



Memo—Archaeological Monitoring Results

Project: Moorebank Precinct East Stage 2	Date: 2 April 2020
Worksite Location: South of Bapaume Road, west of Moorebank Avenue, Moorebank NSW Moorebank NSW 2170	Author: Jessica Horton (Heritage Consultant) and Jenny Winnett (Principal)
	Client: BMD Constructions

Project background

On 9 March 2020 Artefact Heritage attended site following notification that an unexpected find had been encountered during groundworks taking place under SSD 7628 Moorebank Precinct East Stage 2 (formerly Stage 2 of the SIMTA Concept Plan). The unexpected find was located approximately 400 metres south of Bapaume Road, and 20 metres west of Moorebank Avenue, Moorebank (see Figure 1 for location).

The unexpected finds location was not originally part of the MPE Stage 2 SSD 7628 approvals area as per Development Consent issued by DPIE on 31 January 2018. However, a minor amendment to the SSD approvals area to include a portion of the Moorebank Avenue Upgrade Works was approved by the project Environmental Representative on 1 October 2019 and includes the study area.

The unexpected find consisted of a brick pier, portion of concrete slab and two circular cut features. The pier and slab were interpreted as being associated with recently demolished WWII era structures. Structures of this type had been previously identified and assessed and were not identified as being associated with significant archaeological remains.

The two circular B horizon cut features were associated with an artefactual resource indicating that backfill of these features likely occurred between 1890 and 1920. The presence of artefact bearing deposits indicates that the cut features may reach the local significance threshold under criteria A (historic) and E (research potential) and may therefore be 'relics' as defined by the NSW *Heritage Act 1977* (amended 2009). Consequently, a Section 146 (s146) Notification of a 'Relic' form was submitted to Heritage NSW, Department of Premier and Cabinet (Heritage NSW, DPC) on the 23 March 2020. The notification was accompanied by an Archaeological Methodology Statement (AMS) for archaeological monitoring and salvage of the unexpected finds area.¹

This document provides the results of the archaeological monitoring program undertaken on the 25 and 26 March 2020 by archaeologists Julia McLachlan and Jess Horton, in consultation with Excavation Director, Jenny Winnett.

¹ Artefact Heritage 'Archaeological Methodology Statement (AMS), responding to unexpected heritage find, south of Bapaume Road, west of Moorebank Avenue, Moorebank NSW' letter to T. Davis, 19 March 2020

Figure 1: The study area



Historical context

The following historical background has been summarised from the Unexpected heritage find report prepared by Artefact Heritage in March 2020.²

The study area was originally part of Thomas Moore's 760 acre "Moorebank" estate.³ Much of the estate was utilised as grazing pasture for large herds of sheep, cattle, pigs and horses, while other areas were planted with grain crops. In 1810, Moore was appointed magistrate for the Georges River area, and in 1820 he received another grant of 2000 acres in the area. A notice to 'newly arrived emigrants, gardeners and farmers' in 1838 indicates that land in the Moorebank estate was being offered for ten-year leases, with a total of twelve farms of eighty acres each and river frontages advertised in *The Sydney Herald*.⁴ In 1839, a childless Moore made a will bequeathing the 6400 acres of the Moorebank estate to the Church of England.

The Church of England petitioned for the right to sell or lease the Moorebank estate in 1886, with a government gazette naming established farmers in the area including Turner, Hudson, Boit and Clarke.⁵ Lots of 7 – 100 acres were placed on sale from 1888 onwards. The advertisement placed by Boyd & King in *The Sydney Morning Herald* in 1889 offers 'special terms' to settlers on the Moorebank Estate, which included several stipulations regarding land use. Each purchase came with the conditions that⁶:

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- *Purchasers shall settle on the land within three months of purchase*
 - *Erect a cottage of the value of £50 within 12 months, and clear and fence the land within 2 years.*
-

A military presence in the Moorebank area was first felt in 1891, when travelling artillery troops camped in the Liverpool area overnight. In 1894, an inspection of the cavalry, light-horse, artillery and support units was undertaken by Major-General Sir Edward Hutton as the Moorebank Estate, and a mock battle was fought nearby.⁷ Other training exercises took place in Liverpool in 1902, 1904 and 1905; and a camp was established at Liverpool for the 1906 and 1908 Easter training manoeuvres. During this time, only some of the landholders of the Moorebank Estate had given the military permission to access the land for training purposes. In 1907, Brigadier-General J.M Gordon applied to the Military Board for the resumption of 130 000-140 000 acres between the South Coast and Campbelltown railway lines, including the Georges River area, for use as a military training ground.⁸ With the outbreak of the First World War, a resumption did not take place until 1913, when 16 868 acres of land were resumed, including the study area.

