eg, dams, water races, costean, platforms), processing areas, associated building and hut sites, and artefacts. - Has not been subject to disturbance post-use. 	<ul style="list-style-type: none"> ▪ Avoid ground disturbance in this zone. ▪ If ground disturbance cannot be avoided, undertake archaeological test excavation in areas to be disturbed to determine archaeological potential and significance in the disturbance area (possible outcomes are discontinuance of development, revising ground disturbance/ development proposal, salvage excavation, archaeological monitoring and salvage of finds, no constraints). 	Hampshire Silver Mine (Hampshire)	Austral Archaeology (2002) (including B. Rollins map for location & sketch plan – refer appendix 1) THPI (8015:14)
15	27 Mile Sawmill & Siding	Moderate	<ul style="list-style-type: none"> - c.1907 – 1914 Burnie Timber and Brick Co. sawmill on the Emu Bay Railway which milled timber bought to this siding at the 27 mile mark from VDL Co. land; had an associated tramway/s. - Known siding and artefacts; potential sawmill remains, tramway, additional hut foundations and artefacts. - The disturbance history is unknown, but assumed to have been limited to minor disturbance from railway upgrading and possibly later forestry activity. 	<ul style="list-style-type: none"> ▪ Avoid ground disturbance in this zone. ▪ If ground disturbance cannot be avoided, undertake prior archaeological survey and assessment. 	27 Mile Sawmill & Siding (Hampshire)	Austral Archaeology (2002) (including B. Rollins map for location & sketch plan – refer appendix 1)
16	27 Mile Hut	Moderate	<ul style="list-style-type: none"> - Early 1900s hut site, thought to be a timber getter's hut related to the Burnie Timber and Brick Co. 27 Mile Sawmill on the Emu Bay Railway - Potential hut foundations and associated artefacts. - The disturbance history is unknown, but assumed to have been limited to minor disturbance from railway upgrading and possibly later forestry activity. 	<ul style="list-style-type: none"> ▪ Avoid ground disturbance in this zone. ▪ If ground disturbance cannot be avoided, undertake prior archaeological survey and assessment. 	27 Mile Hut (Hampshire)	Austral Archaeology (2002) (including B. Rollins map for location & sketch plan – refer appendix 1)
17	29 Mile Sawmill & Siding	High Moderate	<ul style="list-style-type: none"> - Burnie Timber and Brick Co. sawmill on the Emu Bay Railway established in 1918 to produce myrtle for the Sydney market; from VDL Co. land; had an associated tramway/s. - Known siding, mill site, section of tramway and artefacts; potential hut sites, additional tramway and artefacts. - The site has been significantly disturbed by later forestry activity. 	<ul style="list-style-type: none"> ▪ Avoid ground disturbance in this zone. ▪ If ground disturbance cannot be avoided, undertake prior archaeological survey and assessment (which may require test excavation of select areas). 	29 Mile Sawmill & Siding (Hampshire)	Austral Archaeology (2002) (including B. Rollins map for location & sketch plan – refer appendix 1)
18	Cumming Bros Sawmill	Moderate	<ul style="list-style-type: none"> - c.1920s – 1950s sawmill owned and operate by Cumming Bros; supplied timber for the furniture and construction industry and initially myrtle and sassafras for high heel shoes; initially the mill was a steam driven mill. - Known engine remains, boiler, sawdust heap and concreted building foundations; potential mill site, tramway/s additional hut/house & other building foundations, and artefacts. - The site has had minor disturbance from later forestry and recreational related activity. 	<ul style="list-style-type: none"> ▪ Avoid ground disturbance in this zone. ▪ If ground disturbance cannot be avoided, undertake prior archaeological survey and assessment. 	Cumming Bros Upper Natone Sawmill (Natone)	THPI (8015:27 & 57)

Zoning Map No	Zone	Sensitivity	Potential Archaeology	Management Advice	BHP Report Inventory Reference (if applicable)	Sources (historical & research reports)
19	Hilders Sawmill	Moderate	<ul style="list-style-type: none"> - c.1880s to mid-1900s sawmill, initially steam driven, owned/operated by A.E. Hilder. - Known stationary (non-traction) engine on concrete foundation, timber building remains, brick building foundations and artefacts; potential for additional artefacts, equipment, sawdust heaps, dams, tracks, tramways. - The disturbance history is unknown, but assumed to have been limited to later forestry activity. 	<ul style="list-style-type: none"> ▪ Avoid ground disturbance in this zone. ▪ If ground disturbance cannot be avoided, undertake prior archaeological survey and assessment. 	Hilder's Upper Natone Sawmill (Natone)	THPI (8015:15 & 52)
20	Stowport Road Sawmill	Moderate	<ul style="list-style-type: none"> - Early-mid 1900s sawmill with probable associations with APPM. - Known mill foundations, tracks, artefacts and probable dam; potential for additional structural remains, building foundations and associated artefacts. - Appears not to have been subject to major later disturbance. 	<ul style="list-style-type: none"> ▪ Avoid ground disturbance in this zone. ▪ If ground disturbance cannot be avoided, undertake prior archaeological survey and assessment. 	APPM Stowport Rd Sawmill (Stowport)	B. Rollins & P. Boxhall (pers comm)
21	Osborne Creek Mining	Moderate	<ul style="list-style-type: none"> - Late 1800s to mid-1900s (?) tin mine on Osborne Creek. - Known alluvial workings, dam, and water race (plus extant house); potential for extensive mine workings, other ground modification, other associated building and hut sites, processing areas, and artefacts. - Understood not to have been subject to major later disturbance. 	<ul style="list-style-type: none"> ▪ Avoid ground disturbance in this zone. ▪ If ground disturbance cannot be avoided, undertake prior archaeological survey and assessment. 	Mt Housetop Tin Mine (Hampshire) Osborne Creek House (Hampshire)	THPI ((8015:41, 20 & 21)
22	Blythe River Iron Mine & Tramway	Moderate (-Low?)	<ul style="list-style-type: none"> - Late 1800s iron mine on the west bank of the Blythe River, understood to have associated tramway along the west bank (?) to the coast. - Potential for mine workings (adits, shafts, mullock heaps), other ground modification (eg, dams, water races), associated building and hut sites, processing areas, a major tramway and artefacts. - Appears not to have been subject to major later disturbance (?) 	<ul style="list-style-type: none"> ▪ Avoid ground disturbance in this zone. ▪ If ground disturbance cannot be avoided, undertake prior archaeological survey and assessment. 	Blythe River Iron Mine (Stowport)	Scripps (1990)THPI (8015:24 & 40) B. Rollins & P. Boxhall (pers comm)
23	Copper King Mine	Moderate-Low	<ul style="list-style-type: none"> - Late 1800s – mid-1900s small scale copper mine. - Known workings (eg, adits); potential for additional mine workings (adits, shafts, mullock heaps), other ground modification, associated buildings and hut sites, and artefacts. - Appears not to have been subject to major later disturbance. 	<ul style="list-style-type: none"> ▪ Undertake an archaeological survey of the site prior to any ground disturbance, 	Copper King Mine (Natone)	Scripps (1990) B. Rollins & P. Boxhall (pers comm)

