



**WW2 Air Raid Shelters,
Lluesty Hospital, Old Chester Road,
Milwr, Holywell, Flintshire,
CH8 7RZ (061230).**

February 2021 v1.0



Level 3 Historic Building Record

Project Code: A0293.1

Report no. 0282

Planning Ref: 061230

Event PRN: 166935



æon archaeology

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Project Code: A0293.1

Date: 26/02/2021

Client: BAK Contracts

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WW2 Air Raid Shelters, Llesty Hospital, Old Chester Road, Milwr, Holywell, Flintshire, CH8 7RZ (061230).

February 2021 v1.0

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Project Code: A0293.1

Date: 25/02/2021

Client: BAK Contracts

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Figures

Figure 01: Location of Llesty Hospital, Old Chester Road, Milwr, Holywell, Flintshire, CH8 7RZ. Scale 1:20,000 at A4.

Figure 02: Location of Llesty Hospital, Old Chester Road, Milwr, Holywell, Flintshire, CH8 7RZ. Scale 1:5,000 at A4.

Figure 03: Location of WW2 Air Raid Shelters at Llesty Hospital, Old Chester Road, Milwr, Holywell, Flintshire, CH8 7RZ.
Scale 1:1,000 at A4.

Figure 04: Plan and elevation drawings of Air Raid Shelter 1.

Figure 05: Location and orientation of photographic plates. Scale 1:50 at A4.

Figure 06: Location of WW2 Air Raid Shelters and Llesty Hospital on the Flintshire Council Map of 1946.

Figure 07: Proposed Air Raid Shelter Layout. Scale 1:50 at A4.

Plates

Plate 01: Air Raid Shelter 1 southeast facing external elevation, from the southeast. Scale 1.0m.

Plate 02: Air Raid Shelter 1 southeast and southwest facing external elevations, from the south. Scale 1.0m.

Plate 03: Air Raid Shelter 1 southwest facing external elevation, from the southwest. Scale 1.0m.

Plate 04: Air Raid Shelter 1 southwest and northwest (SW end) facing external elevations, from the west. Scale 1.0m.

Plate 05: Air Raid Shelter 1 northwest (SW end) facing external elevation, from the west. Scale 1.0m.

Plate 06: Air Raid Shelter 1 northwest (SW end) facing external elevation, from the west-southwest. Scale 1.0m.

Plate 07: Air Raid Shelter 1 northwest (NE end) facing external elevation, from the west. Scale 1.0m.

Plate 08: Air Raid Shelter 1 northwest facing external elevation showing electrical connection, from the west. Scale 1.0m.

Plate 09: Air Raid Shelter 1 northeast facing external elevation (hidden behind vegetation), from the east.

Plate 10: Air Raid Shelter 1 Main Room, from the southwest. Scale 1.0m.

Plate 11: Air Raid Shelter 1 Main Room, from the northeast. Scale 1.0m.

Plate 12: Air Raid Shelter 1 Main Room, from the north. Scale 1.0m.

Plate 13: Air Raid Shelter 1 Main Room, from the south. Scale 1.0m.

Plate 14: Air Raid Shelter 1 Main Room showing ceiling brackets, from the east.

Plate 15: Air Raid Shelter 1 Main Room showing wall brackets, from the northwest. Scale 1.0m.

Plate 16: Air Raid Shelter 1 Main Room showing wall cladding, from the northwest. Scale 1.0m.

Plate 17: Air Raid Shelter 1 Main Room showing hinged timber post, from the north. Scale 1.0m.

Plate 18: Air Raid Shelter 1 Main Room showing coat hook rail, from the north.

Plate 19: Air Raid Shelter 1 Main Room showing electrical switches, from the southeast.

Plate 20: Air Raid Shelter 1 Main Room showing wall timber marks, from the south. Scale 1.0m.

Plate 21: Air Raid Shelter 1 Emergency Exit 1, from the southeast. Scale 1.0m.

Plate 22: Air Raid Shelter 1 Chemical Toilet Cubicle, from the southeast. Scale 1.0m.

Plate 23: Air Raid Shelter 1 Emergency Exit 2, from the southeast. Scale 1.0m.

Plate 24: Air Raid Shelter 2 location (now demolished), from the south.

Contents

1.0 NON-TECHNICAL SUMMARY	1
2.0 INTRODUCTION	2
3.0 POLICY CONTEXT	3
4.0 REQUIREMENTS	5
4.1 Building Record	5
5.0 METHOD STATEMENT	5
5.1 Level 3 Record	5
5.1.1 Written Account	5
5.1.2 Photographs	6
5.1.3 Drawings	6
5.2 Processing data, illustration, report and archiving	6
6.0 ARCHAEOLOGICAL AND HISTORICAL RECORD	7
7.0 DIGITAL DATA MANAGEMENT PLAN	11
7.1 Type of study	11
7.2 Format and scale of the data	11
7.3 Methodologies for data collection / generation	11
7.4 Data quality and standards	11
7.5 Managing, storing and curating data	11
7.6 Metadata standards and data documentation	11
7.7 Data preservation strategy and standards	12
7.8 Suitability for sharing	12
7.9 Discovery by potential users of the research data	12
7.10 Governance of access	12
7.11 The study team's exclusive use of the data	12
7.12 Restrictions or delays to sharing, with planned actions to limit such restrictions	12
7.13 Regulation of responsibilities of users	12
7.14 Responsibilities	13
7.15 Organisational policies on data sharing and data security	13
8.0 BUILDING DESCRIPTION	14
8.1 External description of Air Raid Shelter 1 (plates 1-9)	14
8.2 Internal description of Air Raid Shelter 1 (plates 10-23)	14
8.3 External description of Air Raid Shelter 2 (plate 24)	16
9.0 CONCLUSION	17
10.0 SOURCES	19

1.0 NON-TECHNICAL SUMMARY

Comisiynwyd Aeon Archaeology gan BAK Contracts i gynhyrchu cofnod adeiladu hanesyddol lefel 3 o ddau Gysgodfa Cyrch Awyr diffaith o'r Ail Ryfel Byd wedi'u lleoli ar dir yr hen Ysbyty Llesty, Old Chester Road, Milwr, Treffynnon, Sir y Fflint, CH8 7RZ cyn ei ddymchwel.

Aeon Archaeology was commissioned by BAK Contracts to produce a level 3 historic building record of two redundant World War 2 Air Raid Shelters located in the grounds of the former Llesty Hospital, Old Chester Road, Milwr, Holywell, Flintshire, CH8 7RZ in advance of demolition.

2.0 INTRODUCTION

Aeon Archaeology was commissioned by BAK Contracts, hereafter the Client, to produce a level 3 historic building record of two redundant World War 2 Air Raid Shelters located in the grounds of the former Lluesty Hospital, Old Chester Road, Milwr, Holywell, Flintshire, CH8 7RZ (centred on **NGR SJ 18935 74918**) in advance of demolition.

A development proposal was submitted by the Client to Flintshire Council, hereafter the Council, for the construction of 15 No. new housing units and the change of use/conversion of the former Lluesty Hospital Infirmary Wing into 14 No. apartments. The following draft condition concerning archaeology was applied to the proposal (**ref: 061230**):

Condition 8

No development shall take place until a programme of building recording and analysis, equivalent to a Historic England Level 3 building survey, has been secured and implemented, in accordance with a written scheme of investigation which has been submitted and approved in writing by the local planning authority. The programme of building analysis and recording will be completed by an archaeological contractor and must meet the standards laid down by the Chartered Institute for Archaeologists in their Standard and Guidance for the archaeological investigation and recording of standing buildings or structures. A copy of the resulting report should be submitted to the Local Planning Authority and the Development Control Archaeologist (Clwyd-Powys Archaeological Trust The Offices, Coed y Dinas, Welshpool, Powys, SY21 8RP). After approval by the Local Planning Authority, a copy of the report and resulting archive should also be sent to the Historic Environment Record Officer, Clwyd-Powys Archaeological Trust for inclusion in the regional Historic Environment Record.

REASON: To allow an adequate analytical record of the former air raid shelter buildings to be made, before they are demolished, to ensure that the buildings origins, use and development are understood and the main features, character and state of preservation are recorded, and in to comply with Policy HE8 in the Flintshire Unitary Development Plan.

A written scheme of investigation (WSI) was produced by Aeon Archaeology in February 2021 (appendix I) which outlined the aims and objectives of the project and the methods by which they would be met.

This report is offered in consideration to the Council and their advisor, the Development Control Archaeologist (DCA) (Mr Mark Walters) at the Clwyd-Powys Archaeological Trust (CPAT), in relation to condition 8 of application 061230.

This report and all subsequent mitigation will conform to the guidelines specified in Historic England's 'Understanding Historic Buildings: a guide to good recording practice' (2016) & *Standard and Guidance for the Archaeological Investigation and Recording of Standing Buildings or Structures* (Chartered Institute for Archaeologists, 2020).

This level 3 historic building record has been undertaken as CPAT event primary reference number (PRN) **166935**.

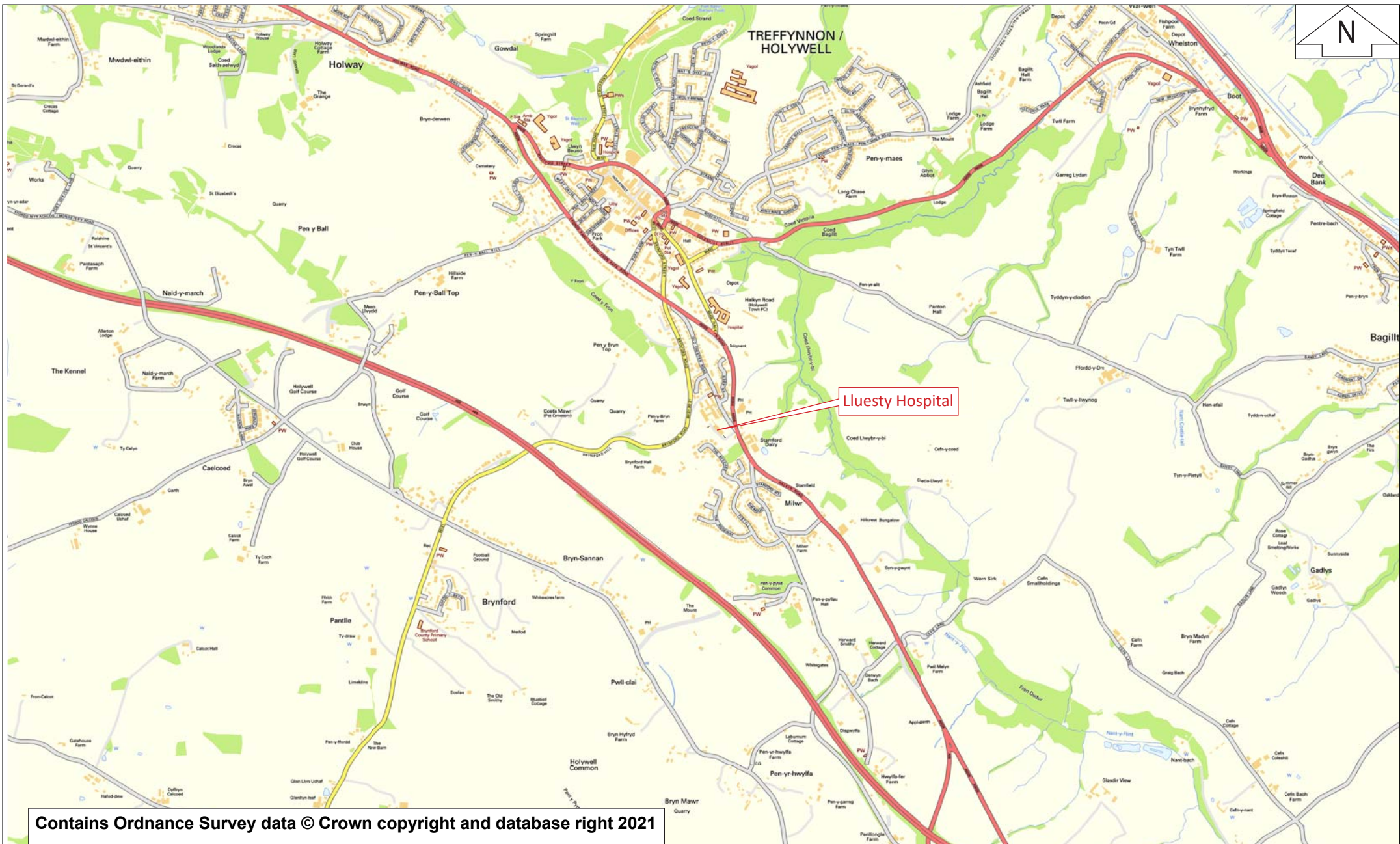


Figure 01: Location of Lluesty Hospital, Old Chester Road, Milwr, Holywell, Flintshire, CH8 7RZ. Scale 1:20,000 at A4.



