

## SUMMARY OF STATE HERITAGE PLACE

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### REGISTER ENTRY

Entry in the South Australian Heritage Register in accordance with the *Heritage Places Act 1993*

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**NAME:** Former Callington Smelting Works

**PLACE NO.:** 26515

**ADDRESS:** Peramangk Country

22 Callington Road, Callington

CT 5398/700 A15 DP28328 & CT 5255/495 A16 F160755, Hundred of Kanmantoo

### STATEMENT OF HERITAGE SIGNIFICANCE

The former Callington Smelting Works is a rare surviving example of a nineteenth century smelting works. The copper industry was significant to the industrial, economic and social development of South Australia in the nineteenth century, and smelting played a crucial role in the industry's economic viability. Nineteenth century copper smelting employed the dominant Welsh Process, a multi-stage smelting operation that called for specialised masonry reverberatory furnaces at each stage.

The former Callington Smelting Works is the only surviving smelting works known to demonstrate more than one stage of the Welsh Process through its extant physical fabric. The former Callington Smelting Works is also one of three known sites in South Australia with intact Welsh reverberatory furnaces, namely two calciners and two smelting furnaces comprised of foundations and lower structure. The reverberatory smelting furnace ruins at Callington are the only known to remain partially intact in South Australia.

### RELEVANT CRITERIA (under section 16 of the Heritage Places Act 1993)

***(b) it has rare, uncommon or endangered qualities that are of cultural significance***

The copper industry played a significant role in the industrial, economic and social development of nineteenth century South Australia, when at least 24 copper smelting works existed in the colony. The dominant method of copper smelting was the 'Welsh Process', which was accomplished in several stages. Smelting

played a crucial role in the nineteenth century copper industry by reducing the weight of ore exported to Wales, thus increasing the industry's profitability.

The former Callington Smelting Works is one of three known sites in South Australia with partially intact Welsh reverberatory furnaces and the only known site where more than one stage of the Welsh Process is demonstrated through extant physical fabric. The two reverberatory smelting furnaces at the Callington Smelting Works are also the only examples confirmed to remain in South Australia.

All remaining nineteenth century smelting works in South Australia survive in a ruined condition, including the former Callington Smelting Works. As the remains of the Callington Smelting Works displays a similar or better degree of intactness, it is a rare surviving example of a nineteenth century smelting works.

***(c) it may yield information that will contribute to an understanding of the State's history, including its natural history***

The extraction, processing and export of copper played a significant role in South Australian history, and in turn copper smelting, by reducing the weight of ore and thereby the cost of export, played a crucial role in the economic viability of the copper industry.

Information on nineteenth-century smelting in South Australia is fragmentary due to an absence of both historical evidence and physical fabric. The nineteenth century Welsh smelting industry was secretive, and practical knowledge of smelting was transmitted by apprenticeship and through family relationships, meaning that thorough descriptions of smelting practice were seldom recorded.

Only three known Welsh-style reverberatory furnaces exist outside of the Callington Smelting Works in South Australia. The two reverberatory smelting furnaces at the Callington Smelting Works are the only examples confirmed to survive in South Australia. Physical evidence is also rare nationally and internationally.

Detailed archaeological investigation of the former Callington Smelting Works site during 2016-2019 revealed intact remains of a nineteenth century Welsh-style smelting works, complete with the footings and lower structures of reverberatory furnaces. The known extent of underground remains has been only partially excavated to date. Historical aerial photography indicates that underground remains of unexcavated structures associated with the former Smelting Works are most likely to exist on the site.

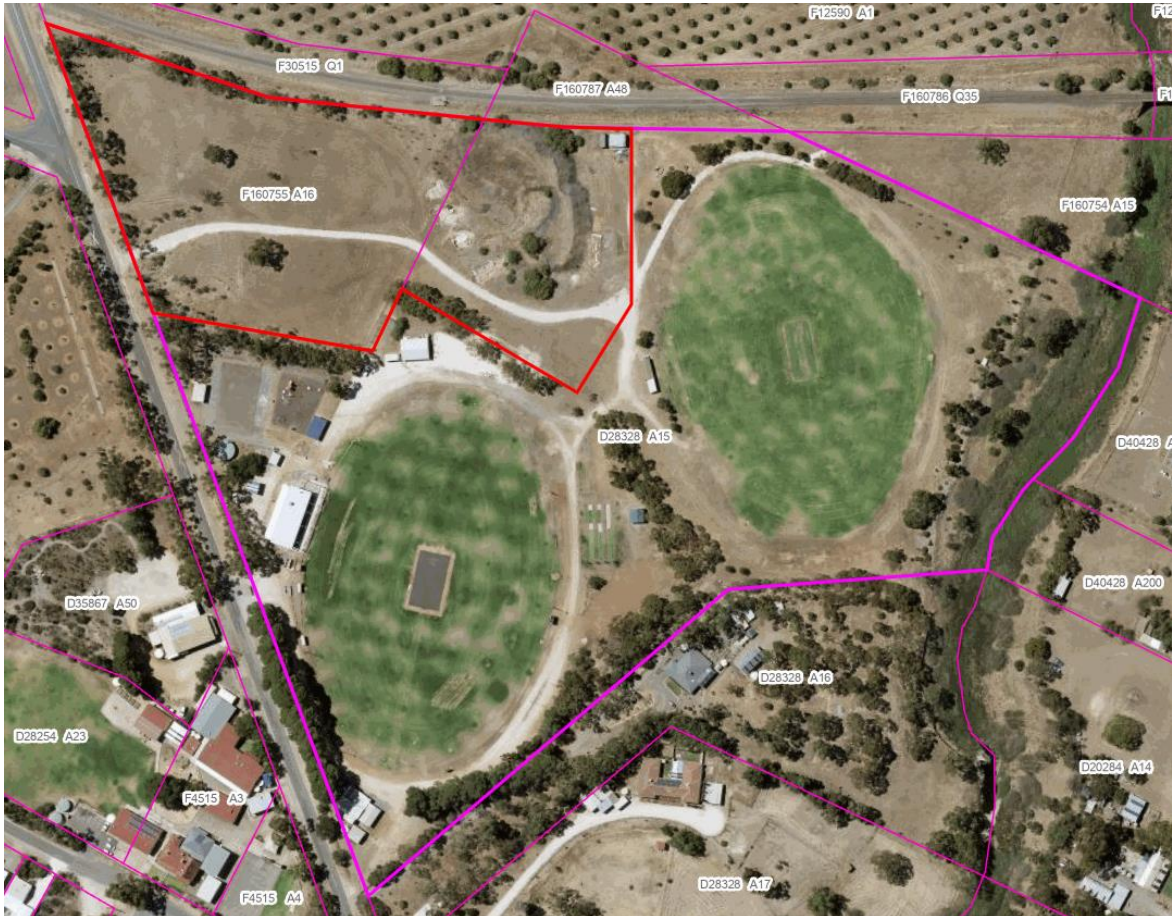
Further detailed archaeological investigation of the former Callington Smelting Works is highly likely to contribute meaningfully towards furthering an

understanding of South Australia's cultural history, in particular the history and practice of nineteenth century copper smelting.