A c1912 map of the resumed land shows the military uses of the site and what remained of the properties of the former Moorebank estate (Figure 3). A 1943 aerial of the study area indicates that

² Artefact Heritage 'Unexpected heritage find, south of Bapaume Road, west of Moorebank Avenue, Moorebank NSW', letter report to T. Davis, 19 March 2020.

³ Biosis, Moorebank Intermodal Terminal: Historical Archaeological Report, 2018. Prepared for Liberty Industrial on behalf of Tactical: 24.

⁴ 1838 "To Newly-arrived Emigrants, Gardeners, Farmers, & c." *Sydney Herald* (NSW: 1831 - 1842), 30 July. Accessed at: <http://nla.gov.au/nla.news-article12862295>. (10/03/2020)

⁵ Biosis, Moorebank Intermodal Terminal: Historical Archaeological Report, 2018. Prepared for Liberty Industrial on behalf of Tactical: 28.

⁶ 1889 "Houses and Land for Sale." *Sydney Morning Herald* (NSW: 1842 - 1954), 22 May. Accessible at: <http://nla.gov.au/nla.news-article13725249> (10/03/2020)

⁷ Biosis, Moorebank Intermodal Terminal: Historical Archaeological Report, 2018. Prepared for Liberty Industrial on behalf of Tactical: 32.

⁸ Navin Officer Heritage Consultants Pty Ltd 2014, 32; 1907 "Military Training Ground." *Sydney Morning Herald* (NSW: 1842 - 1954), 28 November. Accessible at: <http://nla.gov.au/nla.news-article14880239> (10/03/2020)

at that time the site area contained several buildings, presumably associated with the WWII phase of usage, and zig-zag air raid shelters (Figure 4).

Figure 2. Early undated parish map of Holsworthy showing the landholdings of Thomas Moore. The approximate location of the unexpected find is indicated in red. Source: Department of Lands