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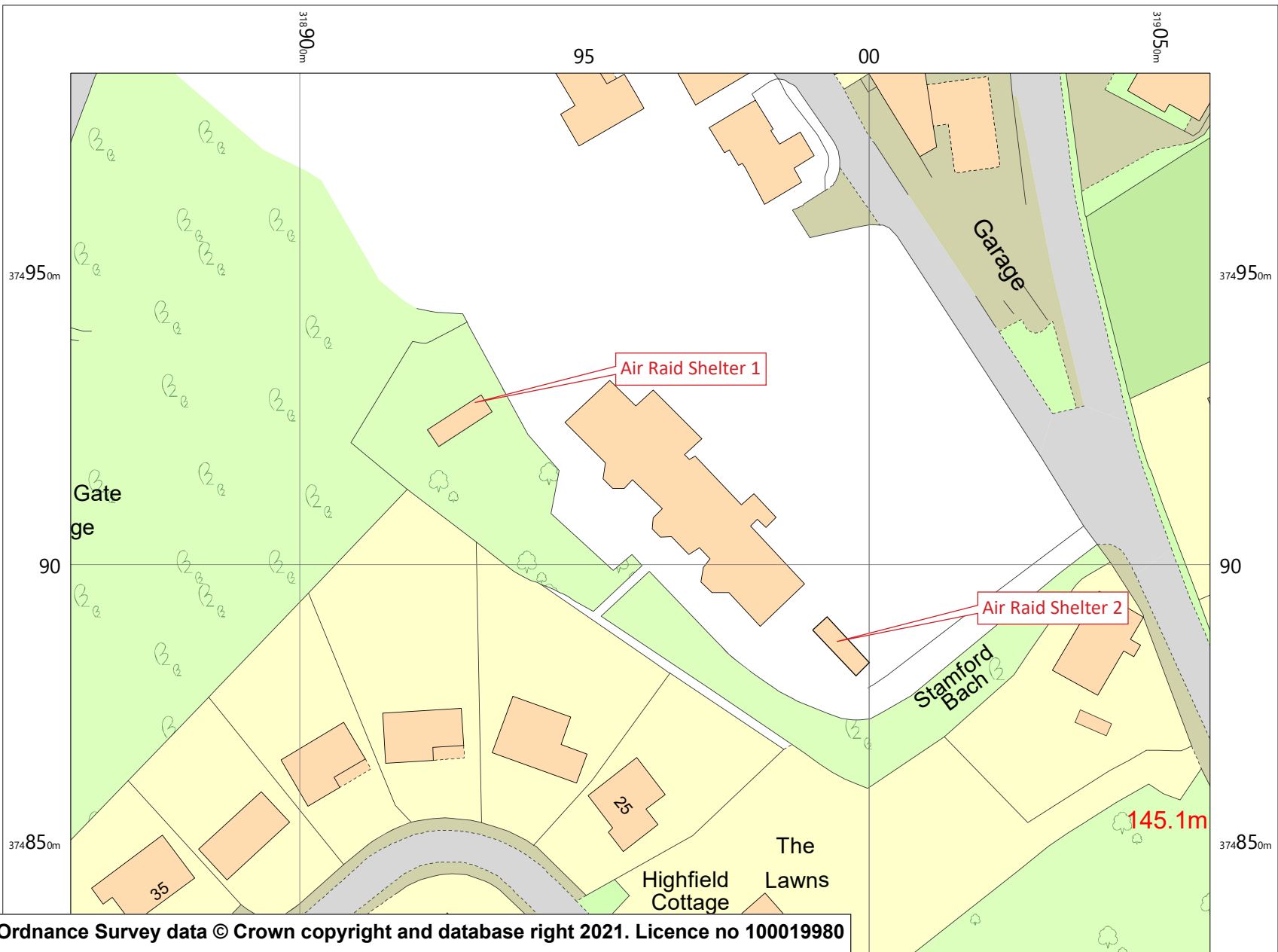


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Figure 02: Location of Llesty Hospital, Old Chester Road, Milwr, Holywell, Flintshire, CH8 7RZ. Scale 1:5,000 at A4.

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Figure 03: Location of WW2 Air Raid Shelters at Llesty Hospital, Old Chester Road, Milwr, Holywell, Flintshire, CH8 7RZ. Scale 1:1,000 at A4.

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3.0 POLICY CONTEXT

At an international level there are two principal agreements concerning the protection of the cultural heritage and archaeological resource – the UNESCO Convention Concerning the Protection of World Cultural and Natural Heritage and the European Convention on the Protection of the Archaeological Heritage, commonly known as the Valetta Convention. The latter was agreed by the Member States of the Council of Europe in 1992, and also became law in 1992. It has been ratified by the UK, and responsibility for its implementation rests with Department for Culture Media and Sport.

The management and protection of the historic environment in Wales is set out within the following legislation:

- The Planning (Listed Buildings and Conservation Areas) Act 1990 (As amended)
- The Historic Environment (Wales) Act 2016
- The Town and County Planning Act 1990
- The Ancient Monuments and Archaeological Areas Act 1979
- The Town and Country Planning (General Permitted Development Order) 1995 (As amended)

The Historic Environment (Wales) Act is the most recent legislation for the management of the Historic Environment and amends two pieces of UK legislation — the Ancient Monuments and Archaeological Areas Act 1979 and the Planning (Listed Buildings and Conservation Areas) Act 1990. The new Act has three main aims:

- to give more effective protection to listed buildings and scheduled monuments;
- to improve the sustainable management of the historic environment; and
- to introduce greater transparency and accountability into decisions taken on the historic environment.

With respect to the cultural heritage of the built environment the Planning (Conservation Areas and Listed Buildings) Act 1990 applies. The Act sets out the legislative framework within which works and development affecting listed buildings and conservation areas must be considered. This states that:-

“In considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority or, as the case may be, the Secretary of State shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses” (s66(1))

Other known sites of cultural heritage/archaeological significance can be entered onto county-based Historic Environment Records under the Town and Country Planning 1995.

Planning Policy Wales sets out the land use planning policies of the Welsh Government. Chapter 6 covers the historic environment and emphasises that the positive management of change in the historic environment is based on a full understanding of the nature and significance of historic assets and the recognition of the benefits that they can deliver in a vibrant culture and economy.

Various principles and policies related to cultural heritage and archaeology are set out in the Planning Policy Wales which guide local planning authorities with respect to the wider historic environment.

The following paragraphs from Planning Policy Wales are particularly relevant and are quoted in full:

Paragraph 6.1.5 concerns planning applications:

The planning system must take into account the Welsh Government's objectives to protect, conserve, promote and enhance the historic environment as a resource for the general well-being of present and future generations. The historic environment is a finite, non-renewable and shared resource and a vital and integral part of the historical and cultural identity of Wales. It contributes to economic vitality and culture, civic pride, local distinctiveness and the quality of Welsh life. The historic environment can only be maintained as a resource for future generations if the individual historic assets are protected and conserved. Cadw's published Conservation Principles highlights the need to base decisions on an understanding of the impact a proposal may have on the significance of an historic asset.

Planning Policy Wales is supplemented by a series of Technical Advice Notes (TAN). Technical Advice Note 24: The Historic Environment contains detailed guidance on how the planning system considers the historic environment during development plan, preparation and decision making on planning and listed building consent applications. TAN 24 replaces the following Welsh Office Circulars:

- 60/96 Planning and the Historic Environment: Archaeology
- 61/96 Planning and the Historic Environment: Historic Buildings and Conservation Areas
- 1/98 Planning and the Historic Environment: Directions by the Secretary of State for Wales

4.0 REQUIREMENTS

4.1 Building Record

The requirements were for an archaeological building record of the two air raid shelters prior to demolition, however should observations or desk-based research suggest the potential for significant features to be encountered during the demolition works, the archaeological contractor should make arrangements to undertake any appropriate supplementary recording work during the development. The DMA at CPAT has requested that the building record be roughly commensurate with the English Heritage '*Understanding Historic Buildings: a guide to good recording practice*' (2016) **Level 3**.

Level 3 is an analytical record, and will comprise an introductory description followed by a systematic account of the building's origins, development and use. The record will include an account of the evidence on which the analysis has been based, allowing the validity of the record to be re-examined in detail. It will also include all drawn and photographic records that may be required to illustrate the building's appearance and structure and to support an historical analysis.

The information contained in the record will for the most part have been obtained through an examination of the building itself. If documentary sources are used they are likely to be those most readily accessible, such as historic Ordnance Survey maps, trade directories, and other published sources. The record will not normally discuss the building's broader stylistic or historical context and importance at any length.

The detailed photographic record will consist of English Heritage '*Understanding Historic Buildings: a guide to good recording practice*' (2016) elements:

- written account: 1-3, 6-9, 11-13, 22
- drawings: 2
- photographs: 1-9

5.0 METHOD STATEMENT

5.1 Level 3 Record

5.1.1 Written Account

The written account will include:

- The building's precise location as a National Grid Reference and address form;
- A note of any statutory designation and non-statutory designation;
- The date of the record, name(s) of the recorder(s) and archive location;
- A summary of the building's form, function, date, and sequence of development.
- An introduction, setting out the circumstances in which the record was made, its objectives, methods, scope and limitations, and any constraints which limited the achievement of objectives.
- Acknowledgements to all those who made significant contributions.
- A discussion of published sources relating to the building and its setting, an account of its history as given in published sources, an analysis of historic map evidence and a critical evaluation of previous records of the building, where they exist.
- An account of the building's overall form and its successive phases of development, together with the evidence supporting this analysis.

- An account of the past and present uses of the building and its parts, with the evidence for these interpretations.
- Any evidence for the former existence of demolished structures or removed plant associated with the building.
- Full bibliographic and other references.

5.1.2 Photographs

The photographic record will include:

- A general view or views of the building;
- The building's external appearance. Typically a series of oblique views will show all external elevations of the building and give an impression of its size and shape;
- The overall appearance of the rooms to be altered.
- Any internal or external detail.
- Any machinery or other plant, or evidence for its former existence.
- Any dates or other inscriptions.
- Any building contents or ephemera which have a significant bearing on the building's history.
- Copies of maps, drawings, views and photographs present in the building and illustrating its development or that of its site.

A Digital SLR (Canon 600D) set to maximum resolution will be used throughout.

5.1.3 Drawings

The drawn record will include:

- A measured site plan showing the location and orientation of photographs. This will label all room spaces and indicate any architectural features of note.
- Measured elevation drawings of all external elevations.

5.2 Processing data, illustration, report and archiving

Following completion of the record as outlined above, a report will be produced incorporating the following:

- A copy of the design brief and agreed specification
- A site location plan
- A plan illustrating the location and direction of photographs
- Basic background and relevant historical, descriptive or analytical detail
- A full bibliography of sources consulted
- Illustrations, including plans and photographs, will be incorporated within the report.