# SITE PLAN

Former Callington Smelting Works  
22 Callington Road, Callington

PLACE NO.: 26515






**Former Callington Smelting Works CT 5522/495, CT 5398/700; F160755 A16, D28328 A15  
Hundred of Kanmantoo**

- The significant components of the SHP include ruins of smelting works comprising remains of four reverberatory furnaces and footings of outbuildings, slag heap, and underground remains of smelting works (full extent unknown).
- The non-significant components of the site include star post and wire fences, gravel roads and vegetation.

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## LEGEND

-  Parcel boundaries (Indicates extent of Listing)
-  Existing State Heritage Place(s)
-  Outline of Elements of Significance for State Heritage Place

## COMMENTARY ON THE LISTING

Description and notes with respect to a place entered in the South Australian Heritage Register in accordance with the *Heritage Places Act 1993*

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### Physical Description



**Indicative site plan showing key features**

Source: ENVMaps

1. Slag heap (approximate extent shaded blue)
2. Hollow in slag heap mined for road fill
3. Ruins of Calciner 1
4. Ruins of Smelter A
5. Ruins of Smelter B
6. Ruins of Calciner 2
7. Outbuilding footings

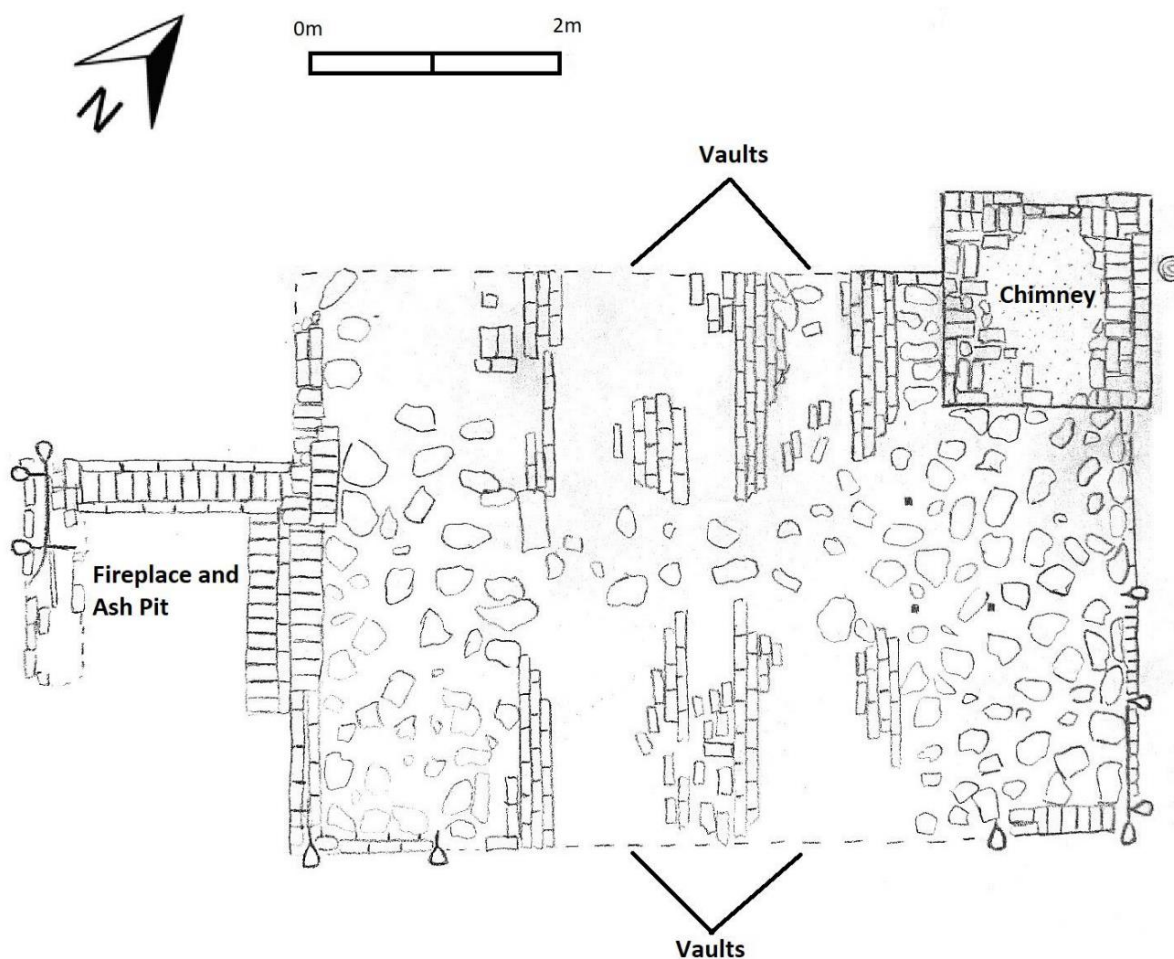
The former Callington Smelting Works is comprised of the ruins of four nineteenth century Welsh reverberatory furnaces, arranged in parallel and positioned along an axis running roughly south-east, with a large slag heap fanning out from the ruins on the north-eastern side. Local shale foundations of a long outbuilding are located to the east of the furnaces. Numerous paved working floors are located on the site adjoining and surrounding the furnaces.

The furnace ruins, from north to south, are known as Calciner 1, Smelter A, Smelter B and Calciner 2. A gravel track skirts the southern side of the slag heap and runs towards the road on the western side of the site, passing close to Calciner 2 and between the furnaces and the outbuilding foundations. Numerous Brazilian pepper trees (*Schinus terebinthifolius*) grow across the site. Star post and wire fences run along the southern and western sides of the site passing close to the furnace ruins.

### Calciner 1

Calciner 1 is comprised of footings and the remains of its lower structure, a chimney base; remains of four partially-collapsed, rubble-filled cooling vaults; and an ash pit. The chimney base is positioned on the northern corner of the structure. The ash pit is located at the opposite end of the structure to the chimney.

