

HISTORIC BUILDING RECORDING

Crank Gunsite Barracks, Crank Road, St Helens,

Merseyside

ARS Report N°: 2023/027

Oasis Report N°: archaeol5- 514422



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Historic Building Recording: Crank Gunsite Barracks, Crank Road, St Helens, Merseyside

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Local Authority: St. Helens Borough Council
Site central NGR: SJ 50583 99130

EXECUTIVE SUMMARY

Project Name:	Historic Building Recording: Crank Gunsite Barracks, Crank Road, St Helens, Merseyside
Planning Authority:	St. Helens Borough Council
Location:	Crank Gunsite, Crank Road, Crank, St Helens, Merseyside, WA11 7RU
Parish:	Crank
Hard Geology:	Pennine Lower Coal Measures Formation
Soil Type:	Slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils
NGR:	SJ 50583 99131
Date of Fieldwork:	March 2023
Date of Report:	March 2023

In March 2023, Archaeological Research Services Ltd was commissioned by Rainford Hall Estate Ltd (the clients) to undertake a historic building recording and site walkover of five barracks buildings associated with the Crank Gunsite, Crank Road, St Helens, Merseyside, WA11 7RU. The historic building recording was undertaken to Historic England's Level 2/3 Standard, and was required to assist in discarding condition 5 of the proposed development, which would see the demolition of the buildings and erection of two detached dwellings (Application Ref. No. P/2022/0314/S73).

The five barracks buildings had likely been constructed as part of the origins of the Crank Gunsite in c.1939. The Gunsite had comprised a large 'L' plan plot, consisting of heavy anti-aircraft batteries, a control bunker, a generator, various outbuildings, and the five barracks buildings. These barracks buildings are prefabricated structures, built of the same style and materials. They had been built with concrete frames, which demarcated the structures with distinct bays, and of red engineering brick in a stretcher bond. Each structure varied in length, with Building 2 the smallest at five bays in length, and Building 5 the longest at nine bays in length. The structures featured asbestos corrugated roofing sheets, with the roof structures formed of concrete frames with a cast iron ridge beam. The buildings also retain cast iron outwards swinging window casements with concrete sills, a number of which retain outer timber plank shutters. These structures are considered to have continued in use into the Cold War, as part of the site's connection with the Orange Yeoman Trails, and would have fallen out of use when the site was decommissioned in the 1960s.

The barracks buildings have fallen into disrepair from their lack of use. As barracks, these structures would have been used as welfare areas and facilities, such as mess halls, kitchens, washrooms, and accommodation. However, the buildings are empty shells, which have presumably lost features of interest that would aid in understanding their original functions. Building 1 had retained a separate room within its north-eastern corner, as well as extant stud walling. The position of this walling suggests that the building had originally formed four compartments. Straight joints within the concrete flooring of Building 5 also indicate that this space had originally formed two compartments internally. Whilst the exact functions of the buildings are unclear, these structures would have played an important role in the site, and would have been used to fulfil the basic needs of the soldiers and to improve morale on site.

The historic building recording provides a descriptive, photographic and analytical record of the five barracks buildings at the Crank Gunsite, and provides a comprehensive archive record of the buildings, in mitigation of their proposed demolition.



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I INTRODUCTION

1.1.1 Archaeological Research Services Ltd (ARS Ltd) was commissioned in March 2023 by Rainford Hall Estate Ltd (the clients) to undertake a historic building recording and walkover survey of five barracks buildings associated with the Crank Gunsite, Crank Road, St Helens, Merseyside, WA11 7RU. The historic building recording was undertaken to Historic England's Level 2/3 Standard, and was required to assist in discharging condition 6 of the planning permission, which would see the demolition of the barracks buildings and erection of two detached dwellings (Application Ref. No. P/2022/0314/S73). Condition 6 of the planning permission states the following.

"No development shall take place until the applicant has submitted a written scheme of investigation for archaeological work for approval in writing by the local planning authority. For the avoidance of doubt the scheme shall include a photographic record of the buildings and any findings discovered on site. The work shall be carried out strictly in accordance with the approved scheme and the final report shall be submitted to the Local Planning Authority as an archaeological record."

1.1.2 The historic building recording was undertaken in compliance with a *Written Scheme of Investigation* (WSI) (**Appendix 5**) that was approved by the Merseyside Environmental Advisory Services (MEAS) Archaeologist prior to the commencement of the work. The recording for the five barracks buildings at the Crank Gunsite was undertaken to a Level 2/3 standard. This fieldwork was carried out in accordance with the guidelines in *Understanding Historic Buildings – A Guide to Good Recording Practice* (Historic England 2016), as well as the guidance within the Chartered Institute for Archaeologists' (CIfA) *Code of Conduct* (2019), and *Standard and Guidance for archaeological investigation and recording of standing buildings or structures* (2020).

2 SITE LOCATION AND GEOLOGY

2.1 Site Location

2.1.1 The 'red line boundary' of the proposed development area is depicted by a red polygon on **Figure 1 (Appendix 1)**, and is c.1490m² in area. The site is located halfway between Rainford Hall and the village of Crank, c.2.5km south-east of the town of Rainford (NGR SJ 50583 99131). The PDA comprises the site of the five camp barracks buildings, associated with the Second World War Crank Gunsite. The north of the site is bounded by an unnamed access road, which provides access with a range of houses to the north. The site is bounded to the west, south, and east by a large agricultural field. Ordnance Survey maps show that the site lies at 77m aOD. It sits on a south-west facing slope on Crank Hill, c.800m to the north-east of Rainford Brook, and c.1.3km to the south-west of Black Brook.

2.2 Site Geology

2.2.1 The underlying solid geology of the site consists of Pennine Lower Coal Measures Formation – mudstone – sedimentary bedrock formed in the Carboniferous Period (British Geological Survey 2023). The superficial geology comprises Devonsian Till, formed in the Quaternary Period.

2.2.2 The soils are recorded as *"slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils"* (Cranfield University 2023).

3 AIMS AND OBJECTIVES

3.1 Historic Building Recording Aims & Objectives

3.1.1 The aim of the building recording is to provide a descriptive, visual and photographic record of the buildings, prior to any development work taking place.

3.1.2 The objectives of the building recording are as follows.

- ♦ To produce a formal description of the five barracks buildings, including their floor plans, elevations, roof structures, flooring, internal layouts and spaces, detailing, form and fabric, and evidence for phasing and development.
- ♦ To produce a full visual photographic record with photographic scales of the exteriors and interiors of the buildings with all photographs descriptively captioned and cross referenced to a plan(s), clearly showing the viewing position, direction and photographic image reference.
- ♦ To produce measured and annotated survey drawings showing the location of features of historic interest for the buildings.
- ♦ To produce an account of each building's origins, development and use.
- ♦ To provide documentary research to provide a detailed history of the site.
- ♦ To place the site within its wider context relating to the Second World War.

3.2 Site Walkover Aims & Objectives

3.2.1 The aim of the site walkover is as follows.

- ♦ To gather sufficient information to establish the character, extent, form, function and likely status of any surviving archaeological features.

3.3 Regional Research Aims & Objectives

3.3.1 The proposed archaeological works have the potential to identify the presence of evidence pertinent to research priorities set out Historic England's 2017 *Research Agenda*, for military and defence. This includes the following.

- ♦ *What is the character and significance of poorly understood classes of military building types and sites?*
- ♦ *How have past and current military land use, military towns and settlements shaped local character and how can this inspire reuse and regeneration?*
- ♦ *What has worked well and less well where historic military buildings and places have been adapted to meet the needs of the 21st century armed forces or to act as the foundations for new distinct civilian places?* (Historic England 2017).

3.3.2 The works are also cognisant of the research priorities within the *North West Regional Research Framework* (Historic England 2022). This includes the summary by M. Barter of the Historic Built Environment in the North West from the post-Medieval period. Other research objectives may become relevant should any archaeological features investigated during the works produce significant findings of regional or greater importance.

4 METHODOLOGY

4.1 Historic Building Recording

4.1.1 A historic building recording of the five barracks buildings at Crank Gunsite was carried out in March 2023. This was carried out to a Level 2/3 standard, in accordance with Historic England's

Understanding Historic Buildings – A Guide to Good Recording Practice (Historic England 2016). The fieldwork was undertaken by Joseph Empsall (BA, MA, MRes). The project was supervised by Senior Consultant Dr Ian Wyre, with the project managed by Lucie McCarthy, Head of Heritage Consultancy for ARS Ltd. The recording was conducted in line with the WSI (**Appendix 5**).

4.1.2 A Level 2/3 survey provides a full visual, descriptive and analytical record. The recording consisted of a written, drawn and photographic account comprising the following.

- ♦ The written record provides the precise location of the buildings together with any statutory and non-statutory designations, the date of the survey, and the location of the archive. It also includes a descriptive account of the buildings' form, function, and phasing, together with a summary of the names of its architects, builders, patrons and owners, if known.
- ♦ The photographic record included the interior, exterior and setting of the buildings, taken using a Canon EOS 700D (18 megapixels) to capture high resolution digital photographs. A two-metre ranging rod was included in a selection of general photographs in order that the scale of elements of the buildings can sufficiently be established. The buildings' external appearance was recorded. This included a series of oblique views showing all external elevations of the structures and providing an overall impression of their size and shape. Where an individual elevation has embodied complex historical information, views at right angles to the plan of the elevation were taken. All photographs contain a graduated photographic scale, where practicable. A photographic register detailing (as a minimum) location and direction of each photograph was compiled and this is included as **Appendix 2** of this report. The location and direction of each photograph have also been noted on plans of the buildings to accompany the archival photographs (**Figure 4, Appendix 1**).
- ♦ The building recording drawn record includes a site location plan at a suitable scale indicating the position of the site within the country, within the county and a clear plan of the precise location/outline of the buildings (**Figure 1, Appendix 1**). A plan indicating the position and orientation of photographs/images has been included in the report (**Figure 4**), along with a set of detailed measured survey drawings. For the Level 2/3 recording, annotated plans and elevations of the building have been included, detailing significant features of interest (**Figures 5-14, Appendix 1**).

4.2 Site Walkover Survey

4.2.1 A site walkover of the five barracks buildings at Crank Gunsite was carried out in March 2023. The survey included a systematic walkover survey.

4.2.2 When earthworks are encountered, a Leica GPS 1200+ global navigation satellite system (GNSS) with post-processing of data providing sub-centimetre accuracy, or other equivalent system, will be used to locate each surviving feature and a series of points recorded at the tops, bottoms and breaks of slope. Where linear features are to be recorded, points will also be recorded at significant changes of direction or at appropriate intervals where no changes in alignment are identified. The base survey produced will be used as the basis for the creation of an accurate hachured plan. Detail will be added to the hachured plan using measurements taken on-site by tape measure.

4.2.3 Baseline photographs to archaeological standards will be captured as part of this survey, and their position will be marked on a plan. An interpretation of the features identified and any relationships between them will be provided in addition to a full catalogue.

4.2.4 A full photographic record will be compiled using a high quality digital SLR camera with a minimum 16-megapixel sensor and a register of all photographs will be kept. Working shots will be taken from fixed points in order to depict what the prevailing conditions were like during the time of recording. A clearly visible, graduated metric scale will be included in all shots.

4.2.5 The site will be accurately tied into the National Grid and located on a 1:2500 or 1:1250 map of the area. All heights above sea level will be recorded for all points in metres above Ordnance Datum (aOD).

4.2.6 All levels will be recorded during the monitoring, using pro-forma record sheets, in accordance with the ARS Ltd field recording manual.

4.2.7 All data outputs will be tabulated, with tables produced in order to show the ground level at the time of the survey work.

5 HISTORICAL BACKGROUND

5.1.1 As part of the historical background research for the site, the National Archives, the St Helens Archives, the Lancashire Archives, and the Liverpool Archives had been consulted. However, no information on the site could be sourced.

5.1.2 The earliest available mapping to provide a clear depiction of the site is the 1840 *Tithe Map*. This shows the site as residing partly within a large agricultural field, noted as Garden House Field (plot 2081), and with two adjoined rectangular plots within its central extent. A rectangular building is depicted within the south-western corner of these adjoined plots, outside of the red line boundary. This had been noted as plot 2082, owned by Zachariah Sillar and described as a cottage and garden. Sillar had owned extensive landholdings in the area, including the Garden House and its pleasure grounds to the south (plot 2075), situated within the position of what is now Rainford Hall. By the 1893 *OS Map*, the two adjoined plots and cottage are no longer present, with the site comprising part of a single large agricultural field. A track is shown c.100 meters to the west, connecting with Crank Road further to the west. Crank Hall is also shown c.250 meters to the south-west. By the 1927-8 *OS Map*, the unnamed track to the west had been extended along the northern boundaries of the agricultural field, running through the northern extent of the site boundary.

5.2 Second World War

5.2.1 The Crank Gunsite was likely established c.1939, situated off the unnamed access road connecting with Crank Road to the west. The Ministry of Defence would have overseen the consolidation of the site, though the specific contractor responsible is unknown. The site comprised four heavy anti-aircraft guns, a control bunker, five barracks, a generator, three possible outbuildings and a Radar/Optical station (**Figures 2 & 3**). The first available mapping to depict the Crank Gunsite is the 1959-60 *OS Map*. This shows the five barracks buildings in question as a cluster of detached rectangular buildings within the southern boundary of the gunsite. Three of these are orientated on a west to east axis, whilst two are on a north to south axis. Barracks buildings such as these represented prefabricated structures, which were quick to assemble on site. This typology of Second World War building often included recreational areas and facilities, such as mess halls, kitchens, and washrooms, and were designed to fulfill the basic needs of the soldiers and improve morale.

5.2.2 The 1959-60 *OS Map* shows the remainder of the Crank Gunsite as forming an 'L' plan plot with a central access road, extending up to c.300 meters to the north-east of the barracks buildings. Three ammunition huts are noted adjacent to the barracks structures c.40 meters to the north-east, as well as the Second World War Command Bunker. The generator building is positioned on the western side of the access road, c.100m to the north-east. A range of structures are also depicted within the north-eastern boundary of the Gunsite, likely forming the anti-aircraft batteries.

5.2.3 The primary function of the site would have been to safeguard the south Lancashire region from enemy bombers. This included an ordnance factory situated c.7.2km to the south of the Crank Battery, called 'Filling Factory No. 7', and an ordnance depot named 'e61414' c.5.2km northwest of Crank. During nighttime bombing raids, a searchlight battery known as 'No. 41138' was stationed at Windle, c.3.1 km to the southwest and would have assisted in identifying enemy bombers, alongside

aiding another similar battery site situated at Rainford, c.4.6 km south of Crank Battery (Archaeology Data Service 2006).

5.2.4 Research has not been able to ascertain who had operated the Crank Gunsite. The 4th Anti-Aircraft Division, established on September 1st 1938, had been responsible for the Litherland/Ford Anti-Aircraft Battery c.11km to the west of Crank. The primary objective for this Division was to defend against air attacks by enemy forces, particularly those that targeted the vital port of Liverpool. Additionally, the 4th Anti-Aircraft Division and, more specifically the 33rd Western Anti-Aircraft Brigade was responsible for overseeing the industrial regions of the North West and West Midlands of England, as well as North and South Wales (RA 39-45, 2023). Although the 4th Anti-Aircraft Division may have also managed the Crank Battery site, specific information about their involvement remains limited.

5.3 Cold War

5.3.1 During the Cold War, the UK government was primarily concerned with the potential threat of nuclear war through long-range enemy bombers targeting key cities and industrial facilities. In response to this threat, the government selected the Crank Battery site for the "Orange Yeoman Trials" in 1949. The Orange Yeoman, also known as AMES Type 82 radar, was a crucial component of the UK's air defence strategy during the Cold War. This radar system was designed to provide early warnings of approaching enemy aircraft and support anti-aircraft artillery (AAA) defences. By transmitting data on a selected target, the system could improve the accuracy of AAA defences and increase the chances of intercepting incoming enemy aircraft (Historic Aviation Military 2023).

5.3.2 To facilitate the calculation of target trajectories, two pairs of lines were connected from each gun site to the Orange Yeoman Tactical Control Radar and Data Handling Center at Newton Hollow, Newton, near Frodsham, Cheshire (Subterranea Britannica 2023); though no known traces of these lines are visible today. Besides the Gunsite at Crank, other locations in the region were chosen for the trials, including Altcar, Norley, Flint, Thurstaston, and Penketh (Historic Aviation Military 2023). A new control bunker was constructed adjacent to the original Second World War Command Bunker at the site, to facilitate the new instruments.

5.3.3 The Orange Yeoman system was a significant technological achievement and played a crucial role in the UK's air defence strategy during the Cold War. The legacy of the Orange Yeoman Trials and the role of Gunsites in the UK's air defence history remain a vital part of the country's military heritage.

5.4 Decommission

5.4.1 The exact date of decommissioning for the Crank Gunsite is unclear. However, it is known that the radar system was operational during the 1950s and 1960s before being replaced in the 1970s by the AMES Type 84, which provided superior performance and the ability to track multiple targets simultaneously (Radarpages 2023). The Penketh site [MY76] was closed in the early 1960s (Historic Aviation Military 2023). Based on this evidence, it is likely that the Crank Battery was also closed around the same time. By the 1983 *OS Map*, the three outbuildings shown c.40 meters to the north-east of the barracks buildings had been demolished and replaced with two dwellings. The purported anti-aircraft batteries within the north-eastern extent of the site had been removed and replaced with a pumping station and reservoir.

6 BUILDING DESCRIPTION

6.1 Introduction

6.1.1 The following section provides a formal description of the five barracks buildings within the Crank Gunsite (Buildings 1-5). These are the structures subject to the historic building recording, starting with the setting of the respective target buildings. Correspondingly, this text description makes reference to photographs below each section, with these photographs collated as part of the

photographic survey of the historic buildings. In addition, each photograph caption serves to cross-reference with the specific photograph number contained within the record, with the photograph location and orientation accordingly depicted on the building plan drawings (**Figure 4, Appendix 1**), and accompanying photographic register (**Appendix 2**). Contact sheets for the full photograph resource are included in **Appendix 3**.

6.2 Building Description - Setting

6.2.1 The five barracks buildings associated with the Second World War Crank Gunsite are positioned within a relatively isolated position within the landscape, bounded by agricultural fields to the west, south, and east (**Photographs 1-3**). Rainford Hall is partially visible from the site, situated c.350m to the south (**Photograph 4**). The group of five camp barracks buildings would have been positioned within the southern extent of the Crank Gunsite. Three of the structures are roughly orientated west to east, with two positioned north to south. The site is accessed from an unnamed access road running parallel with the site to the north, which connects with Crank Road (B5201) c.300m to the west (**Photograph 5**). This road continues to the north, providing access for two houses, constructed in the mid-late 20th century (**Photograph 6**). The Crank Gunsite had originally encompassed the area of the houses, and had featured three square structures shown on OS mapping, now lost. On the eastern side of this road, there are two rectangular concrete structures, comprising Second World War and Cold War command bunkers (**Photograph 7**). A rectangular concrete bunker is situated c.100 to the north-east of the site, associated with the Second World War Gunsite (**Photograph 8**). The road also extends further to the north-east, with this area comprising the position of the suspected anti-aircraft battery bunkers, which are now lost.