4 MANAGEMENT ADVICE IN RELATION TO THE ARCHAEOLOGICAL ZONING

Zoning Management Advice

Management advice has been provided for each zone. This is presented in Table 1 (above).

Because each zone is different (eg, has a different level/s of archaeological sensitivity, different significance, is known from different sources, is mapped to different levels of reliability), it was considered more appropriate to provide management advice for each zone, rather than to have the same advice for each type of archaeological sensitivity recognised, which is the more common approach.

In general terms all known and potential archaeological values identified in this zoning should be conserved (protected) given the assessed significance of the archaeology.

The zoning management advice however is focussed on actions that are required if ground disturbance is to occur. This recognises that the archaeology identified by the zoning is mostly vulnerable to ground disturbing activities and that the key mechanism available to the Burnie City Council for protecting cultural heritage, including archaeological values, is through the planning and the planning scheme provisions, especially in relation to development applications.

The management advice is aimed at conserving the archaeological values to the greatest degree possible, recognising the need for continued use and development. In general terms the advice includes the following options:

- Avoid disturbance – this is particularly important for known significant archaeology and for significant, high density, high potential archaeology.
- Minimise disturbance – this is recommended for areas of moderate or lower assessed sensitivity; it means that all proposed ground disturbance should be restricted in extent (area and depth) as much as possible in the proposed activities, including through design and construction techniques.
- Salvage excavation prior to disturbance – this is recommended where highly significant and high density archaeological remains are known or highly likely, and where ground disturbance cannot be avoided and is considered to be of greater significance than the archaeology.
- Test excavation – is recommended where there is assessed to be highly significant, but extensive and/or poorly known potential archaeology; the intent of this is to establish whether there is in fact archaeology in the area of proposed disturbance and, if so, to re-assesses the conservation requirements based on this zoning and the salvage excavation findings.¹
- Archaeological monitoring – is recommended where it is believed there is significant potential archaeology, but which is very extensive and moderate to low density (such as would be difficult usefully undertaking test excavation). Findings from the monitoring may require re-assessment.¹

¹ Possible outcomes from the re-assessment are discontinuance of development, revising ground disturbance/ development proposal, salvage excavation, archaeological monitoring, salvage of finds, and no constraints.

- Induction and reporting – is recommended where the potential archaeology is assessed as being of lower significance and of low sensitivity (ie, generally low density); in this case it is considered adequate to rely on the developer (or agent) who are less skilled at recognising archaeological remains to notify Council if suspected remains are encountered. When this occurs the Council should seek or advise the developer to seek the services of a professionally qualified archaeologist to assess the remains and provide management advice in relation to the archaeology located.¹ To ensure workers can recognise archaeological remains, all work should be preceded by a heritage induction. This should be carried out by a suitably qualified or proficient person in this area.
- Undertake further research – this is recommended where there is considered to be inadequate knowledge of the archaeological resource at present

Applying the Archaeological Zoning & Management Advice

In applying the archaeological zoning, the Council should be the main authority unless the place represented by the zone or which includes all or part of the zone is listed on the Tasmanian Heritage Register or some other statutory register, in which case the management of the archaeology should be determined jointly.

All costs arising from archaeological protection in relation to development (eg, further assessment, monitoring, salvage archaeology, test excavation, inductions) should be the responsibility of the developer. The Council however should be able to advise developers of the nature of potential costs in this respect.

To ensure the zoning can be used to protect significant archaeological values, it is critical that the zoning (and management advice) is included in the *Burnie Planning Scheme*. Consideration should be given to achieving this by including the zoning under the Special Area Provisions, and creating a new Schedule for 'Archaeological Values'. While the zoning could be included under the current Schedule B 'Protected Buildings', creating a new schedule is considered to offer more clarity and flexibility.

Provision should also be made for the zoning to be revised (including changing zone boundaries, adding zones, removing zones, and changing the management advice for zones) as new information becomes available.

5 SOURCES

Reports (Published & Unpublished)

- Austral Archaeology** (Parham, D., McConnell, A. & Scripps, L.) 2002 *Van Diemen's Land Company Sites Conservation Management Plan Report*. Report for Gunns Limited, Launceston, Tasmania.
- McConnell, A. & Scripps, L.** 2000 *Historical Heritage Survey and Assessment - Bass Highway & River Road Junction, Wivenhoe, Burnie, Tasmania*. Report to Gutteridge Haskins & Davey, Hobart, Tasmania.
- McConnell, A.** 2003 *Tasmanian Natural Gas Distribution Project: Burnie Area Distribution Pipeline – Historical Cultural Heritage Assessment*. Report for Powerco Australian Holdings Pty Ltd Tasmania, Launceston.
- McConnell, A.** 2005 *Tasmanian Natural Gas Distribution Project: Burnie Area Stage 2 Historical Heritage Assessment – Zones 1 & 2 (all sectors)*. Report for Powerco Energy Services Pty Ltd, Launceston, Tasmania.
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- Ross, B. & Scotney, P.** 1990 *Ridgley Main Road: Old Surrey Road to Bass Highway Archaeological Survey (Section 1.1)*. Report to Road Planning Section, Department of Roads & Transport, Tasmania.
- Scripps, L.** 1990 *North West Tasmania – Historic Sites Inventory Project*. Forestry Commission, Tasmania.
- Searle, C.** 1996 *Burnie Truck Route Archaeological Survey*. Report for the Department of Transport, Tasmania.
- Sim, R.** 1997 *Survey Report: An Archaeological Assessment of the Proposed Telstra Cable Route Stowport and Letteene Roads, Stowport*. Report for Telstra, Tasmania/Victoria Region, Hobart, Tasmania.