The top of the remaining structure of Calciner 1 stands at about natural ground level and is surrounded by a recently-excavated trench around its perimeter. The body of the lower structure of the furnace is retained by handmade red brick walls with a local shale masonry core. The looped ends of forged iron tie rods emerge from the masonry at intervals around the perimeter.

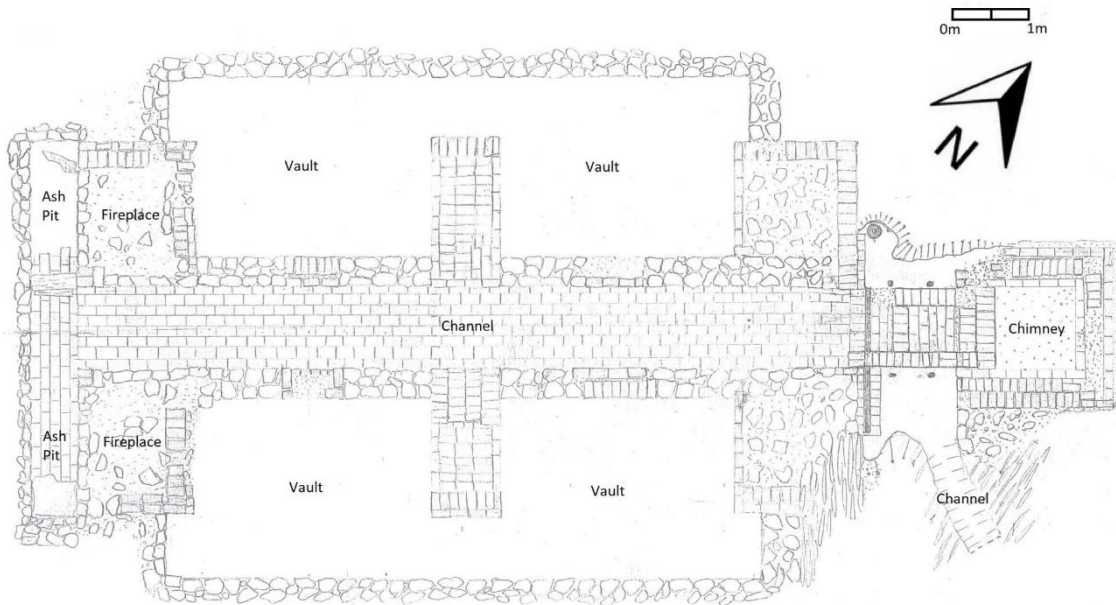


**Diagram of Calciner 1 following excavation**

Source: Nicolas Grguric, "Annex 1 to Callington Smelting Works Archaeological Report" (2020) p. 12

## Calciner 2

Calciner 2 is comprised of footings for features interpreted as cooling vaults, paired fireplaces, a detached chimney, and ash pit. A brick-paved paved channel runs down the centre of the structure, and a rough-hewn channel through the local shale bedrock runs away to the east. The former vaults are enclosed by shale retaining walls.



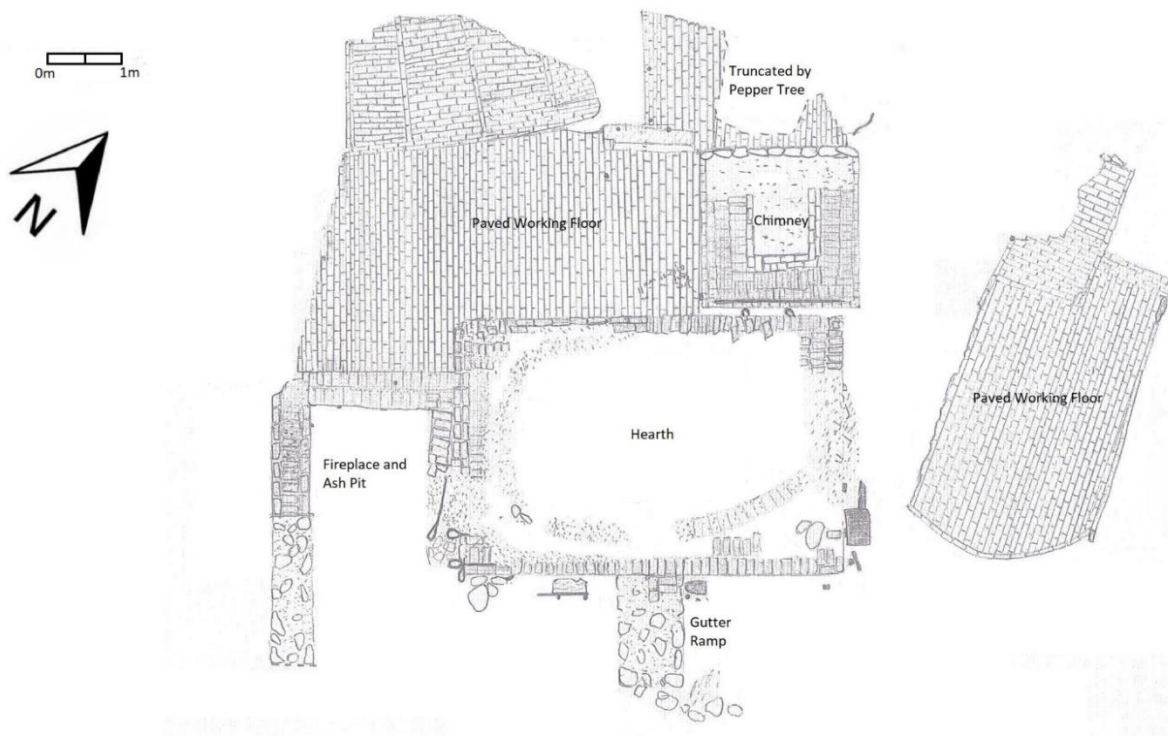
**Diagram of Calciner 2 following excavation**

Source: Nicolas Grguric, "Callington Smelting Works Archaeological Report" (2018) p. 53