Photograph 1: View of the Crank Gunsite Barracks site, facing north-east (File: HBR_3)



Photograph 2: View of the Crank Gunsite Barracks buildings from the south-east, taken facing north-west
(File: HBR_4)



Photograph 3: View of the Crank Gunsite Barracks buildings from the western extent of the site, taken facing east



Photograph 4 Visibility of Rainford Hall from the PDA, taken facing south (File: HBR_13)



Photograph 5: View of the access road to the north of the barracks buildings, taken facing west (File: HBR_8)



Photograph 6: View of the road to the north of the barracks buildings, linking with the mid-late 20th century houses shown to the left (File: HBR_19)



Photograph 7: View of the Second World War and Cold War command bunkers, taken facing south-east (File: HBR_25)



Photograph 8: The concrete bunker associated with the Crank Gunsite, situated c.100m to the north-east of the PDA. Taken facing north-west with 2m scale (File: HBR_21)

6.3 Building Description - Overview

6.3.1 The five camp barracks buildings associated with the Second World War Crank Gunsite each represent single-storey rectangular structures. The buildings comprise prefabricated structures, each built with the same materials and of the same style. Each structure has a concrete frame, delineating the structures into distinct bays. These are formed of reinforced concrete with posts, and with kneebraces for the roof rafters. The buildings had each originated as three bays in width, though they vary in length, ranging between five and nine bays. Three of the structures are roughly orientated west to east, with two positioned north to south. The structures had been built with low pitched gabled roofing, covered with corrugated asbestos sheet cladding and with cast iron drainpipes (**Photograph 9**). Each roof structure is formed of the concrete frame, with a cast iron ridge beam, supporting timber purlins with corrugated sheeting above (**Photograph 10 & 11**). The buildings have been constructed with red engineering brick in a stretcher bond with cement mortar and feature concrete dressings (**Photograph 12**). The buildings feature cast iron outwards swinging window casements, which are tucked under the eaves and have projecting concrete sills (**Photograph 13**). A number of these feature outer timber plank shutters (**Photograph 14**). Each structure has fallen into disrepair, ranging in their severity. Most are missing parts of their roofing, with several missing entire exterior elevations.



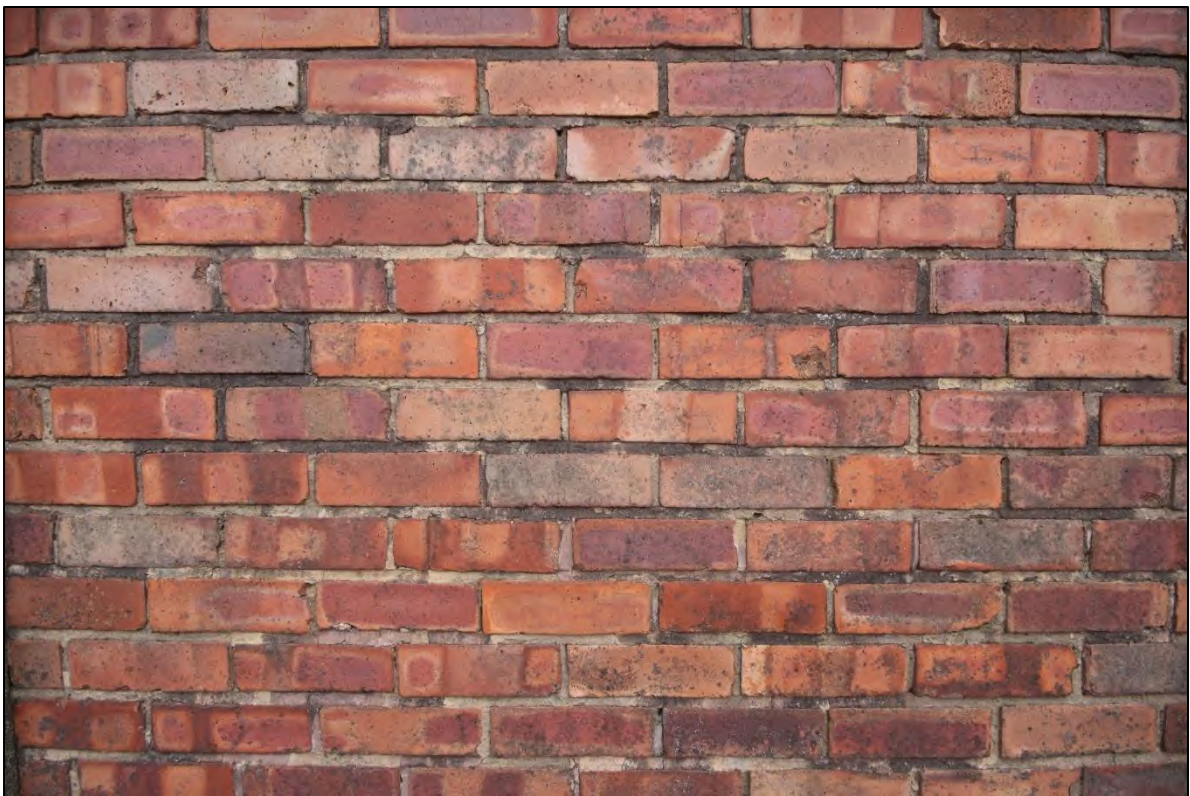
Photograph 9: The corrugated roofing of the barracks buildings (File: HBR_167)



Photograph 10: View of the concrete framed roof structure within Building 3, taken facing north (File: HBR_103)



Photograph 11: View of the cast iron ridge beam within Building 1, taken facing north-west (File: HBR_168)



Photograph 12: View of the red engineering brick with cement mortar used in the construction of the barracks buildings (File: HBR_166)



Photograph 13: View of a cast iron window casement associated with Building 2's eastern elevation, taken facing west with 2m scale (File: HBR_71)



Photograph 14: View of the timber window shutters associated with Building 5's northern elevation, taken facing south-west (File: HBR_139)

6.4 Building Description – Building 1

6.4.1 Building 1 comprises the westernmost structure of the barracks buildings, and is seven bays in length (**Photograph 15**). The roof coverings of the building have been lost within the western three bays, as well as various areas of the outer brick walling. The eastern extent of the roof retains a small concrete flue, as well as a roof light (**Photograph 16**). Three of the bays on the southern elevation retain large apertures with timber framing, with brick walling below (**Photograph 15 & 17**). The exact origins of these apertures is unclear, likely forming large windows. The western gable end appears to have originated with a central doorway now lost, as with the side elevations for the other buildings, which feature evidence of these (**Photograph 18**). The northern elevation had been mostly shielded from view by overgrown vegetation, with no features discernable (**Photograph 19**). On the eastern gable end, there is a central timber framed doorway with concrete lintel (**Photograph 20**). The upper portions of the elevation feature two extant ceramic vents, with a third now lost.

6.4.2 Internally, the building is comprised of a main space and a subdivided room within the north-eastern corner (**Photograph 21**). A circular aperture with the concrete flue and the roof light are visible within the eastern extent of the ceiling structure (**Photographs 22 & 23**). There is also extant cabling for previous electricity and communication. The interior has concrete flooring, predominantly covered over with vegetation. Partially surviving stud walling attached to the southern wall suggest that the space had formed an additional separate space to the east, as well as a small square space to the south-west (**Photographs 24 & 25**). Within the north-eastern corner of Building 1, there are three low brick walls up to c.0.7m in height, likely originally forming a sink (**Photograph 26**). The north-eastern room comprises a small rectangular space, with no features of note discernable (**Photograph 27**).



Photograph 15: Oblique view of Building 1's southern elevation, taken with 2m scale facing north-east (File: HBR_31)



Photograph 16: View of the rooflight and concrete flue within the eastern extent of Building 1's roof structure (File: HBR_41)



Photograph 17: View of an aperture with timber frame on the southern elevation of Building 1, taken facing north (File: HBR_33)



Photograph 18: Oblique view of Building 1's western elevation, taken facing south-east with 2m scale (File: HBR_35)



Photograph 19: Oblique view of Building 1's northern elevation, taken facing south-west with 2m scale (File: HBR_38)



Photograph 20: View of Building 1's eastern elevation, taken facing north-west



Photograph 21: View to the east within Building 1, taken with 2m scale (File: HBR_43)



Photograph 22: The circular aperture associated with the flue within the eastern extent of Building 1's roof structure (File: HBR_164)



Photograph 23: The roof light within the eastern extent of Building 1's roof structure (File: HBR_165)



Photograph 24: View of the stud walling within the central extent of Building 1's southern wall, taken facing south-east with 2m scale (File: HBR_49)



Photograph 25: View of the stud walling within the eastern extent of Building 1's southern wall, taken with 2m scale facing west (File: HBR_54)



Photograph 26: The brick feature for a sink within the north-eastern corner of Building 1's interior, taken with 1m scale (File: HBR_53)



Photograph 27: View to the west within the north-eastern room of Building 1's interior (File: HBR_62)

6.5 Building Description – Building 2

6.5.1 Building 2 is situated within the central-western portion of the PDA, and represents one of the two structures orientated on a roughly north-south axis (**Photograph 28**). The building is five bays in length, comprising the smallest of the five recorded at the Crank Gunsite. The southern two

bays and part of the northern bay of its roof have been lost. The western longitudinal elevation features two cast iron windows, with the southern bay featuring an aperture with scarring from previous framing, suggestive of a previous large window as with Building 1 (**Photograph 29**). The eastern elevation originally featuring three, with the northern and southernmost now lost and their concrete sills remaining extant (**Photographs 30 & 31**). The southern elevation retains a cast iron window to the west, as well as part of its concrete frame, but is otherwise lost (**Photograph 32**). The northern gable elevation has been predominantly lost, with only corrugated sheet clad walling present to the west (**Photograph 33**).

6.5.2 Internally, the building appears to have originated as single open space (**Photographs 34 & 35**). The space features a concrete floor, now mostly covered with moss and debris, and plasterboard remains partially extant for the roof structure.



Photograph 28: View of Building 2 within the site, taken facing north-east with 2m scale (File: HBR_64)



Photograph 29: Oblique view of Building 2's western elevation, taken facing north-east with 2m scale (File: HBR_65)



Photograph 30: Oblique view of Building 2's eastern elevation, taken with 2m scale facing south-west (File: HBR_69)



Photograph 31: Oblique view of Building 2's eastern elevation, taken with 2m scale facing north-west (File: HBR_70)



Photograph 32: Oblique view of Building 2's southern elevation, taken facing north-east (File: HBR_75)



Photograph 33: Oblique view of Building 2's northern elevation, taken with 2m scale facing south-east (File: HBR_67)



Photograph 34: View to the south within Building 2, taken with 2m scale (File: HBR_78)



Photograph 35: View to the north within Building 2, taken with 2m scale (File: HBR_79)

6.6 Building Description – Building 3

6.6.1 Building 3 comprises the southernmost structure within the PDA, representing one of the two buildings orientated on a roughly north-south axis (**Photograph 36**). The building is six bays in length, comprising one of the smaller structures on site, and the northern and southern bays of its roof are now lost. The western elevation features three cast iron windows, with the central window featuring timber shutters (**Photograph 37**). The northern elevation has been entirely lost, barring the concrete framing within the north-western corner of the structure (**Photograph 38**). The northernmost bay of the eastern longitudinal elevation has been lost, with two former window apertures present, retaining their concrete sills (**Photograph 39**). The southern gable elevation retains a cast iron window and part of its concrete frame, but is otherwise lost (**Photograph 40**).

6.6.2 Internally, Building 3 appears to have originated as single open space (**Photograph 41 & 42**). The concrete flooring has been heavily covered over by vegetation and debris. No features of interest could be discerned.



Photograph 36: View of Building 3, taken facing south-east with 2m scale (File: HBR_89)



Photograph 37: Oblique view of Building 3's western elevation, taken with 2m scale facing south-east (File: HBR_91)



Photograph 38: View of Building 3's northern elevation, taken with 2m scale facing south-east (File: HBR_95)



Photograph 39: View of Building 3's eastern elevation, taken facing south (File: HBR_97)



Photograph 40: View of Building 3's southern elevation, taken facing west with 2m scale (File: HBR_99)



Photograph 41: View to the north-west within Building 3, taken with 2m scale (File: HBR_101)



Photograph 42: View to the south-east within Building 3, taken with 2m scale (File: HBR_102)

6.7 Building Description – Building 4

6.7.1 Building 4 comprises the central-eastern structure within the PDA, and represents one the larger buildings, being eight bays in length (**Photograph 43**). The roof structure of the building has been partly lost within its western and eastern end bays. The western gable elevation features a central wide doorway with concrete lintel, flanked by a cast iron window with concrete sill on each side (**Photograph 44**). The upper portions of the elevation feature three vent apertures, with only the northernmost retaining a ceramic vent. The elevation is also leaning significantly westwards within its upper portions (**Photograph 45**). The southern longitudinal elevation is partly obscured by vegetation, and features four cast iron windows, with its easternmost bay now lost (**Photographs 46 & 47**). The eastern gable elevation has also been lost, retaining only its corner end concrete frames (**Photograph 48**). The northern elevation is partly obscured by a spoil heap and vegetation, and features four cast iron windows, and a doorway with concrete lintel to the east (**Photographs 49 & 50**).

6.7.2 Internally, Building 4 comprises a long rectangular space with concrete flooring (**Photograph 51**). Access to the interior was limited due to structural concerns for the eastern elevation, as well as overgrown vegetation blocking access to the east. The interior appears to have been formed of a single large space, with no discernable features of interest noted.



Photograph 43: View of Building 4 from the access road, taken facing south-west (File: HBR_169)



Photograph 44: View of Building 4's western elevation, taken with 2m scale facing east (File: HBR_114)



Photograph 45: View of the upper portions of Building 4's elevation leaning westwards, taken facing south (File: HBR_116)



Photograph 46: Oblique view of Building 4's southern elevation, taken facing north-east (File: HBR_122)



Photograph 47: Oblique view of Building 4's southern elevation, taken facing north-west (File: HBR_121)



Photograph 48: Oblique view of Building 4's eastern elevation, taken facing south-west with 2m scale (File: HBR_118)



Photograph 49: Oblique view of Building 4's northern elevation, taken with 2m scale facing south-east (File: HBR_117)



Photograph 50: Oblique view of Building 4's northern elevation, taken facing south-west (File: HBR_119)



Photograph 51: View to the east within Building 4 (File: HBR_123)

6.8 Building Description – Building 5

6.8.1 Building 5 comprises the easternmost structure of the barracks buildings, and is the largest of the structures on site, being nine bays in length (**Photograph 52**). The roof structure of the building has been partly lost within its western end bay. This roofing also features two concrete flues to the north-west, and another to the south-east. The southern longitudinal elevation is partially obscured from view by overgrown vegetation, and features four cast iron windows, with the central-eastern of these retaining timber shutters (**Photographs 53 & 54**). The eastern gable elevation has a central doorway with concrete lintel, now covered over with corrugated sheet cladding (**Photograph 55**). This is flanked by a cast iron window on each side, with the elevation featuring three ceramic vents in its upper portions. The northern longitudinal elevation features five cast iron windows, all of which have retained timber shutters (**Photographs 56 & 57**). The central-western portion of the elevation also features a doorway with concrete lintel. The original eastern gable elevation has not been lost, retaining only its corner end concrete framing (**Photograph 58**).

6.8.2 Internally, Building 5 comprises a single large rectangular space (**Photograph 59 & 60**). A straight joint within the eastern extent of the concrete flooring is present across the width of the space, suggesting that the interior had originated with a partition wall in this area (**Photograph 61**). This suggests that the space had originated with three distinct compartments, forming three bays to the west and six bays to the east. The larger eastern compartment would have been access from the doors on the northern and eastern elevations, with the western compartment likely accessed via a door on the western gable end, now lost. A rectangular outline is also present within the concrete flooring, adjacent to the eastern straight joint (**Photograph 61**). This resides beneath a circular aperture associated with a concrete flue on the roof, and had likely been associated with a heat source for the structure. No other features of interest could be discerned within the building.



Photograph 52: View of Building 5 within the eastern extent of the PDA, taken facing west (File: HBR_11)



Photograph 53: Oblique view of Building 5's southern elevation, taken facing north-west (File: HBR_130)



Photograph 54: Oblique view of Building 5's southern elevation, taken facing north-east (File: HBR_129)



Photograph 55: View of Building 5's eastern elevation, taken facing west (File: HBR_142)



Photograph 56: Oblique view of Building 5's northern elevation, taken facing south-west (File: HBR_134)



Photograph 57: Oblique view of Building 5's northern elevation, taken facing south-east (File: HBR_133)



Photograph 58: Oblique view of Building 5's western elevation, taken facing south-east (File: HBR_127)



Photograph 59: View to the east within Building 5, taken with 2m scale (File: HBR_144)



Photograph 60: View to the west within Building 5 (File: HBR_145)



Photograph 61: View of Building 5's concrete flooring, with a straight joint delineating a former partition wall, and rectangular outline likely associated with an earlier heating source. Taken facing south-east with 2m scale (File: HBR_143)

7 SITE WALKOVER

7.1.1 The site walkover of the 'red line boundary' was undertaken in March 2023. The site had comprised the five barracks buildings, bounded by agricultural fields to the west, south, and east, and by an access road to the north. The walkover identified several spoil heaps within the red line boundary, associated with lost building materials from the barracks structures, all of which are in a poor state of repair. A spoil heap is present between Building's 1 & 2 (**Photograph 62**), as well as to the north of Building 4 (**Photograph 63**). There are also extant building materials between Building's 4 & 5 (**Photograph 64**). No other archaeological features were noted within the red line boundary, with none identified within the surrounding agricultural field



Photograph 62: The spoil heap to the north of Building 4, taken facing south-east (File: HBR_170)



Photograph 63: The spoil heap between Building's 1 & 2, taken facing north (File: HBR_172)



Photograph 64: Building materials identified between Building's 4 & 5, taken facing north (File: HBR_173)

8 DISCUSSION AND CONCLUSIONS

8.1.1 The five barracks buildings had been constructed as part of the origins of the Crank Gunsite in c.1939. The Gunsite had first been depicted on the 1959-60 OS Map, comprising a large 'L' plan

plot, consisting of heavy anti-aircraft batteries, a control bunker, a generator, various outbuildings, and the five barracks buildings. These barracks formed a small cluster of buildings situated within the southern boundaries of the Crank Gunsite, c.300 meters to the south-west of the anti-aircraft batteries. The buildings are prefabricated structures, built of the same style and materials, and would have been quick and easy to assemble on site. They had been built with concrete frames, which demarcated the structures with distinct bays, and of red engineering brick in a stretcher bond. Each structure had varied in length, with Building 2 the smallest at five bays in length, and Building 5 the longest at nine bays in length. The structures featured asbestos corrugated roofing sheets, with the roof structures formed of concrete frames with a cast iron ridge beam. Several of the structures, including Buildings 1 and 5, retained small concrete flues associated with heating presumably provided by solid fuel stoves. The buildings also retain cast iron outwards swinging window casements with concrete sills, a number of which retain outer timber plank shutters. These structures are considered to have continued in use into the Cold War, as part of the site's connection with the Orange Yeoman Trails, and would have fallen out of use when the site was decommissioned in the 1960s.