Archival & Other Sources (including maps and plans)

- Map – 1986 – *Burnie* 1:25,000 topographic map (4045), TASMALP.
- Map – 1995 – *Inglis* 1:100,000 topographic map (8015), TASMALP.
- Plan – 1843 – *Township of Burnie*, N. Kentish [AOT VDL 343/180].
- Plan – 1849 – *Map of the Van Diemen's Land Company Estate at Emu Bay - shewing the farms occupied and the sections open for selection* [AOT VDL 343/91].
- Plan – 1853 – *Van Diemen's Land Company's Emu Bay* [supplied by present project].
- Plan – 1859 – *Burnie* [AOT VDL 343/183/1].
- Plan – 1887? – *VDL Company's Emu Bay Estate Map 1* [DPIWE, copy provided by B. Rollins].

Oral Sources (present study)

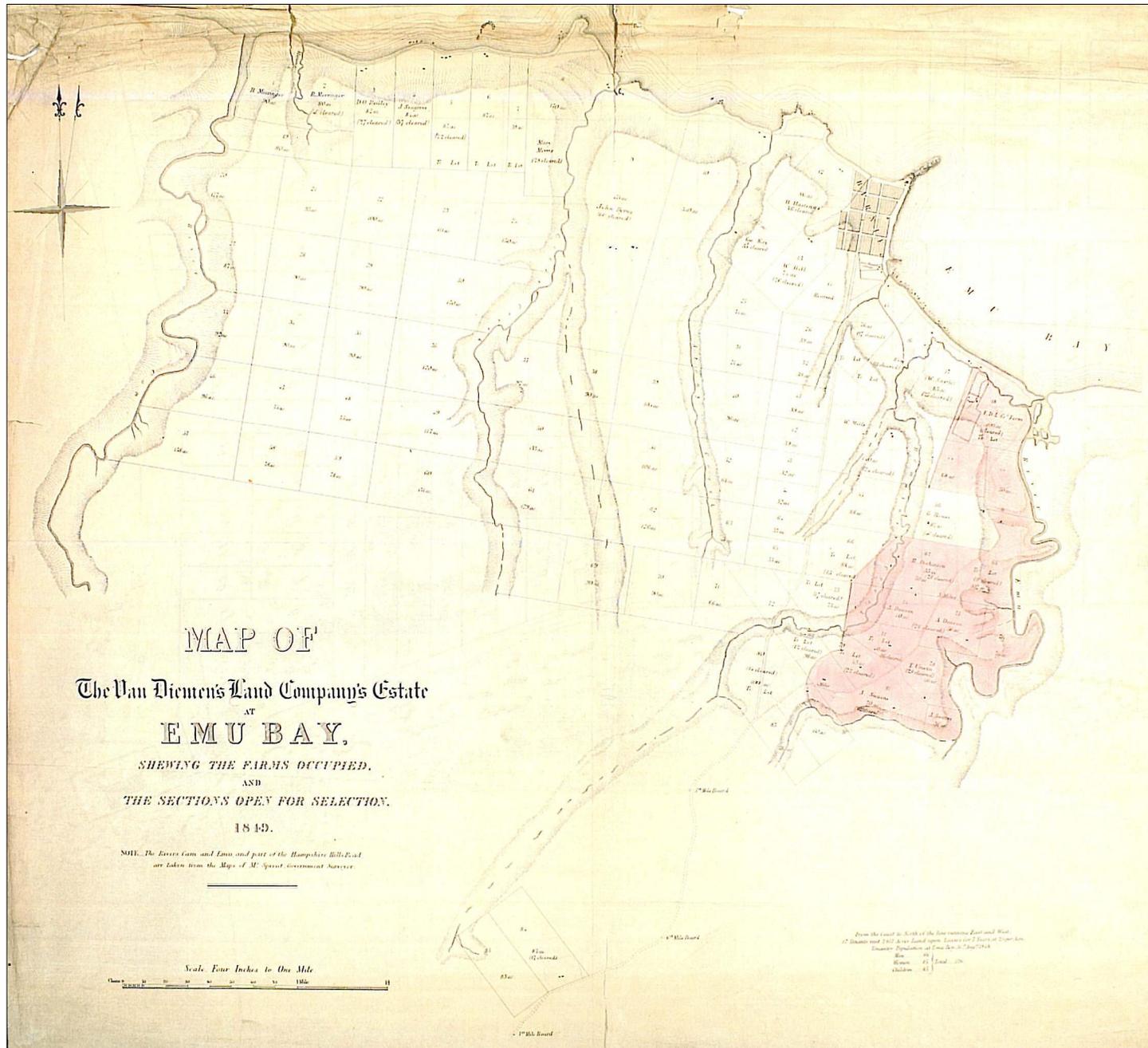
Rodney Green – 29th Oct 2008 (meeting).

Brian Rollins & Pat Boxhall – 29th Oct 2008 (meeting).