## Smelters A and B

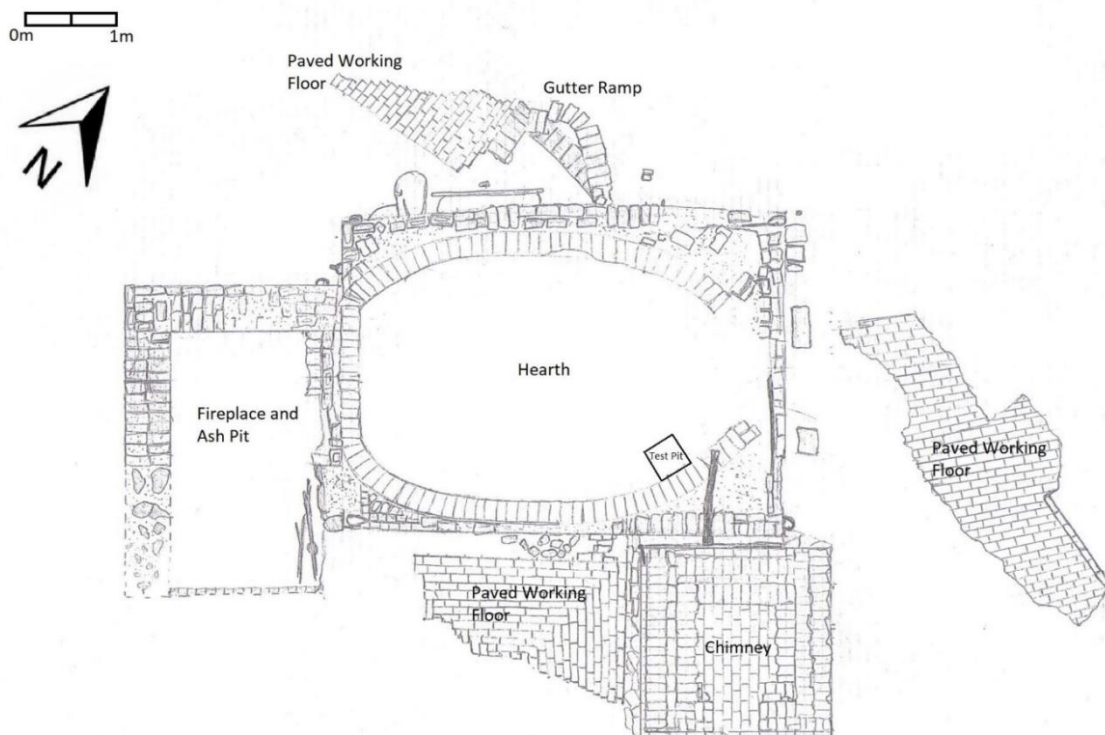
Smelters A and B are comprised of the remains of hearths, the remains of square detached chimneys, ash pits, the remains of gutter ramps and the remains of iron tie rods and buckstays. The ash pits are positioned at the opposite ends of the Smelters and both ash pits face south-east.

The hearths of Smelters A and B are composed of loose refractory sand, retained by hand-made red brick and lime mortar masonry and stand a few courses above the natural ground level. The hearth of Smelter B is additionally retained by an elliptical band of firebricks, which rises several courses high in the eastern corner. The looped ends of forged iron tie rods emerge from the masonry at intervals around the perimeter of the hearths of both Smelters.



**Diagram of Smelter A following excavation**

Source: Nicolas Grguric, "Callington Smelting Works Archaeological Report" (2018) p. 35



**Diagram of Smelter B following excavation**

Source: Nicolas Grguric, "Callington Smelting Works Archaeological Report" (2018) p. 48



### *Slag heap*

The slag heap is roughly crescent-shaped, sloping upwards from the south-west with a flat top. The centre of the heap has been quarried from the south-west. The slag heap is comprised of mainly irregular lumps of slag, with some deliberately cast, roughly rectangular blocks measuring about 600 x 500 x 150 mm, with a rough sprue on opposite ends. Some of these blocks bear the impressions of hobnail boot marks standing in relief.

### *Present condition*

The brick and lime mortar ruins of the Smelting Works are fragile and since being exposed by excavation, damage has occurred through members of the public walking over the ruins, rabbits burrowing into the ruins, through vegetation growth and through weathering. Isolated sections of star post and ring lock field fencing enclose parts of the ruins in an effort to discourage foot traffic. In-situ iron tie rods were also stolen from the site, further damaging the ruins, leading up to and during February 2022.<sup>1</sup>

### **Elements of Significance:**

Elements of heritage significance include (but are not necessarily limited to):

- Ruins of smelting works comprising remains of four reverberatory furnaces and footings of outbuildings,
- Slag heap,
- Underground remains of smelting works (extent unknown)

Elements not considered to contribute to significance of place include (but are not necessarily limited to):

- Star post and wire fences, gravel roads, trees and other vegetation

### **History of the Place**

*For the full history please refer to the Assessment Report*

#### *Smelting at Callington*

Two smelting works were established at Callington to serve the nearby mines, namely the Bremer Smelting Works (trading as the Bremer Smelting Company), opened in 1848 by brothers Mauris and John Thomas in partnership with Mauris' sons Mauris Jnr and Charles, and the Callington Smelting Works (subject of this assessment) opened in 1860 and built by Mauris Jnr and Charles Thomas.

Mauris Snr and John Thomas arrived in South Australia in January 1848 and were the colony's first accomplished smelters, with practical experience smelting and trading copper in Chile. Mauris' sons Mauris Jnr and Charles were born in Chile<sup>2</sup> and were

learning the smelting trade from their father and uncle<sup>3</sup> when they arrived in South Australia.

Mauris Snr's and John's brother Nicholas was also associated with smelting at Callington through employment as a 'servant' at the Bremer Smelting Works.<sup>4</sup> Unusually, while most experienced smelters in the nineteenth century were Welsh or German,<sup>5</sup> the Thomas family are described as Cornish.<sup>6</sup>



**Map showing approximate locations of the Bremer Smelting Works (shaded red), Callington Smelting Works (shaded blue) and the Bremer Mine (shaded green). The township of Callington is located south-west of the ovals.**

Source: Google Maps

The Bremer Smelting Company was contracted to smelt ore from the nearby Kanmantoo Mine, owned by the South Australian Company,<sup>7</sup> and the Bremer Smelting Works is claimed by South Australian mining historian Greg Drew to be the first commercially successful smelter in Australia.<sup>8</sup>

After establishing the Bremer Smelting Works the Thomas family planned to build numerous smelters where ore and timber were abundant.<sup>9</sup> However, friction soon emerged between Mauris Snr and William Giles, the colonial manager of the South Australian Company.<sup>10</sup> When gold was discovered in Victoria in 1851, Mauris Snr and John departed for the Bendigo goldfields with 'several financial disputes [including those with Giles] outstanding,' leaving Mauris Jnr and Charles behind to complete

their contract with the South Australian Company.<sup>11</sup> Mauris Jnr and Charles later followed their father to the goldfields and the Bremer Smelting Works closed.<sup>12</sup>