8.1.2 The barracks buildings have fallen into disrepair from their lack of use, which has seen the loss of exterior walling and parts of roof structures. As barracks buildings, these structures would have been used as welfare areas and facilities, such as mess halls, kitchens, washrooms, and accommodation. However, the buildings are empty shells, which have presumably lost features of interest that would aid in understanding their original functions. Of the five structures, three appear to have originated as open plan, single spaces. Building 1 had retained a separate room within its north-eastern corner, as well as extant stud walling. The position of this walling suggests that the building had originally formed four compartments, though their use is unclear. Straight joints within the concrete flooring of Building 5 also indicate that this space had originally formed two compartments internally. A rectangular outline within this flooring, situated below a circular aperture for a concrete roof flue, had likely been associated with heating presumably provided by solid fuel stoves. Whilst the exact functions of the buildings are unclear, these structures would have played an important role in the site, forming a range of uses, and would have been used to fulfil the basic needs of the soldiers and to improve morale on site.

8.1.3 The historic building recording provides a descriptive, photographic and analytical record of the five barracks buildings at the Crank Gunsite, and provides a comprehensive archive record of the buildings, in mitigation of their proposed demolition.

9 PUBLICITY, CONFIDENTIALITY AND COPYRIGHT

9.1.1 Any publicity will be handled by the client. Archaeological Research Services Ltd will retain the copyright of all documentary and photographic material under the Copyright, Designs and Patent Act (1988).

10 STATEMENT OF INDEMNITY

10.1.1 All statements and opinions contained within this report arising from the works undertaken are offered in good faith and compiled according to professional standards. No responsibility can be accepted by the author/s of the report for any errors of fact or opinion resulting from data supplied by any third party, or for loss or other consequence arising from decisions or actions made upon the basis of facts or opinions expressed in any such report(s), howsoever such facts and opinions may have been derived.

11 ARCHIVE DEPOSITION

11.1.1 A digital archive has been prepared by ARS Ltd and will be submitted to the Archaeology Data Service (**Appendix 4**). The digital archive will be prepared in line with current best practice

outlined in Archaeology Data Service/Digital Antiquity Guides to Good Practice (ADS/Digital Antiquity 2011). A digital copy of the report in PDF/A format will be sent to the MEAS Archaeologist, as well as a copy to the Merseyside Historic Environment Record. An Oasis form has been completed and is included in **Appendix 6** of this report. A digital copy of the report will also be uploaded as part of the OASIS record for online access via the Archaeology Data Service.

12 ACKNOWLEDGEMENTS

12.1.1 Archaeological Research Services Ltd would like to thank Rainford Hall Estate Ltd for commissioning the archaeological works and for providing access to the site. Thanks also to MEAS Archaeologist Alison Plummer for their guidance and advice throughout the project.

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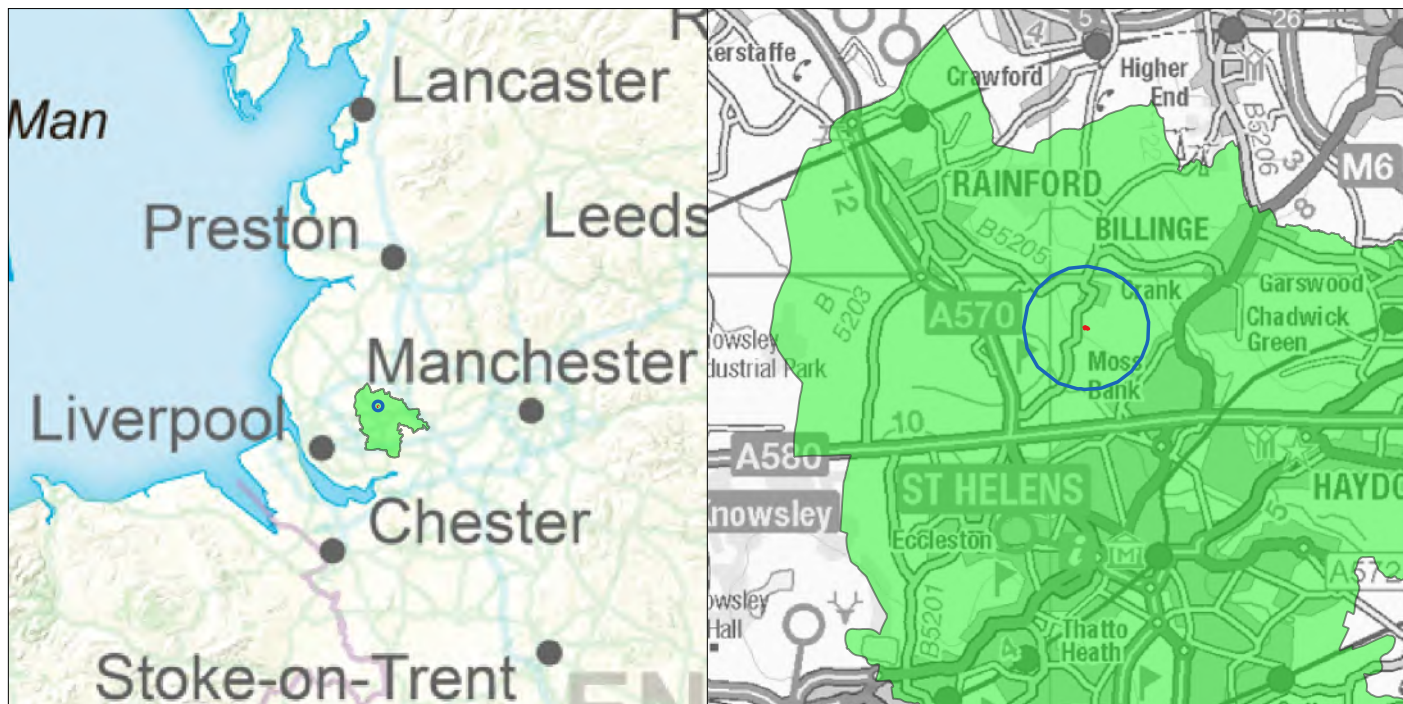
13.1 Primary Sources




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APPENDIX I FIGURES



<p>Site name: Gunsite, Rainford Hall Date: November 22 Drawn by: JL Scale: Varies</p>	<p>Figure 1: Site location</p>	<p>Archaeological Research Services Ltd</p>
<p>This drawing: © ARS Ltd Contains Ordnance Survey data. © Crown copyright and database right 2022</p>	<p> Site Boundary  St. Helens District</p>	<p>Suite 1 First Floor Dunham House Cross Street Sale M33 7HH Tel: 01619 762544 www.archaeologicalresearchservices.com</p> 

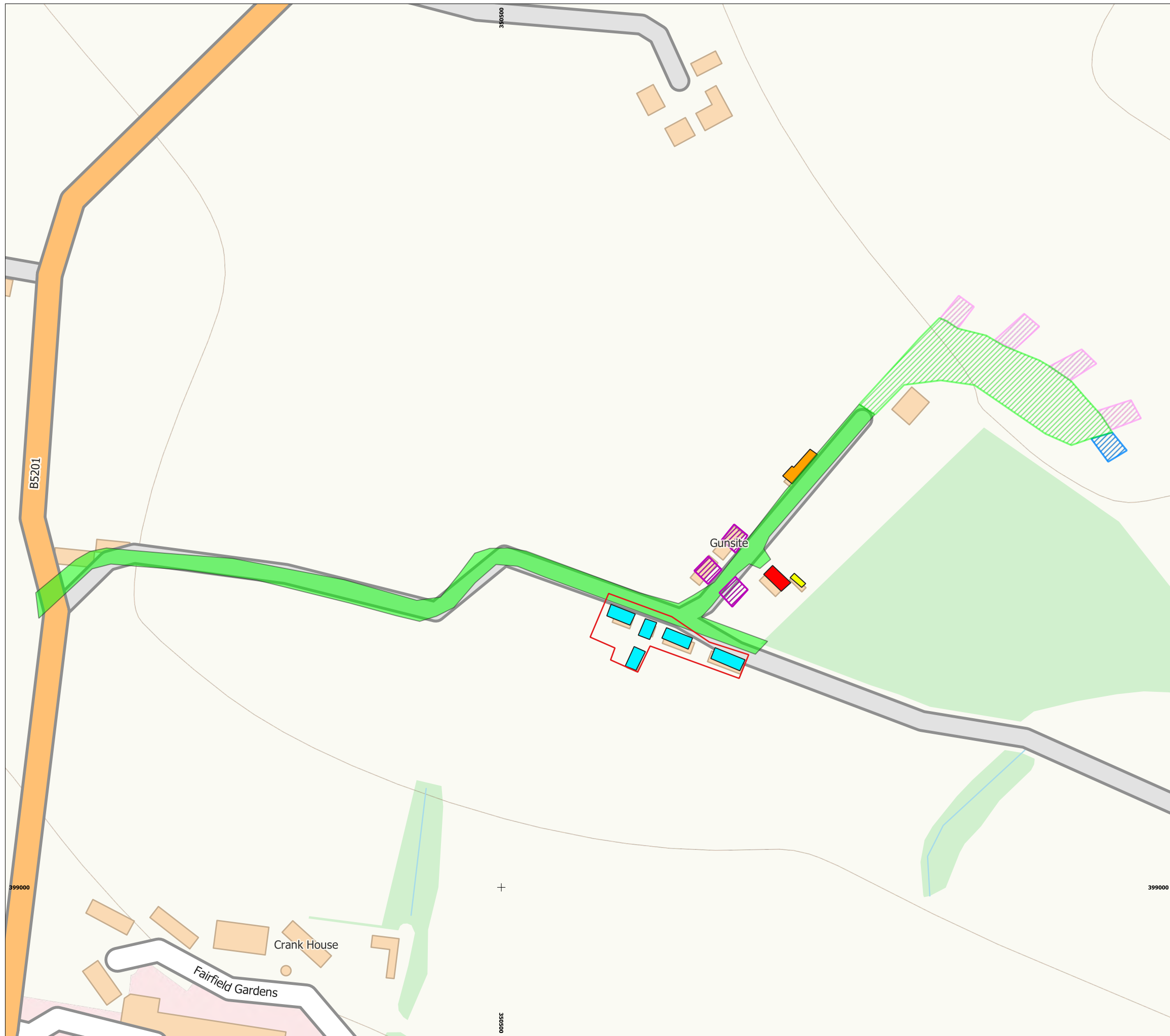
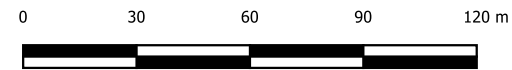


Figure 2: Remains/Identified Former Features

Legend

- Site Boundary PDA
- Preserved (polygon)
 - WW2 Command Bunker
 - Barracks
 - Cold War Command Bunker
 - Generator
 - Road
- Destroyed/Lost (polygon)
 - Other Buildings
 - Road Lost
 - Suspected Battery Locations
 - Suspected Radar and Optical Sighting



Site name: Site name
Date: Month Year
Drawn by: Initials
Scale: 1:2000 @ A3

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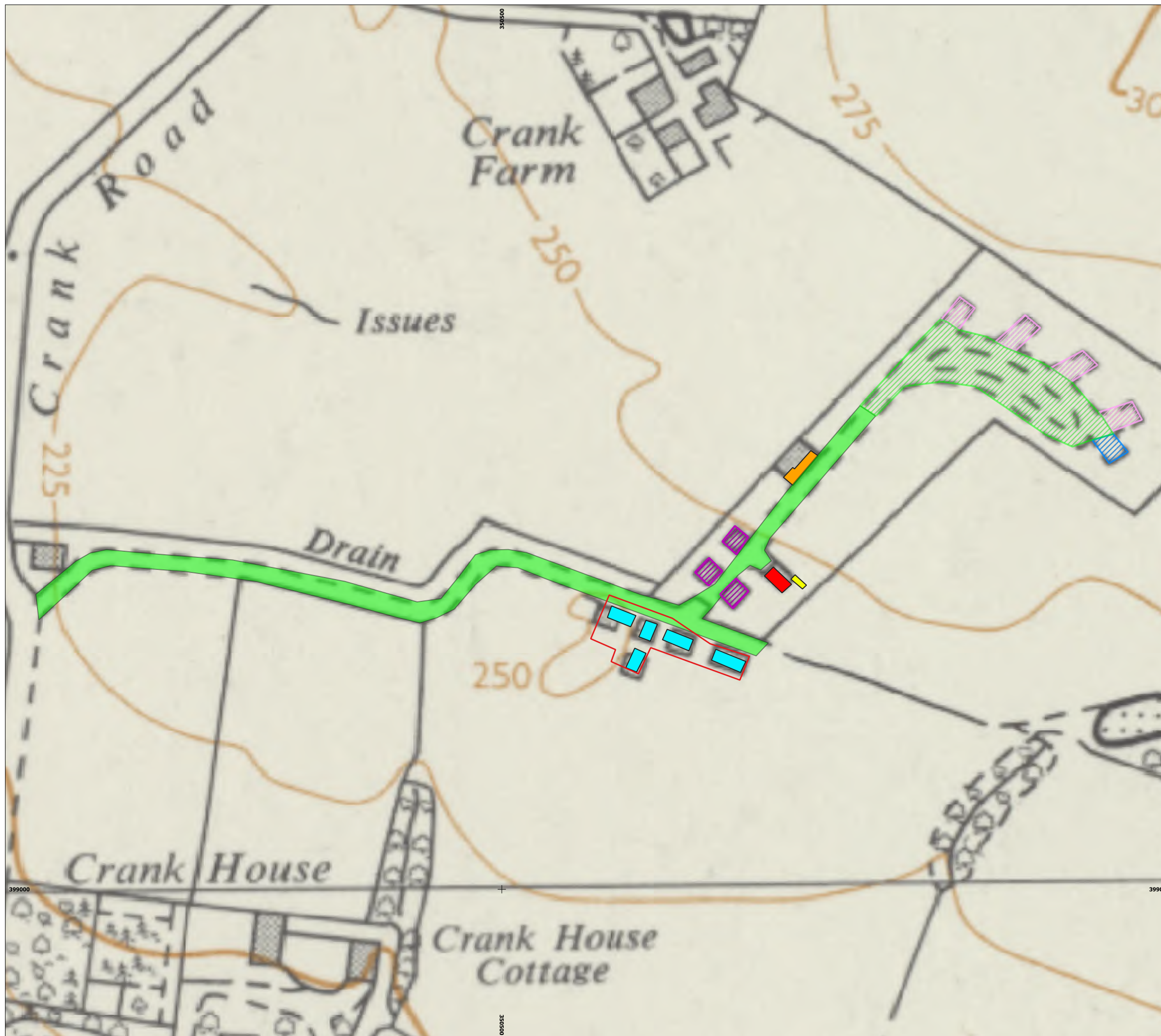
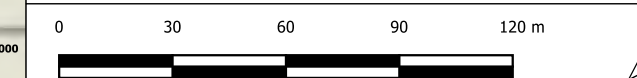


Figure 3: Remains/Identified Former Features - 1960 OS Map Overlay

Legend

- Site Boundary PDA
- Preserved (polygon)
 - WW2 Command Bunker
 - Barracks
 - Cold War Command Bunker
 - Generator
 - Road
- Destroyed/Lost (polygon)
 - Other Buildings
 - Road Lost
 - Suspected Battery Locations
 - Suspected Radar and Optical Sighting



Site name: Site name
Date: Month Year
Drawn by: Initials
Scale: 1:2000 @ A3

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Figure 4: Photographic Location Plan