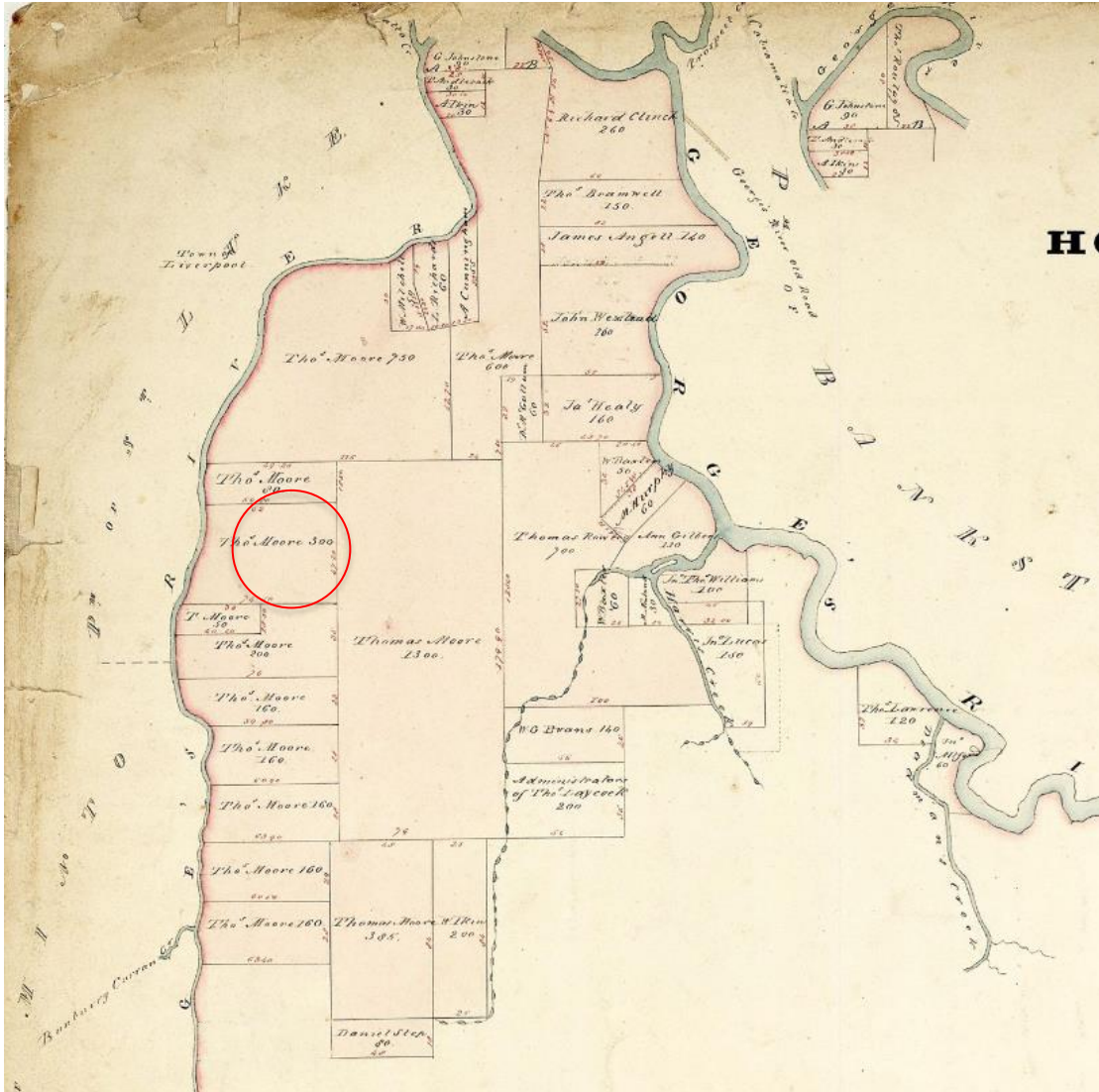


Figure 3. c.1912 plan of Moorebank with initial military facilities. The approximate location of the unexpected find is indicated in red. Source: Biosis overlay, sourced from Graham Brooks and Associates Pty Ltd 2014.