In 1853, the government refused Mauris Jnr's and Charles' application to cut timber for smelting on their return from the goldfields.<sup>13</sup> Instead the brothers established a mixed farm and flour milling business in Callington. Subsequently in 1856 or 1857 Nicholas Thomas sued his brother Mauris Snr over unpaid wages and 'his share' of gold from Ballarat.<sup>14</sup> When Mauris Snr failed to appear before the Supreme Court, Nicholas sued his nephews, leading Mauris Jnr and Charles to accrue legal fees totalling £1,400 and forcing them into insolvency.<sup>15</sup> These events resulted in the 'total loss' of Mauris Jnr and Charles' assets, including 60 acres of farmland, a steam engine, a mill (Former Mill, SHP 10628) and the Bremer Smelting Works.<sup>16</sup>

The site of the Bremer Smelting Works, on the western bank of the Bremer River near the Old Princes Highway bridge, is now marked by a square, bluestone chimney built as a monument in 1986.<sup>17</sup> Around this time, ruins previously evident on the site were deliberately cleared.<sup>18</sup>

### *Callington Smelting Works*

In 1860, Mauris Jnr and Charles Thomas built and began operating the Callington Smelting Works (subject of this assessment)<sup>19</sup> for Alfred Hallett, manager of the Worthington Mining Company's Bremer Mine at Callington,<sup>20</sup> to smelt ore from the adjacent Bremer Mine.<sup>21</sup>

The first smelting furnace was completed and operational by June 1860. A second smelting furnace was operating by October. The first calciner was under construction in February 1861 and operational by May. A second calciner was completed in late August or early September 1863.<sup>22</sup> Prior to construction of the calciners, ore was calcined in open pits.<sup>23</sup> In August 1863, Mauris Jnr and Charles resigned as the managers of the Callington Smelting Works 'on account of some question of authority.'<sup>24</sup>

A vague comment in the *South Australian Register* alludes to the construction of a 'new furnace' at the Bremer Mine roughly a decade later in August 1872,<sup>25</sup> however, there is currently no evidence of a fifth reverberatory furnace on the Callington Smelting Works site. Archaeologist Dr Nicolas Grguric speculates this comment may relate to the 'substantial [...] rebuil[ding]' of an existing furnace.<sup>26</sup> Alternatively, one of the existing calciners may have been entirely replaced with an updated furnace design, or the report may refer to an undiscovered furnace at the Bremer Mine itself.

### *Operation*

Calciner 1 follows textbook calciner design, with off-axis chimney (see diagram p. 19) and four cooling vaults instead of two, like the extant calciner at Talisker (see diagram p. 5). Calciner 2 demonstrates unusual design elements not evident in the extant physical fabric of known surviving Welsh reverberatory furnaces internationally,<sup>27</sup>

notably the central paved channel with a chimney at one end and features interpreted as paired fireboxes at the other. It is not clear how the furnace operated, nor why paired fireboxes would be an advantage. It has been suggested an adjacent channel cut into the shale bedrock may have been designed to drain water used in quenching calcined ore in vaults under the calciner.<sup>28</sup>

The smelting furnaces were built as near mirror images of one another. Ore was stockpiled and charged from the outer sides, while slag and regulus were tapped from the inner sides. Granulated regulus was exported to Wales in large barrels called hogsheads.<sup>29</sup>

Slag was sometimes poured into moulds excavated directly in the ground, creating large blocks which occasionally captured the impressions of hobnail boot-prints in the topsoil.<sup>30</sup> The size and position of the slag heap arose naturally from the orientation of the furnaces, radiating out 'almost exactly' from the centre line between the smelters.

Firebricks at the Callington Smelting Works marked 'Watts' were manufactured by J.S. Watts & Sons at Nairne from 1863, reputedly the first commercial firebrick maker in South Australia.<sup>31</sup> Over time damaged firebricks and red bricks were re-used to pave working floors at various places across the site.<sup>32</sup> Numerous 'Watts' stamped bricks are evident on the site today.

Remnant timber posts adjacent to furnaces and other archaeological evidence such as timber shingles suggests the furnaces may have originally had roofs, such as those depicted in contemporary photographs of smelting works at Kapunda,<sup>33</sup> to protect workers from the elements.

Like the Bremer Smelting Works, furnaces at the Callington Smelting Works were fuelled with firewood cut by farmers. During harvest season, the furnaces sometimes sat idle as the local farmers were not available to cart firewood to the Works.<sup>34</sup> Mining and smelting in the Callington-Kanmantoo district denuded the district of timber, a feature of the landscape still evident today.<sup>35</sup>

### *Production*

The Callington Smelting Works produced mainly matte or regulus and some 'rough' or blistered copper,<sup>36</sup> of about 96 percent purity.<sup>37</sup> Until 1863<sup>38</sup> or 1864<sup>39</sup> regulus produced by the Callington Smelting Works was exported to Wales for refining. After 1863 or 1864 and up until 1867 regulus was sold to the English & Australian Copper Company (E&ACC) for further processing at Port Adelaide prior to export.<sup>40</sup> By 1868, regulus from Callington was sent to Scotts Creek, about three kilometres east of Nairne,<sup>41</sup> where a refinery had been opened the previous year, capable of producing 98.5% pure copper.<sup>42</sup> Finally, from 1873 until the closure of the smelter in 1875, regulus was again sold to E&ACC.<sup>43</sup>

In 1870, the Bremer Mining Company went into liquidation due to declining copper prices, high production costs and a reduction in the quality of ore produced by the

Bremer Mine.<sup>44</sup> In 1872, the mine was reopened by new owners, again as the Bremer Mining Company, but closed again in 1875.<sup>45</sup>

Between 1860 and 1875 the Callington Smelting Works produced over 1200 tons of regulus and 800 tons of rough or blistered copper. As such it was the most productive of the six smelting works in the Callington-Kanmantoo district.<sup>46</sup>

#### *Subsequent History*

After leaving Callington in 1863, brothers Mauris Jnr and Charles Thomas played 'significant roles' in the Australian copper smelting industry over the next thirty years in New South Wales and Queensland.<sup>47</sup> Notably Mauris built at least three further smelting works<sup>48</sup> over the course of his career, namely at Newcastle NSW, Peak Downs QLD and South Cobar NSW.<sup>49</sup>



**Site of Callington Smelting Works, aerial view, 1949.**

Note slag heap and light areas corresponding with ruins of Calciners 1 and 2, Smelters A and B and outbuilding foundations (very faint diagonal linear feature below centre). Other light areas (coloured orange for clarity), including linear feature upper left, irregular area below slag heap, and small elliptical area at slag heap top left, may correspond to remains of as-yet undiscovered structures.