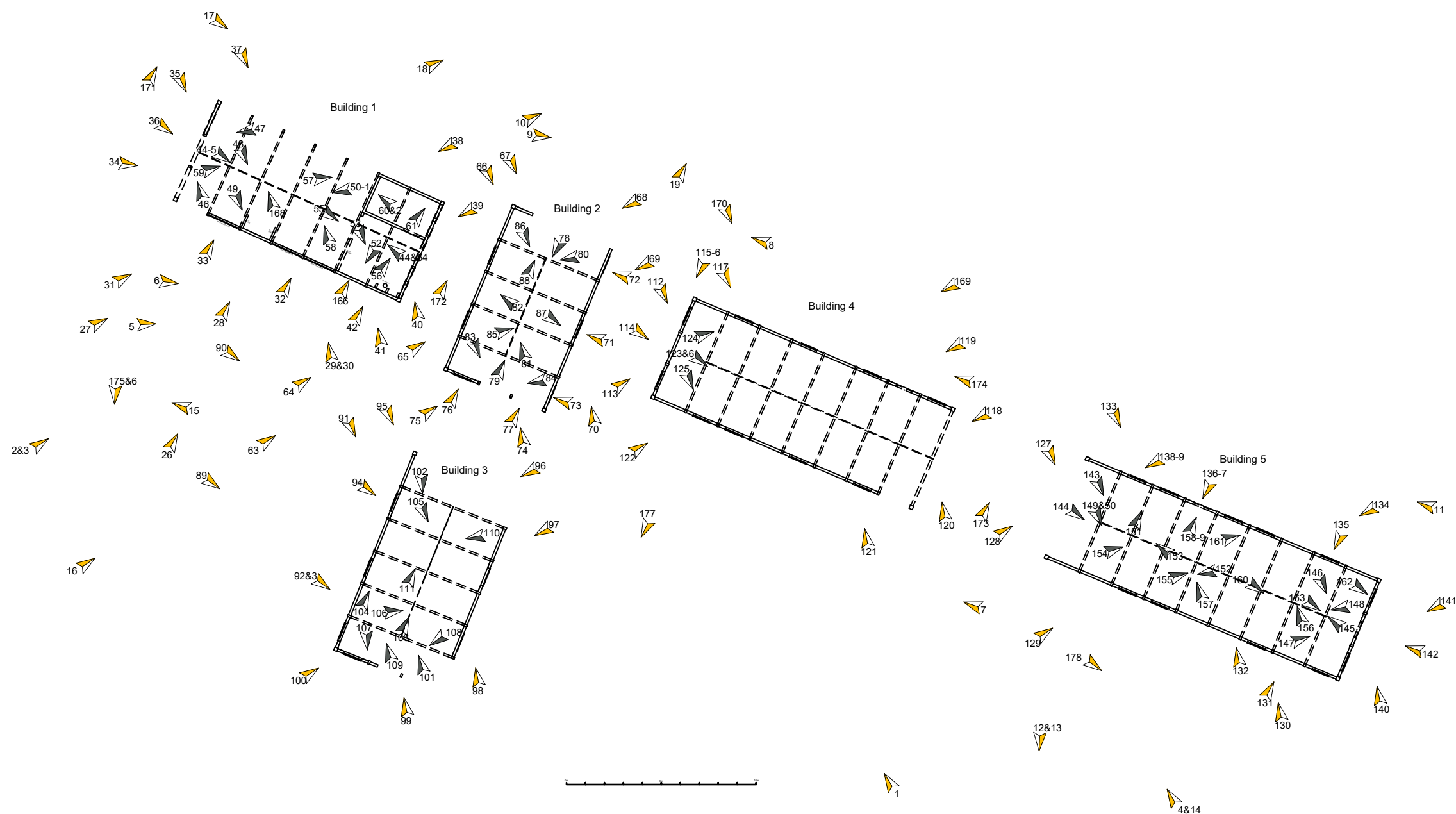


Figure 5: Building 1 Annotated Plan

Building 1

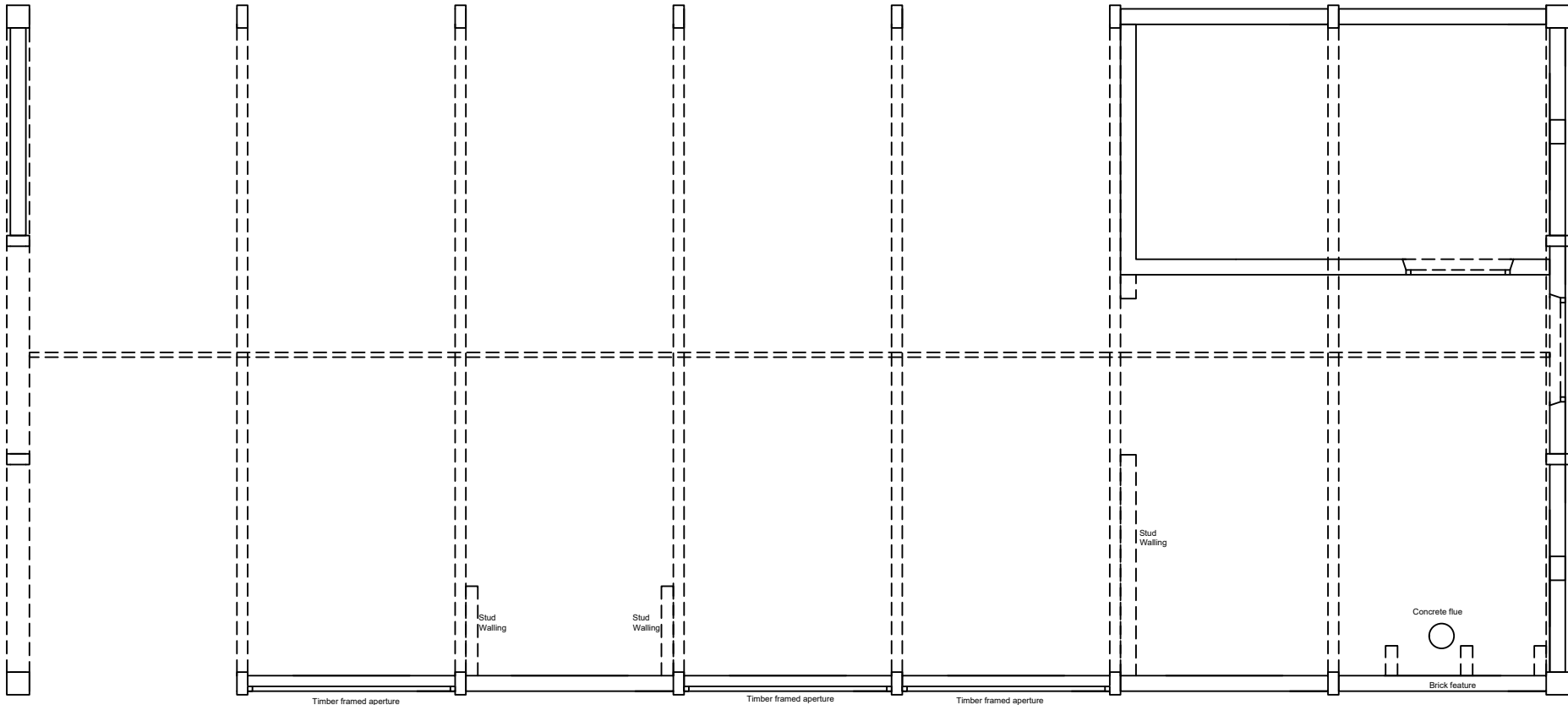
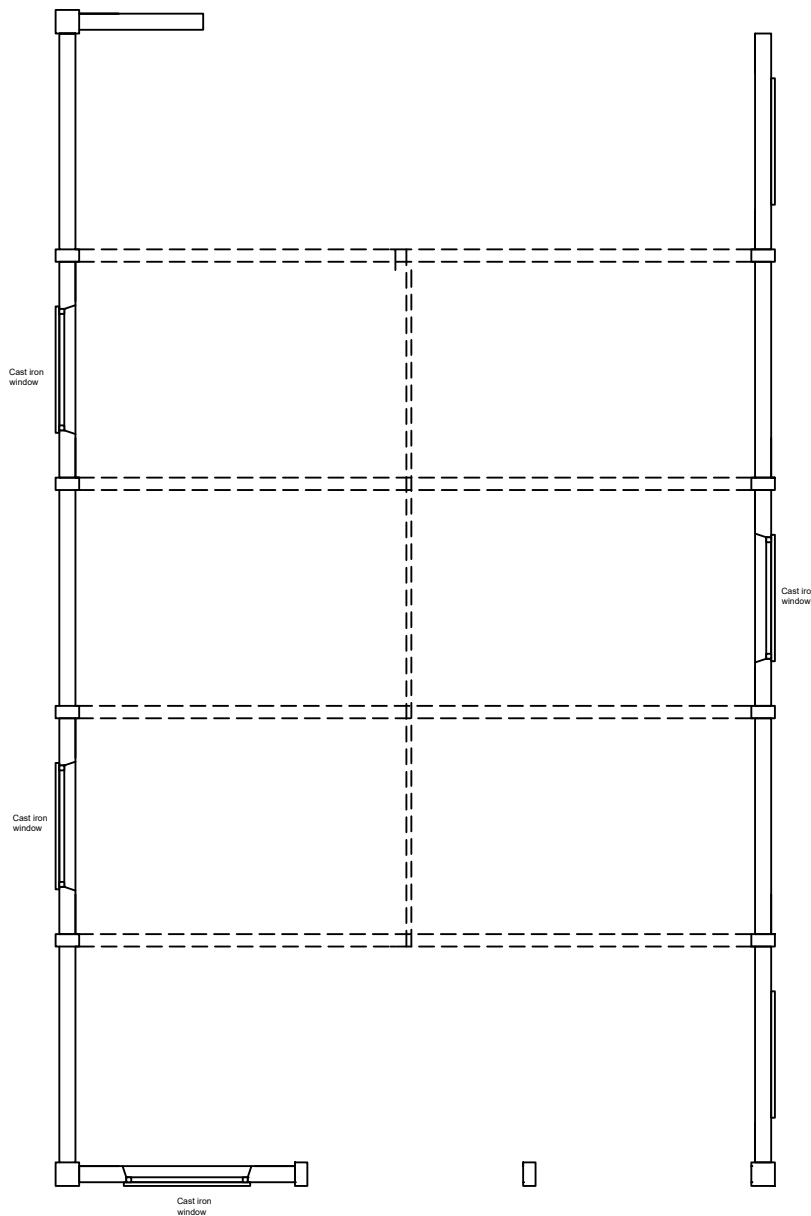


Figure 6: Building 2 Annotated Plan

Building 2



0m 5m



Site name: Crank Gunsite
Date: 22/03/2023
Drawn by: JE

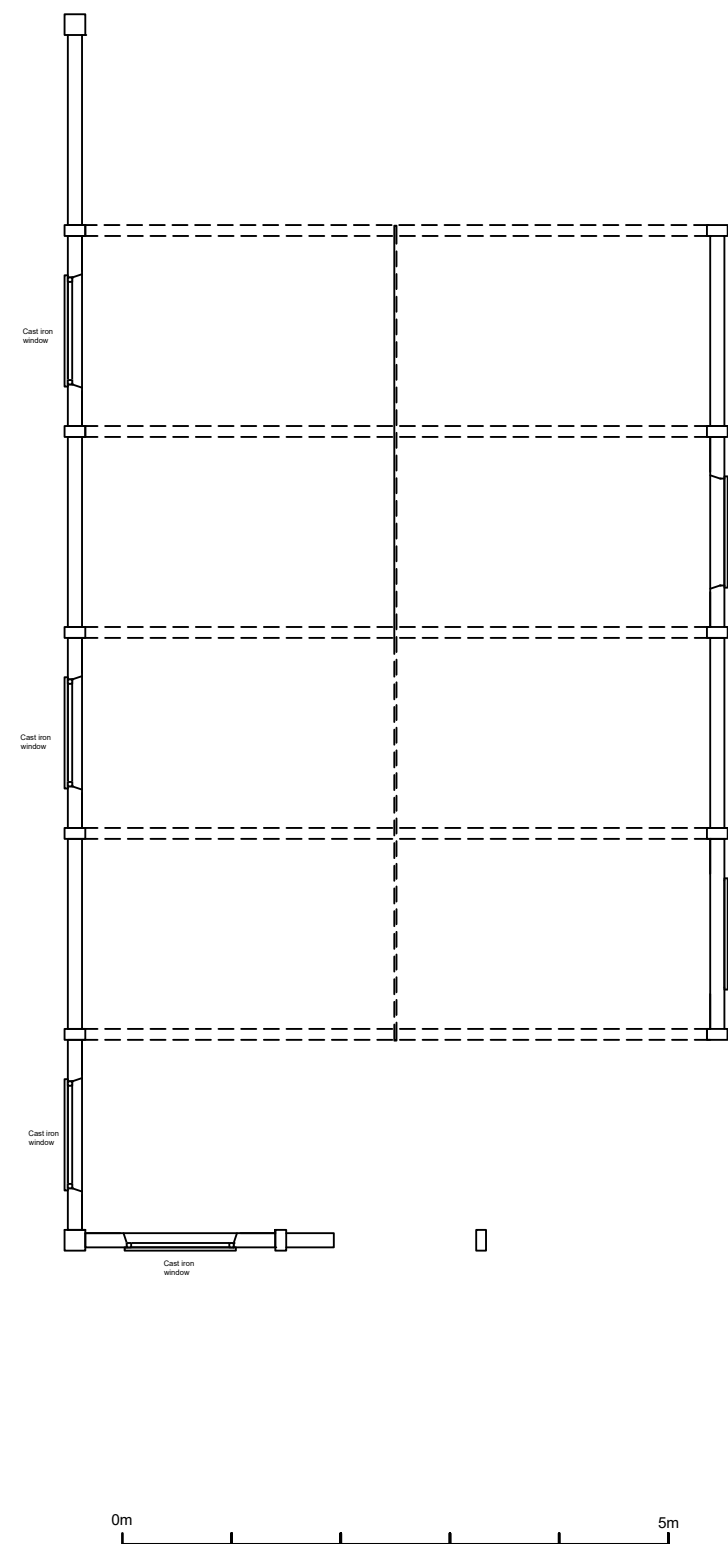
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Figure 7: Building 3 Annotated Plan

Building 3



Site name: Crank Gunsite
Date: 22/03/2023
Drawn by: JE

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Figure 8: Building 4 Annotated Plan

Building 4

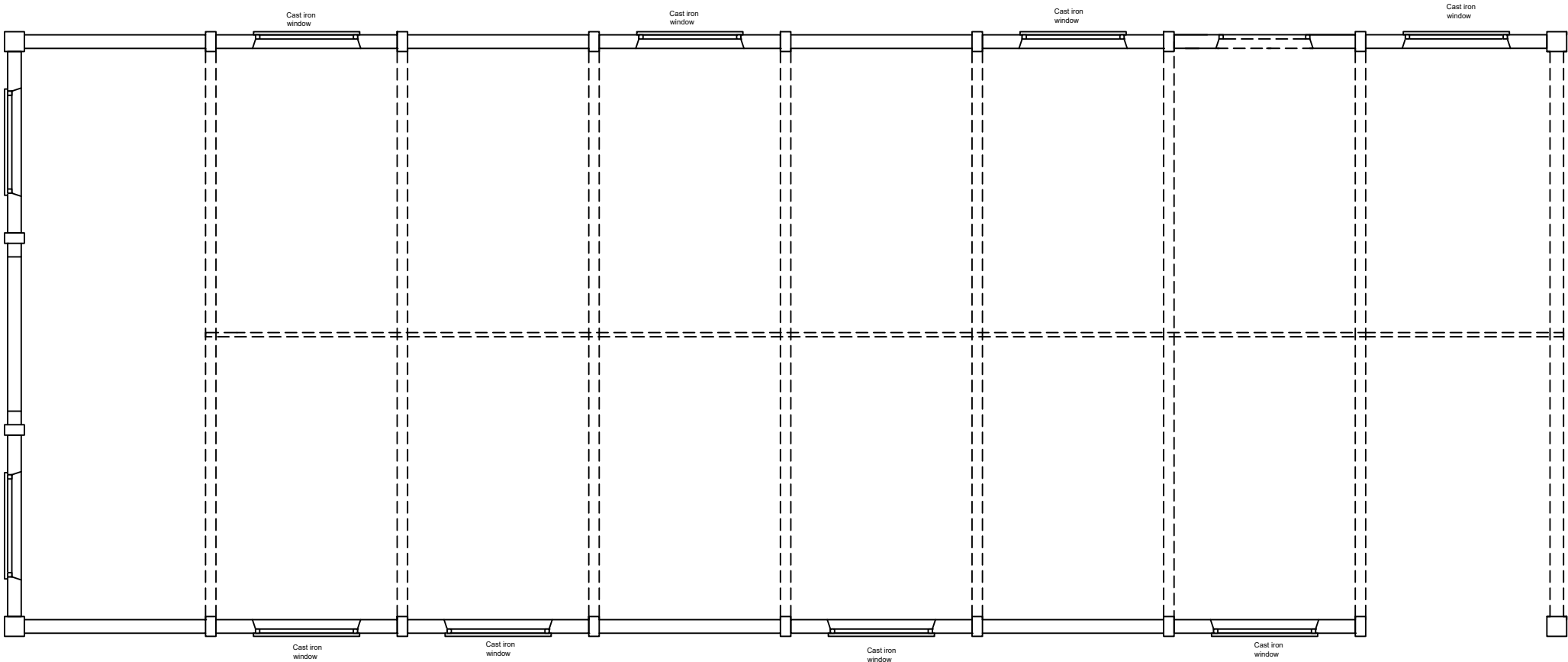


Figure 9: Building 5 Annotated Plan

Building 5

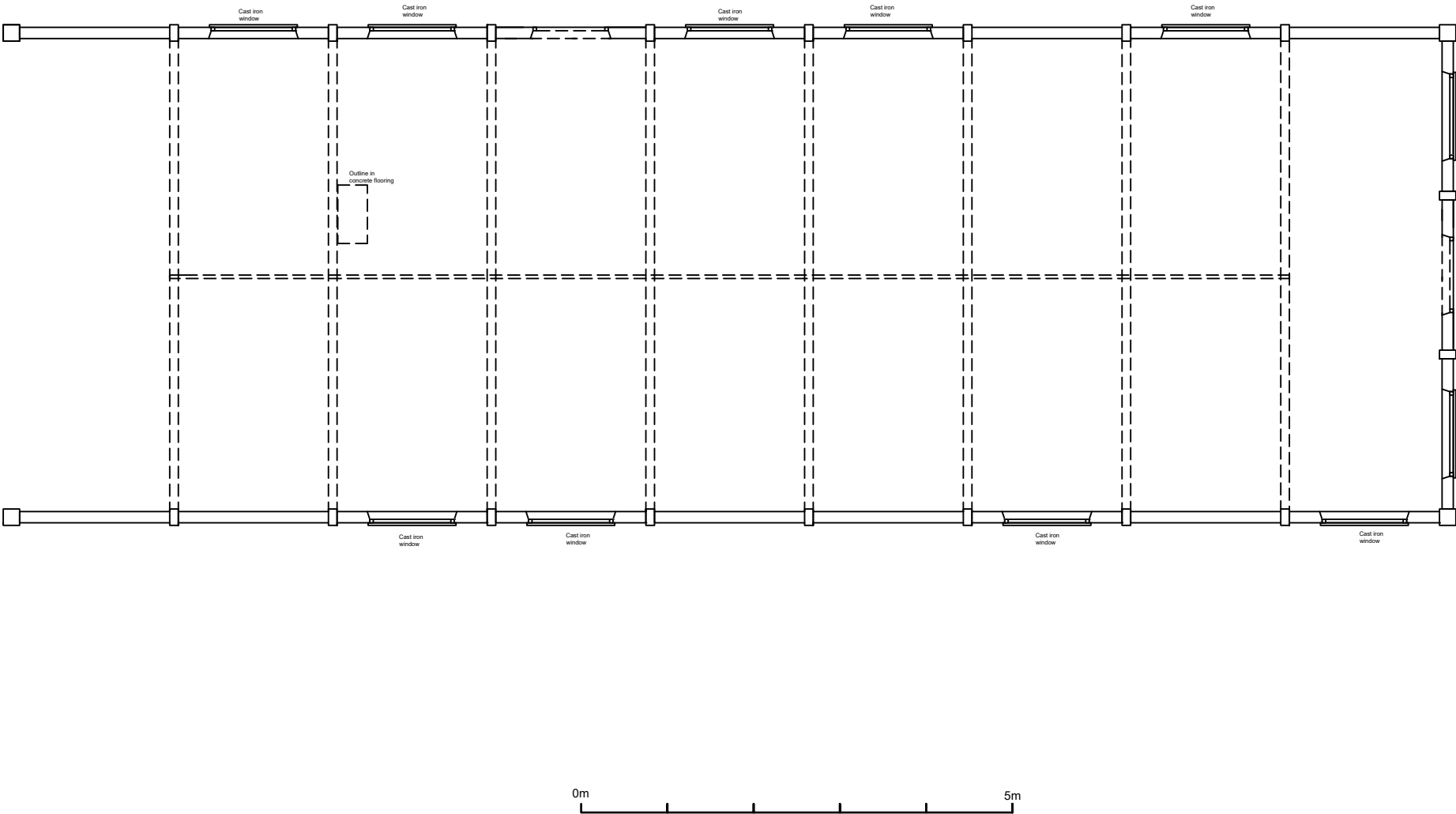
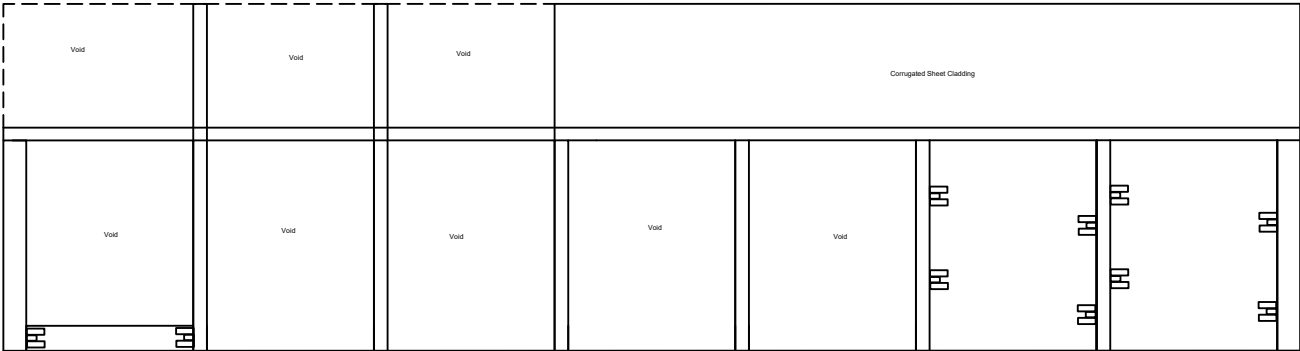


