Callington Steam Mill

Archaeological Research Design

& Method Statement

Mill Lane, Oatlands, Tasmania

Brad Williams - Manager Heritage Projects

SOUTHERN MIDLANDS COUNCIL

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1. Callington Mill – General Description

Callington mill was constructed in 1837, and for over 50 years operated as a wind and steam flour milling enterprise. Having ceased operation in the 1890s, and falling into disrepair in the following decades, the site is now owned by the Tasmanian State Government, and is leased to Southern Midlands Council, who is embarking on an extensive restoration and reconstruction project with the aim of reinstating the windmill to working operation, and incorporating various tourism and commercial activities.

The site covers an area of almost 5000 square metres in the heart of Oatlands, adjacent to the historic Oatlands Military Precinct, with adjacent land forming an important curtilage to the site, and has been incorporated into the *Callington Mill Precinct Plan* (Pitt & Sherry, 2006). The site is largely an internal allotment, with narrow laneways linking it to High Street and The Esplanade, Oatlands.

Several extant buildings occupy the site, including:

- The windmill tower
- The Miller's House
- The Miller's Cottage
- The granary (former steam mill)
- Stables
- Brick store room or privy

Two extant cottages, the former Mill Bakery, and a parcel of land fronting The Esplanade once formed part of the Callington Mill site, however are now privately owned and do not form part of the current proposal or archaeological management plan.

In terms of archaeology, these buildings have the potential to yield underfloor deposits that may have the potential to yield further information about the site. In addition, the site also is known to have once included several buildings no longer extant, including:

- A large building of unknown function (probably stables)
- 1-2 cottages
- Another store room/privy or animal house
- Accretions to the steam mill/granary no longer extant

The site may also have the potential to yield archaeological remains, both of the buildings and activities therein, which may assist in understanding the evolution and functions of that site, as well as the potential to contribute knowledge to various related themes.

The archaeological potential, and a detailed site development history, is provided in the document *Archaeological Management Plan, Callington Mill Oatlands* (Brad Williams, Southern Midlands Council June 2008. This research design should be read in conjunction with that document.

Figure 1.1 – An aerial image of the Callington Mill Site, adapted from Google Earth.

2. Callington Mill – Historical overview

It is obvious that Callington Mill is a site of high historic cultural heritage significance. In order to understand the complexities of this significance, a clear depiction of the history of the site is essential. History can be analysed along a myriad of lines – i.e. social, spiritual, thematic, associative, which are all important considerations when determining the overall significance of a place. However, when assessing the archaeological potential of a place it is the physical history which is most important – how have human actions shaped the physical remnants of past use of the place, and therefore what might remain to demonstrate this. Other aspects of history are then useful in the analysis of significance and the physical record, interpreting social and associative histories etc. For the development of the archaeological management plan, the assessment of the physical history of the site will be the main consideration. The historical overview provided here is drawn from the conservation planning documents and historical studies detailed in Section 3.

The following dot-points will give a brief overview of the history of the Callington Mill site. Whilst the history a site such as the Callington Mill may be analysed along a vast number of lines of enquiry, this assessment will be limited to the events which have influenced the way in which the physical characteristics of the site have evolved, which are likely to have influenced archaeological site formation processes. Events which have bearing on the contextual history of the site (connected to the physical evolution) are also included where appropriate. Most of this history derives from Freeman Collet 1993 vol. 1 – for specific references please refer to that document. Some additional archival sources have been used here which were not included in that work.

1832. Proclaimed a police district in 1826, by 1830 Oatlands was the primary military outpost of the Tasmanian interior. Around this military outpost, a township soon grew, and by the mid 1830s Oatlands was a thriving town, tipped to become the interior capital of Tasmania. According to Calder's 1832 survey of Oatlands**,** the land upon which the Callington Mill was later to be established was owned (in two lots) by Messrs McDonald (fronting High Street) and Richards (fronting the Esplanade). McDonald's lot contained a large building facing High Street.

Figure 2.1 – 1832 site layout, from Sharland's 1832 survey of Oatlands. DPIPWE O/18.

Figure 2.2 – Excerpt of Sharland's 1832 map of Oatlands (blue), showing the largely undeveloped Callington Mill site, overlayed on 2009 aerial (adapted from GoogleEarth).

1836. In August 1836, prominent entrepreneur John Vincent purchased land in Oatlands between the Esplanade and High Street, from Messrs McDonald and Richards.

1837. Very little is known about the details of the construction of Callington Mill. However, on October 15th 1837 Callington Mill opened for business.

1838. Vincent unsuccessfully offered the mill for lease. At this time, the site is described as having a windmill with two sets of French-burr stones, residence with attached counting house, store, washhouse and servant's bedroom (indicating the probable inclusion of the two wings). The site also had a granary, stable, chaise and cart houses, piggery, fowl house and two acres of garden under cultivation. (Hobart Town Courier 4/12/1838). Note that the current stables and cart house were not built until later, therefore the building in front of the mill owner's house is likely to have been a stable and cart house. Figure 2.3 proposes the likely site layout at that time.

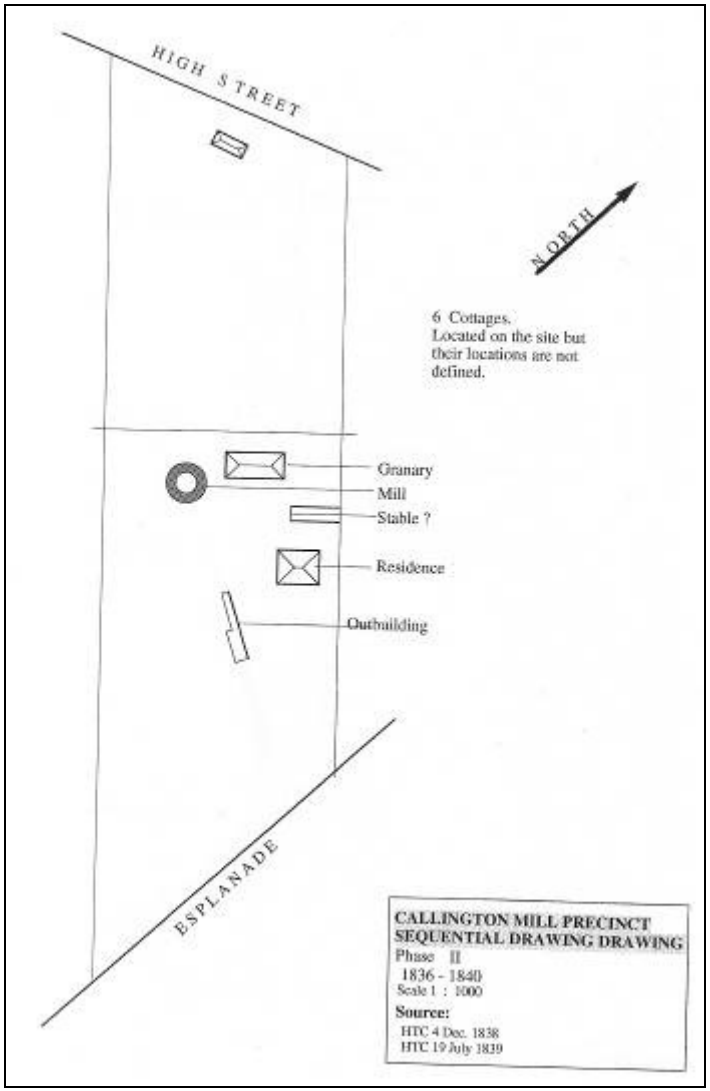

Figure 2.3 – Likely site layout a time of construction (although the wings of the residence are likely to have been built prior to 1838), Freeman Collett 1993 (Appendix 2).

1839: Vincent again offered the mill for lease. In addition to the description of the previous year, the Miller's House is described as being of stone with eleven rooms (indicating the likely construction of the wings), and that there were six cottages on the site as well (HTC 17/7/1839). The locations of these cottages are unclear, as only the mill owner's house, timber cottage at 95 High Street, and the former mill bakery (93 High Street) are shown on Calder's 1846 map.

1840. Callington Mill was sold to John Vincent Jnr., son of the founder John Vincent.

1846. A steam mill was established in the granary with the boiler and its tall brick chimney located under a skillion behind. Owner, John Vincent Jr., employed Alexander Clarke, Millwright (in January of that year), to install 'a perfect and complete 8HP high pressure steam engine with one pair of 4' French burr mill stones connected therewith and also a flour dressing machine'. The original impetus to install steam was probably to increase efficiency as a result of the early 1840's depression.

Calder's map of 1846 (see Figure 2.6) shows the mill tower, miller's residence, the steam mill (in its first incarnation), brick 'skillion building' (piggery?), two buildings facing High Street (cottage and bakery?) as well as ancillary buildings at the rear of these buildings. The miller's residence shows skillions to each side, but the kitchen extension to the rear is not shown. Whilst the stables and miller's cottage are not shown on Calder's map, they have been penciled in at a later date. The bakery appears to have a different shaped footprint, and the timber cottage facing high street is depicted closer to the street (possibly an error). Various stone or brick walls are shown, as is a small cottage facing The Esplanade. This map does not show the building that once existed in front of the miller's residence, not the building beside the residence (on adjacent land) – see Figure 2.7. This map also does not show six cottages (known to have been on the site at the time), the stables and chaise shed that were mentioned in the lease advertisements of 7-8 years earlier (likely to have been in front of the miller's residence). The cottage extant on Mill lane is not shown.