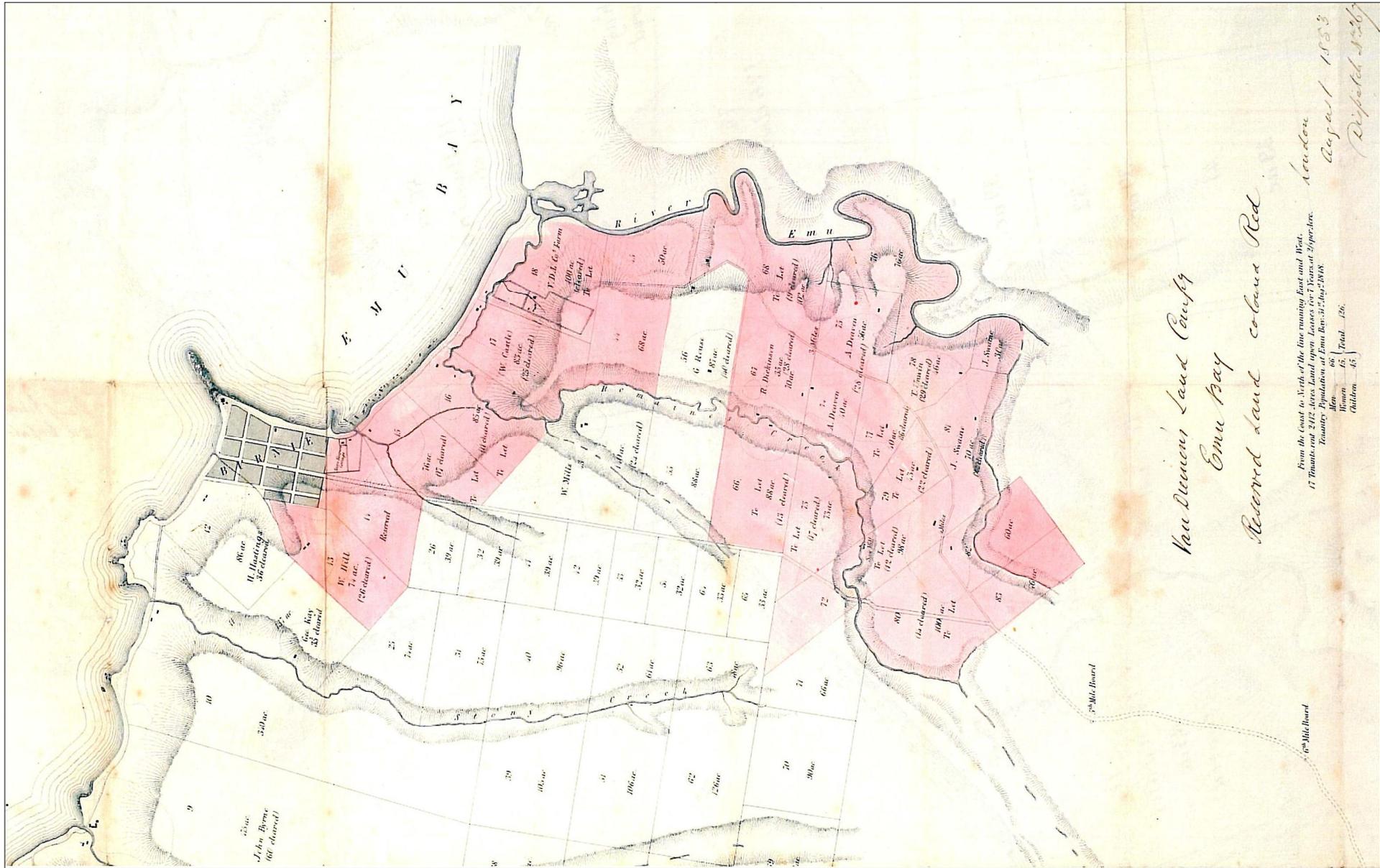
APPENDIX



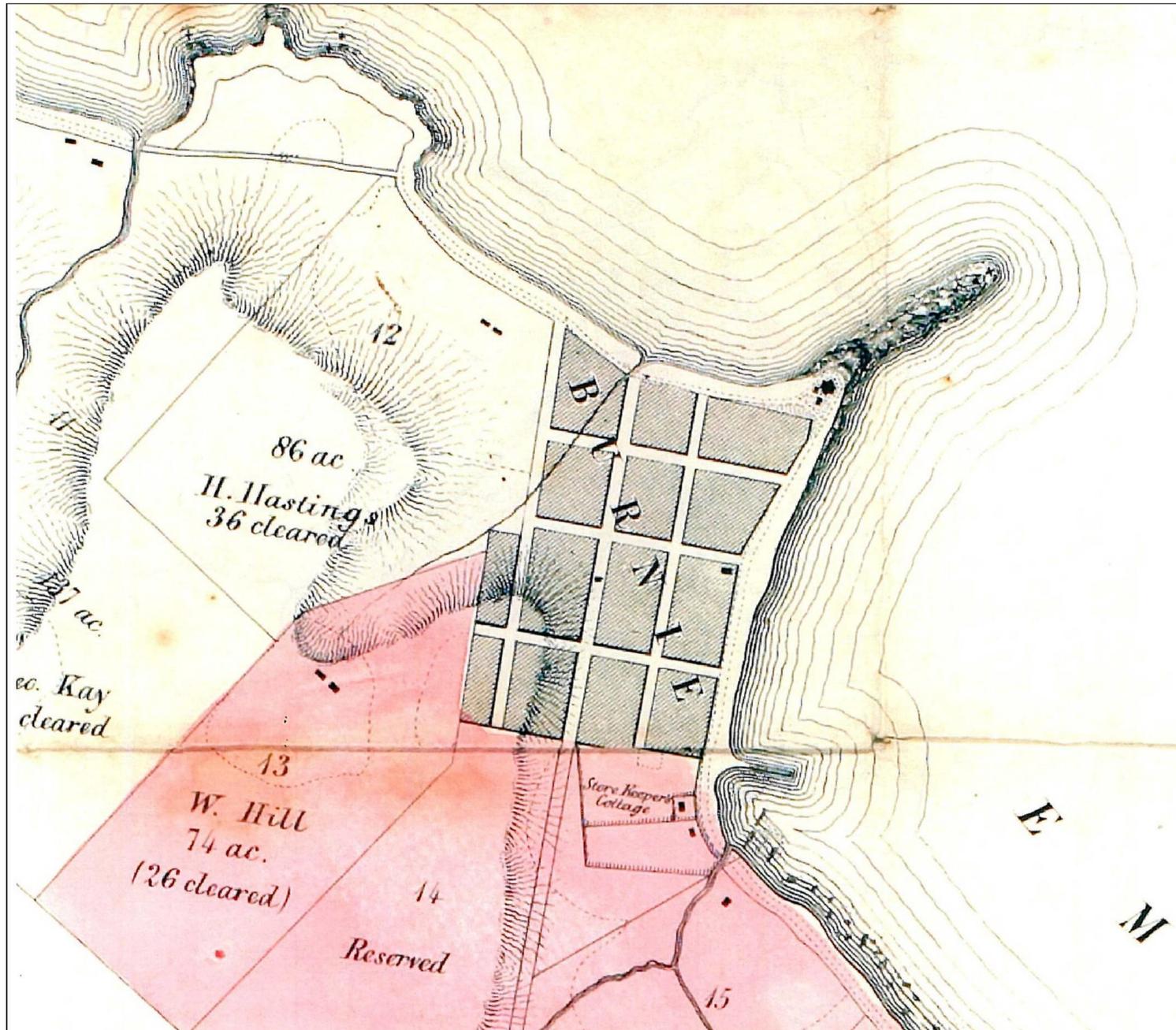
Plan 1 1843 – Township of Burnie, N. Kentish [AOT VDL 343/180]