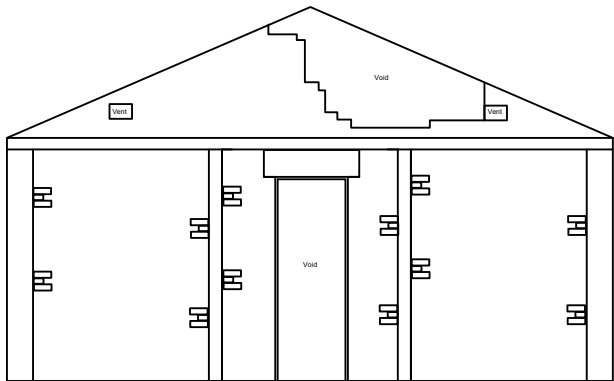
Figure 10: Building 1 Annotated Elevations

Building 1

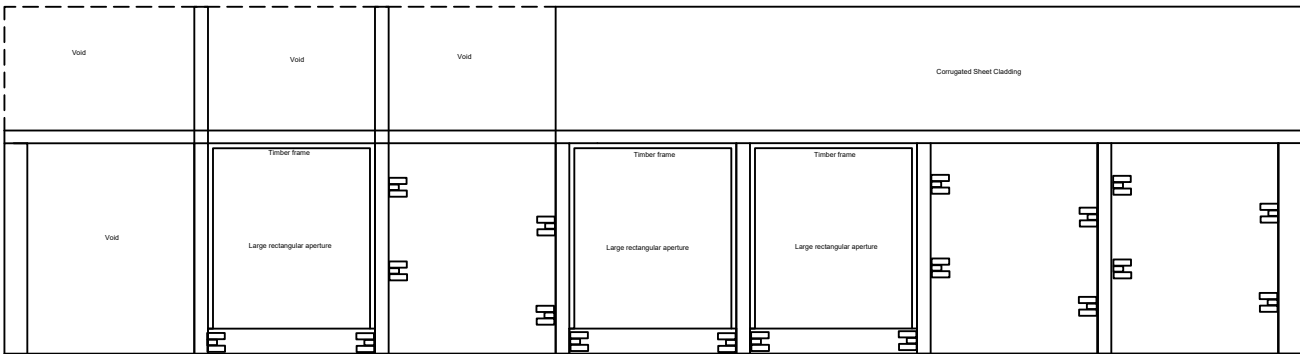
Northern Elevation



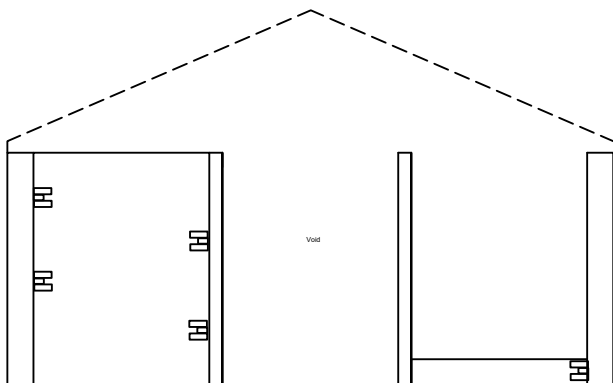
Eastern Elevation



Southern Elevation

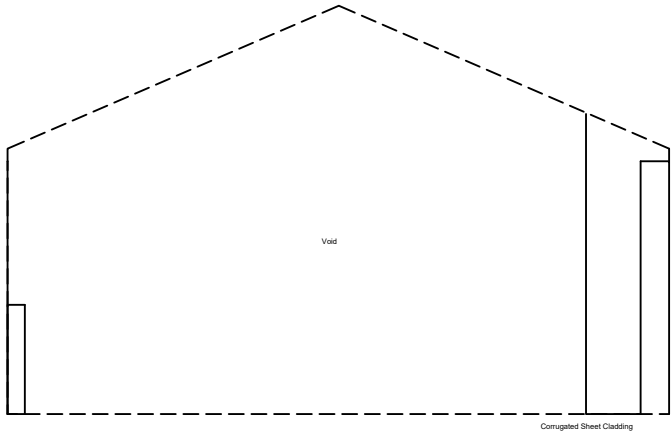


Western Elevation

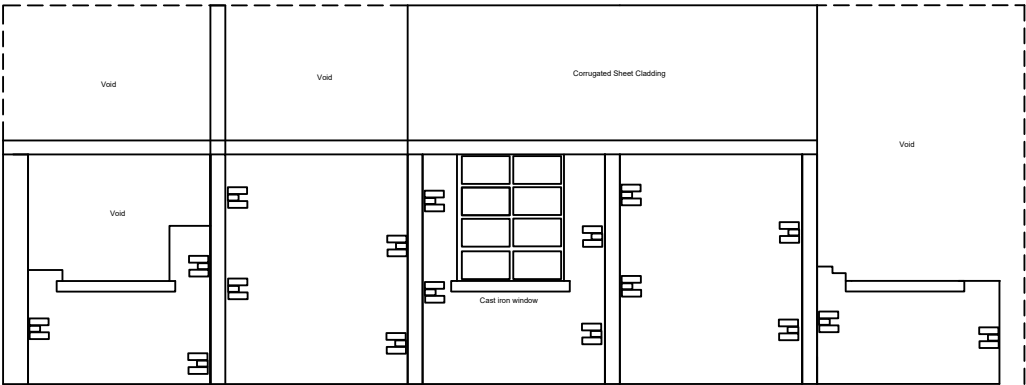


Building 2

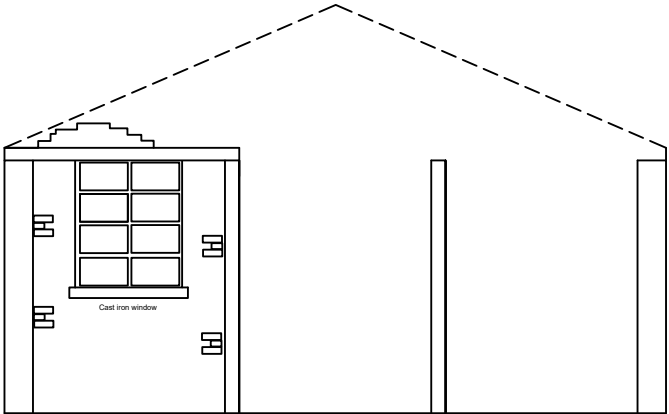
Northern Elevation



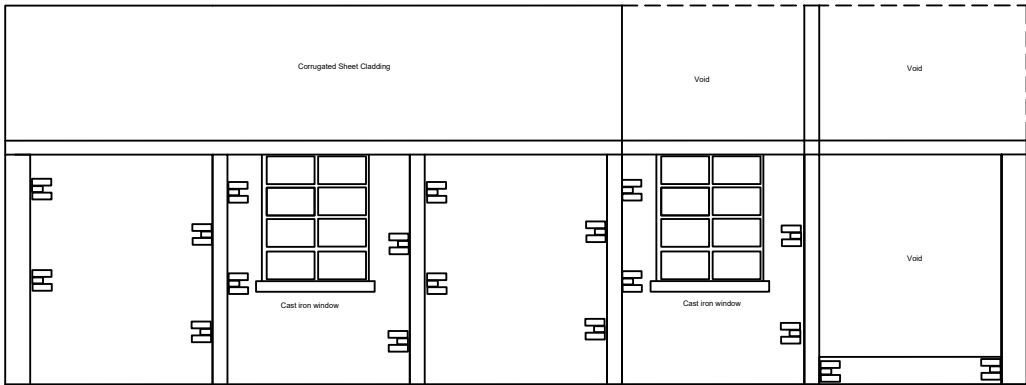
Eastern Elevation



Southern Elevation



Western Elevation



0m 5m

Figure 11: Building 2 Annotated Elevations



Site name: Crank Gunsite
Date: 22/03/2023
Drawn by: JE

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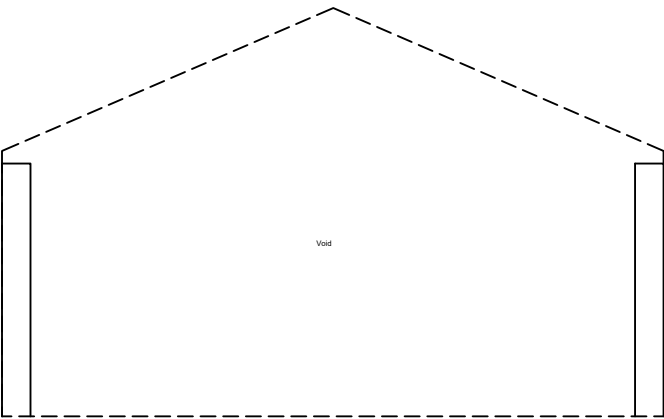
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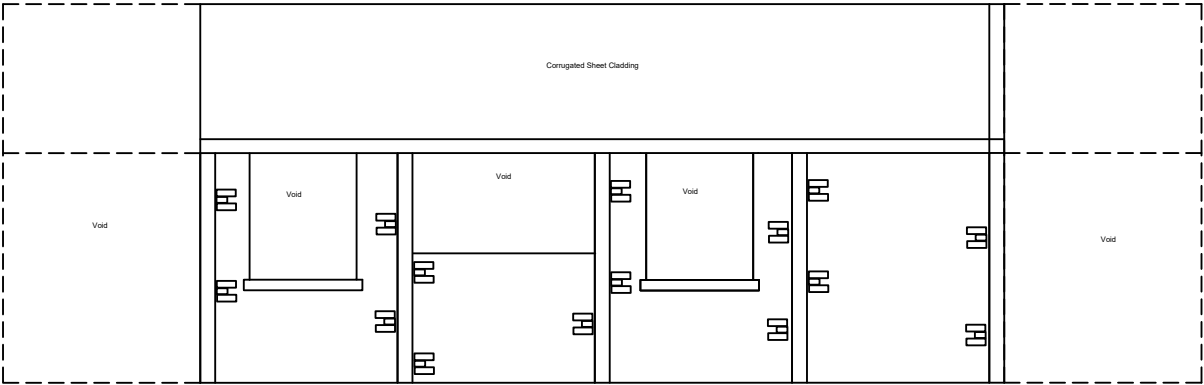
Figure 12: Building 3 Annotated Elevations

Building 3

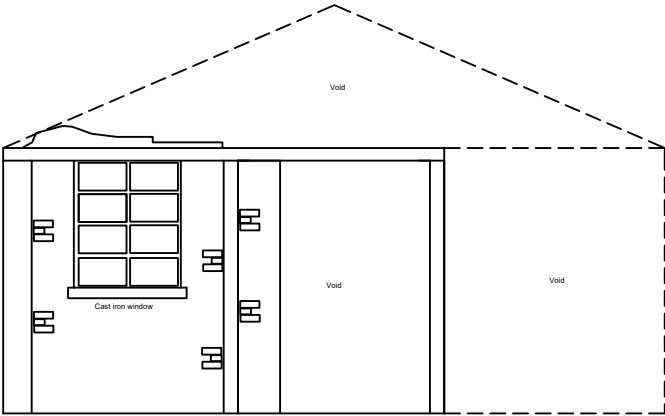
Northern Elevation



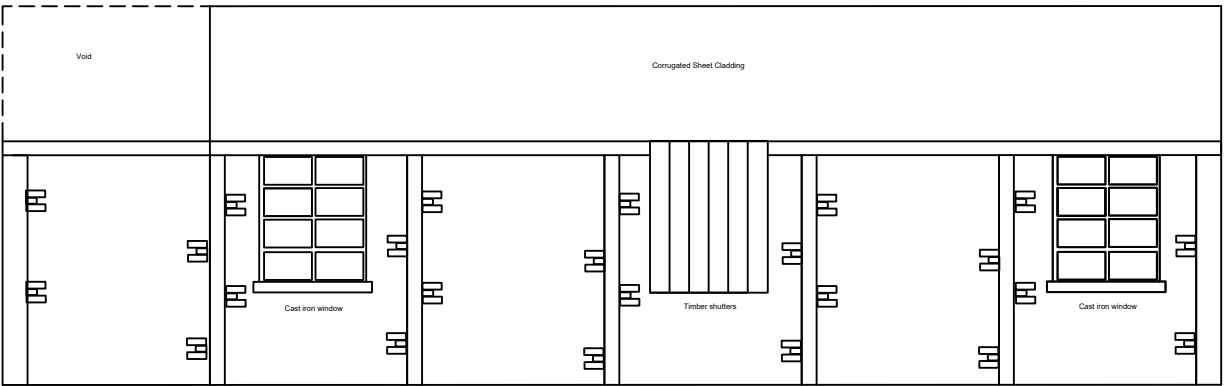
Eastern Elevation



Southern Elevation



Western Elevation



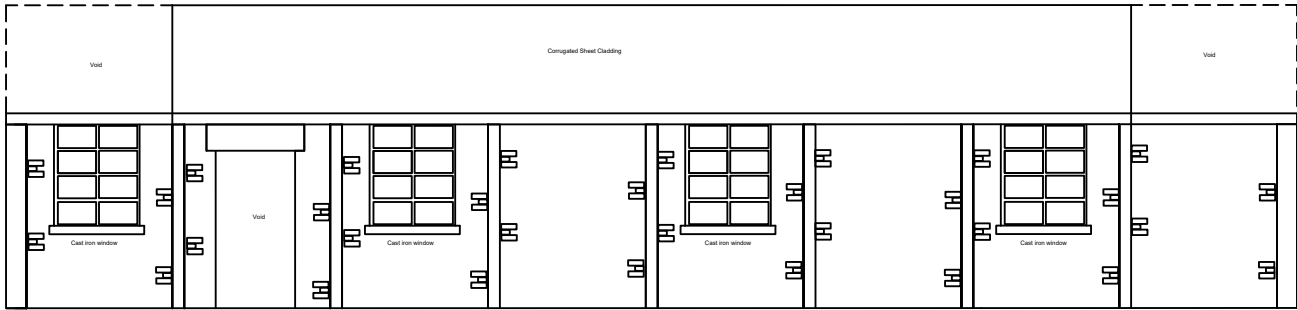
0m 5m



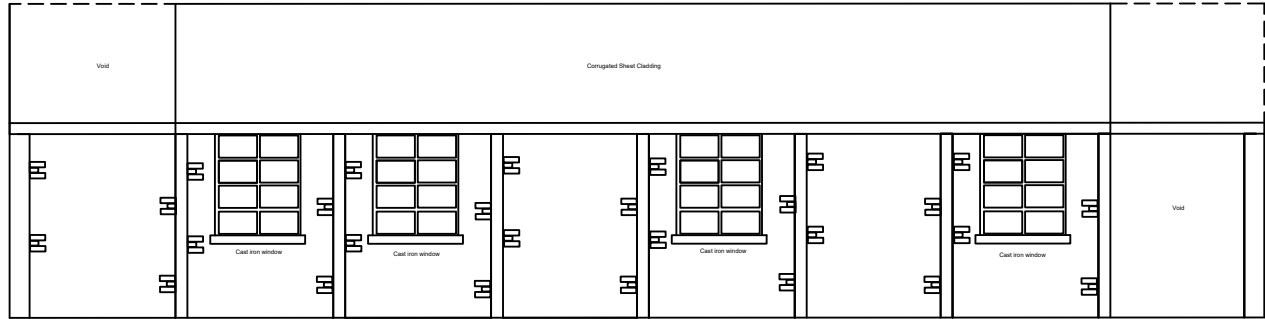
Figure 13: Building 4 Annotated Elevations

Building 4

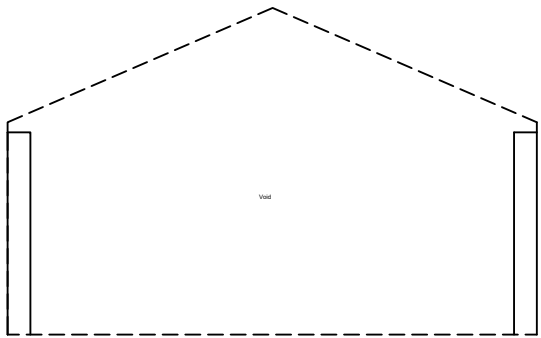
Northern Elevation



Southern Elevation



Eastern Elevation



Western Elevation

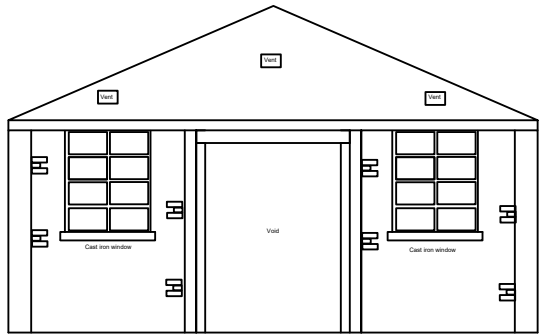
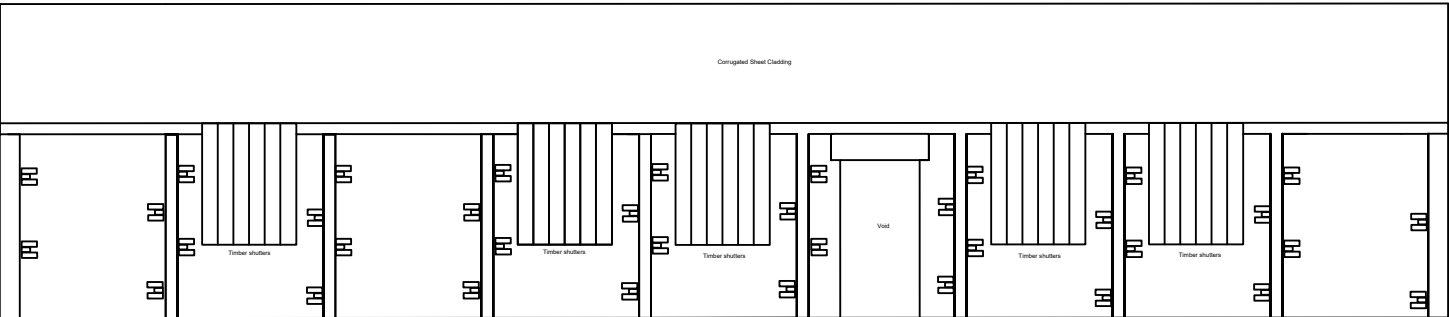