Source: ENVMaps

The Bremer Mine, but not the Callington Smelting Works, reopened for a brief period from 1907.<sup>50</sup> Sometime after closure the above-ground structures at the Smelting Works were deliberately demolished. The site was marked on a 1913 survey map of

the Kanmantoo area with the annotation 'white stacks,'<sup>51</sup> which suggests firebrick chimneys were standing at that time.

During the Depression, the site was plundered for bricks<sup>52</sup> and then in 1941, the centre of the slag heap was mined for road fill.<sup>53</sup> By 1949 all structures on the site had been demolished to near ground level,<sup>54</sup> and soil was dumped over the ruins during the 1980s or 1990s.<sup>55</sup> A house stood on part of the adjacent paddock during the late 1980s but has since been demolished.

The former Callington Smelting Works is associated with and located close to the Former Powder Magazine, Bremer Mine Area (SHP 10499) and the Former Settling Tanks, Bremer Mine Area (SHP 10501).

### *Archaeological investigations*

During the early 1980s part of the Callington Smelting Works site was excavated by unknown individuals, revealing a 'well-preserved' area of brick paving surrounded by bluestone retaining walls on at least two sides. Greg Drew photographed the excavation in c.1983, before it was either backfilled or the feature razed as it is no longer visible on site.<sup>56</sup>

Callington Recreation Park Incorporated commissioned a two stage archaeological excavation of the Callington Smelting Works with funding from the District Council of Mount Barker. Digs took place in November 2016 and October 2019 and were directed by archaeologist Dr Nicolas Grguric with assistance from local volunteers. South Australian mining historian Greg Drew contributed to historical research and assisted with the excavation.<sup>57</sup> The excavation revealed smelter remains more intact than was expected prior to excavation.<sup>58</sup>

The first excavation took place over 12 days between November 2016 and May 2018 and uncovered remains of two smelting furnaces, known as Smelters A and B, a calciner, known as Calciner 2, and a length of bluestone footings from an outbuilding. Grguric and volunteers also investigated two small historical artefact scatters.<sup>59</sup>

The second stage was carried out over two days on 5-6 October 2019 and resulted in the excavation of a calcining furnace, known as Calciner 1 and determined it to be the first calciner constructed on the site, in 1861.<sup>60</sup> Due to time constraints, other features of the site were not excavated<sup>61</sup> and further excavation of Calciner 1 is 'certain to expose more of the cooling vaults and other structural features which may contribute to an understanding of how the furnace was designed and [how it] functioned.'<sup>62</sup>

Thus far, the archaeological excavations at the Callington Smelting Works site have yielded 'significant new information on the history of copper smelting in Australia.' Calciner 2 is 'probably unique' and 'presents physical evidence of hitherto unknown technological design innovations,'<sup>63</sup> notably paired fireboxes and the longitudinal brick-paved channel, a feature not present in contemporary descriptions nor in

archaeological remains elsewhere.<sup>64</sup> As such, Calciner 2 may be internationally significant.<sup>65</sup> Further excavations of the known features, and so far undisturbed below ground features indicated by aerial photography taken in 1949, are highly likely to yield a greater understanding and context of the site including potentially internationally significant calciner and furnace design modifications.<sup>66</sup>

NOTE: Excavations during 2016-2019 were completed with permits from the South Australian Heritage Council (0005/15 and 0008/17) under section 27 of the *Heritage Places Act 1993*.

#### *Future Plans*

Callington Recreation Park Incorporated, with the cooperation of the owner, Mount Barker District Council, intends to preserve the former Callington Smelting Works site as a cultural tourist attraction, with the intention that conservation will be achieved 'through a combination of preservation, very limited reconstruction and restoration and maintenance.'<sup>67</sup>

#### **Chronology**

1845 Mineral discoveries in the Mount Lofty Ranges prompt the South Australian Company to send to Cornish miners to search for minerals in the area.

1848 January 28, Mauris Snr, John, Mauris Jnr, Charles and Nicholas Thomas arrive in South Australia.

Copper discovered near the Bremer River near site of present-day Callington. Paringa Mining Company opens the Bremer Mine and lays out the private township of Callington. Bremer Smelting Works opened by Mauris Snr and John Thomas.

1850 Paringa Mining Company leases the Bremer Mine to the Bremer Mining Company.

1851 Victorian Gold Rush depletes local workforce. Mauris Snr and John Thomas leave for the Bendigo goldfields. The Bremer Mine closes and the Bremer Smelting Works falls idle.

1853 Mauris Jnr and Charles Thomas return to Callington and establish mixed farming and flour milling business.

Nicholas sues Mauris Jnr and Charles Thomas, forcing the brothers into insolvency.

**1860 Callington Smelting Works constructed by Mauris Jnr and Charles Thomas. June, first smelting furnace at the Callington Smelting Works is completed and operational.**

**1861 February, first calciner under construction. May, first calciner operational.**

- August, Mauris Snr and Charles Thomas resign as managers of the Callington Smelting Works.**
- 1863 J. S. Watts & Sons commence commercial production of firebricks in Nairne.  
**Late August or early September, second calciner completed.**
- 1870 **Bremer Mining Company enters liquidation and Callington Smelting Works closes.**
- 1872 **August, the *South Australian Register* reports on construction of a 'new furnace' at the Bremer Mine.**
- 1873 **Callington Smelting Works reopens.**
- 1875 **Callington Smelting Works ceases production, coinciding with the closure of the Bremer Mine.**
- 1907 Bremer Mine briefly reopens.
- 1913 **Site of Callington Smelting Works marked on military map with the notation 'two white stacks.'**
- 1941 **Callington Smelting Works slag heap is mined for road fill.**
- 1949 **Aerial photography reveals all structures at Callington Smelting Works site have been demolished to near ground level.**
- 1980 **21 October, the Callington Township and Bremer Mine are listed on the Register of the National Estate (ID 7545), including the former Callington Smelting Works site by implication.**
- 1983 **SA mining historian Greg Drew photographs archaeological excavation on the former Callington Smelting Works site.**
- 1986 Replica smelting chimney constructed on the Bremer Smelter site, which is apparently cleared of ruins at the same time.
- 1990 **Soil is dumped over the ruins of the Callington Smelting Works around this time.**
- 2007 The Register of the National Estate is closed as a statutory list.
- 2017 **November, first stage archaeological excavation at the former Callington Smelting works site under direction of archaeologist Dr Nic Grguric commences.**
- 2018 **May, first stage archaeological excavation at the former Callington Smelting works site under direction of archaeologist Dr Nic Grguric completed.**
- 2019 **5-6 October, second stage archaeological excavation at the former Callington Smelting Works site under direction of archaeologist Dr Nic Grguric.**
- 2022 **February, February, in-situ iron tie rods are stolen from the Callington Smelting Works site.**