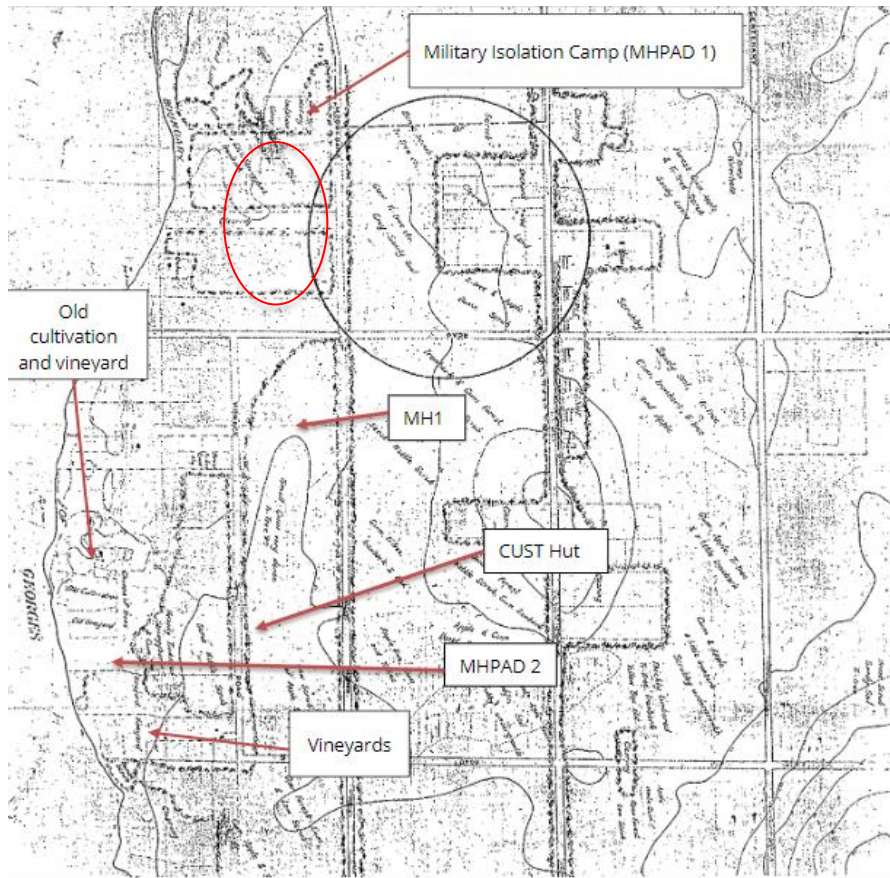
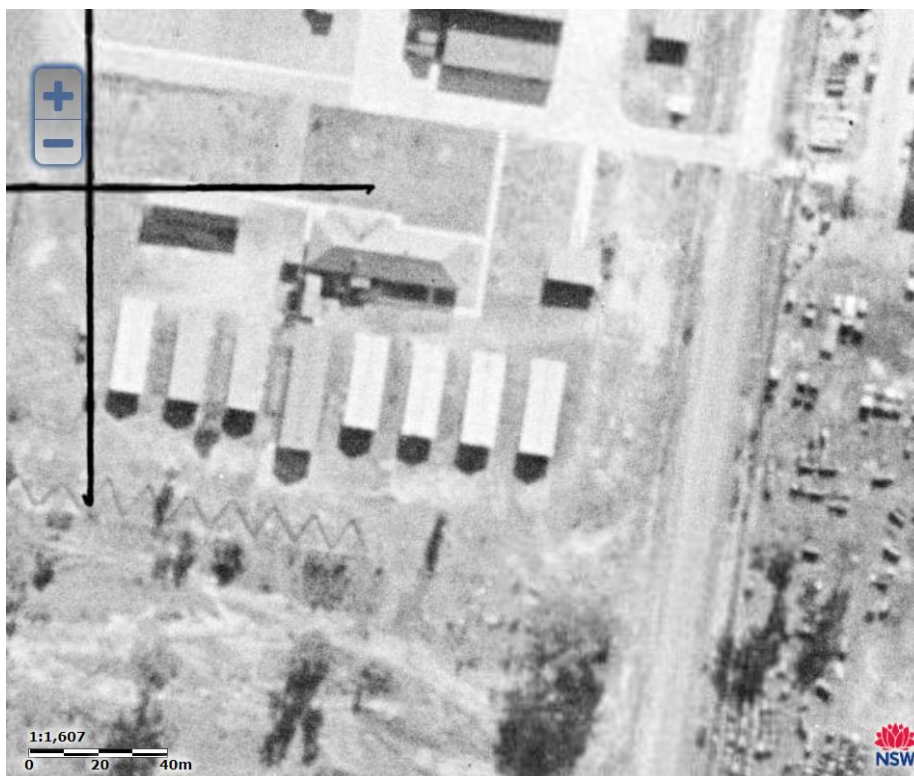


Figure 4: The area in 1943 with WWII buildings. Source: SIX Maps.



Archaeological monitoring results

The archaeological program commenced with machine excavation under supervision of the archaeologists. On identification of archaeological features, machine excavation ceased and hand excavation commenced. All features were photographed pre- and post-excitation, planned and surveyed.

The study area contained 23 postholes cut into the underlying natural clay. The postholes were grouped and recorded based on similarities around size, shape and location, as per Figure 9. An additional four rectilinear features were also identified.

Group 1 postholes

Group 1 consisted of seven round postholes, each with an average diameter of 300mm. This group included the posthole identified on 9 March 2020.⁹ Of the seven postholes, two were hand excavated; posthole 1a and 1e.

Posthole 1a (Figure 5 - Figure 6) was circular shape in plan, with vertical sides and a concave base. The feature was 300mm in diameter and extended to a depth of 240mm. The fill consisted of a dark brown sand, presumably a discolouration of the natural pale sand following decomposition of a wooden post. Inclusions within the fill included infrequent sandstone pieces, less than 50mm in diameter and one metal nail.

Posthole 1e (Figure 7 - Figure 8) was ovular in plan, with vertical sides and a concave base. The feature measured 290mm by 250mm, and extended to a depth of 170mm. The fill consisted of a mid-grey sand with frequent sandstone nodule inclusions, no larger than 50mm diameter.