6.0 ARCHAEOLOGICAL AND HISTORICAL RECORD

Lluesty Hospital

A Heritage Impact Assessment for the proposed development at Lluesty Hospital was produced by TACP Architects Ltd in 2020. The following historical background is reproduced from the report:

The application site occupies the southern section of the Former Lluesty Hospital, Old Chester Road, Holywell on the southern fringe of the settlement of Holywell within a predominantly residential area. The site lies just off the A5026, Halkyn Road, in an elevated, northeast facing position overlooking the Dee Estuary. The A5026 provides direct access to Holywell Town Centre and the A55 Expressway allowing good road transport links to North West Wales, North East Wales and the cities of Chester, Liverpool and Manchester beyond.

The Former Lluesty Hospital contains a complex of historical buildings, several of which are listed, but the only building that occupies the application site is the Edwardian Infirmary Wing dating from 1913, which, although of historical interest, is not listed. The building is fronted by an area of car parking which it is believed may have originally been laid out as terraces of lawn.

This existing building occupies an elevated position at the rear of the site with its principal façade to the rear rather than facing the site frontage. As a consequence, the elevation facing the site frontage constitutes the rear of the building containing much of the service accommodation and which has been extended/modified over the years in a fashion that is not considered sympathetic to the existing building.

The Infirmary wing was built in 1913 of stock brick and pressed brick facings with some terracotta features. There is evidence that terraces of lawn retained by capped stone walls were also built in front of the wing at this time probably to be used as a sitting out and convalescence area for patients. There are two WWII air raid shelters in the vicinity of the building together with associated roads and car parking. There are numerous retaining wall structures within the tiered site as the land rises from the road frontage to the rear.

The existing building is vacant, as is the surrounding site, and all are semi-derelict as the fabric continues to deteriorate.

The existing building is constructed from loadbearing masonry walls with reinforced concrete floors/support beams and traditional pitched roofs from timber king-post trusses finished with natural roofing slate. External walls are from red stock/pressed facing brickwork with terracotta and dressed stone features.

The building takes the form of a central three storey structure with two storey linear wings at each end. Due to the sloping topography of the site the west wing contains some semi-basement/lower ground floor accommodation.

Within the adjacent site the Holywell Union workhouse was first constructed in 1840. This followed the introduction of the Poor Law Amendment Act of 1834.

The typical of the day cruciform or square model building was designed by John Welch as a neo-classical, three storey stone building which opened on 9th November 1840, a little over 100 years after the establishment of the Holywell's first workhouse. The workhouse held,

depending on the economic growth, between 80 to 120 inmates but this rose to in the region of 150 inmates in periods of decline.

The workhouse had several phases of improvements, encouraged by official inspections on the poor state/condition of the buildings and environment over the next 60 years.

It was during the Great War (1914-1918) that it was decided to construct a separate purpose building which was the Edwardian infirmary (1913), this was located on land overlooking the pigsties and the wood store, near the well at the back of the workhouse. The new Infirmary, some internal refurbishments and new lifts within the workhouse came to a costly sum of £3,000. The Army took over the running of the infirmary in 1917 and the building was used as a Military Hospital due to the overflow of war casualties from Manchester, it was recorded that 477 military patients were treated over a 72 week period up until January 1919.

After the Second World War the Poor Laws were repealed and in 1948 the former workhouse became part of the National Health Service and was known as Llesty General Hospital. Llesty Hospital was in operation until 2008 providing mainly geriatric care. After the introduction of the NHS, the Edwardian Infirmary Wing was converted to house Wards 1-4 and an X-Ray unit. Total number of beds available – 54. The last of these wards was closed in 1993 and has been unused since. The main hospital closed in 2008 and the site has been vacant since.

Air Raid Shelters

Air raid shelters are unique physical and social spaces. Their architecture, construction, and means of use are unlike any other structure: they are uncanny, marginal spaces associated with fear, danger and emergency. In wartime air raid shelters have also become the focus for concerns about public health, morale, morality, sexuality, gender and class (www.UCL.ac.uk).

Despite the increasing diversity of study of wartime sites, Home Front sites have been somewhat neglected. The Defence of Britain Project of the early 2000s (Schofield 2004; Foot 2006) surveyed the remaining WWII anti-invasion fortifications of Britain, which consist of various concrete fortifications, defence lines and other positions. However, there has been little consideration of civil ‘passive defence’ measures. The UK’s WWII Civil Defence response was large, yet there has been little in the way of a detailed survey of surviving anti-air-raid structures, many of which exist by chance.

The development of air-raid shelters dates back to the First World War (WW1), with the advent of aerial bombing, and the destruction of property and life that accompanied it (O’Brien 1955; Thomas 2016). The first bombs fell from an aircraft in 1911, when the Italian military bombarded Ottoman troops in Libya with hand grenades during the Italian-Turkish war of 1911-1912. Four years’ later, the Zeppelins of the German Army and Navy were targeting British cities with bombs weighing up to half a ton.

At the outbreak of the First World War, virtually all combatant nations possessed military aircraft. By the armistice four years later, a distinctive category of bomber aircraft had emerged, including the Russian *Ilya Murometz*, the Italian *Caproni*, the French *Breguet 14*, the German *Gotha* and *Giant*, and the British *Handley-Page*. By the end of WW1, bombs had fallen on Antwerp, London, Felixstowe, Ludwigshafen, Constantinople, and many other European cities (Military History Matters 2010).

With little choice, air-raid shelters became *ad hoc* affairs, and in the larger cities, London in particular, railway arches and underground railway tunnels were used as shelters for the first

time. Railway arches in particular were vulnerable to bomb penetration at their weakest part through the railway track bed itself.

The oldest surviving air-raid shelter in Britain is a little grey garage behind a house in Cleethorpes, Lincolnshire. After Zeppelin attacks killed a number of residents and soldiers in April 1916, Joseph Forrester, a chemist and local councillor, constructed a reinforced concrete air-raid shelter with walls half a metre thick. The structure is 4m wide and 5m deep, and consists of a single room with two entrance lobbies. At some point, it was turned into a garage, and as such it survives as a strikingly modern-looking remnant of the first strategic bombing campaign in history (ibid).

Anderson Shelters

The most common and well-known British air-raid shelter of the Second World War (WW2) is the Anderson shelter. By the start of 1939, more than a million of these part-sunken shelters, named after the politician responsible for ARP, had been installed in private gardens. Built of curved sheets of steel, they held four to six people each, and were given free to low-income families. By the time the Blitz began in earnest, more than 2.25 million families had Anderson shelters in their gardens.

The Andersons, however, were cold, damp, and frequently flooded. Many people preferred the communal shelters that began to be built in parks, on pavements, and at other open public spaces. The result was a great variety of forms, capacities, locations, and levels of protection. Broadly, four main types can be identified: surface, semi-sunken, sunken, and deep.

Surface Shelters

Surface shelters were often simply long brick-and-concrete structures built on pavements or beside buildings. They had one or two entrances, and offered shelter from collapsing buildings and shrapnel. Some could hold several hundred people in varying levels of comfort. They were not particularly blast-proof, however, as many models were badly constructed, often using sub-standard mortar, and were liable to collapse. Other surface shelters were constructed from prefabricated reinforced-concrete units, and a few more bunker-like ones were cast in situ using shuttering.

The Civil Defence Act 1939 declared that: 'To lessen the number of casualties from a direct hit, the unit size of shelters should preferably be limited to parties of not more than 50 persons'. From then on, this became the common size for surface and semi-sunken air-raid shelters in schools, businesses, and public areas. Most were formed from pre-cast concrete panels or segments, and could be built to a number of sizes and specifications.

Semi-sunken shelters

Semi-sunken shelters such as the Anderson used shallow initial excavation combined with earth banking to increase the strength and blast-resistance of the structure. One of the most common semi-sunken shelters used preformed segments with a curved roof, which could be more easily buried.

As with surface shelters, semi-sunken shelters tended to have their entrances at an angle or behind a wall to protect the occupants from blast, while lowering the risk of being trapped behind a blocked doorway.

Sunken Shelters

Sunken shelters often started out as basements or trenches. Basements and cellars were reinforced with planks and girders at various angles so that they could withstand the collapse of the building above. Trenches were dug on open pieces of land and reinforced with sandbags, sheet metal, and wooden props. These were intended both as shelters from bombing or strafing and subsequently to prevent gliders from landing. Later on, many of these trenches were built up with steel, concrete panels, or cast concrete, to create more stable and better protected shelters that could survive bombs exploding underground close by, as well as providing more comfortable accommodation.

Deep Shelters

None of the shelters described above was capable of surviving a direct hit. Rather, they were designed to protect against the statistically far higher possibility of a near miss, with its risk of flying bomb fragments and collapsing debris. In the pre-war period, however, there was a widespread campaign for the construction of deep underground shelters that could survive direct hits from heavy bombs.

Finsbury Borough Council commissioned the civil engineer Ove Arup to study the effects of bombing on soil and buried structures, and to design a range of giant bomb-proof shelters. Arup's designs are bizarre and beautiful, resembling complex molecules, giant spirals, honeycombs, and enormous subterranean multi-storey car-parks. The smallest held 50 people, but the largest was designed to hold 12,300 in bomb-proof safety below many metres of earth and reinforced concrete.

In the event, few of the giant deep shelters were constructed, and none for civilian purposes. Instead, the public began to use the underground stations in London as unofficial shelters. Unlike Andersons and communal shelters, the tube was dry, warm, and apparently bomb-proof. While the authorities initially banned the use of the tube in fear of transport disruption, they soon relented in the face of massive public demand. Not all tube stations were sufficiently deep, however, and bombings at Balham and Bank killed several hundred people (ibid).

7.0 DIGITAL DATA MANAGEMENT PLAN

7.1 Type of study

Level 3 historic building record of two redundant World War 2 Air Raid Shelters located in the grounds of the former Lluesty Hospital, Old Chester Road, Milwr, Holywell, Flintshire, CH8 7RZ (centred on **NGR SJ 18935 74918**) in advance of demolition.

Photographs, digital text, annotated plans.

7.2 Format and scale of the data

Photographs taken in *RAW* format and later converted to *TIF* format for long term archiving and *JPEG* format for use in the digital report, converted using *Adobe Photoshop*. All photographs renamed using *AF5* freeware with the prefix (*project code_frame number*) and a photographic metadata created using Microsoft Excel (*.xlsx*) or Access (*.accdb*).

Written descriptions taken in digital *.txt* format and sent via email to ensure a digital backup copy at time of record.

Annotated plans scanned as *.PDF* files.

7.3 Methodologies for data collection / generation

Digital data will be collected / generated in line with recommendations made in the Chartered Institute for Archaeologists (CIfA) *Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives* (2014. Rev 2020). Sections 3.3.1 and 3.3.3 are relevant:

3.3.1 Project specifications, research designs or similar documents should include a project specific Selection Strategy and a Data Management Plan.

3.3.3 Project designs or schedules of works etc should outline the methodology used in recording all information, in order to demonstrate that all aspects of archive creation will ensure consistency; for instance in terminologies and the application of codes in digital data sets, highlighting relevant data standards where appropriate

7.4 Data quality and standards

Consistency and quality of data collection / generation shall be controlled and documented through the use of standardised procedure as outlined in the WSI. This will include the use of standardised data capture file formats, digital proformas, data entry validation, peer review, and use of controlled vocabularies.

7.5 Managing, storing and curating data.

All digital data will be organised into Aeon Archaeology proforma project file systems and backed up to the cloud using *Acronis Cyber Protect* with additional copies made to external physical hard drive.

7.6 Metadata standards and data documentation

Digital metadata created using Microsoft Excel (*.xlsx*) or Access (*.accdb*) of all photographic plates.

Paper metadata created from Aeon Archaeology proformas for contexts, artefacts, environmental samples, watching brief day sheets, trench sheets, and basic record sheets and then scanned to create digital .PDF copies.