Plan 2 – 1849 – Map of the Van Diemen's Land Company Estate at Emu Bay - shewing the farms occupied and the sections open for selection [AOT VDL 343/91]



Plan 3 – 1853 – Van Diemen's Land Company's Emu Bay [supplied by present project]

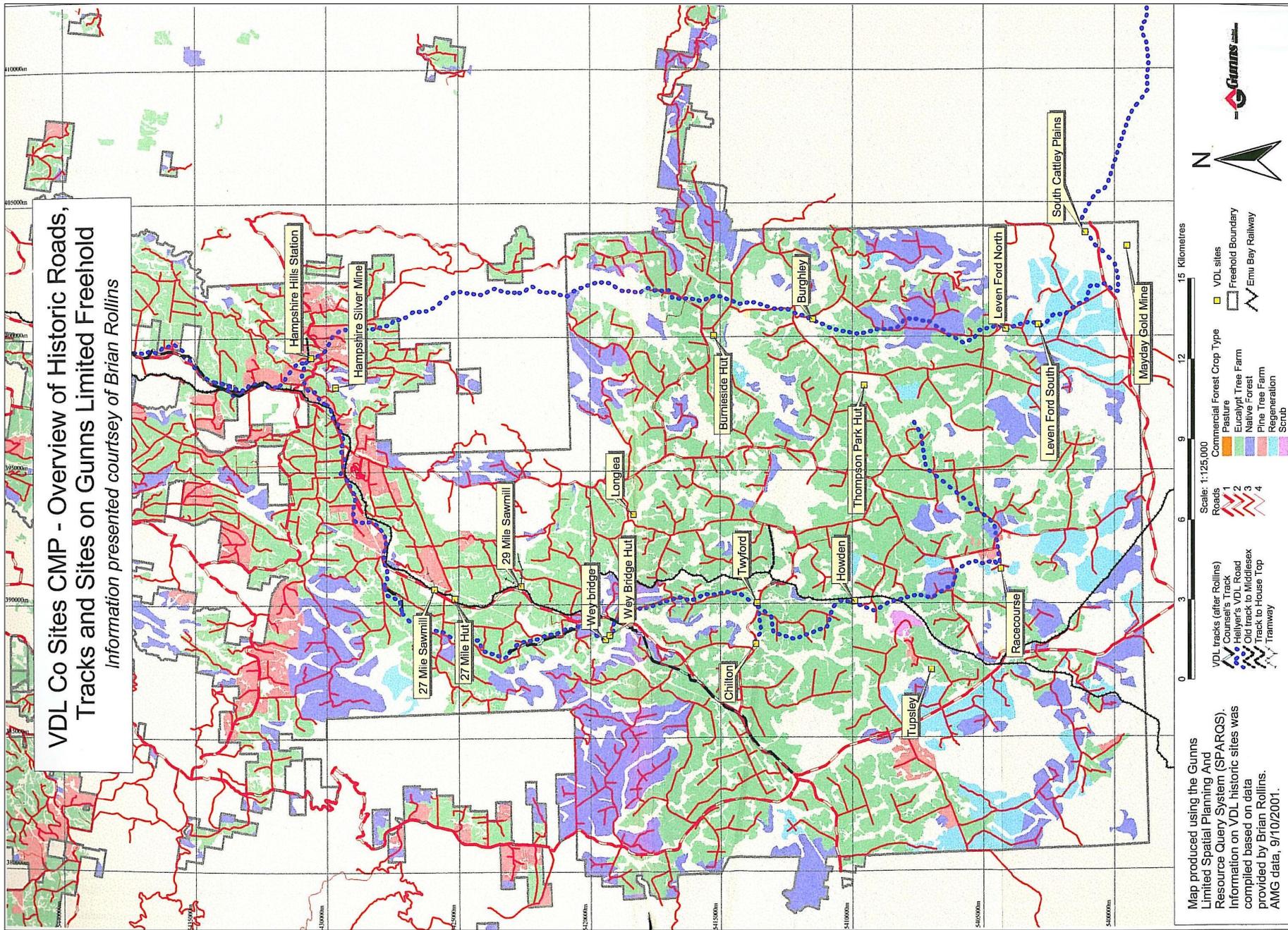


Plan 3b – 1853 – Van
Diemen's Land Company's
Emu Bay – enlargement of
CBD showing cemetery.
[supplied by present project]