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Summary of State Heritage Place: 26515  
Provisionally entered by the South Australian Heritage Council on 7 April 2022  
Confirmed by the South Australian Heritage Council on 18 August 2022

<http://www.nntf.gov.au/searchRegApps/NativeTitleRegisters/Pages/Search-National-Native-Title-Register.aspx> accessed 17 March 2022

<https://www.catalog.slsa.sa.gov.au:443/record=b1962340~S1> accessed 21 March 2022

**Archival**

B 9955 State Library of South Australia <https://collections.slsa.sa.gov.au/resource/B+9955>

## SITE DETAILS

**Former Callington Smelting Works**

**PLACE NO.:** 26515

**22 Callington Road, Callington**

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<b>FORMER NAME:</b>	Callington Smelting Works
<b>DESCRIPTION OF PLACE:</b>	Former smelting works site, including four excavated reverberatory furnaces and outbuilding footings, slag heap and underground remains
<b>DATE OF CONSTRUCTION:</b>	1860-1875
<b>REGISTER STATUS:</b>	Nominated 25 May 2020 Provisionally entered 7 April 2022 Confirmed 18 August 2022
<b>LOCAL HERITAGE STATUS:</b>	Unlisted
<b>CURRENT USE:</b>	Interpretive archaeological site adjacent to Callington Oval and Recreation Centre 2016-
<b>PREVIOUS USE(S):</b>	Copper smelter 1860-1875
<b>BUILDER:</b>	Mauris Jnr and Charles Thomas 1860-1863; ongoing rebuilding through use until 1875
<b>LOCAL GOVERNMENT AREA:</b>	Mount Barker District Council
<b>LOCATION:</b>	<b>Street No.:</b> 22 <b>Street Name:</b> Callington Road <b>Town/Suburb:</b> Callington <b>Post Code:</b> 5254
<b>LAND DESCRIPTION:</b>	<b>Title</b> CT 5522/495 F160755 A16, CT <b>Reference:</b> 5398/700 D28328 A15 <b>Hundred:</b> Kanmantoo

## PHOTOS

Former Callington Smelting Works

PLACE NO.: 26515

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**Overall view of Calciner 1 looking south**

Source: DEW Files 1 March 2022



**Overall view of Calciner 2 looking east**

Source: DEW Files 1 March 2022

## PHOTOS

Former Callington Smelting Works

PLACE NO.: 26515

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**Overall view of Smelter A looking north-east**

Source: DEW Files 1 March 2022



**Overall view of Smelter B looking north-east**

Source: DEW Files 1 March 2022

## PHOTOS

Former Callington Smelting Works

PLACE NO.: 26515

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**Chimney of Calciner 1 showing firebricks**  
Source: DEW Files 1 March 2022



**Calciner 1 cooling vault**  
Source: DEW Files 1 March 2022



**Typical forged tie rod**  
Source: DEW Files 1 March 2022



**Chimney of Smelter A showing collapsed firebricks**  
Source: DEW Files 1 March 2022



**Refractory sand hearth of Smelter B with remains of elliptical firebrick walls**  
Source: DEW Files 1 March 2022



**Hearth of Smelter B showing coursed firebricks**  
Source: DEW Files 1 March 2022

## PHOTOS

Former Callington Smelting Works

PLACE NO.: 26515

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**Paved firebrick working floor**

Source: DEW Files 1 March 2022



**Ash pit of Smelter B**

Source: DEW Files 1 March 2022



**Chimney of Smelter B showing eroded, previously exposed upper courses**

Source: DEW Files 1 March 2022



**Chimney of Smelter B showing firebrick core**

Source: DEW Files 1 March 2022



**Calciner 2 paved central channel**

Source: DEW Files 1 March 2022



**Calciner 2 chimney**

Source: DEW Files 1 March 2022

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<sup>1</sup> Harry Seager pers. comm. 1 March 2022