7.7 Data preservation strategy and standards

Long term data storage will be through the submission of digital (.PDF) reports to the regional Historic Environment Record (HER); submission of digital (.PDF) reports, scanned and original archive to the RCAHMW; and retention of copies of all digital files at Aeon Archaeology on physical external hard drive and uploaded to the cloud.

7.8 Suitability for sharing

All digital data will be placed within the public realm (through the channels in 7.8) except for where project confidentiality restricts the sharing of data. All data sets will be selected / discriminated by the Senior Archaeologist at Aeon Archaeology and written permission will be sought from all project specific Clients prior to the sharing of data.

7.9 Discovery by potential users of the research data

Potential users of the generated digital data (outside of the organisation) will be able to source the data and identify whether it could be suitable for their research purposes through access granted via the RCAHMW website. Requests can also be made for data through the regional HER's and directly to Aeon Archaeology (info@aeonarchaeology.co.uk).

7.10 Governance of access

The decision to supply research data to potential new users will be via the associated website request (RCAHMW, HER) or via the Senior Archaeologist when made directly to Aeon Archaeology.

7.11 The study team's exclusive use of the data

Aeon Archaeology's requirement is for timely data sharing, with the understanding that a limited, defined period of exclusive use of data for primary research is reasonable according to the nature and value of the data, and that this restriction on sharing should be based on simple, clear principles. This time period is expected to be six months from completion of the project however Aeon Archaeology reserves the right to extend this period without notice if primary data research dictates.

7.12 Restrictions or delays to sharing, with planned actions to limit such restrictions

Restriction to data sharing may be due to participant confidentiality or consent agreements. Strategies to limit restrictions will include data being anonymised or aggregated; gaining participant consent for data sharing; and gaining copyright permissions. For prospective studies, consent procedures will include provision for data sharing to maximise the value of the data for wider research use, while providing adequate safeguards for participants.

7.13 Regulation of responsibilities of users

External users of the data will be bound by data sharing agreements provided by the relevant organisation or directly through Aeon Archaeology.

7.14 Responsibilities

Responsibility for study-wide data management, metadata creation, data security and quality assurance of data will be through the Senior Archaeologist (Richard Cooke BA MA MCifA) at Aeon Archaeology when concerning data generation and early/mid-term storage. Upon deposition with digital depositories the study-wide data management, metadata creation, data security and quality assurance of data will be the responsibility of the specific organisations' themselves.

7.15 Organisational policies on data sharing and data security

The following Aeon Archaeology policies are relevant:

- Aeon Archaeology Archive Deposition Policy 2019
- Aeon Archaeology Quality Assurance Policy 2019
- Aeon Archaeology Conflict of Interest Policy 2019
- Aeon Archaeology Outreach Policy 2019
- Aeon Archaeology Digital Management Plan 2020

8.0 BUILDING DESCRIPTION

8.1 External description of Air Raid Shelter 1 (plates 1-9)

The survey was undertaken by Richard Cooke BA MA MCIfA on the 18th February and the 24th February 2021. Although some ivy had been removed the shelter was partially obscured by dense tree growth, in particular to the northeast.

Air Raid Shelter 1 is located c13m to the west of the Edwardian Infirmary Wing, centred on NGR SJ 18931 74929. The building is a single storey, rectangular structure measuring 11.56m in length by 3.52m in width (externally), orientated northeast-southwest.

The flat roof is of reinforced concrete with felting and the walls are of unfrogged machine-made red-yellow brick bonded by Portland cement in an English bond.

The northeast elevation is obscured by tree growth but appears to be featureless.

The southeast elevation is partially obscured by tree growth, particularly at the northeast end, but appears to be featureless.

The southwest elevation is featureless.

The northwest elevation has a single doorway opening at the right hand end permitting access to emergency exit 1, but now boarded over. To the immediate left of this two apertures in the masonry appear to correspond with a cast-iron heating pipe located within the interior and is likely the ingress and egress for the hot water heating pipe.

To the right of centre is a single doorway opening of larger width than emergency exit 1, which permits access to the interior of the shelter proper via a double door of light grey painted wooden planks set within a light grey painted wooden frame. Above this door are the remnants of a light grey PVC gutter. To the immediate left of this doorway a vertical section of iron conduit is attached to the wall and carried the electrical cable connection for the shelter. This would have originally connected to the Edwardian Infirmary Wing to the east but has now been severed.

The left hand end of the shelter is obscured by dense tree growth however it could be discerned that a single doorway opening was located at the left hand end permitting access to emergency exit 2 but now boarded over.

8.2 Internal description of Air Raid Shelter 1 (plates 10-23)

Main room

A rectangular room orientated northeast-southwest and measuring 7.6m in length by 2.76m in width. The walls are of exposed brick painted white.

The northeast elevation has an opening at the right-hand end permitting access to the toilet cubicle and emergency exit 2 but without door and frame. The elevation is otherwise featureless.

The southeast elevation has two upright wooden brackets at the left-hand end. To the right of this is an area of timber cladding. Both the brackets and the cladding were likely part of an area of fixed bunk-beds against the wall.

To the right of centre is a brick built pier with the remains of a wooden frame and iron strap hinge, possibly for a cupboard or a subdividing door. At the right-hand end is a horizontal wooden bracket with protruding iron nails, almost certainly a coat hook rail.

The southwest elevation has an opening at the left-hand end permitting access to emergency exit 1 but without door and frame.

The northwest elevation has a cast-iron pipe at the left hand end, almost certainly having formed part of the hot water heating system. To the right of this the main entrance doorway permits access to the exterior of the building via an oversized light grey painted wooden board door in matching frame. To the right of the door is a brick built pier with two mounted, single dolly switches and galvanised conduit for two centrally mounted ceiling lights in the northeast and southwest halves of the room.

To the right of the brick built pier there are three upright timber marks on the wall masonry possibly from fixed bunkbeds but which are now absent. At the right-hand end there is a fixed wooden bracket at ceiling height with protruding nails possibly for coat hanging, and in the corner there is an iron pipe identical to the one seen at the far left hand end and almost certainly for hot water heating.

The floor is of poured concrete.

Emergency Exit 1

A rectangular room orientated northwest-southeast and measuring 1.84m in length by 0.91m in width. The walls are of exposed brick painted white. The northeast elevation has an opening at the right-hand end permitting access to the main room of the shelter but is otherwise featureless. The southeast elevation is featureless. The southwest elevation is featureless. The northwest elevation is dominated by a single doorway opening, now boarded up, but with simple unpainted wooden frame.

The floor is of poured concrete.

Toilet Cubicle

A rectangular room orientated northwest-southeast and measuring 1.62m in length by 0.69m in width. The walls are of exposed brick painted white. The northeast elevation has an opening at the right-hand end permitting access to emergency exit 2 but is otherwise featureless. The southeast elevation is open to the main room. The southwest elevation is featureless. The northwest elevation has a rectangular opening at ceiling height with an offset air vent but is otherwise featureless.

The floor is of poured concrete.

Emergency Exit 2

A rectangular room orientated northwest-southeast and measuring 1.99m in length by 0.77m in width. The walls are of exposed brick painted white. The northeast elevation is featureless. The southeast elevation opens into the toilet cubicle and main room but is otherwise features. The southwest elevation is featureless. The northwest elevation is entirely dominated by a single doorway opening permitting access to the exterior of the shelter via a wooden board door in simple wooden unpainted frame.

The floor is of poured concrete.



Plate 01: Air Raid Shelter 1 southeast facing external elevation, from the southeast. Scale 1.0m.



Plate 02: Air Raid Shelter 1 southeast and southwest facing external elevations, from the south. Scale 1.0m.



Plate 03: Air Raid Shelter 1 southwest facing external elevation, from the southwest. Scale 1.0m.



Plate 04: Air Raid Shelter 1 southwest and northwest (SW end) facing external elevations, from the west. Scale 1.0m.



Plate 05: Air Raid Shelter 1 northwest (SW end) facing external elevation, from the west. Scale 1.0m.



Plate 06: Air Raid Shelter 1 northwest (SW end) facing external elevation, from the west-southwest. Scale 1.0m.



Plate 07: Air Raid Shelter 1 northwest (NE end) facing external elevation, from the west. Scale 1.0m.



Plate 08: Air Raid Shelter 1 northwest facing external elevation showing electrical connection, from the west. Scale 1.0m.



Plate 09: Air Raid Shelter 1 northeast facing external elevation (hidden behind vegetation), from the east.



Plate 10: Air Raid Shelter 1 Main Room, from the southwest. Scale 1.0m.



Plate 11: Air Raid Shelter 1 Main Room, from the northeast. Scale 1.0m.



Plate 12: Air Raid Shelter 1 Main Room, from the north. Scale 1.0m.



Plate 13: Air Raid Shelter 1 Main Room, from the south. Scale 1.0m.



Plate 14: Air Raid Shelter 1 Main Room showing ceiling brackets, from the east.



Plate 15: Air Raid Shelter 1 Main Room showing wall brackets, from the northwest. Scale 1.0m.

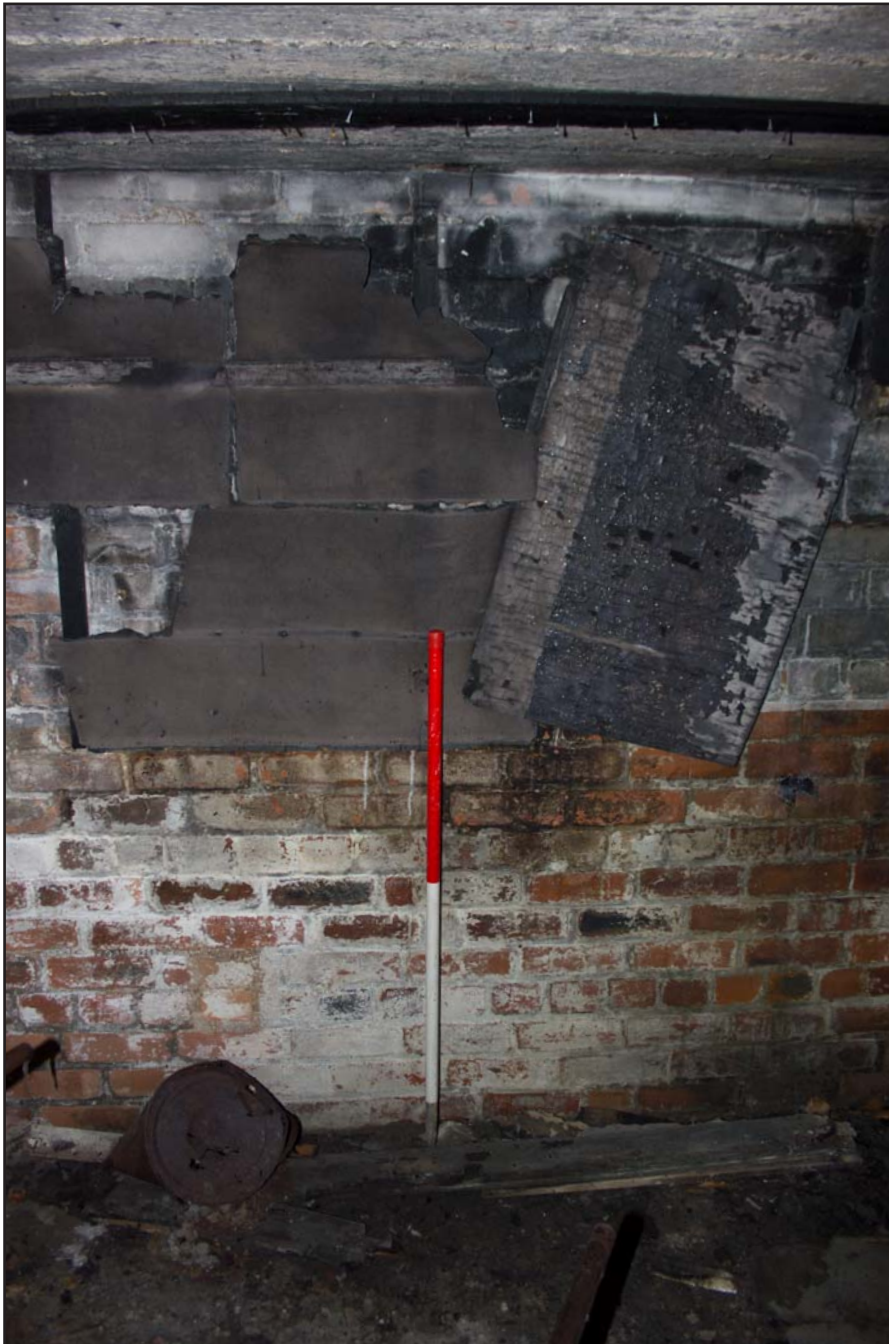


Plate 16: Air Raid Shelter 1 Main Room showing wall cladding, from the northwest. Scale 1.0m.