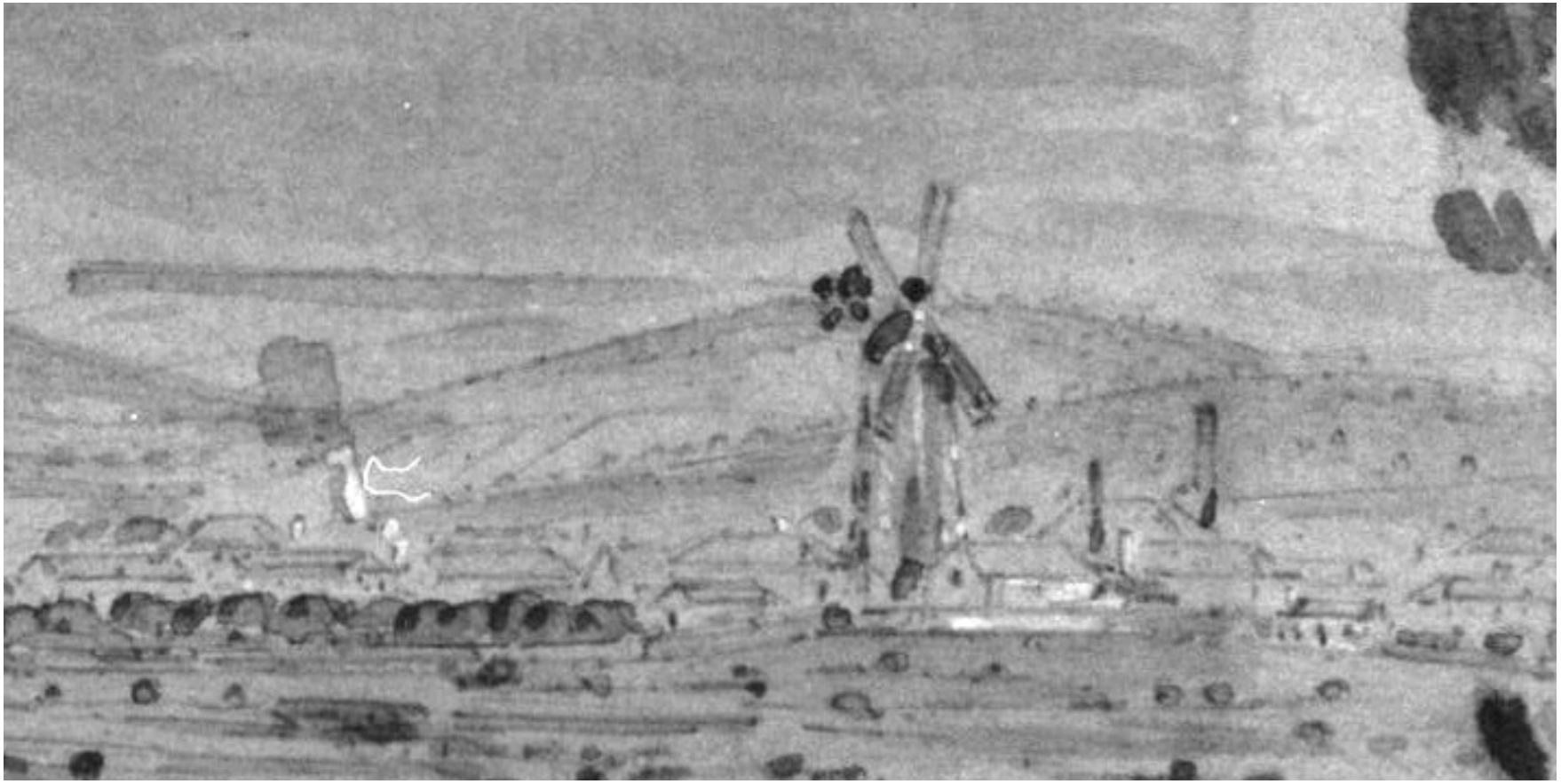

Figure 2.5 – Undated, but post-1846 (i.e, the steam mill is present), and probably pre 1860, sketch of Oatlands, showing Callington Mill from the east (a similar location to that of the Nixon sketch and Abbott photo (Mitchell Library). This sketch shows the kitchen addition to the rear of the residence, a building in front of the residence, and a building next to the residence (now on adjacent land). Note also the steam mill chimney.

Figure 2.6 – Excerpt of Calder's 1846 map of Oatlands, showing the Callington Mill site.

Figure 2.7 – Excerpt of Calder's 1846 map of Oatlands (red), showing the Callington Mill site, overlayed on 2009 aerial (adapted from GoogleEarth).

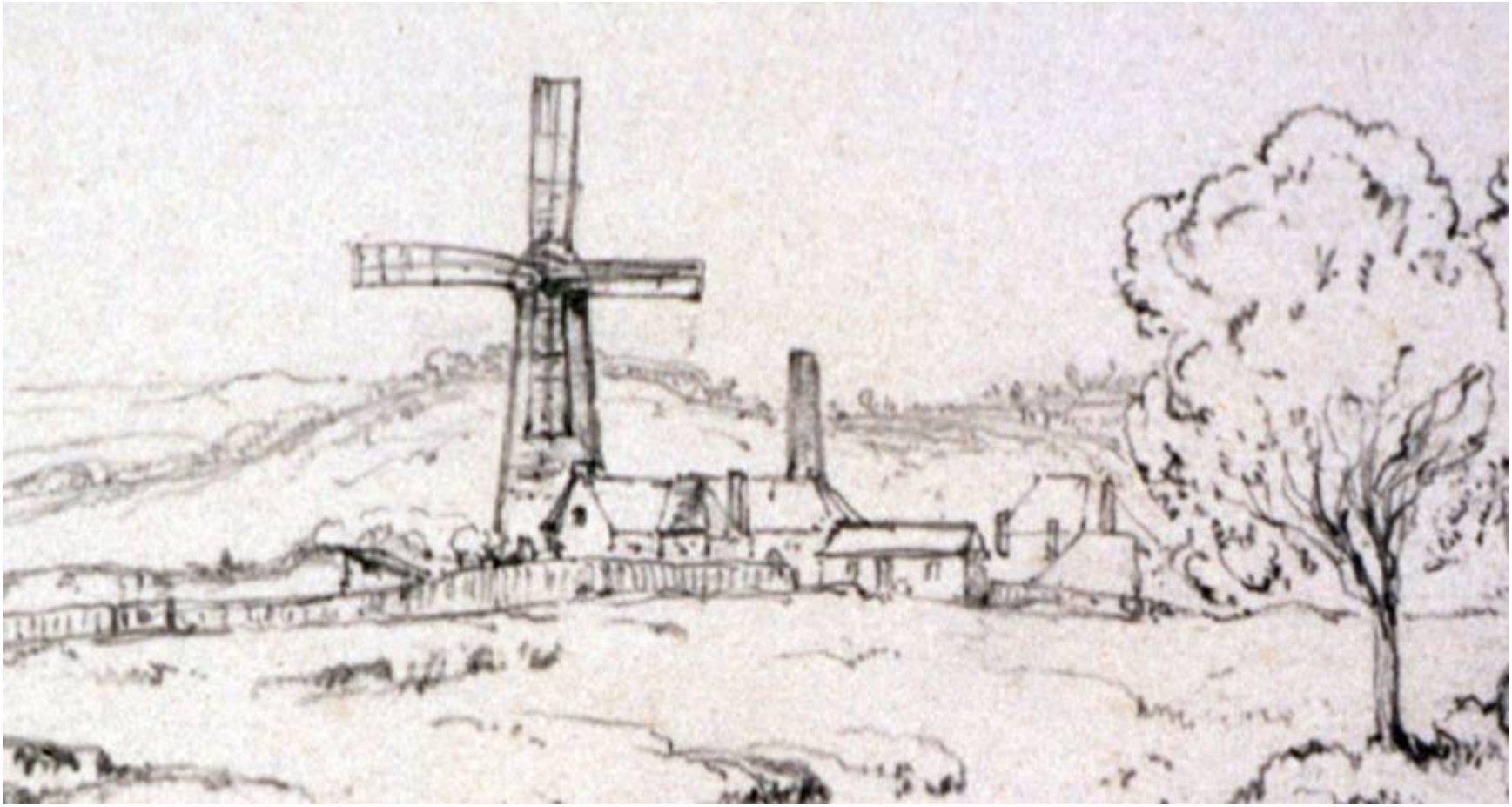

Figure 2.8 – Excerpt from Bishop Nixon's 1850 sketch of Oatlands, showing the Callington Mill (original held by Narynna Heritage Museum, Battery Point). This also shows the building adjacent to the miller's residence.

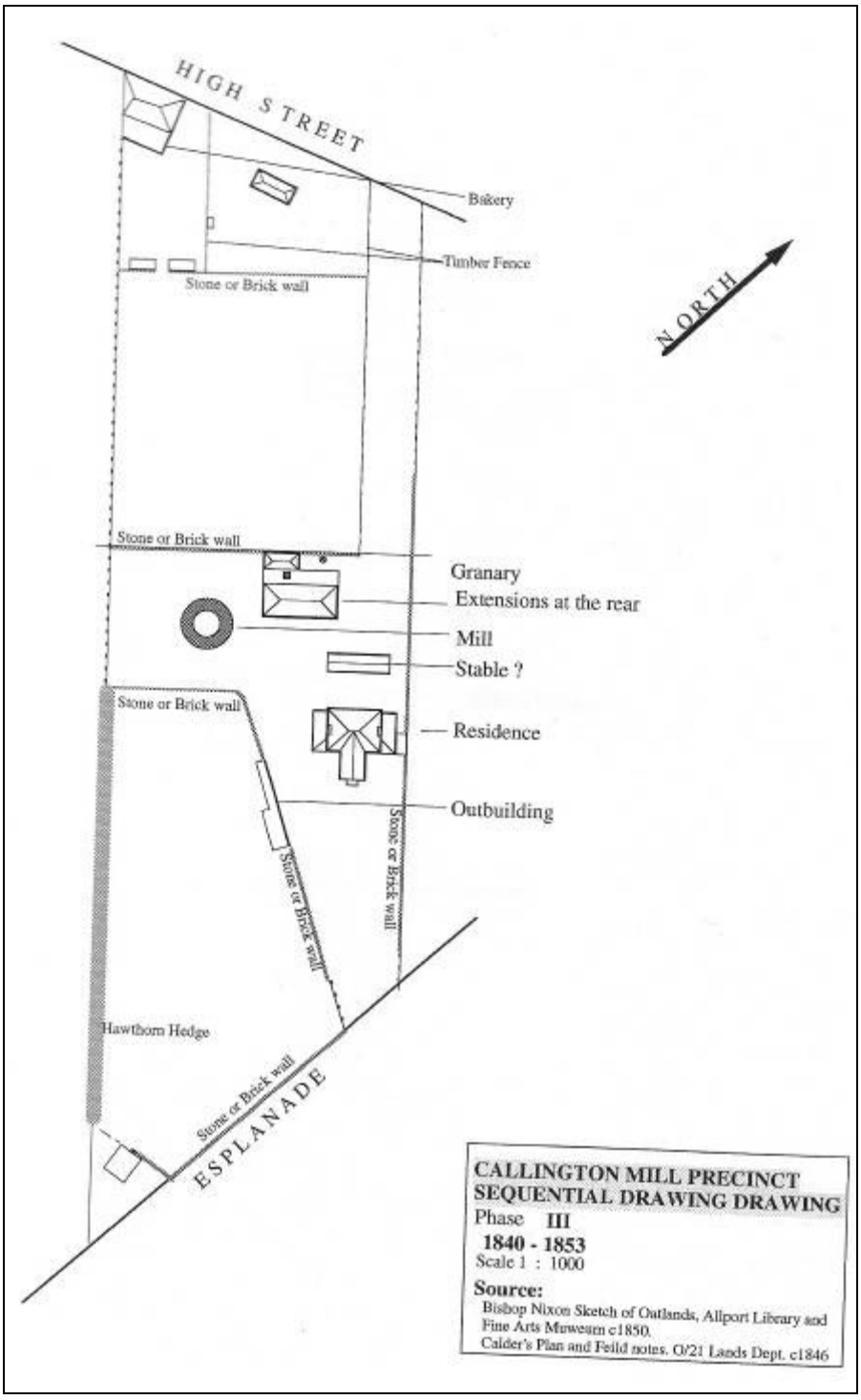

Figure 2.9 – Callington Mill 1840-1853, Freeman Collett 1993 (Appendix 2). This layout more likely represents a post 1846 (and pre 1853) layout.