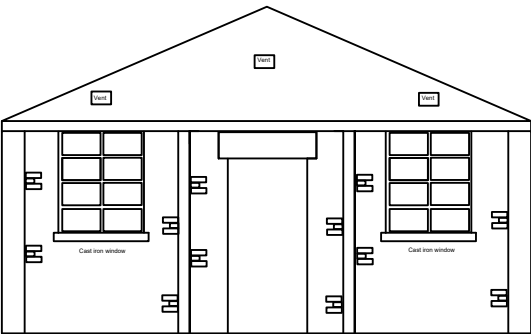
Figure 14: Building 5 Annotated Elevations

Building 5

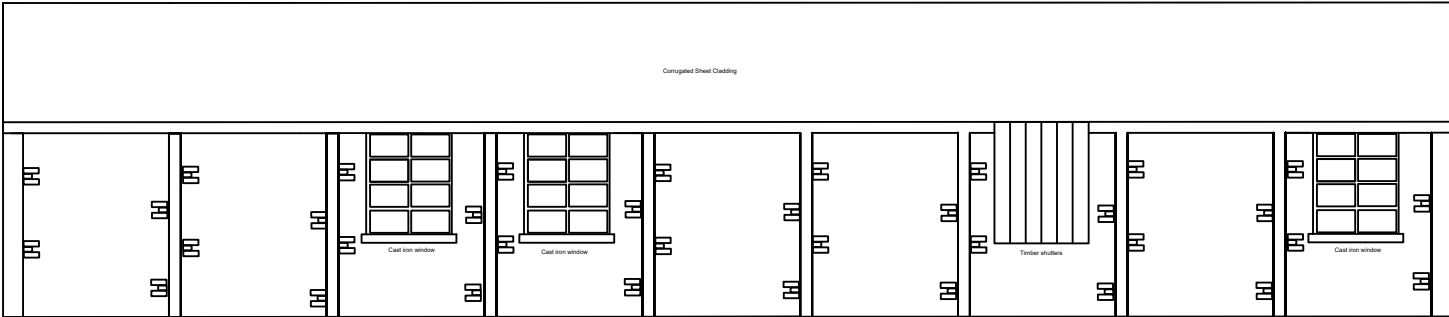
Northern Elevation



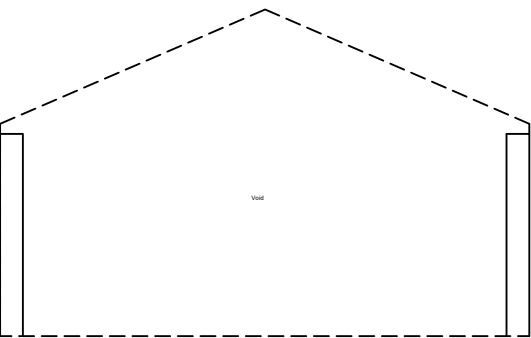
Eastern Elevation



Southern Elevation



Western Elevation



APPENDIX 2 PHOTOGRAPHIC REGISTER

Site:	Crank Gunsite Barracks, Crank Road, St Helens, Merseyside				
Date:	March 2023				
Officer:	Joseph Empsall				
Camera:	Canon EOS 700D				
Photo No.	Description	Scale	Orientation	Located on drawing	
Image prefix:					
Crank_Gunsite_HBR					
1	View of the site to the north-west		NW	✓	
2	View of the site to the north-east		NE	✓	
3	View of the site to the north-east		NE	✓	
4	View of the site to the north-west		NW	✓	
5	View of the site to the north-east		NE	✓	
6	View of the site to the east		E	✓	
7	View to the west within the site		W	✓	
8	View of the access road to the north of the site, taken facing west		W	✓	
9	View of the access road to the north of the site, taken facing east		E	✓	
10	View of the road linking with the houses to the north of the site, taken facing north-east		NE	✓	
11	View of the site from the east, taken facing west		W	✓	
12	View of the agricultural fields to the south of the site		S	✓	
13	View of Rainford Hall to the south of the site, taken facing south		S	✓	
14	View of the barracks buildings from the south-east, taken facing north-west		NW	✓	
15	View of the agricultural fields to the south-west of the site		SW	✓	
16	View of the barracks buildings from the south-west, taken facing north-east		NE	✓	
17	View of the site from the west, taken facing east		E	✓	
18	View of the houses to the north of the site, taken facing north-east		NE	✓	
19	View along the road to the north of the site, taken facing north		N	✓	

20	View of the concrete structures to the north of the site, forming part of the original Gunsite, taken facing north-west with 2m scale	2m	NW	✓	
21	View of the concrete structures to the north of the site, forming part of the original Gunsite, taken facing north-west with 2m scale	2m	NW	✓	
22	View of the interior of the concrete structure to the north of the site, forming part of the original Gunsite, taken facing west with 2m scale		W	✓	
23	View of the concrete structures to the north of the site, forming part of the original Gunsite, taken facing south-west		SW	✓	
24	View along the road to the north of the site, taken facing south towards the barracks buildings		S	✓	
25	View of concrete structures to the north-east of the site, taken facing south-east		SE	✓	
26	View of Building 1, taken facing north with 2m scale	2m	N	✓	
27	View of Building 1, taken facing north-east with 2m scale	2m	NE	✓	
28	View of Building 1's southern elevation, taken facing north with 2m scale	2m	N	✓	
29	View of Building 1's southern elevation, taken facing north with 2m scale	2m	N	✓	
30	Oblique view of Building 1's southern elevation, taken facing north-west with 2m scale	2m	NW	✓	
31	Oblique view of Building 1's southern elevation, taken facing north-east with 2m scale	2m	NE	✓	
32	View of the two apertures with outer timber frame on the southern elevation of Building 1, taken with 2m scale	2m	N	✓	
33	View of the western aperture with outer timber frame on the southern elevation of Building 1, taken with 2m scale	2m	N	✓	
34	Oblique view of Building 1's western elevation, taken facing north-east with 2m scale	2m	NE	✓	
35	Oblique view of Building 1's western elevation, taken facing south-east with 2m scale	2m	SE	✓	
36	View of the central aperture on Building 1's western elevation, taken with 2m scale facing east	2m	E	✓	
37	Oblique view of Building 1's northern elevation, taken facing south-east with 2m scale	2m	SE	✓	
38	Oblique view of Building 1's northern elevation, taken facing south-west with 2m scale	2m	SW	✓	
39	Oblique view of Building 1's eastern elevation, taken facing south-west		SW	✓	

40	Oblique view of Building 1's eastern elevation, taken facing north-west		NW	✓	
41	View of Building 1's roof structure with rooflight		NW	✓	
42	View of the flue within the eastern extent of Building 1's roof, taken facing north		N	✓	
43	View to the east within Building 1, taken with 2m scale	2m	E	✓	
44	View to the west within Building 1, taken with 2m scale	2m	w	✓	
45	View of the roof structure within Building 1, taken facing east		E	✓	
46	Oblique view of Building 1's western interior wall, taken with 2m scale facing west	2m	W	✓	
47	Oblique view of Building 1's western interior wall, taken with 2m scale facing south-west	2m	SW	✓	
48	Oblique view of Building 1's southern interior wall, taken with 2m scale facing south-east	2m	SE	✓	
49	View of the remains of stud walling attached to the southern interior wall of Building, taken with 2m scale facing south-east	2m	SE	✓	
50	Oblique view of Building 1's southern interior wall, taken with 2m scale facing south-west	2m	SW	✓	
51	Oblique view of Building 1's southern interior wall, taken with 2m scale facing south-west	2m	SW	✓	
52	View of the eastern end of Building 1's southern interior wall, taken with 2m scale facing south	2m	S	✓	
53	View of the brick feature within the south-eastern corner of Building 1, taken with 1m scale	1m	SE	✓	
54	View of the extant stud walling attached to the eastern extent of Building 1's southern wall, taken with 2m scale facing west	2m	W	✓	
55	View of the eastern interior wall of Building 1, taken with 2m scale	2m	E	✓	
56	View of the structure within the north-eastern corner of Building 1's interior, taken facing north with 2m scale	2m	N	✓	
57	View of the structure within the north-eastern corner of Building 1's interior, taken facing north-east with 2m scale	2m	NE	✓	
58	Oblique view of Building 1's northern interior wall, taken with 2m scale facing north-west	2m	NW	✓	
59	Oblique view of Building 1's northern interior wall, taken with 2m scale facing north-east	2m	NE	✓	
60	View within the north-eastern space of Building 1, taken facing west		W	✓	

61	View within the north-eastern space of Building 1, taken facing north		N	✓	
62	View within the north-eastern space of Building 1, taken facing north		N	✓	
63	View of Building 2, taken facing north-east with 2m scale	2m	NE	✓	
64	View of Building 2, taken facing north-east with 2m scale	2m	NE	✓	
65	Oblique view of Building 2's western elevation, taken with 2m scale facing north-east	2m	NE	✓	
66	Oblique view of Building 2's western elevation, taken with 2m scale facing south-east	2m	SE	✓	
67	Oblique view of Building 2's northern elevation, taken with 2m scale facing south	2m	S	✓	
68	Oblique view of Building 2's northern elevation, taken with 2m scale facing south-west	2m	SW	✓	
69	Oblique view of Building 2's eastern elevation, taken with 2m scale facing south-west	2m	SW	✓	
70	Oblique view of Building 2's eastern elevation, taken with 2m scale facing north-west	2m	NW	✓	
71	View of a window on the eastern elevation of Building 2, taken with 2m scale	2m	W	✓	
72	View of the extant sill associated with an earlier window, on the eastern elevation of Building 2	1m	W	✓	
73	View of the extant sill associated with an earlier window, on the eastern elevation of Building 2	1m	W	✓	
74	Oblique view of Building 2's southern elevation, taken with 2m scale facing north-west	2m	NW	✓	
75	Oblique view of Building 2's southern elevation, taken with 2m scale facing north-east	2m	NE	✓	
76	View of a window on the southern elevation of Building 2, taken facing north		N	✓	
77	View of the concrete frame on the southern elevation of Building 2, taken facing north		N	✓	
78	View to the north within Building 2's interior, taken with 2m scale	2m	N	✓	
79	View to the south within Building 2's interior, taken with 2m scale	2m	S	✓	
80	Oblique view of Building 2's western interior wall, taken with 2m scale facing south-west	2m	SW	✓	
81	Oblique view of Building 2's western interior wall, taken with 2m scale facing north-west	2m	NW	✓	
82	View of the windows on the western interior wall of Building 2, taken with 2m scale	2m	W	✓	

83	Oblique view of Building 2's southern interior wall, taken with 2m scale facing south-east	2m	SE	✓	
84	Oblique view of Building 2's southern interior wall, taken with 2m scale facing south-west	2m	SW	✓	
85	Oblique view of Building 2's eastern interior wall, taken with 2m scale facing north-east	2m	NE	✓	
86	Oblique view of Building 2's eastern interior wall, taken with 2m scale facing south-east	2m	SE	✓	
87	View of a window on the eastern wall of Building 2, taken facing east	2m	E	✓	
88	View of the northern interior of Building 2, taken with 2m scale facing north	2m	N	✓	
89	View of Building 3, taken facing south-east with 2m scale	2m	SE	✓	
90	View of Building 3, taken facing east with 2m scale	2m	E	✓	
91	Oblique view of Building 3's western elevation, taken with 2m scale facing north-east	2m	NE	✓	
92	View of the southern end of Building 3's western elevation, taken with 2m scale facing east	2m	E	✓	
93	View of the southern end of Building 3's western elevation, taken with 2m scale facing east	2m	E	✓	
94	View of the northern extent of Building 3's western elevation, taken facing east with 2m scale	2m	E	✓	
95	Oblique view of Building 3's western elevation, taken with 2m scale facing south-east	2m	SE	✓	
96	Oblique view of Building 3's northern elevation, taken with 2m scale facing south-east	2m	SE	✓	
97	Oblique view of Building 3's eastern elevation, taken with 2m scale facing south	2m	S	✓	
98	Oblique view of Building 3's eastern elevation, taken with 2m scale facing north	2m	N	✓	
99	Oblique view of Building 3's southern elevation, taken facing west		W	✓	
100	Oblique view of Building 3's southern elevation, taken facing west		E	✓	
101	View to the north-west within Building 3, taken with 2m scale	2m	NW	✓	
102	View to the south-east within Building 3, taken with 2m scale	2m	SE	✓	
103	View of the roof structure within Building 3, taken facing north		N	✓	
104	View of the concrete frame of the roof structure within Building 3, taken facing north		N	✓	

105	Oblique view of Building 3's eastern interior wall, taken with 2m scale facing south-east	2m	SE	✓	
106	Oblique view of Building 3's eastern interior wall, taken with 2m scale facing north-east	2m	NE	✓	
107	View of Building 3's southern interior wall, taken with 2m scale facing south	2m	S	✓	
108	View of Building 3's southern interior wall, taken with 2m scale facing south-west	2m	SW	✓	
109	Oblique view of Building 3's western interior wall, taken with 2m scale facing north-west	2m	NW	✓	
110	Oblique view of Building 3's western interior wall, taken with 2m scale facing south-west	2m	SW	✓	
111	View to the north within Building 3's interior		N	✓	
112	Oblique view of Building 4's western elevation, taken with 2m scale facing south-east	2m	SE	✓	
113	Oblique view of Building 4's western elevation, taken with 2m scale facing north-east	2m	NE	✓	
114	View of Building 4's western elevation, taken with 2m scale facing east	2m	E	✓	
115	View of the leaning of Building 4's western side, taken facing south		S	✓	
116	View of the leaning of Building 4's western side, taken facing south		S	✓	
117	Oblique view of Building 4's northern elevation, taken with 2m scale facing south-east	2m	SE	✓	
118	Oblique view of Building 4's eastern elevation, taken with 2m scale facing south-west	2m	SW	✓	
119	Oblique view of Building 4's northern elevation, taken with 2m scale facing south-west	2m	SW	✓	
120	Oblique view of Building 4's eastern elevation, taken with 2m scale facing north-west	2m	NW	✓	
121	Oblique view of Building 4's southern elevation, taken with 2m scale facing north-west	2m	NW	✓	
122	Oblique view of Building 4's southern elevation, taken with 2m scale facing north-east	2m	NE	✓	
123	View to the east within Building 4		E	✓	
124	View to the north-east within Building 4		NE	✓	
125	View to the south-east within Building 4		NE	✓	
126	View of Building 4's roof structure, taken facing east		E	✓	
127	Oblique view of Building 5's western elevation, taken facing east		E	✓	
128	Oblique view of Building 5's western elevation, taken facing north-east		NE	✓	

129	Oblique view of Building 5's southern elevation, taken facing north-east		NE	✓	
130	Oblique view of Building 5's southern elevation, taken facing north-west		NW	✓	
131	View of the eastern extent of Building 5's southern elevation, taken facing north		N	✓	
132	View of the flue on the roof of Building 5, taken facing north-west		NW	✓	
133	Oblique view of Building 5's northern elevation, taken facing south-east		SE	✓	
134	Oblique view of Building 5's northern elevation, taken facing south-east		SE	✓	
135	View of the eastern extent of Building 5's northern elevation, taken facing south		S	✓	
136	View of the central extent of Building 5's northern elevation, taken facing south		S	✓	
137	View of the central extent of Building 5's northern elevation, taken facing south		S	✓	
138	View of the flues within the western extent of Building 5's roof, taken facing south-west		SW	✓	
139	View of the flues within the western extent of Building 5's roof, taken facing south-west		SW	✓	
140	Oblique view of Building 5's eastern elevation, taken facing north-west		NW	✓	
141	Oblique view of Building 5's eastern elevation, taken facing south-west		SW	✓	
142	View of Building 5's eastern elevation, taken facing west		W	✓	
143	View of the concrete flooring within Building 5's interior, taken facing south-east with 2m scale	2m	SE	✓	
144	View to the east within Building 5's interior, taken with 2m scale	2m	E	✓	
145	View to the west within Building 5's interior, taken with 2m scale	2m	W	✓	
146	Oblique view of Building 5's eastern interior wall, taken with 2m scale facing south-west	2m	SE	✓	
147	Oblique view of Building 5's eastern interior wall, taken with 2m scale facing north-west	2m	NE	✓	
148	Oblique view of Building 5's southern interior wall, taken with 2m scale facing south-west	2m	SW	✓	
149	Oblique view of Building 5's southern interior wall, taken with 2m scale facing south-east	2m	SE	✓	
150	Oblique view of Building 5's southern interior wall, taken with 2m scale facing south-east	2m	SE	✓	

151	View of windows on the southern interior wall of Building 5, taken with 2m scale	2m	S	✓	
152	Oblique view of Building 5's southern interior wall, taken with 2m scale facing south-west	2m	SW	✓	
153	View of the western interior of Building 5		W	✓	
154	Oblique view of Building 5's northern interior wall, taken with 2m scale facing north-east	2m	NE	✓	
155	Oblique view of Building 5's northern interior wall, taken with 2m scale facing north-east	2m	NE	✓	
156	Oblique view of Building 5's northern interior wall, taken with 2m scale facing north-west	2m	NW	✓	
157	Oblique view of Building 5's northern interior wall, taken with 2m scale facing north-west	2m	NW	✓	
158	View of the doorway on the northern wall of Building 5's interior, taken with 2m scale facing north	2m	N	✓	
159	View of a flue fixture within Building 5's roof structure			✓	
160	View of Building 5's roof structure, taken facing east		E	✓	
161	View of a vent on the eastern wall of Building 5, taken facing east		E	✓	
162	View of the concrete frame within Building 5, taken facing north-east		NE	✓	
163	View of a vent on the eastern wall of Building 5, taken facing east		E	✓	
164	View of a flue within the northern extent of Building 1's interior		E	✓	
165	View of a rooflight within the northern extent of Building 1's interior		S	✓	
166	View of the brick used in the construction of the buildings			✓	
167	View of the corrugated sheet cladding used in the roofing of the buildings			✓	
168	View of the cast iron ridge beam used within the roof structure of the buildings, taken within Building 1 facing north-west		NW	✓	
169	View of the spoil heap to the north of Building 4, taken facing west		W	✓	
170	View of the spoil heap between Building's 1 & 2, taken facing south		S	✓	
171	View of the spoil heap to the north of Building 4, taken facing south-east		SE	✓	
172	View of a recent trench associated with council work, to the east of Building 1		N	✓	