Plate 17: Air Raid Shelter 1 Main Room showing hinged timber post, from the north. Scale 1.0m.



Plate 18: Air Raid Shelter 1 Main Room showing coat hook rail, from the north.



Plate 19: Air Raid Shelter 1 Main Room showing electrical light switches, from the southeast.



Plate 20: Air Raid Shelter 1 Main Room showing wall timber marks, from the south. Scale 1.0m.



Plate 21: Air Raid Shelter 1 Emergency Exit 1, from the southeast. Scale 1.0m.



Plate 22: Air Raid Shelter 1 Chemical Toilet Cubicle, from the southeast. Scale 1.0m.



Plate 23: Air Raid Shelter 1 Emergency Exit 2, from the southeast. Scale 1.0m.

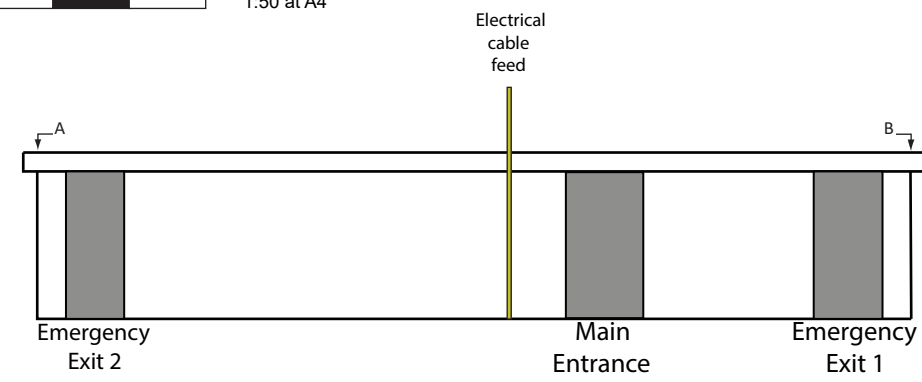
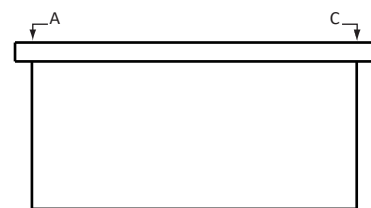
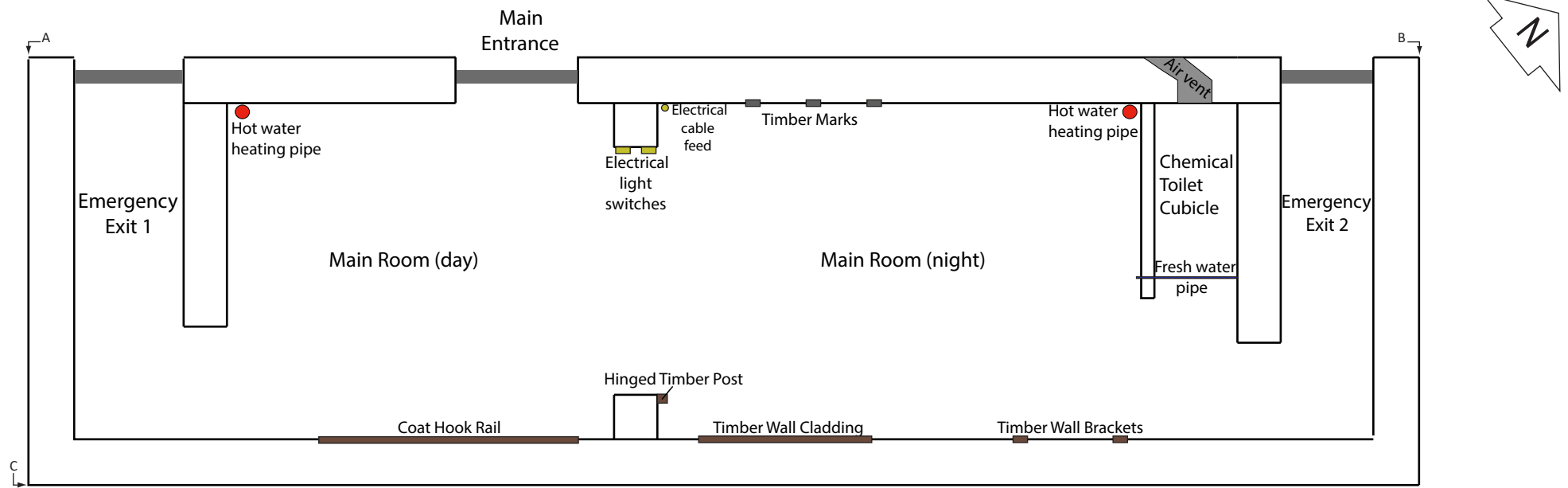


Figure 04: Plan and elevation drawings of Air Raid Shelter 1.

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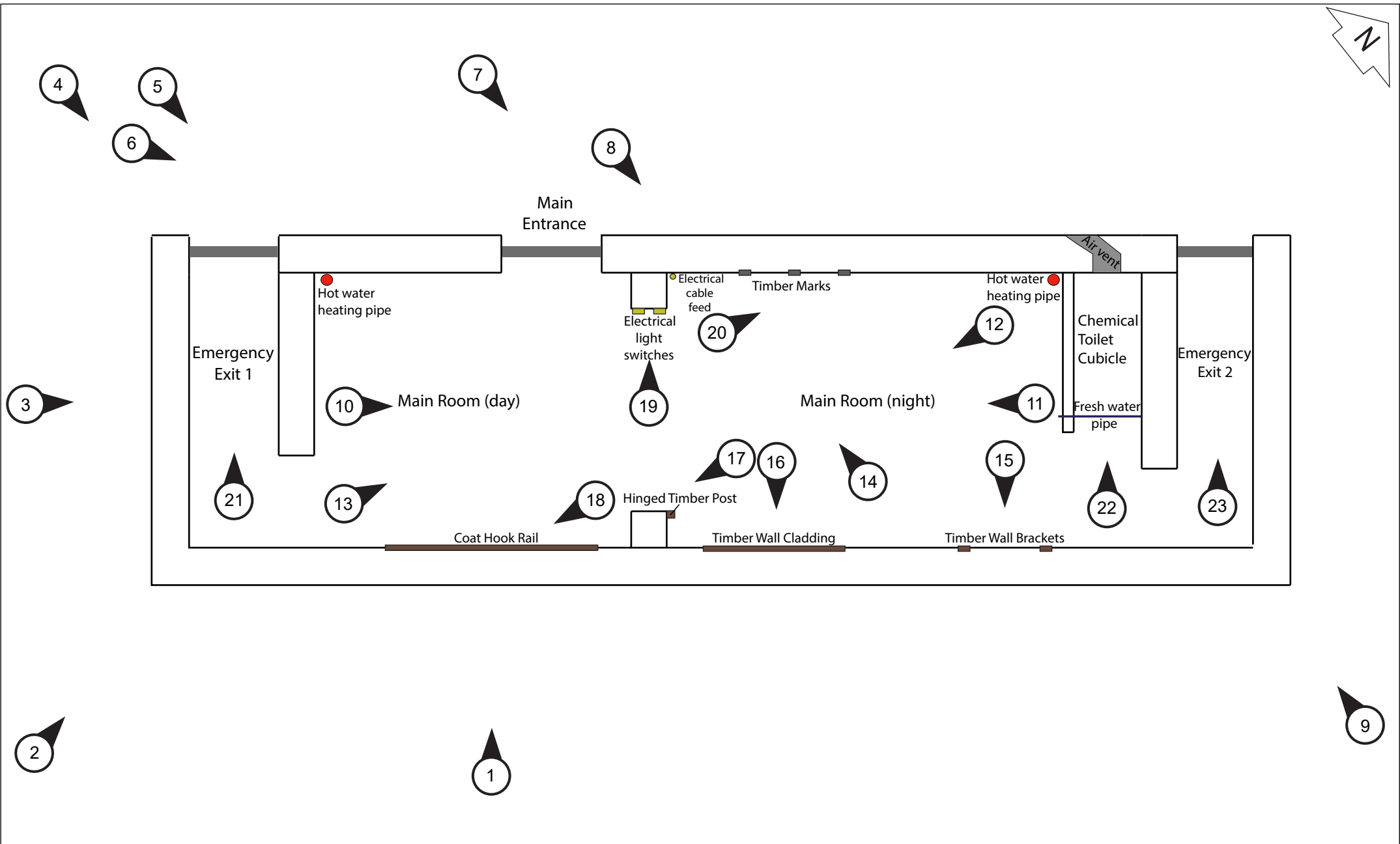


Figure 05: Location and orientation of photographic plates. Scale 1:50 at A4.



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8.3 External description of Air Raid Shelter 2 (plate 24)

Air Raid Shelter 2 had been demolished before the survey was commissioned. The Flintshire Council map of 1946 (figure 06) would suggest that this shelter was of the same size and shape as that of Air Raid Shelter 1 and it is likely that these two buildings were of identical appearance and form. It lay c6.0m to the east of the Edwardian Infirmary Wing, orientated northwest-southeast, and centred on NGR SJ 18994 74890.



Plate 24: Air Raid Shelter 2 location (now demolished), from the south.

9.0 CONCLUSION

It is clear from the historic building survey that the recorded Air Raid Shelter 1 had very specific design features that enabled particular use of space. The shelter itself is of a *surface shelter* type, designed to protect people against flying debris and collapse from nearby buildings, but not from a direct bomb hit. The roof, although reinforced concrete, had no earth mounding to provide protection and the walls were of standard brick construction.

The shelter was accessed via a main entrance door to the right of centre and facing away from the Edwardian Hospital Wing, as this would have been a weak spot for flying rubble in case of a direct hit on the Hospital Wing itself. The door was slightly oversized (1.03m width) in comparison to the two emergency exits located at the far right (0.91m width) and left hand ends (0.77m width) of the northwest facing elevation.

The main room of the shelter was a rectangular space measuring 7.6m in length by 2.76m in width and had two brick-built piers against the south-eastern and north-western elevations but located to the southwest of centre. These piers were not keyed into the wall masonry and appear to have not been added for roof support but rather to sub-divide the main room space. The remnants of a wooden post and strap iron hinge on the southeast pier is likely part of this sub-division structure, which was likely a wooden panel with a doorway or possibly a removable screen. This sub-division likely demarcated the main room into a 'day' and 'night' area.

The day area, located at the southwest end, was smaller in size measuring 3.2m in length by 2.76m in width, orientated northeast-southwest. A wooden rail against the south-eastern elevation was almost certainly a coat hook rail and single electrical light fitting in the centre of the ceiling space would have illuminated the room via a single dolly switch on the northwest pier. A cast-iron pipe in the western corner of the room was likely a central heating pipe fed from the Hospital Wing and which provided warmth.