1846 – 1860. Erection of stone stables, chaise and cart houses and a two-roomed miller's cottage (i.e. those buildings not shown on the Calder map, but now extant on site). Also between 1846 and 1850 a kitchen extension was build onto the rear of the miller's residence. With the steam mill occupying the former granary, grain was later stored in the upper level of the stables. A sketch by Bishop Nixon from 1850 (Figure 2.8) shows the windmill, miller's residence (with rear extension), the steam mill chimney and cottage and bakery on High Street. A small building, no longer extant, can be seen next to the miller's residence – on adjacent land. The roofline of a building between the miller's residence and granary can be seen. This layout is also evident in the Abbott photograph of 1860 (see Figures 2.8 and 2.9). In 1853 the mill was sold to Thomas Jillet, who advertised the site for sale in 1860 (HTA 28/8/1860), the sale description including three stables - one at rear of the bakery, one four stall (extant) and one two stall, which may be the additional building seen in images of that period.

Figure 2.10 – Photograph of the mill by A. Abbott, April 1860 (SLT AUTAS001124069956). See Figure 2.11 for further detail on this photograph.

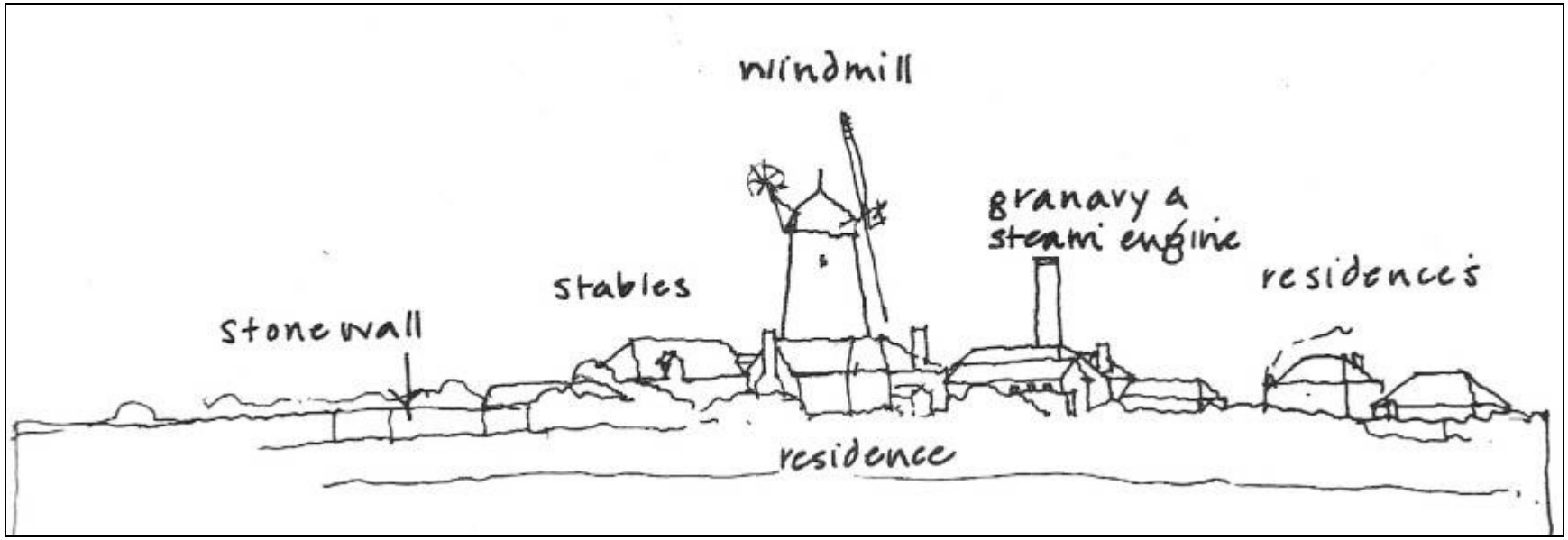

Figure 2.11 – Tracing of the 1860 Abbott photograph, from Freeman Collett 1993, vol.3.

1860's. A separate stone building was erected behind the granary skillion probably to cope with the loss of storage space in the granary due to the enlargement of the steam mill. Figure 2.12 depicts the site layout at that time.

c1862. Jillett added a second pair of stones. In addition the mill had 'dressing and smut machines, hoisting gear and every necessary convenience on the most approved principal'. Jillett sold the mill to John Bradshaw in 1863, with the bakery and two cottages fronting High Street, separated from the complex by that time.

1870. Bradshaw added a silk reel, an improved machine for dressing meal. By the early 1870's times were again hard. Mills had begun closing down from the 1860's. Major wheat production had moved to the mainland.

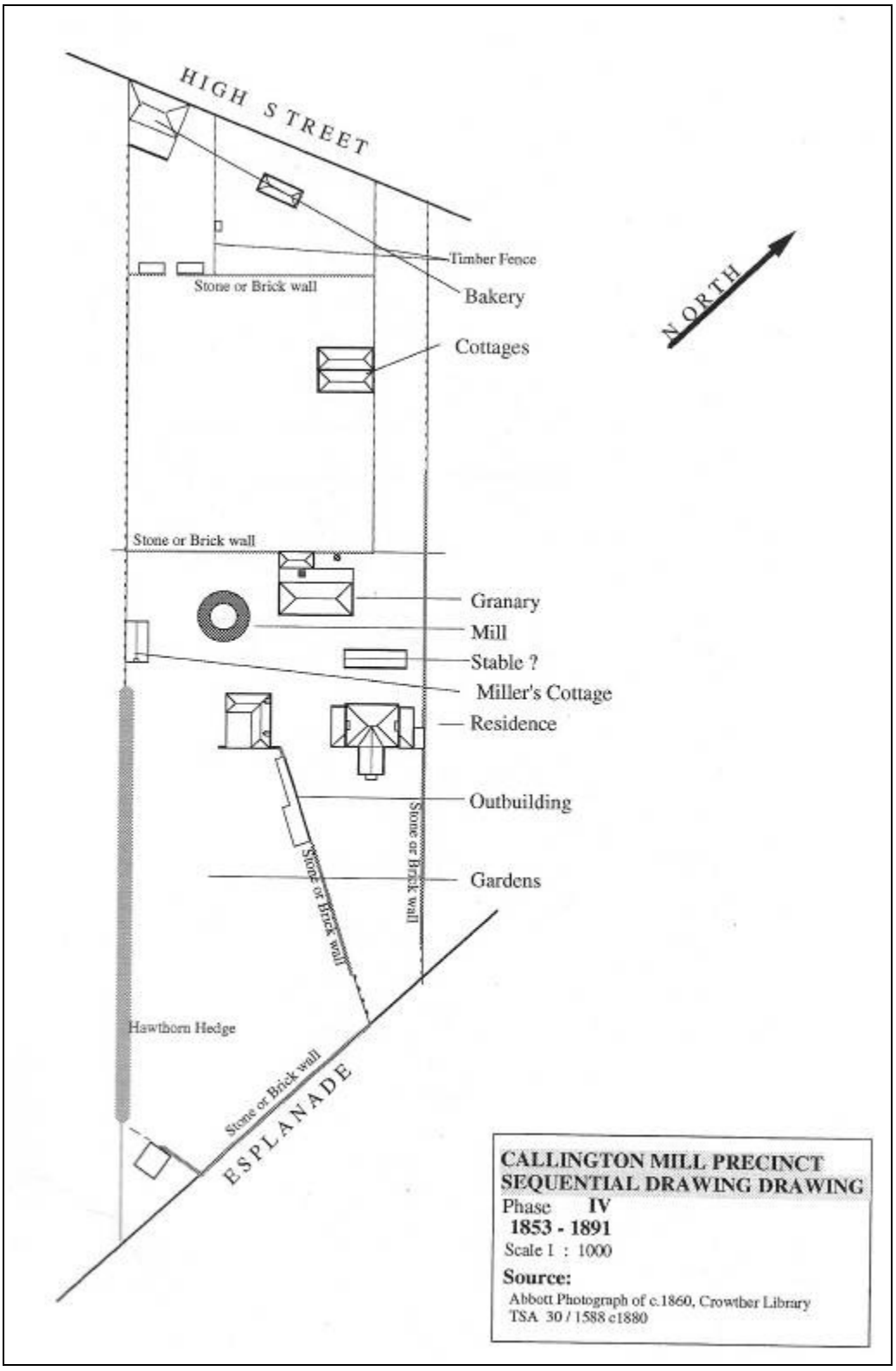

Figure 6.12 – Callington Mill 1853-1891, Freeman Collett 1993 (Appendix 2).

1873. Boddington's patent millstones installed, most likely in the steam mill.

Late 1870's. A photograph from this time shows the joining of the roofs of the building behind the granary with another (possibly timber) to the south west. This gives the best indication of the High Street side of the steam mill building, with the skillion additions and hipped roof building no longer extant. This photograph is also the best known depiction of the windmill sails. See Figure 6.14.

Figure 2.13 – Callington Mill 1853-1891, composite based on phase diagram by Freeman Collett 1993 (Appendix 2) – from historic images and sketches (see Figures 2.8-2.10). Note that the cottages in adjacent to Mill lane are probably erroneously out of place, and the northern extension of the granary should extend further westward (see Figure 2.14).

Figure 2.14 – Callington Mill pre-1880, showing the rear (northern wall) of the steam mill (now granary) (TAHO PH/30/1/1558).

1876. By this date the mills – probably on two separate hursts – are said to have had elevators, a 12HP engine, a circular saw and a weigh bridge improving efficiency and output.

1880. The mill was described as being '…fitted with a 14HP engine….. besides the most improved machinery, the appliances for producing the best article are most complete and labour saving'. By 1880, competition from large mills on railway lines and in ports, and importing grain from the mainland were making it difficult for small mills to survive. The extensive adoption of roller milling drove the final nail into the coffin of traditional milling late in the century. Bradshaw sold the mill to Jon Blakemore Roe in 1881.

c1884. The steam mill was the only mill operating on the site as at this date the windmill was being used only for storage.

1891. The mill ceased operation.

1891 – c1910. Windmill had fallen into disrepair, sails and fantail removed. By this time, the buildings at the rear of the steam-mill and the chimney appear to have been removed.

Figure 2.16 – Callington Mill, c1900, showing Miller's Cottage, stables and granary (SLT AUTAS001126253533).

Figure 2.17 – Callington Mill c1905. Courtesy of Mr. and Mrs. Steven Walker, Oatlands.