173	View of brick debris between Building's 2 & 4, taken facing north		N	✓	
174	View of the spoil heap along Building 4's northern side, taken facing west		W	✓	
175	View of the fields to the south of the site, taken facing south		S	✓	
176	View of the fields to the south of the site, taken facing south		S	✓	
177	View of the fields to the east of the site, taken facing south		S	✓	
178	View of the fields to the east of the site, taken facing east		S	✓	

APPENDIX 3 PHOTOGRAPHIC CONTEXT SHEETS



Crank_Gunsite_HBR_1



Crank_Gunsite_HBR_2



Crank_Gunsite_HBR_3



Crank_Gunsite_HBR_4



Crank_Gunsite_HBR_5



Crank_Gunsite_HBR_6



Crank_Gunsite_HBR_7



Crank_Gunsite_HBR_8



Crank_Gunsite_HBR_9



Crank_Gunsite_HBR_10



Crank_Gunsite_HBR_11



Crank_Gunsite_HBR_12



Crank_Gunsite_HBR_13



Crank_Gunsite_HBR_14



Crank_Gunsite_HBR_15



Crank_Gunsite_HBR_16



Crank_Gunsite_HBR_17



Crank_Gunsite_HBR_18



Crank_Gunsite_HBR_19



Crank_Gunsite_HBR_20



Crank_Gunsite_HBR_21



Crank_Gunsite_HBR_22



Crank_Gunsite_HBR_23



Crank_Gunsite_HBR_24



Crank_Gunsite_HBR_25



Crank_Gunsite_HBR_26



Crank_Gunsite_HBR_27



Crank_Gunsite_HBR_28



Crank_Gunsite_HBR_29



Crank_Gunsite_HBR_30



Crank_Gunsite_HBR_31



Crank_Gunsite_HBR_32



Crank_Gunsite_HBR_33



Crank_Gunsite_HBR_34



Crank_Gunsite_HBR_35



Crank_Gunsite_HBR_36



Crank_Gunsite_HBR_37



Crank_Gunsite_HBR_38



Crank_Gunsite_HBR_39



Crank_Gunsite_HBR_40



Crank_Gunsite_HBR_41



Crank_Gunsite_HBR_42



Crank_Gunsite_HBR_43



Crank_Gunsite_HBR_44



Crank_Gunsite_HBR_45



Crank_Gunsite_HBR_46



Crank_Gunsite_HBR_47



Crank_Gunsite_HBR_48



Crank_Gunsite_HBR_49



Crank_Gunsite_HBR_50



Crank_Gunsite_HBR_51



Crank_Gunsite_HBR_52



Crank_Gunsite_HBR_53



Crank_Gunsite_HBR_54



Crank_Gunsite_HBR_55



Crank_Gunsite_HBR_56



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Crank_Gunsite_HBR_72



Crank_Gunsite_HBR_73



Crank_Gunsite_HBR_74



Crank_Gunsite_HBR_75



Crank_Gunsite_HBR_76



Crank_Gunsite_HBR_77



Crank_Gunsite_HBR_78



Crank_Gunsite_HBR_79



Crank_Gunsite_HBR_80



Crank_Gunsite_HBR_81



Crank_Gunsite_HBR_82



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Crank_Gunsite_HBR_84



Crank_Gunsite_HBR_85



Crank_Gunsite_HBR_86



Crank_Gunsite_HBR_87



Crank_Gunsite_HBR_88



Crank_Gunsite_HBR_89



Crank_Gunsite_HBR_90



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Crank_Gunsite_HBR_107



Crank_Gunsite_HBR_108



Crank_Gunsite_HBR_109



Crank_Gunsite_HBR_110



Crank_Gunsite_HBR_111



Crank_Gunsite_HBR_112



Crank_Gunsite_HBR_113



Crank_Gunsite_HBR_114



Crank_Gunsite_HBR_115



Crank_Gunsite_HBR_116



Crank_Gunsite_HBR_117



Crank_Gunsite_HBR_118



Crank_Gunsite_HBR_119



Crank_Gunsite_HBR_120



Crank_Gunsite_HBR_121



Crank_Gunsite_HBR_122



Crank_Gunsite_HBR_123



Crank_Gunsite_HBR_124



Crank_Gunsite_HBR_125



Crank_Gunsite_HBR_126



Crank_Gunsite_HBR_127



Crank_Gunsite_HBR_128



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Crank_Gunsite_HBR_140



Crank_Gunsite_HBR_141



Crank_Gunsite_HBR_142



Crank_Gunsite_HBR_143



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Crank_Gunsite_HBR_147



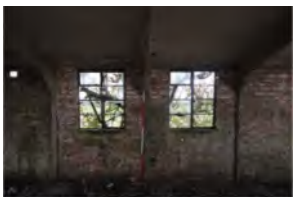
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Crank_Gunsite_HBR_149



Crank_Gunsite_HBR_150



Crank_Gunsite_HBR_151



Crank_Gunsite_HBR_152



Crank_Gunsite_HBR_153



Crank_Gunsite_HBR_154



Crank_Gunsite_HBR_155



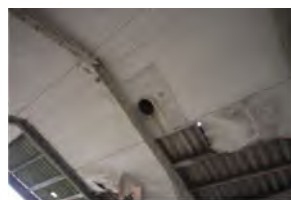
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Crank_Gunsite_HBR_159



Crank_Gunsite_HBR_160



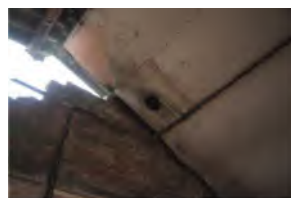
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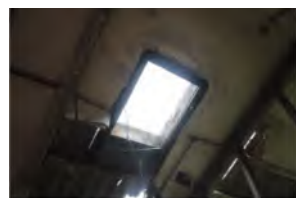
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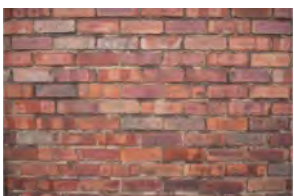
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Crank_Gunsite_HBR_164



Crank_Gunsite_HBR_165



Crank_Gunsite_HBR_166



Crank_Gunsite_HBR_167



Crank_Gunsite_HBR_168



Crank_Gunsite_HBR_169



Crank_Gunsite_HBR_170



Crank_Gunsite_HBR_171



Crank_Gunsite_HBR_172



Crank_Gunsite_HBR_173



Crank_Gunsite_HBR_174



Crank_Gunsite_HBR_175



Crank_Gunsite_HBR_176



Crank_Gunsite_HBR_177



Crank_Gunsite_HBR_178

APPENDIX 4 ARCHIVE INDEX TABLE

Crank Gunsite Barracks,
Crank Road, St Helens,
Merseyside, WA11 7RU
Archive Index

Record type	Quantification
Context Register	
Evaluation Trench Register	
Drawings Register	
Drawing Sheet Register	
Drawing Sheet	
Drawing	
Digital Photograph Register	1
Environmental Sample Register	
Context Sheets	
Evaluation Trench Recording Sheet	
Written Report	1
WSI	1
Digital Photographs	178

APPENDIX 5 WRITTEN SCHEME OF INVESTIGATION

WRITTEN SCHEME OF INVESTIGATION

Gunsite Barracks, Rainford Hall, Crank Road,
St Helens, Merseyside
Site Walkover and Historic Building Recording



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Written Scheme of Investigation for Site Walkover and Historic Building Recording at Gunsite Barracks, Rainford Hall, Crank Road, St Helens, Merseyside

ARS LTD REPORT 2022



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Issue	Author	Checked by	Approved by	Date approved	Reason for issue
1	John Lavender	Jenny Doole	Lucie McCarthy	23/11/2022	Initial draft for consultation
1.1	Lucie McCarthy	Jenny Doole	Lucie McCarthy	16/01/2023	Revisions following MEAS feedback

Prepared on behalf of: Rainford Hall Estate Ltd
Planning Reference: P/2020/0854/FUL
Local Authority: St. Helens Borough Council
Site central NGR: SJ 50583 99130



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I INTRODUCTION

1.1 Project and Planning Background

1.1.1 This Written Scheme of Investigation (WSI) has been prepared by Archaeological Research Services Ltd on behalf of Rainford Hall Estate Ltd. It details a scheme of historic building recording to be undertaken to Historic England's Level 2 Standard, walkover survey and documentary research of Gunsite Barracks, Crank Road, St Helens, prior to proposed development work on the site. These works would comprise the demolition of former barracks buildings and erection of three detached dwellings (Application Ref. No. P/2022/00649).

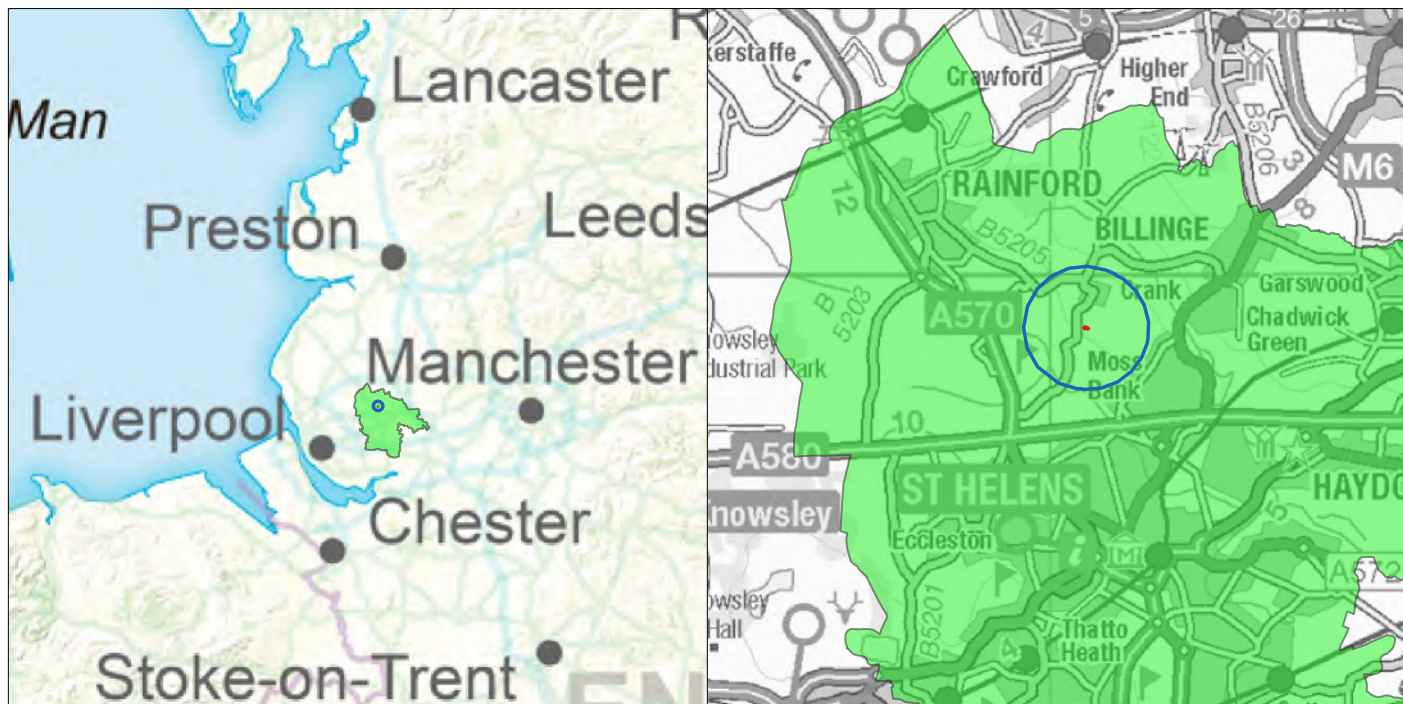
1.1.1 Planning permission has been granted (conditionally) by St Helens Council, subject to Condition 5.




"5. No development shall take place until the applicant has submitted a written scheme of investigation for archaeological work for approval in writing by the local planning authority. The work shall be carried out strictly in accordance with the approved scheme."

1.1.2 This document comprises a Written Scheme of Investigation confirming the nature of archaeological works, comprising historic building recording, walkover survey and documentary research to be undertaken by Archaeological Research Services Ltd at Gunsite Barracks, Crank Road, St Helens, in accordance with the Planning Archaeologist of Merseyside Environmental Advisory Service.

1.1.3 The aim of this programme of works is, in line with the National Planning Policy Framework (NPPF) paragraph 205 (MHCLG 2021), to record and enhance understanding of the significance of any heritage assets to be lost (wholly or in part) in a manner proportionate to their importance and the impact, and to make this evidence (and any archive generated) publicly accessible.

1.1.4 Any variations to this scope of works will be by agreement of the Client and the archaeological planning advisor to the Local Planning Authority (LPA). Should discoveries be made of local or greater importance, this may lead to further requirements being issued by the LPA for the purpose of mitigation in accordance with the NPPF (MHCLG 2022, para 205). If a further stage of work is necessary, it would require a separate WSI and scope of works.



<p>Site name: Gunsite, Rainford Hall Date: November 22 Drawn by: JL Scale: Varies</p>	<p>Figure 1: Site location</p>	<p>Archaeological Research Services Ltd</p>
<p>This drawing: © ARS Ltd Contains Ordnance Survey data. © Crown copyright and database right 2022</p>	<p> Site Boundary  St. Helens District</p>	<p>Suite 1 First Floor Dunham House Cross Street Sale M33 7HH Tel: 01619 762544 www.archaeologicalresearchservices.com</p> 

1.2 Site Location and Description

- 1.2.1 The proposed development encompasses a total area of approximately 1490 m² and is located halfway between Rainford Hall and the village of Crank, some 2.5 km southeast of the town of Rainford (Figure 1; NGR SJ 50583 99130). The site currently comprises the area of building(s) 5 (the camp barracks buildings of the gun site), extending beyond the fenced area into the field to the south. To the north the site is bounded by an unnamed road, to the east by a small cultivated field, and to the south and west by a larger cultivated field. The site is accessible by the unnamed road to the north via Crank Road (B5201).
- 1.2.2 Ordnance Survey maps show the site to lie at 77m above Ordnance Datum. It sits on a southwest facing slope of Crank Hill, 800m northeast of Rainford Brook and 1.3 km southwest of Black Brook, both south flowing tributaries of Sankey Brook.

1.3 Geology and Soils

- 1.3.1 The underlying solid geology of the site consists of Pennine Lower Coal Measures Formation, mudstone formed between 319 and 318 million years ago during the Carboniferous (British Geological Survey 2022). The superficial geology is described as Devensian till, a diamicton superficial deposit formed between 116 and 11.8 thousand years ago during the Quaternary period
- 1.3.2 The soils are characterised by the Cranfield Soil and Agrifood Institute as Soilscape 18 which is slowly permeable seasonally wet slightly acid but base-rich loamy and clayey soils (Cranfield University 2022).

1.4 Historical Background

- 1.4.1 The proposed development area comprises the Second World War Crank Gunsite, which is positioned between Rainford Hall and the village of Crank, c.2.5km south-east of the town of Rainford. Historic mapping shows that the PDA had comprised agricultural fields between the mid-19th century and early 20th century.
- 1.4.2 The Crank Gunsite was added in the Second World War, as part of Britain's defense network at the time, to protect the area around Liverpool. The site had been known under code MY10, representing an anti-aircraft gun battery site, which housed a generator building, a Second World War control bunker, a Post-War control bunker and the five camp barracks buildings which are the subject of the forthcoming historic building recording (Historic Aviation Military 2022).
- 1.4.3 The first mapping to depict the site is the 1956 *OS Map*, which shows that a new road had been added off Crank Road to the east, providing access to the site.
- 1.4.4 The five camp barracks buildings are positioned within the southern extent of the site, on the southern side of this road. The buildings are single-storeyed, with a pitched gabled roof covering with corrugated roofing sheets. The structures are concrete framed, with walls formed of machine-cut red brick in a stretcher bond, with cement mortar. Three of the structures are orientated west to east, with the other two positioned north to south. These structures represented the barracks huts and were for personnel who operated the Gunsite.
- 1.4.5 The Crank Gunsite continued in use throughout the Cold War.

- 1.4.6 The buildings are now out of use, with aerial photography indicating that most are in a poor state of repair.

2 AIMS AND OBJECTIVES

2.1 Site Walkover Aim

2.1.1 The aims of the site walkover are as follows:

- ◆ To 'ground-truth' the proposed survey area via implementation of a detailed walkover survey (See Figure 2), supplemented by a photographic record of the site, so that any subtleties within the construction of the features are fully recorded.
- ◆ To identify the presence/absence of archaeological features and deposits within the site.

2.2 Building Recording Aim

2.2.1 The aim of the building recording is to provide a descriptive and visual record of the former barracks buildings prior to demolition.

2.3 Documentary Research Aim

2.3.1 The aim of the documentary research is to provide a detailed narrative of the site and its context.

2.4 Site Walkover Objectives

2.4.1 The objectives of the site walkover are as follows:

- ◆ To gather sufficient information to establish the character, extent, form, function and likely status of any surviving archaeological features.

2.5 Building Recording Objectives

2.5.1 The objectives of the building recording are as follows.

- ◆ To produce a formal description of the outbuildings, including their floor plan, elevations, roof structure, flooring, internal layout and spaces, detailing, form and fabric, and evidence for phasing and development.
- ◆ To produce a full visual photographic record with photographic scales of the exterior and interior of the outbuildings with all photographs descriptively captioned and cross referenced to a plan(s) clearly showing the viewing position, direction and photographic image reference.
- ◆ To produce measured and annotated survey drawings showing the location of features of historic interest.
- ◆ To produce an account of the buildings' origins, development and use.
- ◆ The historic building recording will comply with a Level 2-3 standard as outlined in the Historic England volume Understanding Historic Buildings. A Guide to Good Recording Practice (Historic England 2016).

2.6 Documentary Research Objectives

2.6.1 The objectives of the building recording are as follows:

- ◆ To provide documentary research to inform the reader of a detailed history of the site.
- ◆ To place the site within its wider context relating to World War II.