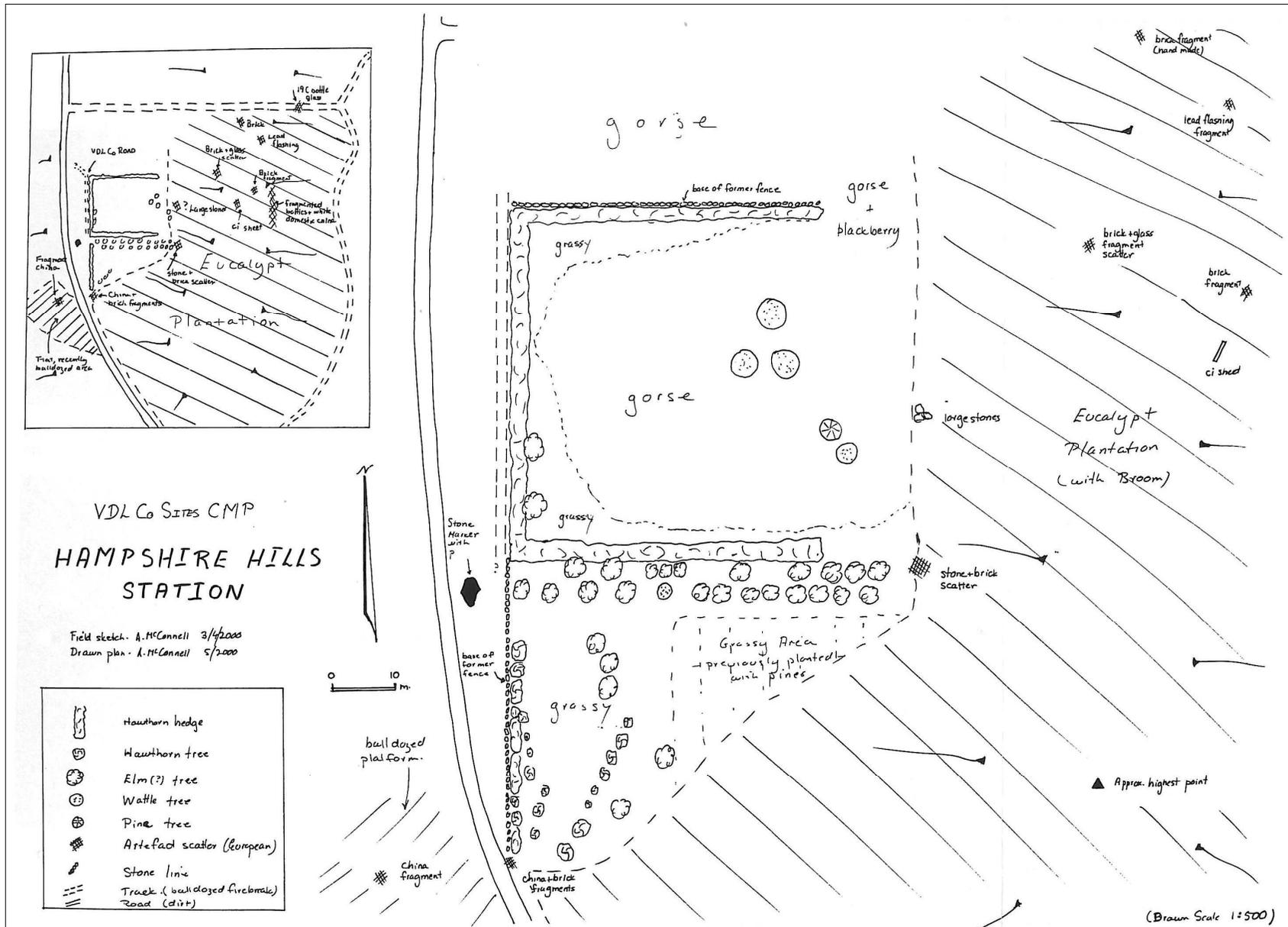


Archaeological Sensitivity Assessment & Management Advice for the Burnie Heritage Study.
 McConnell, A. (Feb 2010) - for GHD & the Burnie City Council

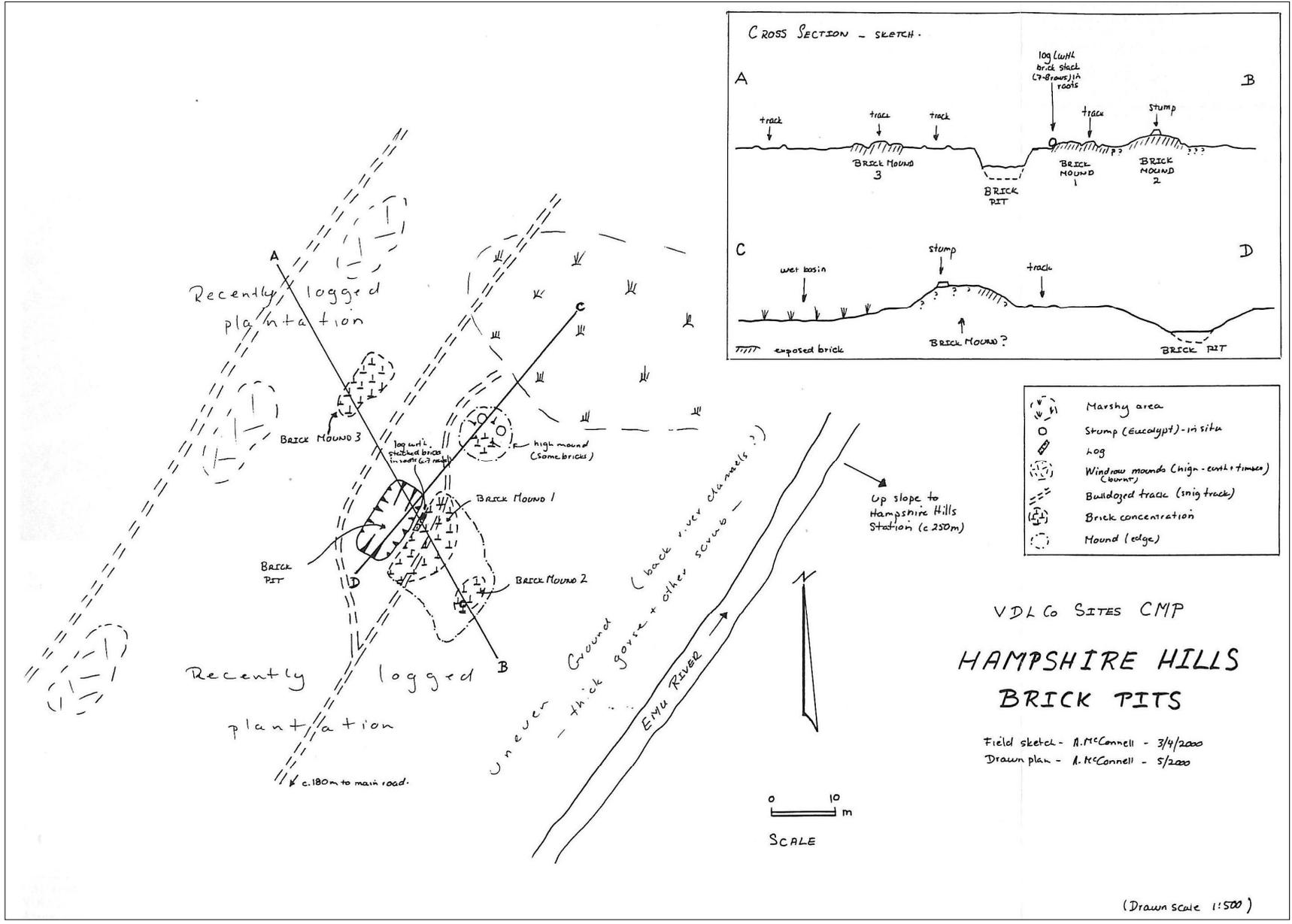
Plan 4 1887? – VDL Company's Emu Bay Estate Map 1 [DPIWE, copy provided by B. Rollins]