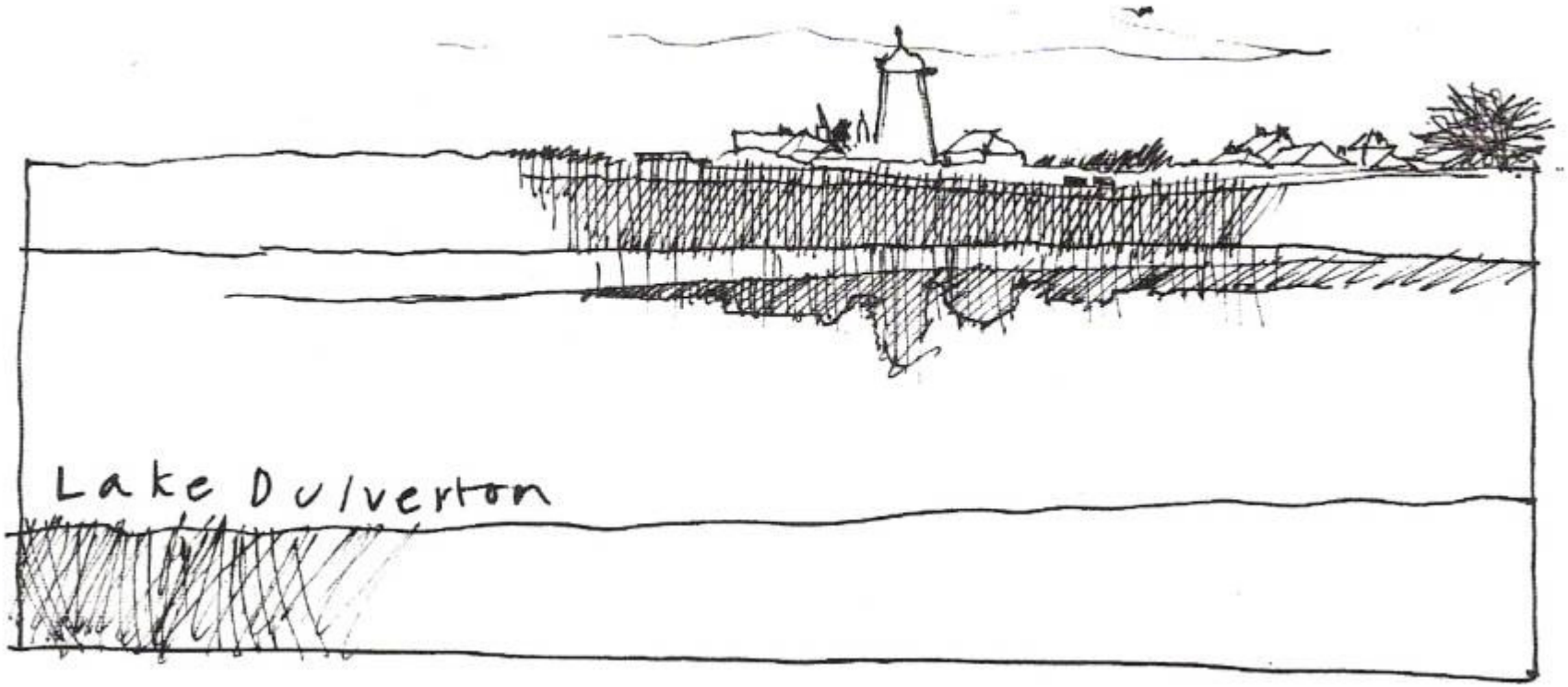

Figure 2.18 – Tracing from 1910 postcard showing Callington Mill (from Freeman Collett 1993 Vol.1).

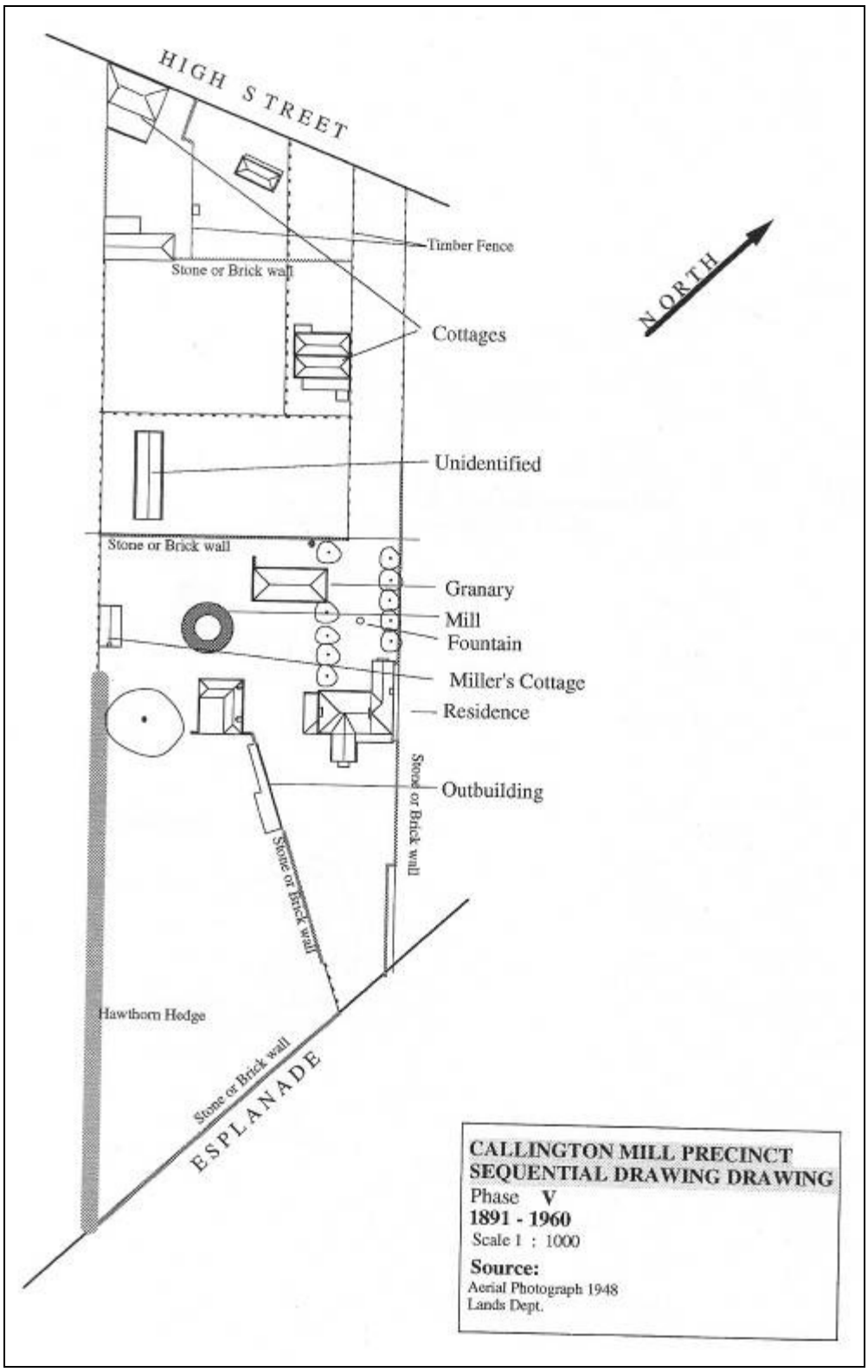

Figure 2.19 - Callington Mill [1891 sic] post 1930s -1960, Freeman Collett 1993 (Appendix 2).

c1913? Fire in mill tower, presumably resulted in loss of the cap, and any internal structure extant at that time. In a 1983 interview with Oatlands Resident Cliff Thomas (long time resident of the Mill complex) detailed in Harris (see Section 3), Mr. Thomas recalled that around the time of his birth (1913 – and the time of the fire) an extensive clean-up occurred at the mill site, in which *"the old steam engine and any other old rubbish were thrown down a well under the floor of the steam mill building".* The portion of the transcript reproduced by Freeman Collett (1994 vol.1 pp.44-5) reads as if the interview was conducted with the c1930 photograph of the steam mill area[1] as an aid to memory and that the well in question was under the skillion extension to the granary.

c1913 – pre1975. Ground floor of mill tower was used as a water tank. Remains of the north-eastern part of the steam mill was demolished probably in the 1930s.

[1] Tasmanian Archive and Heritage Office Ref. 30/3327

Figures 2.20 – A view of Callington Mill from the site of the steam mill, Ierene Mort 1933 (NLA pic-an3807484 Note the remnant boilers on the steam mil site.

Figure 2.21 – Callington Mill, showing the ruins of the steam mill, probably c1930s. TAHO PH30-1-3327

Figure 2.22 – Callington Mill late 1940s showing the rear of the granary, note that the ruins of the steam mill had been demolished (TAHO PH30/1/4917).

Figure 2.23– Callington Mill, 1947, taken by R Harvey. TAHO NS 1029/1.

1964. The site was purchased by the Scenery Preservation Board, from Mr. Neil Burbury, for $2000.

Figure 2.24 – Callington Mill in 1966, taken by Sir Ralph Whishaw. TAHO NS165-1-333

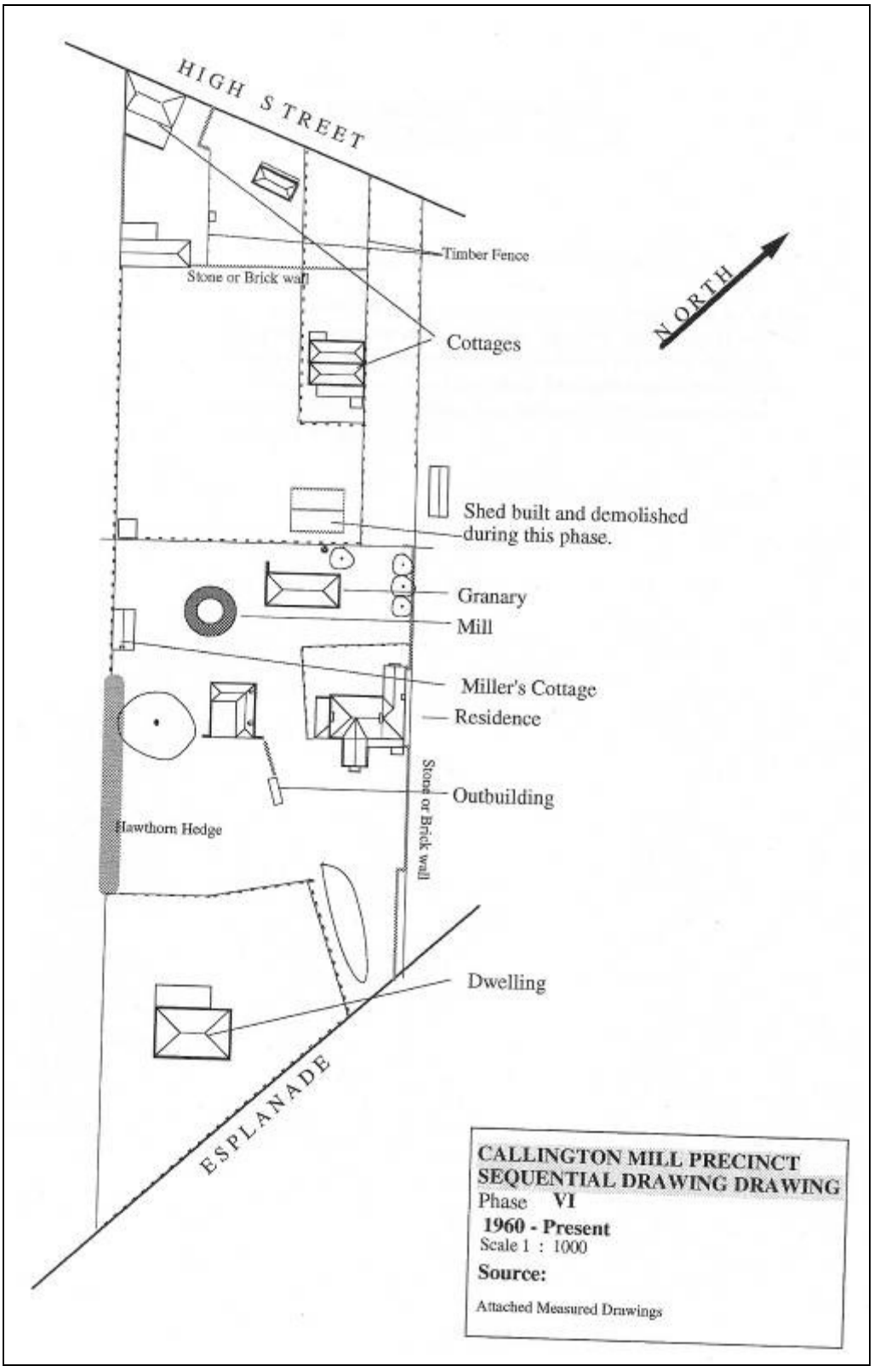

Figure 2.25 – Callington Mill, 1960-1993, Freeman Collett 1993 (Appendix 2).