Figure 5: Pre-excitation shot of posthole 1a showing circular shape in plan



Figure 7: Pre-excitation shot of posthole 1e showing oval shape in plan

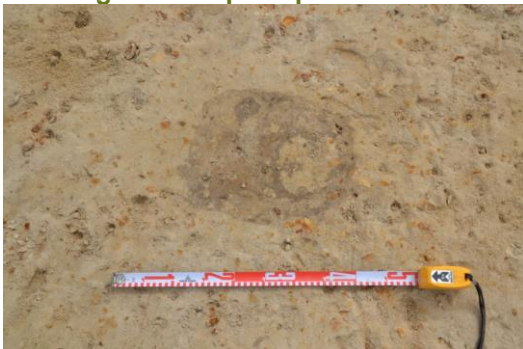


Figure 6: Post-excitation shot of posthole 1a showing depth

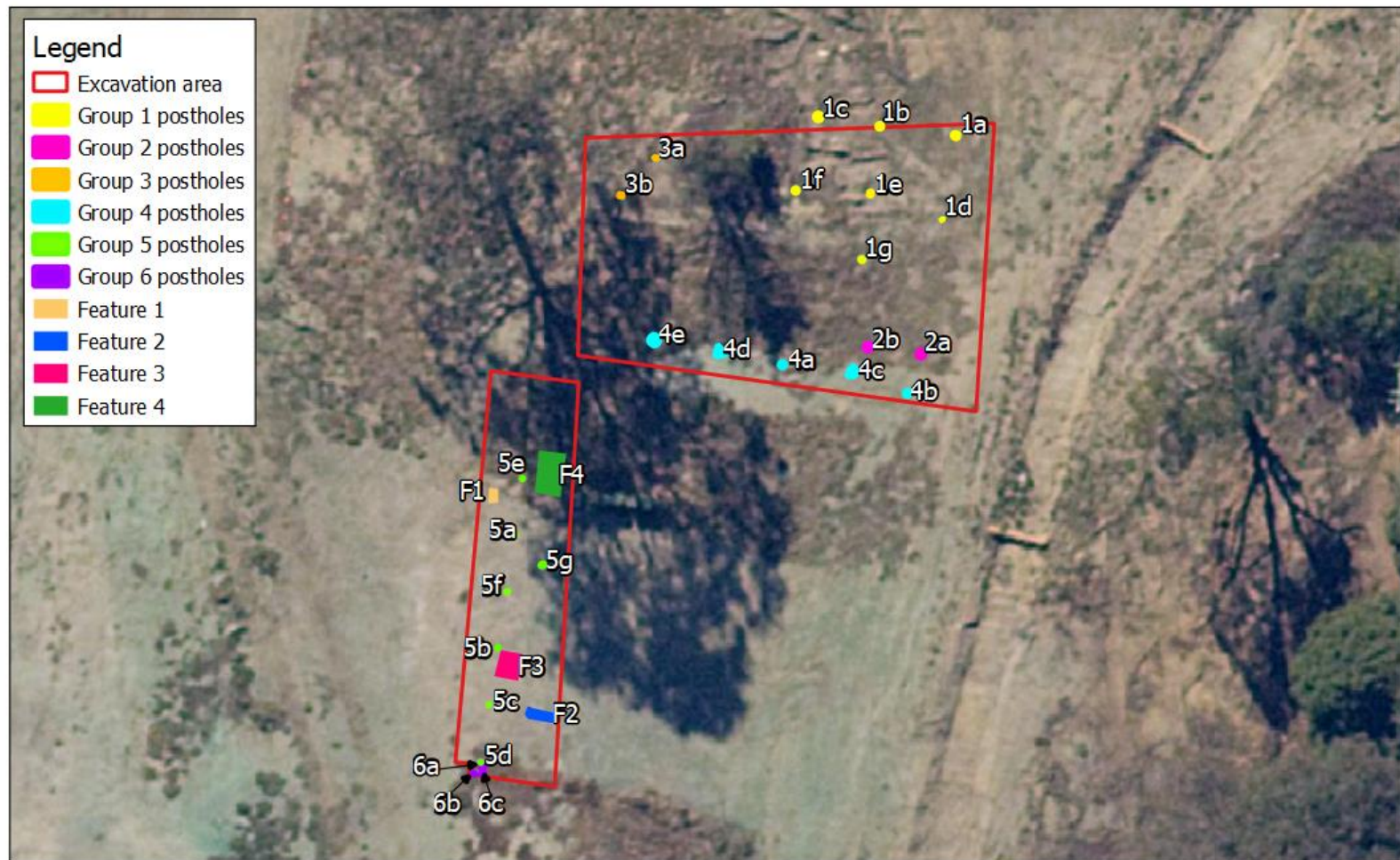


Figure 8: Post-excitation shot of posthole 1e showing depth



⁹ Artefact Heritage 'Unexpected heritage find, south of Bapaume Road, west of Moorebank Avenue, Moorebank NSW', letter report to T. Davis, 19 March 2020.