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- <sup>2</sup> Fred Thomas, "Establishing Copper Smelting in Australia" in *Royal Historical Society of Queensland Journal* Vol XV No 7 (May 1994) p. 313
- <sup>3</sup> Nicolas Grguric, *Callington Smelting Works Archaeological Project, Excavation Report* (2016) p. 6
- <sup>4</sup> Fred Thomas, "Establishing Copper Smelting in Australia" p. 314
- <sup>5</sup> Swanbury Penglase, *Australian Cornish Mining Sites: Burra Conservation Management Plan* (March 2021 ref 18188) p. 31
- <sup>6</sup> Fred Thomas, *The Thomas Smelter 1848-1852: the first commercially successful copper smelter in Australia* (2002) Carey Bay NSW: Fred Thomas
- <sup>7</sup> D. A. Cumming and G. J. Drew, "Copper Smelting in South Australia: the first fifty years" in Jonathon Selby, *South Australia's Mining Heritage (Special Publication No. 7)* (1987) Adelaide SA: Department of Mines and Energy South Australia with the Australasian Institute of Mining and Metallurgy p. 115
- <sup>8</sup> G. J. Drew, *G. J. Drew, Notes on the Kanmantoo-Strathalbyn Mining District* (2014) <https://web.archive.org/web/20190520070331/http://www.samininghistory.com/wp-content/uploads/2014/11/drew-2014-kan-strath-district.pdf> p. 23
- <sup>9</sup> Fred Thomas, "Establishing Copper Smelting in Australia" p. 314
- <sup>10</sup> Fred Thomas, "Establishing Copper Smelting in Australia" p. 316
- <sup>11</sup> Fred Thomas, "Establishing Copper Smelting in Australia" p. 317
- <sup>12</sup> Fred Thomas, "Establishing Copper Smelting in Australia" p. 317
- <sup>13</sup> Fred Thomas, "Establishing Copper Smelting in Australia" p. 317
- <sup>14</sup> Fred Thomas, "Establishing Copper Smelting in Australia" p. 318
- <sup>15</sup> Fred Thomas, "Establishing Copper Smelting in Australia" p. 318
- <sup>16</sup> Fred Thomas, "Establishing Copper Smelting in Australia" p. 318
- <sup>17</sup> <https://www.catalog.slsa.sa.gov.au:443/record=b1962340~S1>
- <sup>18</sup> Fred Thomas, "Establishing Copper Smelting in Australia" p. 317
- <sup>19</sup> Nicolas Grguric, *Callington Smelting Works* p. 7
- <sup>20</sup> "The Bremer Mine. Complimentary Dinner to Mr. Alfred Hallett." in *South Australian Weekly Chronicle* 7 November 1863 p. 7 <http://nla.gov.au/nla.news-article90264240> accessed 4 March 2022
- <sup>21</sup> G. J. Drew, *Notes on the Kanmantoo-Strathalbyn Mining District* p. 23
- <sup>22</sup> Nicolas Grguric, *Callington Smelting Works* p. 7
- <sup>23</sup> The newspaper describes roasting which may be inferred to mean calcining, "Worthington Mining Company." in *Register* 26 November 1860 p. 2 <http://nla.gov.au/nla.news-article50026584> accessed 14 January 2022
- <sup>24</sup> "Callington." in *Adelaide Observer* 1 August 1863 p. 1 <http://nla.gov.au/nla.news-article159519199> accessed 4 March 2022
- <sup>25</sup> "Mining Intelligence." in *South Australian Register* 10 August 1872 p. 5 <http://nla.gov.au/nla.news-article39272110> accessed 4 March 2022; another article in the *Evening Journal* notes the smelting furnaces were being 'set in order and extended' at this time; "Latest News, The Bremer Mine." 10 August 1872 p. 2 <http://nla.gov.au/nla.news-article196742191> accessed 4 March 2022
- <sup>26</sup> Nicolas Grguric, *Callington Smelting Works* p. 7
- <sup>27</sup> Nicolas Grguric, *Callington Smelting Works* p. 61
- <sup>28</sup> Nicolas Grguric, *Callington Smelting Works* p. 60
- <sup>29</sup> Nicolas Grguric, *Callington Smelting Works* p. 8
- <sup>30</sup> Nicolas Grguric, *Callington Smelting Works* p. 510
- <sup>31</sup> "Brickyards" in *Mount Barker Courier and Onkaparinga and Gumeracha Advertiser* 25 April 1940 p. 4 <http://nla.gov.au/nla.news-article147856579> accessed 7 March 2022
- <sup>32</sup> Nicolas Grguric, *Callington Smelting Works* p. 32
- <sup>33</sup> B 9955 State Library of South Australia <https://collections.slsa.sa.gov.au/resource/B+9955>
- <sup>34</sup> "Callington." in *Register* 27 February 1864 p. 3 <http://nla.gov.au/nla.news-article39122136> accessed 14 January 2022
- <sup>35</sup> <https://www.callingtonrecreationcommunitycentre.com.au/history-of-callington/> accessed 7 March 2022
- Surveyed by South Australian Heritage Place: 26515
- Provisionally entered by the South Australian Heritage Council on 7 April 2022
- Confirmed by the South Australian Heritage Council on 18 August 2022

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- <sup>36</sup> Nicolas Grguric, *Callington Smelting Works* p. 7
- <sup>37</sup> Nicolas Grguric, *Callington Smelting Works* p. 8
- <sup>38</sup> G. J. Drew, *Notes on the Kanmantoo-Strathalbyn Mining District* p. 23
- <sup>39</sup> Nicolas Grguric, *Callington Smelting Works* p. 5
- <sup>40</sup> Nicolas Grguric, *Callington Smelting Works* p. 5; G. J. Drew, *Notes on the Kanmantoo-Strathalbyn Mining District* p. 23.
- <sup>41</sup> G. J. Drew, *Notes on the Kanmantoo-Strathalbyn Mining District* p. 23
- <sup>42</sup> D. A. Cumming and G. J. Drew, "Copper Smelting in South Australia" p. 126
- <sup>43</sup> Nicolas Grguric, *Callington Smelting Works* p. 8
- <sup>44</sup> <https://www.callingtonrecreationcommunitycentre.com.au/history-of-callington/> accessed 17 March 2022; Nicolas Grguric, *Callington Smelting Works* p. 9
- <sup>45</sup> D. A. Cumming and G. J. Drew, "Copper Smelting in South Australia" p. 127
- <sup>46</sup> Nicolas Grguric, *Callington Smelting Works* pp. 9-10
- <sup>47</sup> Nicolas Grguric, *Callington Smelting Works* p. 65
- <sup>48</sup> Fred Thomas, "Establishing Copper Smelting in Australia" p. 327
- <sup>49</sup> Fred Thomas, "Establishing Copper Smelting in Australia"
- <sup>50</sup> H. Y. L Brown, *A record of the mines of South Australia* (1908) Adelaide SA: Government Printer pp. 34-35; <https://www.callingtonrecreationcommunitycentre.com.au/history-of-callington/> accessed 17 March 2022
- <sup>51</sup> Harry Seager, pers. comm. 1 March 2022
- <sup>52</sup> Nicolas Grguric, *Callington Smelting Works* p. 52
- <sup>53</sup> "Points from Letters, Slag Dump At Callington" in *Advertiser* 19 April 1941 p. 18 <http://nla.gov.au/nla.news-article47862060> accessed 4 March 2022
- <sup>54</sup> ENVMaps
- <sup>55</sup> Nicolas Grguric, *Callington Smelting Works* p. 22
- <sup>56</sup> Nicolas Grguric, *Callington Smelting Works* p. 16
- <sup>57</sup> Nicolas Grguric, *Callington Smelting Works* pp. 1-2
- <sup>58</sup> Nicolas Grguric, *Callington Smelting Works* p. i
- <sup>59</sup> Nicolas Grguric, *Callington Smelting Works* p. i
- <sup>60</sup> Nicolas Grguric, *Annex 1 to Callington Smelting Works Archaeological Project, Excavation Report* (January 2020) p. 1
- <sup>61</sup> Nicolas Grguric, *Annex 1 to Callington Smelting Works* p. 6
- <sup>62</sup> Nicolas Grguric, *Annex 1 to Callington Smelting Works* p. 15
- <sup>63</sup> Nicolas Grguric, *Callington Smelting Works* p. 23
- <sup>64</sup> Nicolas Grguric, *Callington Smelting Works* p. 61
- <sup>65</sup> Nicolas Grguric, *Callington Smelting Works* p. 62
- <sup>66</sup> Nicolas Grguric, *Callington Smelting Works* p. 58; Nicolas Grguric, *Callington Smelting Works* p. i
- <sup>67</sup> Nicolas Grguric, *Callington Smelting Works* p. 15