There is no evidence for any structures within the day room however it is possible that bench seats were fixed against the south-eastern and south-western elevations.

By contrast the night area, located at the northeast end, measured 4.2m in length by 2.76m in width, also orientated northeast-southwest. The remnants of wooden rails and cladding against the southeast elevation, as well as timber rail marks on the northwest elevation, would suggest that wooden bunk-beds were fixed against both walls. Indeed, the remains of timber batons on the ceiling would perhaps suggest a third bank of bunk-beds situated in the centre of the room. Assuming this to be the case it appears likely that there would have been enough bed space for twelve people at any one time.

The night room also appears to have been illuminated by a single centralised electric light fitting controlled via a single dolly switch again located on the northwest pier. A second cast iron pipe is located in the northern corner which again likely provided hot water heating, and the remnants of a small bore copper pipe against the north-eastern elevation was likely a fresh water supply for drinking.

To the immediate northeast of the night room a narrow cubicle with brick dividing wall would have housed the chemical toilet, along with air vent in the northwest elevation which was staggered to prevent ingress via flying debris in case of attack.

At both the northeast and southwest ends of the shelter were two emergency exits in case of the main exit having been blocked or damaged during an air raid.

On the balance of evidence it would seem that Air Raid Shelter 1 could accommodate around 12 individuals, perhaps more if the day and night rooms were used in conjunction. Unfortunately Air Raid Shelter 2 had been demolished prior to the historic building survey however it is assumed to be of the same dimension and layout as shelter 1. As such there was enough shelter space provided for around 24 individuals. This would not nearly have been enough for the patients housed in the Edwardian Infirmary Wing and it can therefore be assumed that the shelters were intended to be used by the staff nurses.

LLUESTY HOSPITAL
DEVELOPMENT AND CONSERVATION BRIEF
FEBRUARY 2006
MAP 9
1946 HISTORICAL MAP

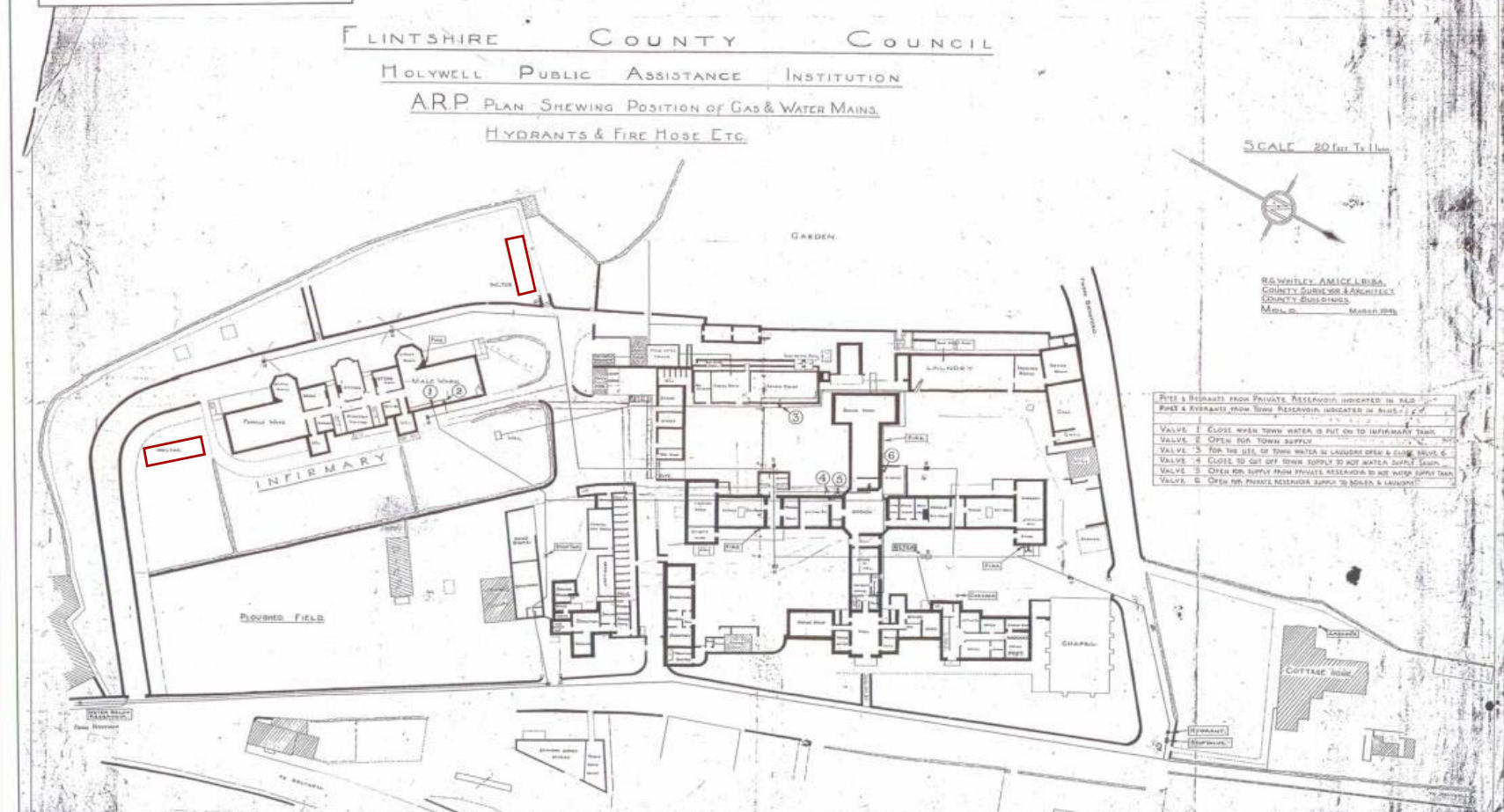


Figure 06: Location of WW2 Air Raid Shelters and Lluesty Hospital on the Flintshire Council Map of 1946.



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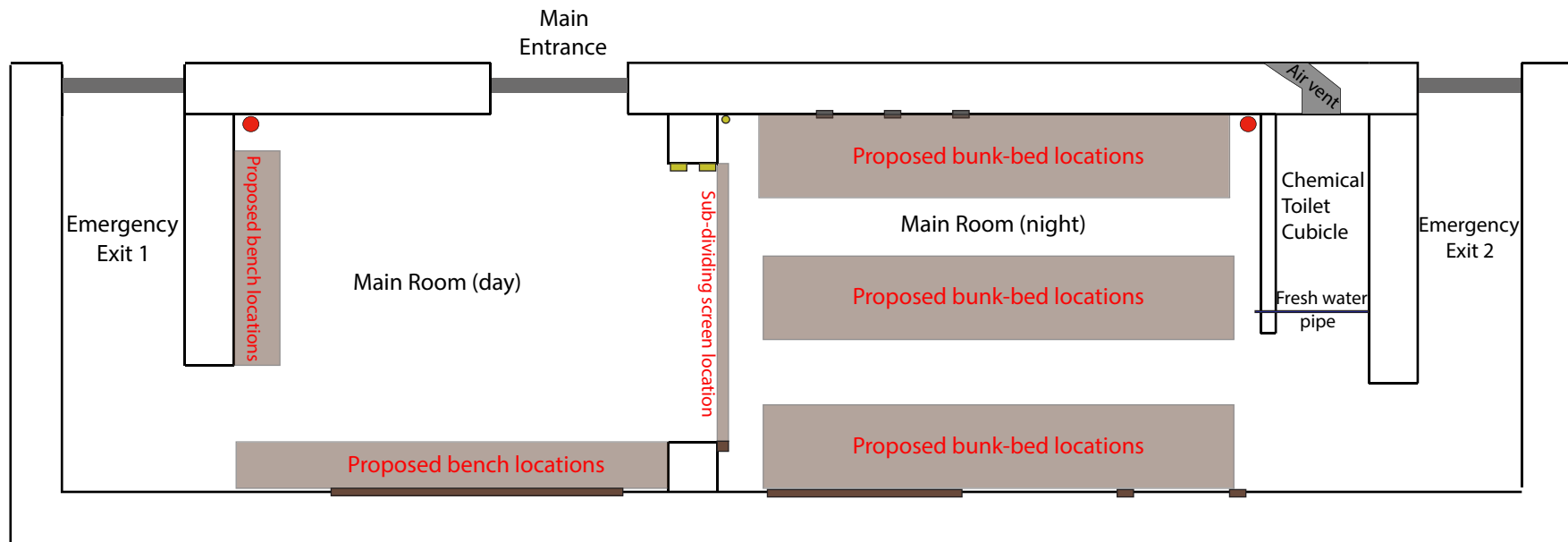


Figure 07: Proposed Air Raid Shelter Layout. Scale 1:50 at A4.



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The Air Raid Shelter at Llesty Hospital, although a marginal space associated with fear, danger and emergency, appears to have been equipped with electric lighting, hot water heating, fresh water, bunk-beds, and chemical toilet, and as such appears to have been a far cry from the simple, cramped and damp Anderson Shelters seen within a domestic setting in the gardens of houses across the nation.

The level 3 building record of the Air Raid Shelter at Llesty Hospital has met the spirit and intent of planning condition 8 of application 061230 in that it has produced a time-stamped photographic and descriptive record of the buildings in advance of demolition. As such it is the recommendation of this report that the condition now be discharged.

10.0 SOURCES

Maps.

Flintshire Council map 1946

Ordnance Survey Open Data maps SJ NE17, NW17, SE17, SW17.

Secondary Sources

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www.UCL.ac.uk/archaeology/research/directory/archaeology-air-raid-shelters



æon archaeology

**WW2 Air Raid Shelters, Llesty Hospital,
Old Chester Road, Milwr, Holywell,
Flintshire, CH8 7SA.**

**Written Scheme of Investigation (WSI)
for Level 3 Historic Building Record.**

February 2021 v1.0



Level 3 Historic Building Record
Project Code: A0293.1
Event PRN: 166935



WW2 Air Raid Shelters, Llesty Hospital, Old Chester Road, Milwr, Holywell, Flintshire, CH8 7SA.

February 2021 v1.0

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Project Code: A0293.1

Date: 08/02/2021

Client: BAK Contracts

info@aeonarchaeology.co.uk

1.0 PROJECT BACKGROUND	2
2.0 POLICY CONTEXT	3
3.0 REQUIREMENTS.....	5
3.1 Building Record	5
4.0 METHOD STATEMENT.....	6
4.1 Level 3 Record	6
4.1.1 Written Account.....	6
4.1.2 Photographs.....	6
4.1.3 Drawings	6
4.2 Processing data, illustration, report and archiving	7
5.0 DISSEMINATION AND ARCHIVING	7
6.0 DIGITAL DATA MANAGEMENT PLAN	8
6.1 Type of study.....	8
6.2 Types of data	8
6.3 Format and scale of the data.....	8
6.4 Methodologies for data collection / generation.....	8
6.5 Data quality and standards	8
6.6 Managing, storing and curating data.	8
6.7 Metadata standards and data documentation.....	8
6.8 Data preservation strategy and standards	9
6.9 Suitability for sharing.....	9
6.10 Discovery by potential users of the research data	9
6.11 Governance of access	9
6.12 The study team’s exclusive use of the data	9
6.13 Restrictions or delays to sharing, with planned actions to limit such restrictions.....	9
6.14 Regulation of responsibilities of users	9
6.15 Responsibilities	10
6.16 Organisational policies on data sharing and data security.....	10
7.0 PERSONNEL	11
8.0 RESOURCES AND PROGRAMMING	11
9.0 MONITORING AND TIMING.....	11
10.0 HEALTH AND SAFETY	12
11.0 INSURANCE.....	12
12.0 CONFIDENTIALITY.....	13
13.0 SOURCES CONSULTED.....	13

1.0 PROJECT BACKGROUND

Aeon Archaeology has been asked by BAK Contracts, hereafter the Client, to provide a Written Scheme of Investigation (WSI) for carrying out a level 3 historic building record of two redundant World War 2 Air Raid Shelters located in the grounds of the former Lluesty Hospital, Old Chester Road, Milwr, Holywell, Flintshire, CH8 7SA (centred on **NGR SJ 18935 74918**) in advance of demolition.