Figure 9: Location of archaeological remains



Source: C:\Users\JHorton\Documents\Moorebank\Moorebank.kqz



Moorebank Precinct East archaeological remains

20034 Moorebank Precinct East

LGA: City of Liverpool

Scale: 1:1

Size: A4

Date: 02-04-2020



Group 2 postholes

Group 2 consisted of two circular postholes, each with an average diameter of 400mm. Both postholes 2a and 2b were half sectioned by hand.

Posthole 2a comprised a circular shape in plan with gently sloping sides and a concave base (see Figure 10 and Figure 11). It was 320mm by 320mm to a depth of 110mm. The fill comprised a dark brown sandy organic silt and included infrequent flecks of charcoal. In addition, there were frequent tree roots throughout.

Posthole 2b consisted of a circular shape in plan with gently sloping sides and a concave base (see Figure 12 and Figure 13). It was 390mm by 350mm to a depth of 110mm. The fill comprised a dark brown sandy silt with charcoal flecks.

Figure 10: Pre-excavation shot of posthole 2a showing circular shape in plan



Figure 11: Post-excavation shot of posthole 2a showing depth



Figure 12: Pre-excavation shot of posthole 2b showing circular shape in plan, bottle glass on surface



Figure 13: Post-excavation shot of posthole 2b showing depth



Group 3 postholes

Group 3 consisted of two rectangular postholes, 3a and 3b; each with an average size of 260mm x 200mm. 3a was half sectioned by hand.

Posthole 3a comprised a rectangular shape in plan with straight vertical sides and a flat base (see Figure 14 and Figure 15). It was 250mm by 200mm to a depth of 120mm. The fill comprised a pale grey sand with tan and orange sand mottling. In addition, the posthole included a number of tree roots.

Figure 14: Pre-excavation shot of posthole 3a showing rectangular shape in plan



Figure 15: Post-excavation shot of posthole 3a showing depth



Group 4 postholes

Group 4 consisted of five circular postholes, 4a – 4e, with an average diameter of 500mm. Out of the five post holes, 4e was half sectioned by hand.

Posthole 4e comprised an oval shape in plan with vertical sides and a flat base (see Figure 16 and Figure 17). It was 600mm by 460mm to a depth of 200mm. The fill comprised a pale grey sand with tan sand mottling and infrequent sandstone nodule inclusions, no larger than 50mm diameter.

Figure 16: Pre-excavation shot of posthole 4e showing circular shape in plan



Figure 17: Post-excavation shot of posthole 4e showing depth



Group 5 postholes

Group 5 consisted of seven round postholes, 5a – 5g; each with an average diameter of 200mm. Out of the seven postholes two were hand excavated; 5a and 5g.

Posthole 5a comprised an oval shape in plan with vertical sides and a concave base (see Figure 18 and Figure 19). It was 200mm by 140mm to a depth of 270mm. The fill comprised a dark brown friable sand with infrequent plastic, wood and stone inclusions, no larger than 50mm diameter.

Posthole 5g consisted of an oval shape in plan with gently sloping sides and a concave base (see Figure 20 and Figure 21). It was 300mm by 200mm to a depth of 50mm. The fill comprised a dark brown friable sand with infrequent sandstone nodule inclusions, no larger than 50mm diameter.

Figure 18: Pre-excavation shot of posthole 5a showing circular shape in plan



Figure 19: Post-excavation shot of posthole 5a showing depth



Figure 20: Pre-excavation shot of posthole 5g showing oval shape in plan, bottle glass on surface



Figure 21: Post-excavation shot of posthole 5g showing depth



Group 6 postholes

Group 4 consisted of three rectangular postholes, 6a – 6c; with an average size of 250mm x 200mm. Out of the three post holes, 6a was hand excavated.