2.7 Relevant Research Aims and Objectives

2.7.1 The investigations will be conducted with a view to addressing objectives suggested by the published research priorities set out for the *North West Regional Research Framework* published online by Historic England (2022).

2.7.2 Research priorities that might become relevant are those identified within the *Research Framework* notably the summary by M. Barter of the Historic Built Environment in the North West from the post-medieval period (Historic England 2022). Other research objectives may become relevant should any archaeological features investigated during the investigations produce significant findings of regional or greater importance.

3 RECORDING AND WALKOVER STRATEGY

3.1 Coverage

- 3.1.1 It is intended that a detailed walkover survey be conducted across the proposed development area in its entirety (Figure 2).
- 3.1.2 The buildings to be recorded comprise building group 5 of the Gunsite—the barracks buildings situated in the south of the Gunsite, on the south side of the unnamed road.
- 3.1.3 The buildings will be recorded to the equivalent of Historic England's (2016) *Understanding Historic Buildings – A guide to good recording practice* Level 2 or 3 building survey standard, prior to demolition.
- 3.1.4 A methodology for the implementation of all elements of the historic building recording is presented below.

3.2 Methodology

Documentary Research

- 3.2.1 A scheme of documentary research to supplement and interpret the historic building recording will be undertaken. This should include but is not limited to a map-regression exercise based on the readily-available map and photographic evidence held by the relevant archive (St Helens Archives, Liverpool City Council Archives, Defence of Britain Archive,) and an examination of the available 19th- and 20th-century Trades and Postal directories, the appropriate census returns and all other available primary and relevant secondary sources. This work is intended to enhance the building recording by providing detailed information beyond that of function and phasing.

Walkover survey

- 3.2.2 ARS Ltd will provide a suitably qualified and experienced archaeologist to undertake a detailed walk over survey of the site
- 3.2.3 The survey will commence with a systematic walkover survey. When earthworks are encountered, a Leica GPS 1200+ global navigation satellite system (GNSS) with post-processing of data providing sub-centimetre accuracy, or other equivalent system, will be used to locate each surviving feature and a series of points recorded at the tops, bottoms and breaks of slope. Where linear features are to be recorded, points will also be recorded at significant changes of direction or at appropriate intervals where no changes in alignment are identified. The base survey produced will be used as the basis for the creation of an accurate hachured plan. Detail will be added to the hachured plan using measurements taken on-site by tape measure.
- 3.2.4 Baseline photographs to archaeological standards will be captured as part of this survey, and their position will be marked on a plan. An interpretation of the features identified and any relationships between them will be provided in addition to a full catalogue.
- 3.2.5 A full photographic record will be compiled using a high quality digital SLR camera with a minimum 16-megapixel sensor and a register of all photographs will be kept. Working

shots will be taken from fixed points in order to depict what the prevailing conditions were like during the time of recording. A clearly visible, graduated metric scale will be included in all shots.

- 3.2.6 The site will be accurately tied into the National Grid and located on a 1:2500 or 1:1250 map of the area. All heights above sea level will be recorded for all points in metres above Ordnance Datum (aOD).
- 3.2.7 All levels will be recorded during the monitoring, using *pro-forma* record sheets, in accordance with the ARS Ltd field recording manual.
- 3.2.8 All data outputs will be tabulated, with tables produced in order to show the ground level at the time of the survey work.

Level 2 or 3 Building Recording

- 3.2.9 Any stored materials will be emptied from inside the buildings, and all vegetation and other obstructions to the exterior elevations will be cleared away prior to the building recording being undertaken. Adequate lighting for internal record photographs will be provided, including the use of portable lighting powered by a battery or generator if required.
- 3.2.10 The archaeologist on site will carefully examine all parts of each building prior to the commencement of photographic and drawn recording, in order to identify all features relevant to original and later use. As part of this exercise, the archaeologist on site will produce written observations (e.g. on phasing; on detailing, on building function), sufficient to permit the preparation of a report on the structures identified. Each external wall or internal space should be examined individually, and the results of that examination noted in a systematic fashion. These site records will be adequate to allow a full architectural and archaeological description of the building to be included in the subsequent report, as a walk around and through each building—starting with setting, then progressing to all sides of the structure in sequence, and finally to the interior from the ground floor up.
- 3.2.11 The building recording drawn record will include the following:
 - ◆ Site location plans at suitable scales (preferably indicating the position of the site within the country, within the county and a clear plan of the precise location/outline of the building i.e. 1:50).
 - ◆ A plan(s) indicating the position and orientation of photographs/images included in the report.
 - ◆ A set of detailed measured survey drawings including floor plans and, if accessible, one cross section through each identified building and one long section through each range (with a contingency allowance for an additional cross-section and an additional long-section, as required) with annotations and conventions following Historic England standards (2016). These will be based on an architect's drawings of the site provided by the client, but it is the responsibility of the archaeological contractor to check the drawings supplied and to make any necessary adjustments or corrections.
 - ◆ Phased plans showing the development of the buildings.

3.2.12 Where possible, photographs will include a graduated scale and cameras will be mounted on tripods for extra stability. Details of the photographs will be recorded on *pro-forma* index sheets, which include location, subject and orientation. The location and direction of the photographs will be plotted on scaled plans forming part of the general archive.

3.2.13 The photographic record will cover as a minimum:

- ◆ Photographs of the interior, exterior and setting of the buildings. A two-metre ranging rod will be included in a selection of general shots in order that the scale of all elements of the building can be sufficiently established.
- ◆ The external appearance of each building is to be recorded. Typically, a series of oblique views will show all external elevations of the structures and give an overall impression of size and shape. Where an individual elevation embodies complex historical information or has been conceived as a formal composition, views at right angles to the plane of the elevation may also be appropriate.
- ◆ The overall appearance of principal rooms and circulation areas for all rooms and areas that are accessible.
- ◆ Photographs of any internal or external detail, structural or decorative, which is relevant to the building's design, development or use and which does not show adequately on general views.
- ◆ Photographs of any internal or external fixtures, fittings or machinery relevant to the building's use or development.

3.2.14 Copies of maps, drawings, views, photographs, dates, inscriptions, or contents present in the building and illustrating its development/use, or that of its site.

3.3 Documentary Research

3.3.1 The documentary research will comprise a study of St Helens Archives published and available archival and cartographic sources

4 MONITORING ARRANGEMENTS

4.1.1 Notice is given prior to commencement of the works upon submission of this WSI to the archaeological planning advisor. The proposed start date will be a minimum of seven working days from submission. Work will not commence until the WSI has been approved.

4.1.2 The archaeological planning advisor for the LPA is Alison Plummer, Planning Archaeologist at Merseyside Environmental Advisory Service.

4.1.3 ARS Ltd will consult with the archaeological planning advisor at regular intervals throughout the course of the work.

4.1.4 The client will afford reasonable access to the archaeological planning advisor for the LPA or representative officers, for the purposes of monitoring the archaeological work.

4.1.5 The County Archaeologist for MEAS will be responsible for monitoring the historic building recording. Ideally, seven days' notice of the commencement of fieldwork will be given by

ARS Ltd to the County Archaeologist in order that arrangements for monitoring the work may be made.

Alison Plummer
Planning Archaeologist
Merseyside Environmental Advisory Service
The Barn
Court Hey Park
Roby Road
Huyton
L16 3NA
Email: alison.plummer@sefton.gov.uk

The client will afford reasonable access to the Planning Archaeologist of Merseyside Environmental Advisory Service, or their representative, for the purpose of monitoring the historic building recording. ARS Ltd will liaise with the County Archaeologist at regular intervals throughout the course of the work.

4.1.6

5 TIMETABLE, STAFFING AND RESOURCES

- 5.1.1 ARS Ltd is a Chartered Institute for Archaeologists (CIfA) Registered Organisation. Registered Organisations are regularly assessed to ensure that high standards of work, processes and training are embedded in the organisation, in line with the professional *Code of Conduct* (CIfA 2021) and the Chartered Institute's Standards and Guidance documents.
- 5.1.2 ARS Ltd is a Chartered Institute for Archaeologists (CIfA) Registered Organisation. Registered Organisations are regularly assessed to ensure that high standards of work, processes and training are embedded in the organisation, in line with the professional *Code of Conduct* (CIfA 2021) and the Chartered Institute's Standards and Guidance documents.
- 5.1.3 The Project Manager for the historic building recording will be Lucie McCarthy MCIfA, Head of Heritage Consultancy at ARS Ltd. The historic building recording will be carried out by Joseph Empsall BA, MA, MRes of ARS Ltd.
- 5.1.4 The outline timetable for the works is as follows. This will be updated by email as the project progresses.

Task No	Task	Proposed Commencement Date
1	Historic building recording on-site	TBC after written approval of WSI received. Written notice provided to MEAS.
2	Walkover Survey of site	TBC after written approval of WSI received. Written notice provided to MEAS.
3	Documentary research	Immediately following completion of Tasks 1 and 2

4	Historic building recording report preparation	Immediately following completion of Tasks 1, 2 and 3 within 1 month of site based activities.
5	Historic building recording archive preparation, completion and deposition	Immediately following completion of Task 2 and to be completed within 3 months

6 REPORTING

6.1.1 Following completion of the fieldwork, ARS Ltd will produce a report that will comprise:

- ◆ Non-technical summary
- ◆ Introductory statement
- ◆ Aims and objectives
- ◆ Method statement
- ◆ Precise location of buildings, by name or street number, civil parish, town and National Grid reference
- ◆ The date when the record was made, the names of the recorders and the archive content/character and location
- ◆ A note of any relevant statutory designations
- ◆ A discussion of the building's form, function, date, and sequence of development and significance. Together with a discussion of the names of architects, builders, patrons and owners if known. This will include a note of any evidence for demolished structures or removed plant associated with the building
- ◆ Detailed documentary research of the site, placing it within its wider context
- ◆ Discussion of site walkover survey
- ◆ An architectural and archaeological description of the buildings will be produced
- ◆ A set of detailed measured survey drawings including floor plans, elevations, and sections with annotations and conventions following Historic England standards (2016).
- ◆ Illustrations of all archaeological features with appropriately scaled plans and sections
- ◆ Specialists' assessments of artefacts and samples, where found
- ◆ Discussion outlining conclusions
- ◆ Statement of intent regarding publication
- ◆ Supporting data – tabulated or in appendices
- ◆ A register of photographs taken
- ◆ Index to archive and details of archive location
- ◆ Bibliography
- ◆ Confirmation of archive transfer arrangements
- ◆ A copy of the OASIS form

6.1.2 The report illustrations will contain the following as a minimum:

- ◆ A location map at not less than 1:2500
- ◆ A site plan at not less than 1:500
- ◆ Photographs used to illustrate all key points and a complete set of site drawings, at an appropriate scale, executed to publication standard
- ◆ Extracts from relevant historic maps with the buildings of interest clearly visible

- ◆ Copies of documentary sources including historic images and photographs obtained as a result of the detailed documentary research
 - ◆ The photographic record plan
 - ◆ In addition to those photographs used as illustrations, a complete set of all photographs, excluding duplications, with the digital copy of the report and referenced as necessary.
- 6.1.3 A draft report will be submitted to the archaeological planning advisor for agreement and comment before being issued as a planning document to the client within 2 months of the date of fieldwork.
- 6.1.4 A digital copy of the report in PDF/A format will be deposited with the Historic Environment Record (HER). A copy of the report will be uploaded as part of the OASIS record, and a hardcopy will be included in the physical archive.

6.2 Provisions for publication

- 6.2.1 Any publication requirements contained within the archaeological planning brief will be reviewed between the Project Manager, client, and archaeological planning advisor prior to preparation of the site report. In general, the publication would appear as a short note in an appropriate journal.
- 6.2.2 As a minimum, publication would be as a c.300-word summary of the project with, if appropriate, selected illustration for inclusion in the annual round-up of fieldwork within the region. More significant sites may warrant a light article in a relevant county or period journal with, if appropriate, selected illustrations and photographs.

7 PROJECT ARCHIVE

7.1 Archive Selection Strategy

- 7.1.1 Selection of the working project archive will be guided by the aims and objectives of the project, as set out in this Written Scheme of Investigation.

7.2 Documentary Archive

- 7.2.1 All original documentary material created and collected during the archaeological works will be selected according to the ARS Ltd Retentions and Discard Policy for inclusion in the final archive. Any duplicates (including photocopies) of original documents will not be included in the final archive.

7.3 Digital Archive

- 7.3.1 All digital data created over the course of this project will be collected, stored, and selected for final deposition in line with the project's Data Management Plan.
- 7.3.2 The key types of digital data produced will include:

Type	Data
Text	Digital copies of the WSI and final report
Images	Site photographs, scans of site drawings, report illustrations, digital drawings

Finds data	Finds reports and tables, conservation records, images
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- 7.3.3 Only the final copies of any digital data will be selected and deposited in the final project archive.
- 7.3.4 Digital data to be included in the final archive will be reviewed during the post-excavation and archiving phase of works. Digital photographs will be assessed and selected in line with Historic England guidelines (Cole and Backhouse 2015). Any data to be excluded from the archive will be removed in accordance with the ARS Ltd Retention and Discard Policy.

7.4 Archive Deposition

- 7.4.1 The archaeological archive will be deposited with National Museums Liverpool (Stewart 2021). Should the archaeological works produce no archaeologically significant finds, then it is not deemed necessary to deposit an archive with the repository museum. ARS Ltd will contact the museum and the archaeological planning advisor following the quantification and assessment of the archive to confirm and finalise archiving requirements.
- 7.4.2 Archaeologically significant finds and project archives will be prepared for deposition by ARS Ltd. The archive will comprise the primary record and synthetic works arising from the project, including documents, plans, sections, photographs, and electronic data and an accompanying metadata statement.
- 7.4.3 High resolution digital photographs will typically be submitted to the Archaeological Data Service (ADS) digital archive repository with the associated photographic registers and metadata. The digital archive will be prepared in line with current best practice (ADS/Digital Antiquity 2011; Archaeological Data Service 2022).
- 7.4.4 The archive will be deposited in line with industry standards and best practice guidelines (SMA 1993; Brown 2011; ClfA 2020b). In addition, the recommendations of the receiving repository will be adhered to. The archive will be deposited at the next available opportunity agreed with the museum after completion of the report.
- 7.4.5 All projects have an Online Access to the Index of Archaeological Investigations (OASIS III) registration form within the report. All parts of the OASIS online form will be completed for submission to the Historic Environment Record (HER). This will include an uploaded PDF/A version of the entire report. Upon final completion of the project, a final copy of the report will be deposited with the county HER in an agreed format.

8 PUBLICITY, ENGAGEMENT AND COPYRIGHT

- 8.1.1 The Client will manage any publicity. ARS Ltd will not undertake media engagement except where approved and directed by the Client.
- 8.1.2 Any form of public community engagement, presentations, exhibitions or otherwise lie outside the scope of this WSI. Any such opportunities will by separate agreement with the Client.
- 8.1.3 ARS Ltd will retain the copyright of all documentary, photographic and video material under the Copyright, Designs and Patent Act (1988).

9 PROFESSIONAL STANDARDS

- 9.1.1 The project will be managed according to the Historic England guidance for research projects (Historic England 2015c).
- 9.1.2 As a Registered Organisation Archaeological Research Services Ltd follows the Chartered Institute for Archaeologists *Code of conduct* (CIfA 2021). All archaeological works will follow the CIfA *Standard and guidance for archaeological evaluation* (CIfA 2020a).

10 HEALTH AND SAFETY

- 10.1.1 All works will be undertaken in full compliance with the Health and Safety at Work Act 1974 and with the Management of Health and Safety Regulations 1992.
- 10.1.2 A risk assessment will be produced before commencement of the work that will be updated and adhered to throughout the course of the project.

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Summary for archaeol5-514422

OASIS ID (UID)	archaeol5-514422
Project Name	Historic Building Recording: Crank Gunsite Barracks, Crank Road, St Helens, Merseyside
Sitename	Crank Gunsite Barracks, Crank Road, St Helens, Merseyside
Activity type	Analytical Buildings Record (Level 3)
Project Identifier(s)	
Planning Id	P/2022/0854/FUL
Reason For Investigation	Planning: Post determination
Organisation Responsible for work	Archaeological Research Services Ltd
Project Dates	01-Mar-2023 - 12-Apr-2023
Location	Crank Gunsite Barracks, Crank Road, St Helens, Merseyside NGR : SJ 50583 99130 LL : 53.48655083409979, -2.746205940956555 12 Fig : 350583,399130
Administrative Areas	Country : England County : Merseyside District : St. Helens Parish : Rainford
Project Methodology	In March 2023, Archaeological Research Services Ltd was commissioned by Rainford Hall Estate Ltd (the clients) to undertake a historic building recording of five barracks buildings associated with the Crank Gunsite, Crank Road, St Helens, Merseyside, WA11 7RU. The historic building recording was undertaken to Historic England's Level 2/3 Standard, and was required to assist in discarding condition 5 of the proposed development, which would see the demolition of the buildings and erection of two detached dwellings (Application Ref. No. P/2022/0854/FUL).

Project Results	<p>The five barracks buildings had likely been constructed as part of the origins of the Crank Gunsite in c.1939. The Gunsite had comprised a large 'L' plan plot, consisting of heavy anti-aircraft batteries, a control bunker, a generator, various outbuildings, and the five barracks buildings. These barracks buildings represent prefabricated structures, built of the same style and materials. They had been built with concrete frames, which demarcated the structures with distinct bays, and with red engineering brick in a stretcher bond. Each structure had been three bays in width, but had varied in length, with Building 2 the smallest at five bays in length, and Building 5 the longest at nine bays in length. The structures featured asbestos corrugated roofing sheets, with the roof structures formed of concrete frames with a cast iron ridge beam. The buildings also retain cast iron outwards swinging window casements with concrete sills, a number of which retain outer timber plank shutters. These structures would likely have continued in use into the Cold War, as part of the site's connection with the Orange Yeoman Trails, and would have fallen out of use when the site was decommissioned in the 1960s.</p> <p>The barracks buildings have fallen into disrepair from their lack of use. As barracks, these structures would have been used as recreational areas and facilities, such as mess halls, kitchens, washrooms, and accommodation. However, the extant buildings represent empty shells, which have predominantly lost features of interest that would aid in understanding their original functions. Building 1 had retained a separate room within its north-eastern corner, as well as extant stud walling. The position of this walling suggests that the building had originally formed four compartments. Straight joints within the concrete flooring of Building 5 also indicate that this space had originally formed two compartments internally. Whilst the exact functions of the buildings are unclear, these structures would have played an important role in the site, and would have been used to fulfil the basic needs of the soldiers and to improve morale on site.</p>
Keywords	Barracks - Second World War - FISH Thesaurus of Monument Types
Funder	
HER	
Person Responsible for work	Joseph, Empsall
HER Identifiers	
Archives	