1970's – early 1980's. Periodical restoration of the buildings and investigations of restoring the mill to working use. In 1976 windows and a temporary roof were installed in the mill tower.

1988. Internal structure, cap, windows and doors installed in the windmill.

1999. Fanwheel and gears added to windmill to allow the cap to rotate.

2005. Commencement of the Master Plan phase of the redevelopment of the site and reconstruction of the windmill.

2007-8. Confirmation of $2.4m funding for Southern Midlands Council implementation of the Callington Mill Master Plan.

2010. Reconstruction of the Callington Mill Tower completed. Site buildings restored. Mill Owner's House converted to a visitor centre.

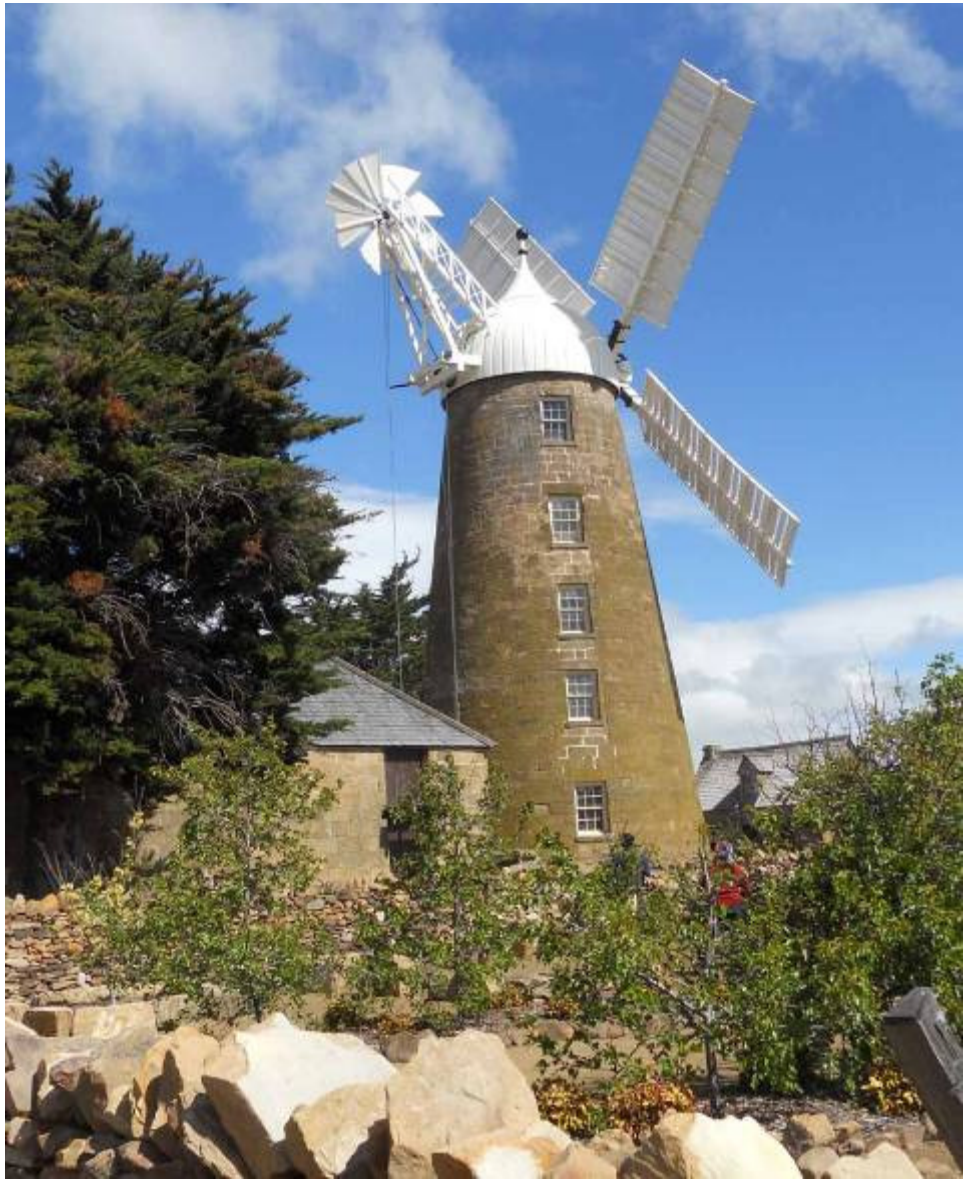

Figure 2.26 – Callington Mill 2010.

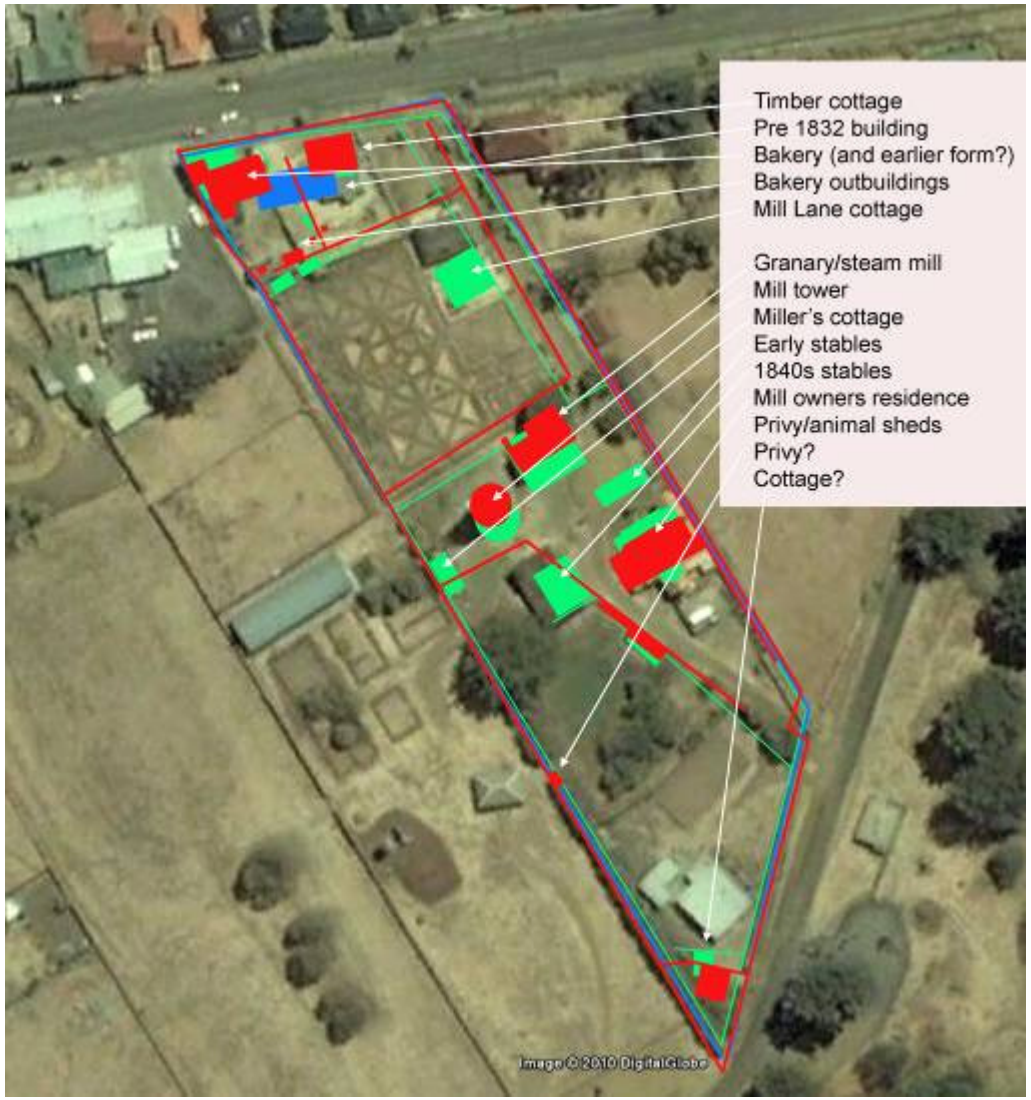

Figure 2.27 – Overlay of all known major historical features on the Callington Mill site, based on the 1832 and 1846 surveys, as well as Freeman Collet's conjectural reconstruction of the c1860s-1890s site layout.

3. Callington Mill – Conservation Planning Background & previous archaeological works/policies

The following conservation and project planning documents (and supplements) have been studied in the development of the historical overview and archaeological management strategies for Callington Mill;

- Bjorksten, B. 2005: *Callington Mill Reinstatement, A Personal Supplement and Commentary to the 1994 Conservation Plan*
- Bjorksten, B. 2006: *Callington Mill Reinstatement, A Personal Second Supplement and Commentary to the 1994 Conservation Plan*
- Cassidy, J., Preston, K: *Thematic Study of the Tasmanian Flour Milling Industry*
- Freeman Collett 1994: *Callington Mill Historic Site – Oatlands Tasmania. Conservation Management Plan*
- Freeman Collett 2004: *Callington Mill Historic Site Conservation Plan – Addendum*
- Harris, S. 1987: *Callington Mill Research, Stage 1 Historical Report*
- Pitt & Sherry 2006a: *Callington Mill Precinct Strategy*
- Pitt & Sherry 2006b: *Callington Mill Precinct Plan*
- Pitt & Sherry 2006c: *Risk Identification, Callington Mill Redevelopment*
- Townsend, A. 2010: *Callington Mill Historical Research Project.*

The conservation plan (Freeman Collett 1993) does give an overview of areas that may have archaeological potential. Vol.1 p107 of the conservation management plan designates areas believed to be able to yield information (i.e. as part of the 'research potential' criterion of the statement of significance developed in that plan. This overview is presented here as Figure 8.1. Namely, this designates the following areas:

- The area immediately behind the granary, as the former steam-mill site.
- The area between the granary and the Miller's House, as the former site of what most likely were stables.
- The area between the brick skillion and the stables, being the former site of another skillion (probably a privy or animal sheds).
- A privy site on the north-western edge of the site near the break in the angle of the stone boundary wall.
- An area along the south-eastern boundary, beneath the hawthorn hedges, although it is unclear why this area was designated (perhaps through perceived lack of disturbance, being covered by a hedge for a long period).
- The area immediately surrounding the Miller's Cottage.