Posthole 6a comprised a square shape in plan with steeply curved sides and a roughly v-shaped base (see Figure 22 and Figure 23). It was 240mm by 210mm to a depth of 190mm. The fill comprised a mid-brownish grey friable sand with infrequent metal inclusions.

Figure 22: Pre-excavation shot of posthole 5d to the north and the square shape in plan of 6a to the south



Figure 23: Post-excavation shot of posthole 4e showing depth



Feature 1

A north-south aligned feature was identified in the western extent of the excavation area. The feature was rectangular in plan with rounded corner, with straight vertical sides and a flat base (see Figure 24 and Figure 25). The features extended to a length of 700mm by 500mm and depth of 200-250mm.

The fill within the feature comprised a dark brown silt material with charcoal inclusions containing several artefacts including glass and metal fragments. One fragment of glass indicated a diagnostically distinctive Owens Automatic Bottle Machine suction scar, which would date the fragment to 1890-1920. An additional fragment showed a mould-like seam and small bubbles indicating it may have been hand blown or poorly machine made, again dating it to 1890 – 1920.

Figure 24: Post-excavation shot of rubbish pit showing rectangular shape in plan



Figure 25: Post-excavation shot of rubbish pit showing depth



Feature 2

An east-west aligned oval feature was uncovered within the excavation area (Figure 26). The feature was hand excavated. A 600mm x 400mm sondage was excavated within the western portion of the feature.

Feature 2 was oval in plan with gently sloping sides and a concave base (Figure 27). The feature measured 1500mm x 600mm and extended to a depth of 50mm. The fill consisted of a mid-grey sand with infrequent metal and asphalt fragments. Additional inclusions included animal bone and sandstone nodules, no larger than 50mm diameter. Feature 2 was interpreted as being a divot within the natural sand, containing a mixed former topsoil.

Figure 26: Pre-excavation shot of Feature 2 showing oval shape in plan



Figure 27: Post-excavation shot of Feature 2 showing depth



Feature 3

Feature 3 consisted of a north-south aligned rectangular feature in the south of the excavation area (Figure 28). A 1500mm x 300mm sondage was excavated within the southern portion of the feature.

Feature 3 comprised a rectangular shape in plan with straight vertical sides and a flat base (Figure 29). It was 1320mm by 1150mm, to a depth of 100 – 160mm. The fill consisted of a pale grey friable sand with frequent metal inclusions. Additional artefacts included undiagnostic animal bone and fragmented base of a condiment bottle embossed with “W.C. Douglass LTD”. This indicate the feature was in-filled post 1906.

Figure 28: Pre-excavation shot of Feature 3 showing rectangular shape in plan and bottle glass on surface



Figure 29: Post-excavation shot of Feature 3 showing depth



Feature 4

A north-south aligned rectangular feature was uncovered within the excavation area (Figure 30). The feature was hand excavated by excavating a 650mm x 300mm sondage within the southern portion. Photographs were taken, plans were drawn, and survey data was taken.

Feature 4 comprised a rectangular shape in plan with a sloping side to the south, vertical side to the west and a gently sloping / concave base (Figure 31). The fill consisted of a mid-grey sand with frequent sandstone nodule inclusions, no larger than 50mm, and modern plastic sheeting. Feature 4 was interpreted as being a modern excavator machine made ‘scrapes’.

Figure 30: Pre-excavation shot of Feature 4 showing rectangular shape in plan



Figure 31: Post-excavation shot of Feature 4 showing depth



Interpretation

The general lack of diagnostic artefacts makes conclusive interpretation of the function of the former structures difficult. Most of the postholes are likely to be associated with fence lines and late 19th and early 20th century structures.

It is probable that group 5 and group 3 postholes are associated with military buildings present on the 1943 aerial of the site (Figure 32). Rectangular features 1, 3 and 4 follow approximately the same alignment as posthole group 5, which suggests they were also associated with the former military structure. However, due to the truncation of A horizon across the area, the purpose of rectangular features 1, 3 and 4 was unable to be determined during excavation. Group 4 is likely to represent a former fence line. Group 1 may provide evidence of an earlier light-weight structure or agricultural pen.