A development proposal (**061230**) has been submitted by the Client to Flintshire Council for the construction of 15No. new housing units and the change of use/conversion of the former Lluesty Hospital Infirmary Wing into 14No. apartments. The following draft condition concerning archaeology has been applied to the proposal:

Condition 8

No development shall take place until a programme of building recording and analysis, equivalent to a Historic England Level 3 building survey, has been secured and implemented, in accordance with a written scheme of investigation which has been submitted and approved in writing by the local planning authority. The programme of building analysis and recording will be completed by an archaeological contractor and must meet the standards laid down by the Chartered Institute for Archaeologists in their Standard and Guidance for the archaeological investigation and recording of standing buildings or structures. A copy of the resulting report should be submitted to the Local Planning Authority and the Development Control Archaeologist (Clwyd-Powys Archaeological Trust The Offices, Coed y Dinas, Welshpool, Powys, SY21 8RP). After approval by the Local Planning Authority, a copy of the report and resulting archive should also be sent to the Historic Environment Record Officer, Clwyd-Powys Archaeological Trust for inclusion in the regional Historic Environment Record.

REASON: To allow an adequate analytical record of the former air raid shelter buildings to be made, before they are demolished, to ensure that the buildings origins, use and development are understood and the main features, character and state of preservation are recorded, and in to comply with Policy HE8 in the Flintshire Unitary Development Plan.

This design and all subsequent mitigation will conform to the guidelines specified in Historic England's 'Understanding Historic Buildings: a guide to good recording practice' (2016) & *Standard and Guidance for the Archaeological Investigation and Recording of Standing Buildings or Structures* (Chartered Institute for Archaeologists, 2014).

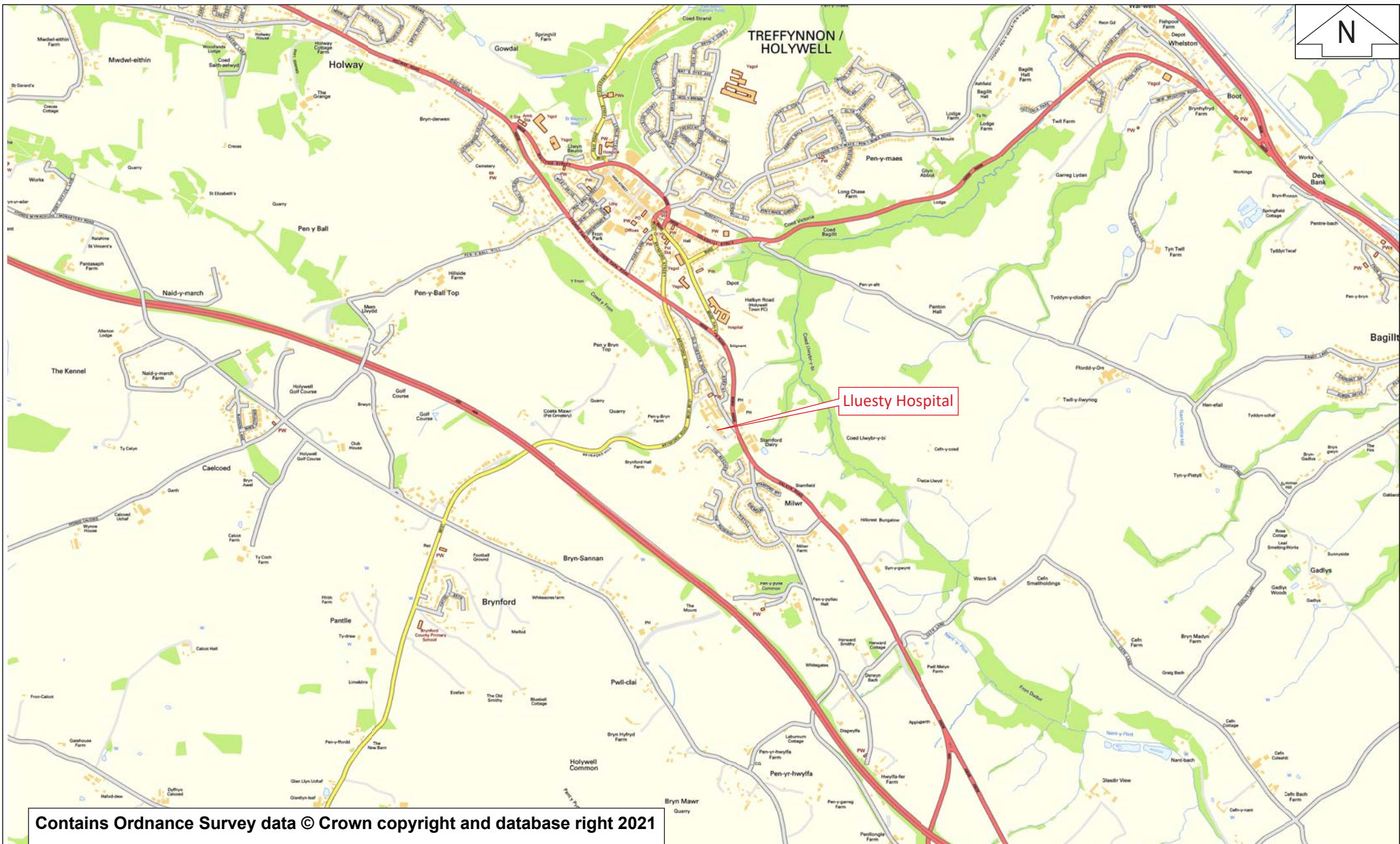


Figure 01: Location of Lluesty Hospital, Old Chester Road, Milwr, Holywell, Flintshire, CH8 7SA. Scale 1:20,000 at A4.



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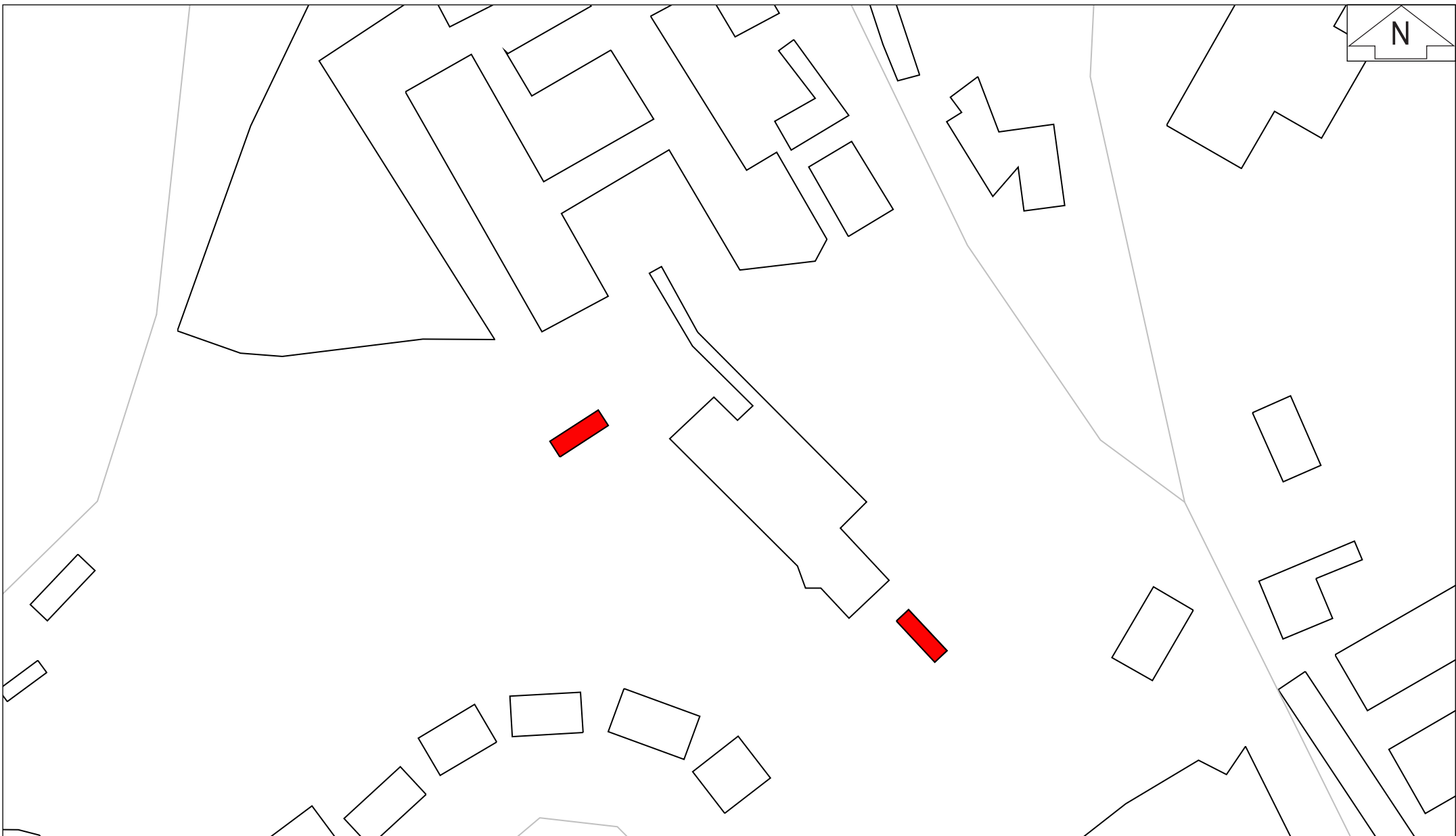


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Figure 02: Location of Llesty Hospital, Old Chester Road, Milwr, Holywell, Flintshire, CH8 7SA. Scale 1:5,000 at A4.

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Figure 03: Location of the former Air Raid Shelters at Llesty Hospital, Old Chester Road, Milwr, Holywell, Flintshire, CH8 7SA. Scale 1:5,000 at A4.

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2.0 POLICY CONTEXT

At an international level there are two principal agreements concerning the protection of the cultural heritage and archaeological resource – the UNESCO Convention Concerning the Protection of World Cultural and Natural Heritage and the European Convention on the Protection of the Archaeological Heritage, commonly known as the Valetta Convention. The latter was agreed by the Member States of the Council of Europe in 1992, and also became law in 1992. It has been ratified by the UK, and responsibility for its implementation rests with Department for Culture Media and Sport.

The management and protection of the historic environment in Wales is set out within the following legislation:

- The Planning (Listed Buildings and Conservation Areas) Act 1990 (As amended)
- The Historic Environment (Wales) Act 2016
- The Town and Country Planning Act 1990
- The Ancient Monuments and Archaeological Areas Act 1979
- The Town and Country Planning (General Permitted Development Order) 1995 (As amended)

The Historic Environment (Wales) Act is the most recent legislation for the management of the Historic Environment and amends two pieces of UK legislation — the Ancient Monuments and Archaeological Areas Act 1979 and the Planning (Listed Buildings and Conservation Areas) Act 1990. The new Act has three main aims:

- to give more effective protection to listed buildings and scheduled monuments;
- to improve the sustainable management of the historic environment; and
- to introduce greater transparency and accountability into decisions taken on the historic environment.

With respect to the cultural heritage of the built environment the Planning (Conservation Areas and Listed Buildings) Act 1990 applies. The Act sets out the legislative framework within which works and development affecting listed buildings and conservation areas must be considered. This states that:-

“In considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority or, as the case may be, the Secretary of State shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses” (s66(1))

Other known sites of cultural heritage/archaeological significance can be entered onto county-based Historic Environment Records under the Town and Country Planning 1995.