Freeman Collett (vol.2 p.4) provides a second plan of archaeological potential (see Figure 3.2) which adds some areas which may yield evidence of former walls (i.e. those which predate the stables). In addition, vol.1 p.90 mentions that the well behind the granary would be of archaeological interest, citing the possibility that machinery from the steam mill may have been thrown down it. Underfloor deposits are not mentioned in the conservation management plan.

Freeman Collett, (1993, vol.4. p6) provides a policy relating to archaeological remains:

> *The precinct is archaeologically rich, particularly with respect to 19th century European occupancy connected with the windmill and milling operation. Policy should allow for further investigation of this richness, ether by 'active' archaeology, or by resistivity survey. Such further investigation would provide information about demolished buildings, connections within the precinct, and the interrelationship of mill functions.*

Whilst this policy is valid, and this plan generally agrees with the areas of sensitivity identified in this archaeological management plan, no specific policies or procedure has been outlined for the treatment of archaeological remains, particularly in the works process – obviously this was beyond the scope of the conservation management plan, however the archaeological management plan aims to expand upon this policy and develop specific procedure for archaeological investigation alongside the proposed program of works.

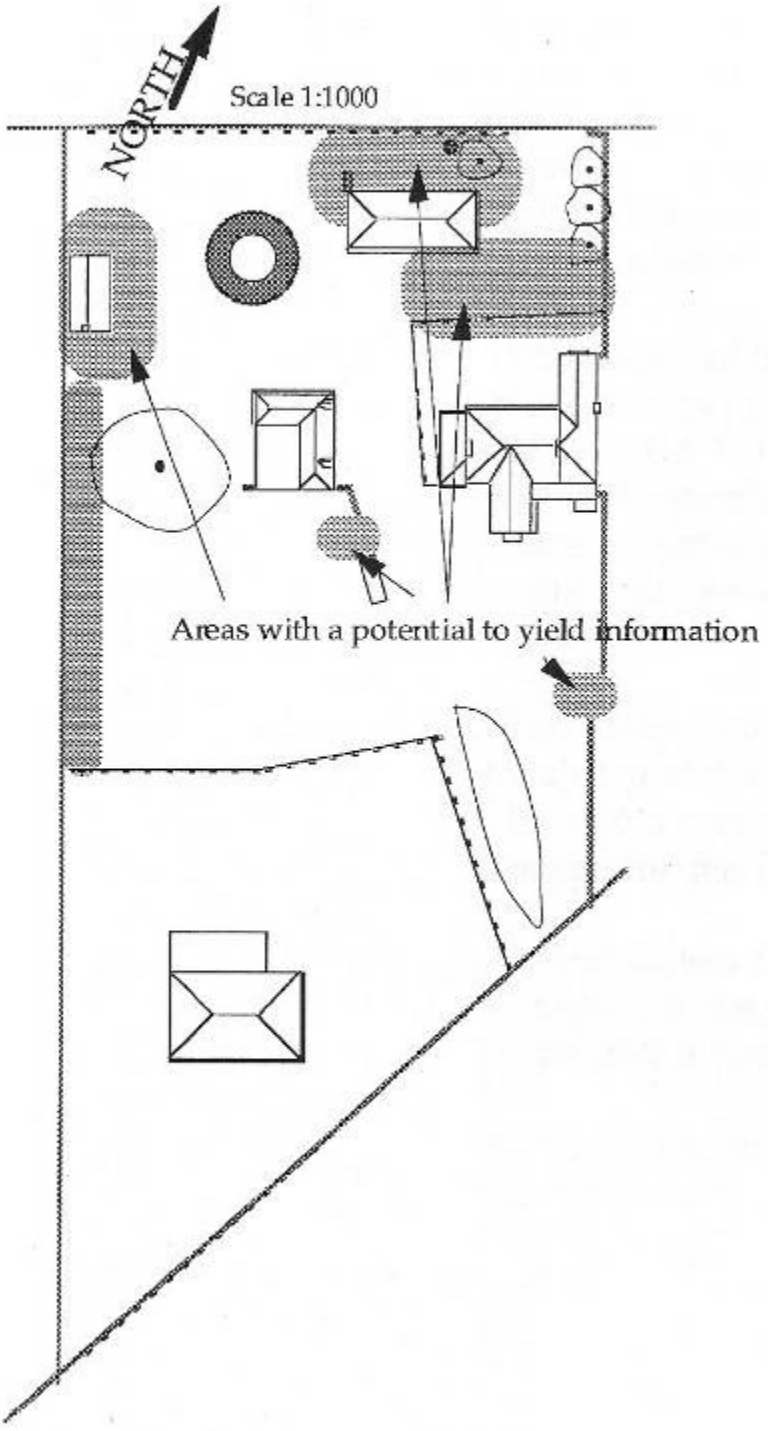

Figure 3.2 – Areas of archaeological potential, as identified by Freeman Collett (1993, vol.2 p4.

4. Statutory heritage requirements

The following heritage listings and overarching legislative provisions are relevant to the management of the historic cultural heritage values (including archaeological values) of Callington Mill.

Callington Mill is listed on Schedule 4 (Buildings and Works of Historical Significance) of the Southern Midlands Planning Scheme 1998 (*the Scheme)*. This makes the site subject to the provisions of Part 10 of the Scheme, which sets the planning guidelines for works on the place.

The site (and precinct) is also included in the Oatlands Historic precinct Special Area, therefore subject to the provisions of Part 9 of the Scheme.

The Scheme requires that all works on that site, including archaeological investigations, require planning approval as a *Discretionary* planning assessment. Only those works which are considered to be essential maintenance, and which do not significantly alter the appearance of the place, are exempt from the requirement of a planning application.

Historic cultural heritage Act 1995

Callington Mill is listed on the Tasmanian Heritage Register. Accordingly, the place is subject to the provisions of the *Historic Cultural Heritage Act 1995* (HCHA). Under Part 6 of the HCHA, any works (including invasive archaeological works) will require the approval of the Tasmanian Heritage Council – who would assess any proposal against the impact that such proposal may have on identified (or possible) historic cultural heritage values.

Invasive archaeological investigations, or works which might have an impact upon significant archaeological remains would also require approval, and be in-line with the requirements of the Tasmanian Heritage Council's Practice Note 2 (*Managing Historical Archaeological Significance in the Works Application Process)* and/or the Tasmanian Heritage Council's *Guidelines for Historical Archaeological Research Projects on Registered Places.*

Non invasive archaeological investigations (i.e. survey or geophysical investigations), as well as investigations which do not impact upon significant archaeological remains (i.e. exposing but not disturbing remains to test or confirm an archaeological theory), would not require the approval of the Tasmanian Heritage Council. Nonetheless, it is recommended that any archaeological findings be reported to the Tasmanian Heritage Council (or Heritage Tasmania) as a means of supporting and centralising the collection of Tasmanian archaeological data.

Environment Protection & Biodiversity Conservation Act 1999

Callington Mill is not listed on the National or Commonwealth Heritage Lists, therefore is not subject to the historic cultural heritage provisions of the *Environment Protection and Biodiversity Conservation Act 1999*.

Non-statutory heritage lists

Callington Mill is recognised by the (now defunct) Register of the National Estate. Whilst this register has no statutory power and no referral would be required for use or development of the place, it is indicative of a level of historic heritage significance.

The site was also formerly registered by the National Trust – that register being superseded by the Tasmanian Heritage Register upon assent of the *Historic Cultural Heritage Act 1995*.

Aboriginal heritage

The provisions of the *Aboriginal Relics Act 1975* are applicable to the place and Aboriginal heritage values must be managed according to that Act. It is considered highly unlikely that any Aboriginal heritage values would be impacted upon by this proposal. Nonetheless, if any Aboriginal artifacts are found, then work will cease and Aboriginal Heritage Tasmania will be contacted for advice on compliance with the Act.

5. Archaeological potential and rationale of proposed investigations

Figure 5.1 depicts graded areas of archaeological significance (drawn from Williams 2010), based on the potential shown in Figure 8.3, the assigned significance developed in Section 9, and the likely disturbance ascertained in Section 8.2 of that document.

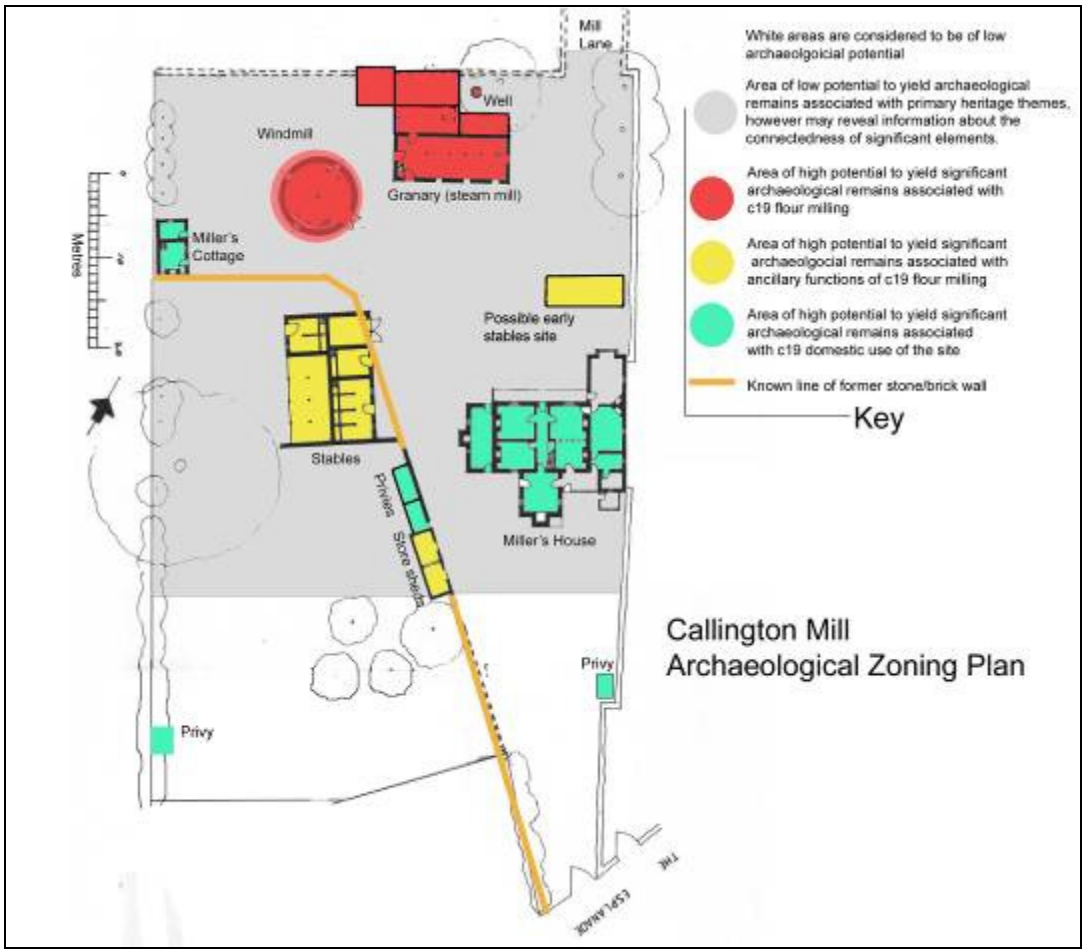

Figure 5.1 – Archaeological zoning plan, integrating archaeological significance and areas of known past disturbance.