Only two of the features excavated contained dateable artefacts. Analysis of these items indicates that the backfill of feature 1 likely occurred between 1890 and 1920, whilst the backfill of feature 3 post-dates 1906. It is therefore likely that the features on the site are associated with military occupation of the area in the first half of the 20th century.

Figure 32: 1943 aerial imagery



Source: C:\Users\JHorton\Documents\Moorebank\Moorebank.agz



Moorebank Precinct East - 1943 aerial imagery

20034 Moorebank Precinct East

LGA: City of Liverpool

Scale: 1:600
Size: A4
Date: 01-04-2020

0 10 20 m



Assessment of significance

Determining the significance of a potential archaeological resource is undertaken by utilising a system of assessment centred on the *Burra Charter*. The assessment of heritage significance is outlined through legislation in the Heritage Act and implemented through the *NSW Heritage Manual* and the *Archaeological Assessment Guidelines*.¹⁰ The following table presents an assessment of the potential archaeological resource of the subject site against NSW Significance Criteria.

Table 1: Fulfilment of the NSW heritage assessment criteria

Criteria	Discussion	Local State	
A – Historical Significance	<p>The archaeological remains excavated provide some physical evidence of former land use, including postholes that indicate the potential location of former structures and evidence of fence lines. The lack of artefactual remains and general truncation of the area, however, means that the purpose of these structures is difficult to identify, and the remains are unable to definitively provide evidence of previous uses of the area.</p> <p>The remains do not reach the local significance threshold under this criterion.</p>	–	–
B – Associative Significance	<p>Although the early history of the site indicates that it was associated with significant early landholders such as Thomas Moore, it is unlikely that the archaeological resource would be directly related to these individuals.</p> <p>The remains do not reach the local significance threshold under this criterion.</p>	–	–
C – Aesthetic Significance.	<p>Although it is recognised that exposed in situ archaeological remains may have distinctive/attractive qualities, only rarely are these considered ‘important in demonstrating aesthetic characteristics and/or a high degree of creative or technical achievement in NSW’</p> <p>The unexpected finds do not meet the local significance threshold for this criterion.</p>	–	–
D – Social Significance	<p>The archaeological remains do not meet the local significance threshold for this criterion.</p>	–	–
E – Research Potential	<p>The archaeological remains excavated provide some physical evidence of former land use, including postholes that indicate the potential location of former structures and evidence of fence lines. However, the lack of artefactual remains means that the purpose of these structures is difficult to identify. The ability for the remains to yield information not readily available within existing plans and is low</p> <p>The remains do not reach the local significance threshold under this criterion</p>	–	–

¹⁰ NSW Heritage Office 1996; 25-27

Criteria	Discussion	Local	State
F – Rarity	The archaeological resource is not considered to be rare. The unexpected finds do not meet the local significance threshold for this criterion.	–	–
G – Representative	<p>The unexpected finds do not demonstrate any particular characteristics of NSW's cultural or natural places of cultural or natural environments or for the local area.</p> <p>The unexpected finds do not meet the local significance threshold for this criterion..</p>	–	–

Summary of findings

The archaeological program identified that the unexpected find study area contained 23 postholes and four features cut into the underlying B horizon clays. The features had been largely truncated through previous ground disturbance and only the lower portion remained. This truncation had also removed any former topsoil, artefactual remains or occupation deposits that may have originally been associated with the structures represented by the excavated features.

The majority of the features are likely associated with earlier fence lines. Group 5 and group 3 postholes are likely associated with WWII era buildings present on the 1943 aerial of the site, whilst Group 1 are likely to be associated with activity in the area dating between 1890 and 1920. Overall, the findings are consistent with the preliminary assessment prepared by Artefact Heritage in March 2020.¹¹

Although the monitoring program identified archaeological evidence of former structures, due to the general lack of *in situ* artefact deposits, the remains do not reach the local significance threshold. The ability for the remains to yield information not readily available within existing plans is low.

Conclusions

This report has made the following conclusions:

- No further archaeological investigation of the unexpected finds study area is required prior to works recommencing
- Management of future unexpected finds should continue in accordance with Management Measure HM13B of the MPES2 Construction Heritage Management Plan (CHMP).

¹¹ Artefact Heritage 'Unexpected heritage find, south of Bapaume Road, west of Moorebank Avenue, Moorebank NSW', letter report to T. Davis, 19 March 2020.