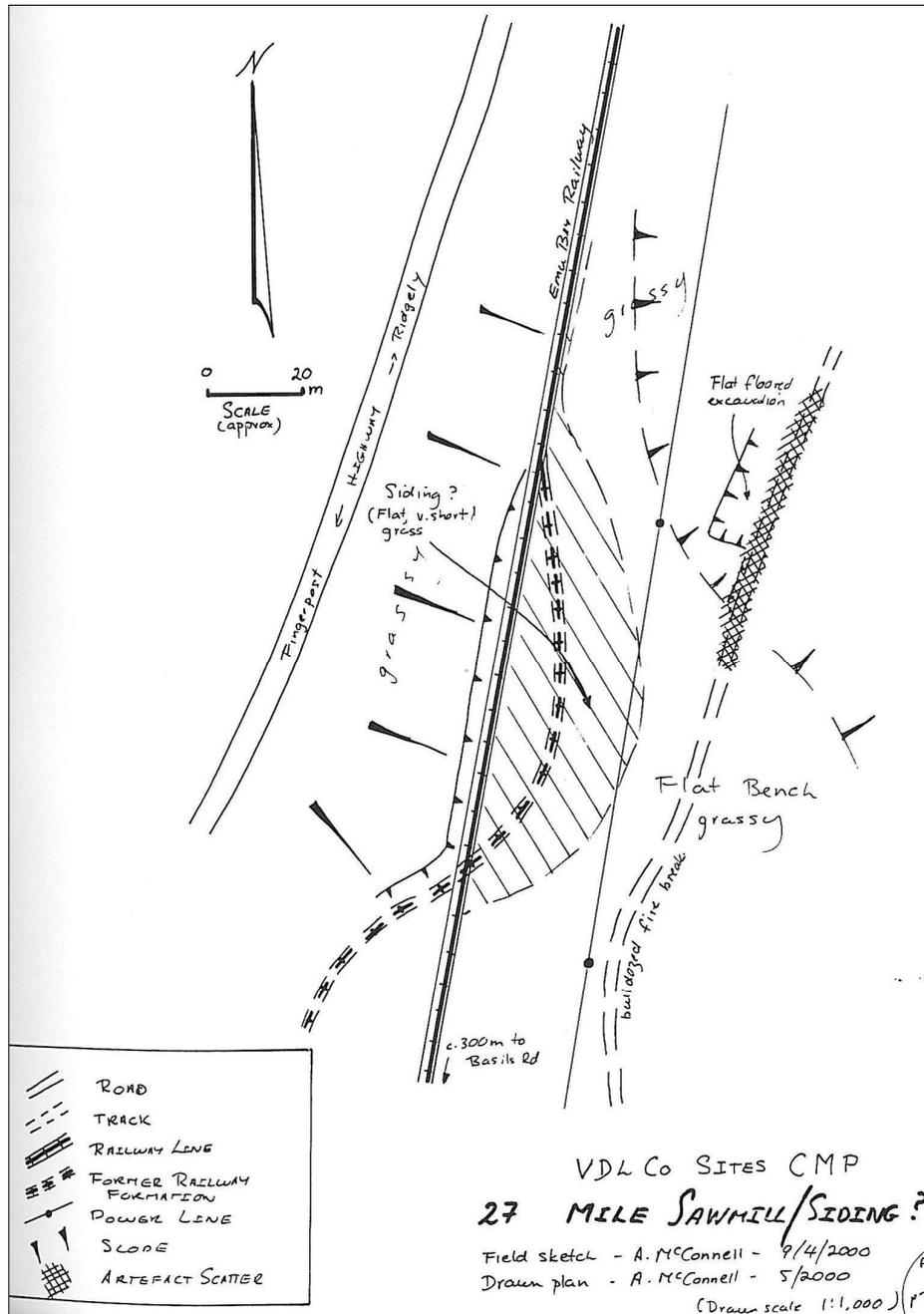
Plan 5 – Location of Key VDL Co Sites in the Hampshire and Surrey Hills.
 Itaken from Austral Archaeology 20021



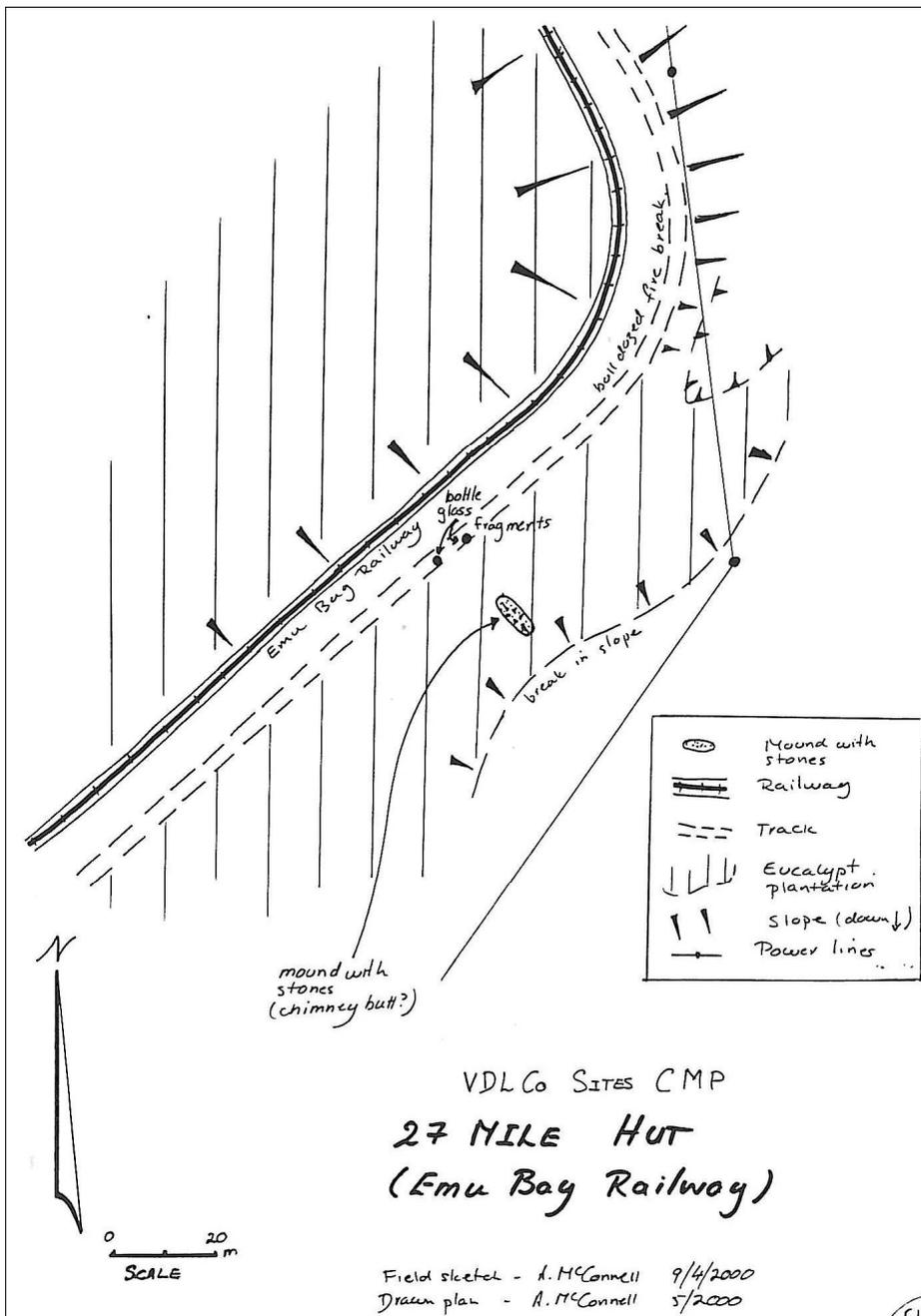
Plan 6 – Zone 12
(Hampshire Hills Station).
[taken from Austral
Archaeology 2002]