The proposed works are primarily a research excavation, aimed at contributing to the research agendas and frameworks proposed in Section 6 – specifically the investigation of the Callington Steam Mill – a part of the site which was critical to the nineteenth century viability of the site, however is not at all well known historically.

Aside from the research potential likely to be yielded by these works, it is considered necessary for the conservation of the granary building that the ground level in the vicinity of the former steam mill buildings be lowered – as the granary is suffering from severe damp issues, which can only be rectified by re-grading of the ground.

A secondary and consequential rationale is the added interpretive potential that excavated material is likely to have – artifacts and in-situ structural remains.

In achieving the above, it is recognised that significant archaeological deposits may be disturbed, therefore this current proposal includes a research design to yield the archaeological potential that the areas of the site proposed for excavation holds – and ensure that the proposed works have a comprehensively mitigated heritage impact in line with industry standards.

Accordingly, the broad rationale of the proposed works is to:

- Lower the ground level of the rear section of the granary (i.e. the steam mill site) to address critical drainage issues which threaten the building.
- Fully excavate the (already partially excavated) steam mill well, to remove fill (which may be archaeologically significant) and to allow drainage into the well to assist in wider site drainage issues.
- Realise the high archaeological potential of the steam mill site, expose the footprint of the former steam mill, and to conserve and interpret in-situ remains (preferably the remains themselves, or else backfill and footprint through landscaping and/or other interpretive media).
- Yield information that can be used in comparative datasets related to themes associated with the site, both from structural remains and artifact assemblages (further detailed in Section 6).
- Allow enhanced public access (with meaningful interpretation) to archaeological remains which are currently obscured.

6. Research questions and enquiry framework

As detailed in Section 9 of the Archaeological Management Plan (AMP), Callington Mill, the following key archaeological themes for Callington Mill have been identified, deriving from the statements of significance as outlined in Section 7 of that document:

> As demonstrated in Section 7 of the AMP, as developed in the statements of significance, the primary significance of the Callington mill site is as an example of a nineteenth century industrial-scale flour milling site. It is also recognised that an important sub-theme of the site is its ability to demonstrate domestic life within an industrial complex, being the home to various mill staff and presumably their families.
>
> Archaeological resources of the site, which are associated with flour milling are therefore significant as they have the ability to collectively add to the overall significance of the site – either through thematic research or on-site interpretation. Particularly, those archaeological resources that may demonstrate a rare or endangered aspect of the milling process (or other sites of its type) have a very high level of archaeological significance (hence research potential). The assessment of archaeological significance as detailed in the AMP, and consequent research design as detailed here, will be categorised along 2 lines, that of archaeological remnants associated with flour milling (in particular steam milling), and that of archaeological remnants associated with the sub themes of domestic life in an industrial complex.

Nineteenth century flour milling

The primary significance of the site being nineteenth century flour milling, this is undoubtedly the predominant and most significant archaeological theme of the site, and accordingly remains associated with such should be the priority of any archaeological investigations.

Two distinctly different milling processes occurred at the Callington Mill – wind powered milling and steam powered milling. Each process, the associated processes and infrastructure, and the linkages between all of these processes would leave a different signature in the archaeological record. In addition, the site has the ability to yield information associated with the general investigation of steam technology (i.e. beyond milling) – with the knowledge that a steam saw (and perhaps other industries) also existed on the site.

There has been no substantial archaeological investigations of any single flour mill site in Tasmania, however invaluable investigations of the nineteenth century flour milling industry in Tasmania has been from a primarily historical perspective (Cassidy & Preston n.d.). This thematic study of the Tasmanian flour milling industry gives a very comprehensive and detailed historical background to the industry, with some brief notes as to the condition of the remnant sites. From this report, the following findings are relevant to understanding the significance of the archaeological potential of Callington Mill:

- Callington Mill is one of only three windmill sites with clearly discernable remnant features or obvious archaeological potential (the others being Darlington and Saltwater River)[2].
- Callington Mill is the only windmill in Tasmania which is substantially intact.
- No remaining mill site in Tasmania ever incorporated both wind and steam mills as simultaneous processes, therefore the archaeological resources of Callington mill, in particular the steam mill site, have significant potential to yield information regarding the simultaneous wind and steam processes, and whether the simultaneous process leaves a different archaeological signature to ordinary steam milling processes.

Other relevant points arising from comparison of the findings of Cassidy & Preston are:

- Callington Mill is the only windmill site in Tasmania which retains a suite of associated extant ancillary buildings.

[2] Nonetheless, there has not been any substantial investigation of the archaeological potential of other known windmill sites where no aboveground trace remains, such as Sorell, Rokeby (both wooden post mills) Richmond, Battery Point, and Barton - Cressy (all masonry tower mills). Also, preliminary research of other Southern Midlands mill sites has revealed that there may have been a windmill at Colebrook Park, and at Constitution Hill, which still require further investigation to confirm any existence of archaeological potential.

- Callington Mill is the only substantially intact windmill site which is not associated with a penal station, therefore providing the only obvious opportunity for comparative study between milling operations of free versus convict.

Whilst further detailed comparison would be beneficial in understanding the archaeological potential of Tasmanian wind and steam sites, the brief points above clearly demonstrate that the aspects of the archaeological potential of Callington Mill that relate to nineteenth century flour milling are highly archaeologically significant, and must be managed accordingly. These points also demonstrate that further research should be encouraged within the framework of comparative assessment of Tasmanian mill sites, to which the results of the current proposed investigations would form a substantive basis.

The sum of our knowledge of the steam mill obtained from contemporary written sources and recorded oral history, researched by Harris (1987) Freeman Collett (1994) and Cassidy & Preston (n.d.). Overall, currently known historic sources tell us very little about the steam mill and buildings – archaeological investigation being the best perceived means of adding to the knowledge base of this part of the site.

It is considered that the steam mill site has the potential to yield information in support of these themes and lines of investigation.

Domestic life within an industrial complex

The secondary archaeological theme of the Callington Mill site is the theme of domestic life with an industrial complex. With at least 6 separate buildings for domestic accommodation on the site, the archaeology associated with each has the potential to yield information about the lives and activities of the people associated with the milling operation. An example of the research potential of this theme would be whether there is a marked difference in the material culture evident in the archaeological record between the different classes expected to be living on the site (i.e. differences between the archaeology of the mill owners house and workers cottages). The material culture representing women and children living in an industrial complex may also be represented by the archaeology of domestic life at Callington Mill.

Prior archaeological work in industrial complexes in Tasmania has rarely examined the domestic life therein. Recent excavations at the Launceston Gasworks complex disturbed an area adjacent to the former manager's house within the gasworks complex[3], however this yielded no information about domestic life within the complex as that part of the site has been largely disturbed in the 1980s with the installation of an in-ground swimming pool.

Whilst a thorough literature review of this theme throughout Australia has not yet been undertaken, it can be reasonably expected that the sub-theme of domestic like within an industrial context would largely be overlooked in favour of analysing themes related to the industry itself.

Whilst it is unlikely that the excavation of the steam mill site would yield information regarding domestic life within the complex, it is possible that excavation of the well may yield such information in the way of domestic discard – albeit probably from the post-mill operation period.

Accordingly, the following research questions are posed in the approach to works pursuant to the rationale outlined in Section 5:

- What was the exact layout, form and location of the steam mill? What are the details of its construction methods? Do these differ from other buildings on site? What does the evolution of the steam mill building tell us about the needs, technologies and economies of the site?
- What processes appear to have been undertaken in specific parts of the steam mill building? Do these all relate to milling? Or are other processes archaeologically evident?
- Do archaeological traces of steam milling processes indicate any functional relationships to the windmill, either mechanically or chronologically?
- What is the nature of the fill in the well? Does this support the idea that windmill remains were thrown down the well after the 1913 fire? Does the well contain any domestic or other industrial discard?

[3] Praxis Heritage Consultants (forthcoming): *Launceston Gasworks Archaeological Report,* developed on behalf of ISPT3 Pty. Ltd. Melbourne.

7. Proposed excavation methodology

Pursuant to the rationale and research questions outlined in Section 6, Figure 7.1 depicts the specific areas of the Callington Steam Mill site proposed for excavation during the current phase of works. This includes almost the entire footprint of the no-longer-extant buildings of the steam mill (note that part of the buildings extended into now-neighbouring land). No excavations are proposed at this stage in the underfloor area of the granary.

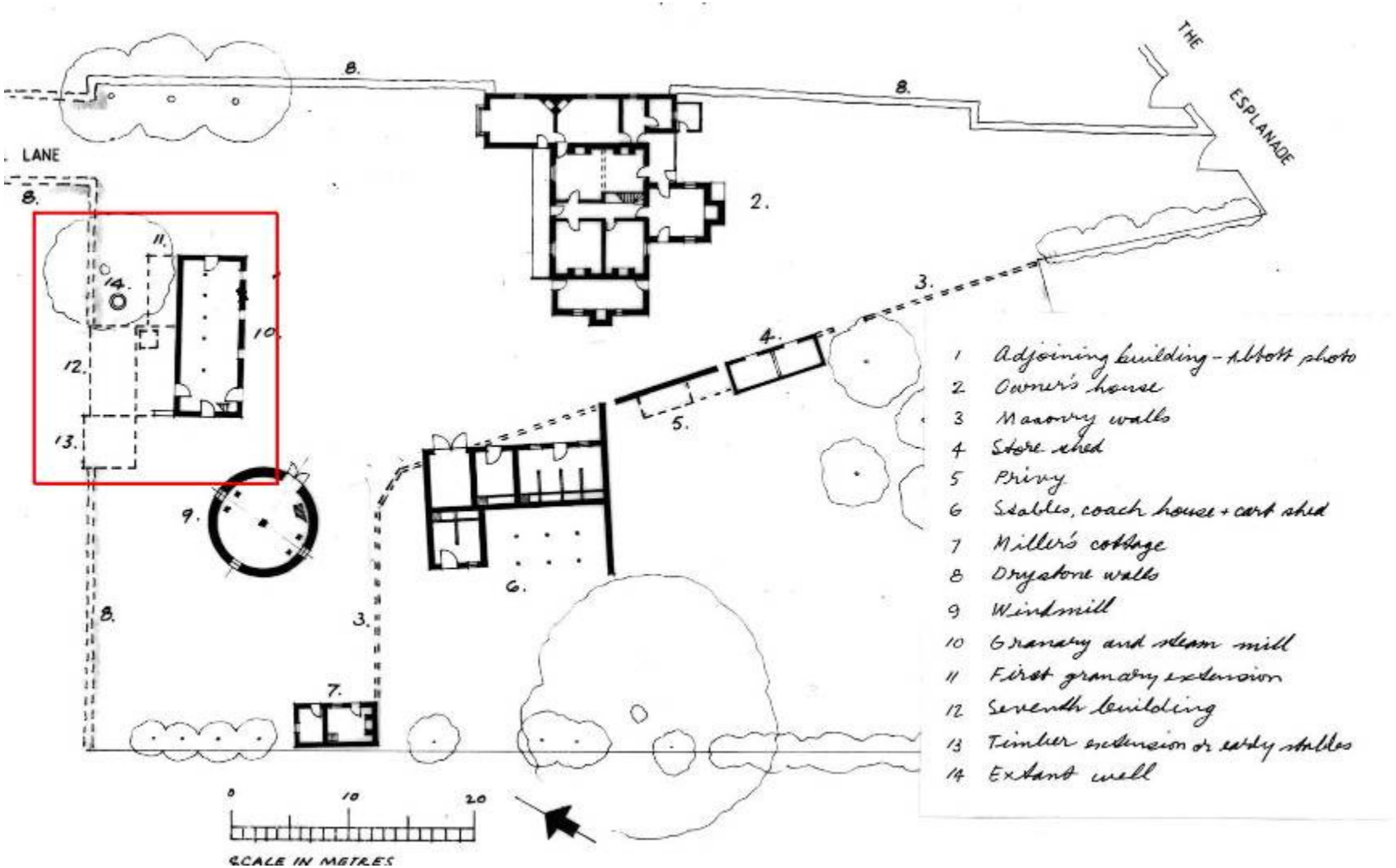

Figure 7.1 – Callington Mill site plan. The inset at 7.2 shows specific areas proposed for excavation.

Figure 7.2 – Specific proposed excavation areas to the west of the granary.

Likely archaeological remains

It is expected that the footprint of the steam mill buildings will be found, at a very shallow level (both internal and external walls). Undulations in the ground behind the granary suggest that structural remains are shallow. As it seems that the building was constructed in several phases (as spatial needs arose) it is expected that the foundations will be inconsistent styles of masonry. These foundations are not expected to extend to any great depth, as bedrock throughout the site is usually very shallow, from 100-800mm below current ground level.

It is also likely that foundations of machinery (i.e. mounting blocks) and the steam mill boiler and chimney will also be found. Subtle evidence of linkages between functional elements may be discernable.

Artefactual remains within the building footprint may include remnants of machinery, bi-products of industrial processes, and post-mill-use deposition (presumably when the buildings were used as ancillary buildings of the mill house).

This area is not likely to have been the subject of substantial post-demolition disturbance, therefore it is expected that structural remains are likely to be substantially intact below ground.

Excavation of the well is likely to yield a very substantial amount of artifacts, which are likely to vary markedly in stratigraphy correlating to the use/disuse of the mill and the well itself. Higher levels of stratigraphy (i.e. post mill use) are likely to yield artefacts resulting from discard (domestic and industrial – given the folkore of mill equipment being disposed of down the well).

Excavation Methodology

As the archaeological remains in this area are expected to be very shallow – all excavation will be done by hand. It is not considered feasible to employ any mechanical means of excavation in this part of the site.

It is proposed to excavate the footprint of the steam mill building (approximately 40 square metres). The area will be gridded in horizontal control units not exceeding 1 square metre and excavation will be undertaken by hand, using trowels and brushes (as appropriate) in arbitrary spits not exceeding 50mm. Excavation will cease when either the floor of that building is found (e.g. flagstones), or when bedrock is encountered (expected to be shallow) or when it is

considered that sufficient information to address research questions has been yielded. Excavation will also cease should it be found that structural remains are not of sufficient integrity that exposure will be feasible without the possibility of damage or structural failure through exposure.

The well will be excavated as per the above methodology, however logistical support in the way or harnesses, safe access, and safe methods of spoil/artifact removal will need to be refined on-site as conditions dictate.

All excavated spoil will be sieved through mesh of a gauge of no greater than 12mm, and all significant artifacts retrieved and managed as per the methodology outlined below and in Appendix A. Depending on the nature of the well deposits, wet sieving may be required.

Field notes will be hand-written in field notebooks, and transcribed digitally at the end of each day of fieldwork. The excavations will be thoroughly recorded (both photographically and sketched at a scale of no smaller than 1:20), as per requirements of Section 4.2 of the Tasmanian Heritage Council's Practice Note 2 *Managing Historical Archaeological Significance in the Works Application Process.*

8. Logistics

Personnel:

The project personnel will be as follows:

Principal archaeologist and Project Manager:

Manager – Heritage Projects, Southern Midlands Council - Brad Williams BA(hons.) archaeology, MA (Cultural Heritage Management).

Archaeological field supervisors:

Dr. Martin Gibbs, University of Sydney

Dr. Kate Quirk, Brisbane Museum.

Field assistants:

Alan Townsend – Heritage Project Officer, Southern Midlands Council.

Artifact curation (if required):

Lesley Ikin, Veronica Macno - Roving Curators, Arts Tasmania.

Timeframe of implementation:

Project planning:	Nov-Dec 2010
Lodge works application:	15th Dec 2010
Expect works determination:	31st Jan 2010
Undertake excavations:	5th Feb 2011 - 16th Feb 2010.
All artifacts curated by:	30th April 2011
Provision of final report by:	31h August 2011

9. Post excavation procedures

Analysis of contexts

Callington Mill has several phases of usage relevant to conservation management, understanding of site formation processes, and the interpretation of the archaeological record:

- Indigenous/pre European period (pre 1820's)
- Pre-steam mill (1837-1846)
- Steam mill operation (1846-1891)
- Post-milling operation (1891-1965)
- Public site (post-1965).

Analysis of structure, fill and artifacts will be undertaken within the contexts of those periods, utilising supplementary histories deriving form those associations where appropriate, an in-line with the key research questions as outlined above.

The thematic analysis and interpretation of artifacts will be guided by the research question framework as outlined in Section 6. Depending on the types and quantities of artifacts excavated, post- excavation analysis of artifacts is expected to be done both within the contexts of the above research questions, as well as comparison against other available artifact assemblages of relevant type, or from comparative sites nationally (and/or internationally).

Artifact ownership, curation & storage:

All artifacts will remain the property of the site owner – the Tasmanian Government. It is proposed that a Memorandum of Understanding will be developed for the long-term curation and storage of those artifacts, based on the provisions outlined below.

All artifacts will be managed in accordance with the requirements of Part 6 of the Tasmanian Heritage Council's PN2, and the provisions of the *Southern Midlands Council Heritage Collections Policy,* as well as any other relevant professional standard. Appendix A details the proposed involvement of Deakin University museum studies students, and assistance by Arts Tasmania Curators, therefore promoting the best-practice post-field analysis, curation and storage of excavated material. It is also possible that some post-field analysis will be done by Sydney University Students (subject to the nature of artifacts excavated – and as guided by the *Southern Midlands Council Heritage Collections Policy*).

Once excavated, ceramic and glass artifacts will be washed, dried, bagged and tagged as soon as practicable. Organics will be dry brushed, then bagged and tagged also. Southern Midlands Council are currently establishing an artifact processing and storage facility at the Oatlands Gaol, with guidance from Arts Tasmania, therefore all artifact processing and storage will occur on-site (with the exception of any specialist conservation required – as per below).

Should any artifacts be deemed to require specialist conservation treatment, a professional conservator will be consulted on an as-needs basis.

Site rehabilitation and conservation of in-situ remains:

It is intended to conserve any in-situ remains of the steam mill building and leave these exposed for public viewing and interpretation **only if this does not result in further degradation of those remains**. It is expected that these sandstone foundations (and possibly flagstone floors) will be fairly robust, and will be able to remain exposed.

Conservation works to these remains (i.e. stone repairs, repointing, capping if necessary) will be done in consultation with Heritage Tasmania's Heritage Advisory Team. Should it be found that these remains cannot be left exposed, then they will be covered with geofabric and backfilled with clean fill – interpretation will then be installed through no-impact and reversible landscape elements (i.e. paving or gravel) on top of that fill.

Ongoing interpretation and public access:

Further to Part 8 of the Tasmanian Heritage Council's Practice Note 2, and as detailed through this document, one of the aims of these excavations is to provide an enhanced level of interpretation of the overall Callington Mill site and improved public benefit arising from the restoration of the site. It is intended that some in-situ structure will be left permanently exposed (subject to conservation requirements outlined above) in order to 'reclaim' previously unseen structural elements of the site, and provide interpretation to supplement the interpretation of the windmill aspects of the site. Remains which cannot feasibly be left exposed will be interpreted either by footprinting of buried remains, or by interpretive media (both on and off-site).

Also, further to the requirements of Part 8 of that practice note, a communications strategy will be developed to deliver publicity throughout the excavation phase, in order to enhance the public benefit arising from these excavations. It is expected that, during excavation works, a public archaeology program will be facilitated by Council's Tourism Centre, as part of the Callington Mill guided tour package. Arts Tasmania has been providing assistance in the preliminary planning of the communications strategy.

In the longer term, artifacts deriving from the excavations may be used in interpretation within the granary, or the Mil Owner's House (visitor centre).

Reporting requirements:

A report on the excavations, artifacts and structural conservation aspects of this project will be completed within 6 months of the completion of fieldwork, to the standards prescribed in Section 4.2 of the Tasmanian Heritage Council's Practice Note 2, and lodged with Heritage Tasmania. A copy of the report will also be submitted to the Tasmanian Archive and Heritage Office, as well as an electronic copy lodged with STORS service of the State Library of Tasmania.

The project archive will be accessioned into the Southern Midlands Council Corporate Library. An electronic project archive will be provided to Heritage Tasmania with the lodgment of the final report.

Unless otherwise waived by the Works Manager of Heritage Tasmania (i.e. if results do not warrant), a conference paper and/or journal article will be developed from the excavations, and other researchers will be encouraged to use these results in wider thematic comparisons.

A copy of the report, and any other relevant documentation, photographs etc. will be made available through the Heritage Projects page of the Southern Midlands Council website.

Acquittal:

Upon completion of the excavations, the following acquittals will be completed:

- All obligations to permit authorities (Heritage Tasmania) outlined in this document, and pursuant to any permit conditions.
- Funding acquittal to Southern Midlands Council and other relevant funding (and in-kind) supporters.