Plan 7- Zone 13
 (Hampshire Hills
 Brick Pits)
 [taken from Austral
 Archaeology 2002]

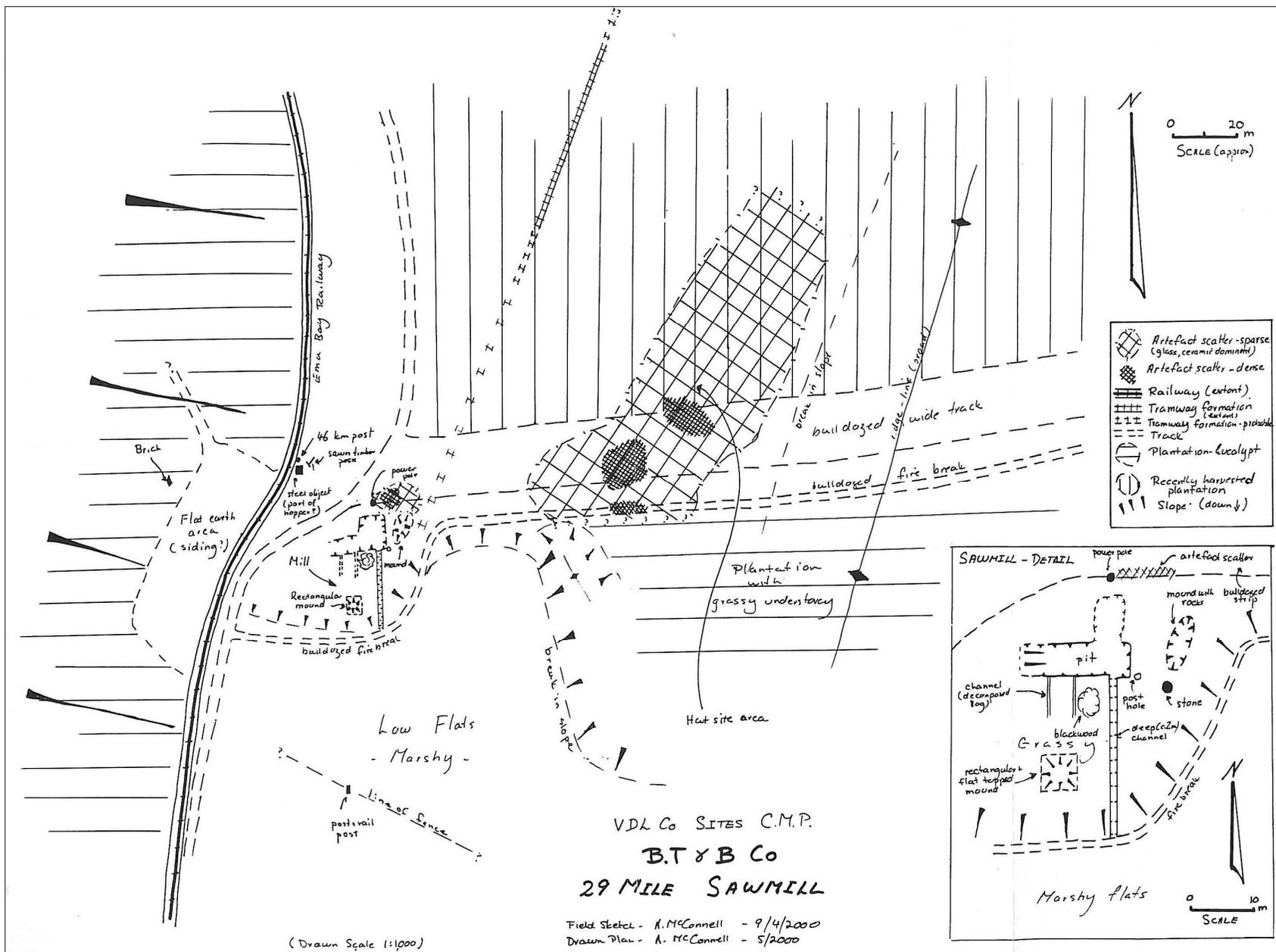


Plan 9 – Zone 15
 (27 Mile Sawmill & Siding).
 [taken from Austral Archaeology
 2002]



Plan 10 – Zone 16
 (27 Mile Hut).

[taken from Austral Archaeology 2002]



Plan 11 – Zone 17
(29 Mile Sawmill & Siding).

[taken from Austral Archaeology 2002]