Planning Policy Wales sets out the land use planning policies of the Welsh Government. Chapter 6 covers the historic environment and emphasises that the positive management of change in the historic environment is based on a full understanding of the nature and significance of historic assets and the recognition of the benefits that they can deliver in a vibrant culture and economy.

Various principles and policies related to cultural heritage and archaeology are set out in the Planning Policy Wales which guide local planning authorities with respect to the wider historic environment.

The following paragraphs from Planning Policy Wales are particularly relevant and are quoted in full:

Paragraph 6.1.5 concerns planning applications:

The planning system must take into account the Welsh Government's objectives to protect, conserve, promote and enhance the historic environment as a resource for the general well-being of present and future generations. The historic environment is a finite, non-renewable and shared resource and a vital and integral part of the historical and cultural identity of Wales. It contributes to economic vitality and culture, civic pride, local distinctiveness and the quality of Welsh life. The historic environment can only be maintained as a resource for future generations if the individual historic assets are protected and conserved. Cadw's published Conservation Principles highlights the need to base decisions on an understanding of the impact a proposal may have on the significance of an historic asset.

Planning Policy Wales is supplemented by a series of Technical Advice Notes (TAN). Technical Advice Note 24: The Historic Environment contains detailed guidance on how the planning system considers the historic environment during development plan, preparation and decision making on planning and listed building consent applications. TAN 24 replaces the following Welsh Office Circulars:

- 60/96 Planning and the Historic Environment: Archaeology
- 61/96 Planning and the Historic Environment: Historic Buildings and Conservation Areas
- 1/98 Planning and the Historic Environment: Directions by the Secretary of State for Wales

3.0 REQUIREMENTS

3.1 Building Record

The requirements are for an archaeological building record of the two air raid shelters prior to demolition, however should observations or desk-based research suggest the potential for significant features to be encountered during the demolition works, the archaeological contractor should make arrangements to undertake any appropriate supplementary recording work during the development. The Development Management Archaeologist (DMA) at the Clwyd-Powys Archaeological Trust (CPAT) has requested that the building record be roughly commensurate with the English Heritage '*Understanding Historic Buildings: a guide to good recording practice*' (2016) **Level 3**.

Level 3 is an analytical record, and will comprise an introductory description followed by a systematic account of the building's origins, development and use. The record will include an account of the evidence on which the analysis has been based, allowing the validity of the record to be re-examined in detail. It will also include all drawn and photographic records that may be required to illustrate the building's appearance and structure and to support an historical analysis.

The information contained in the record will for the most part have been obtained through an examination of the building itself. If documentary sources are used they are likely to be those most readily accessible, such as historic Ordnance Survey maps, trade directories, and other published sources. The record will not normally discuss the building's broader stylistic or historical context and importance at any length.

The detailed photographic record will consist of English Heritage '*Understanding Historic Buildings: a guide to good recording practice*' (2006) elements:

- written account: 1-3, 6-9, 11-13, 22
- drawings: 2
- photographs: 1-9

4.0 METHOD STATEMENT

4.1 Level 3 Record

4.1.1 Written Account

The written account will include:

- The building's precise location as a National Grid Reference and address form;
- A note of any statutory designation and non-statutory designation;
- The date of the record, name(s) of the recorder(s) and archive location;
- A summary of the building's form, function, date, and sequence of development.
- An introduction, setting out the circumstances in which the record was made, its objectives, methods, scope and limitations, and any constraints which limited the achievement of objectives.
- Acknowledgements to all those who made significant contributions.
- A discussion of published sources relating to the building and its setting, an account of its history as given in published sources, an analysis of historic map evidence and a critical evaluation of previous records of the building, where they exist.
- An account of the building's overall form and its successive phases of development, together with the evidence supporting this analysis.
- An account of the past and present uses of the building and its parts, with the evidence for these interpretations.
- Any evidence for the former existence of demolished structures or removed plant associated with the building.
- Full bibliographic and other references.

4.1.2 Photographs

The photographic record will include:

- A general view or views of the building;
- The building's external appearance. Typically a series of oblique views will show all external elevations of the building and give an impression of its size and shape;
- The overall appearance of the rooms to be altered.
- Any internal or external detail.
- Any machinery or other plant, or evidence for its former existence.
- Any dates or other inscriptions.
- Any building contents or ephemera which have a significant bearing on the building's history.
- Copies of maps, drawings, views and photographs present in the building and illustrating its development or that of its site.

A Digital SLR (Canon 600D) set to maximum resolution will be used throughout.

4.1.3 Drawings

The drawn record will include:

- A measured site plan showing the location and orientation of photographs. This will label all room spaces and indicate any architectural features of note.
- Measured elevation drawings of all external elevations.

4.2 Processing data, illustration, report and archiving

Following completion of the record as outlined above, a report will be produced incorporating the following:

- A copy of the design brief and agreed specification
- A site location plan
- A plan illustrating the location and direction of photographs
- Basic background and relevant historical, descriptive or analytical detail
- A full bibliography of sources consulted
- Illustrations, including plans and photographs, will be incorporated within the report.

5.0 DISSEMINATION AND ARCHIVING

A full archive including plans, photographs, written material and any other material resulting from the project will be prepared. All plans, photographs and descriptions will be labelled, and cross-referenced, and lodged with the RCAHMW within six months of the completion of the project.

Upon completion of the project copies of the report will be sent to the Client, regional HER and DCA at CPAT.

The project report and archive will adhere to the Welsh Trusts' and Cadw's *Guidance for the Submission of Data to the Welsh Historic Environment Records (HERs)* (2018) including the translation of a non-technical summary into the medium of Welsh.

6.0 DIGITAL DATA MANAGEMENT PLAN

6.1 Type of study

A level 3 historic building record of two redundant World War 2 Air Raid Shelters located in the grounds of the former Lluesty Hospital, Old Chester Road, Milwr, Holywell, Flintshire, CH8 7SA (centred on NGR SJ 18935 74918).

6.2 Types of data

Photographs, photograph register, scaled drawings.

6.3 Format and scale of the data

Photographs taken in *RAW* format and later converted to *TIF* format for long term archiving and *JPEG* format for use in the digital report, converted using *Adobe Photoshop*. All photographs renamed using *AF5* freeware with the prefix (*project code_frame number*) and a photographic metadata created using Microsoft Excel (*.xlsx*) or Access (*.accdb*).

All written registers, pro-formas, and scaled drawings scanned as *.PDF* files.

6.4 Methodologies for data collection / generation

Digital data will be collected / generated in line with recommendations made in the Chartered Institute for Archaeologists (CIfA) *Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives* (2014. Rev 2020). Sections 3.3.1 and 3.3.3 are relevant:

3.3.1 Project specifications, research designs or similar documents should include a project specific Selection Strategy and a Data Management Plan.

3.3.3 Project designs or schedules of works etc should outline the methodology used in recording all information, in order to demonstrate that all aspects of archive creation will ensure consistency; for instance in terminologies and the application of codes in digital data sets, highlighting relevant data standards where appropriate

6.5 Data quality and standards

Consistency and quality of data collection / generation shall be controlled and documented through the use of standardised procedure as outlined in the WSI. This will include the use of standardised data capture file formats, digital proformas, data entry validation, peer review, and use of controlled vocabularies.

6.6 Managing, storing and curating data.

All digital data will be organised into Aeon Archaeology proforma project file systems and backed up to the cloud using *Digital River's Crashplan* with additional copies made to external physical hard drive.

6.7 Metadata standards and data documentation

Digital metadata created using Microsoft Excel (*.xlsx*) or Access (*.accdb*) of all photographic plates.

Paper metadata created from Aeon Archaeology proformas for contexts, artefacts, environmental samples, watching brief day sheets, trench sheets, and basic record sheets and then scanned to create digital .PDF copies.

6.8 Data preservation strategy and standards

Long term data storage will be through the submission of digital (.PDF) reports to the regional Historic Environment Record (HER); submission of digital (.PDF) reports and a project completion form to the Oasis database; submission of the scanned (.PDF) archive, photographic plates (.TIF), and metadata (.xlsx) (.acddb) to the Archaeology Data Service (ADS); and retention of copies of all digital files at Aeon Archaeology on physical external hard drive and uploaded to the cloud.

6.9 Suitability for sharing

All digital data will be placed within the public realm (through the channels in 6.8) except for where project confidentiality restricts the sharing of data. All data sets will be selected / discriminated by the Senior Archaeologist at Aeon Archaeology and written permission will be sought from all project specific Clients prior to the sharing of data.

6.10 Discovery by potential users of the research data

Potential users of the generated digital data (outside of the organisation) will be able to source the data and identify whether it could be suitable for their research purposes through access granted via the ADS and RCAHMW websites. Requests can also be made for data through the regional HER's and directly to Aeon Archaeology (info@aeonarchaeology.co.uk).

6.11 Governance of access

The decision to supply research data to potential new users will be via the associated website request (ADS, RCAHMW, HER) or via the Senior Archaeologist when made directly to Aeon Archaeology.

6.12 The study team's exclusive use of the data

Aeon Archaeology's requirement is for timely data sharing, with the understanding that a limited, defined period of exclusive use of data for primary research is reasonable according to the nature and value of the data, and that this restriction on sharing should be based on simple, clear principles. This time period is expected to be six months from completion of the project however Aeon Archaeology reserves the right to extend this period without notice if primary data research dictates.

6.13 Restrictions or delays to sharing, with planned actions to limit such restrictions

Restriction to data sharing may be due to participant confidentiality or consent agreements. Strategies to limit restrictions will include data being anonymised or aggregated; gaining participant consent for data sharing; and gaining copyright permissions. For prospective studies, consent procedures will include provision for data sharing to maximise the value of the data for wider research use, while providing adequate safeguards for participants.

6.14 Regulation of responsibilities of users

External users of the data will be bound by data sharing agreements provided by the relevant organisation or directly through Aeon Archaeology.

6.15 Responsibilities

Responsibility for study-wide data management, metadata creation, data security and quality assurance of data will be through the Senior Archaeologist (Richard Cooke BA MA MCIFA) at Aeon Archaeology when concerning data generation and early/mid-term storage. Upon deposition with digital depositories the study-wide data management, metadata creation, data security and quality assurance of data will be the responsibility of the specific organisations' themselves.

6.16 Organisational policies on data sharing and data security

The following Aeon Archaeology policies are relevant:

- Aeon Archaeology Archive Deposition Policy 2019
- Aeon Archaeology Quality Assurance Policy 2019
- Aeon Archaeology Conflict of Interest Policy 2019
- Aeon Archaeology Outreach Policy 2019
- Aeon Archaeology Digital Management Plan 2020

7.0 PERSONNEL

The work will be managed and undertaken by Richard Cooke BA MA MCifA, Archaeological Contractor and Consultant at Aeon Archaeology. Full details of personnel involved, with *curricula vitae*, can be supplied upon request.

8.0 RESOURCES AND PROGRAMMING

It is intended to undertake the historic building recording in February 2021. A provisional target date for the completion of the project archive and the production of a project report is March 2021.

The historic building recording will be undertaken by a team of demonstrable competence provided by Aeon Archaeology, a Registered Organisation with the CIfA.

Performance Standards

Aeon Archaeology will undertake the historic building recording and operate in accordance with:

- The Chartered Institute for Archaeologists' *Code of Conduct* (2014 edition).
- The Chartered Institute for Archaeologists' *Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology* (2014 edition).
- The Chartered Institute for Archaeologists' *Standard and Guidance for the Archaeological Investigation and Recording of Standing Buildings or Structures* (2014 edition)
- The Historic England document *Understanding Historic Buildings A Guide to Good Recording Practice* (2016)
- The European Association of Archaeologists' *Principles of Conduct for Archaeologists Involved in Contract Archaeological Work* (1998).
- The Chartered Institute for Archaeologists' *Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials* (2014 edition).
- The Chartered Institute for Archaeologists' *Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives* (2014 edition)

9.0 MONITORING AND TIMING

The CPAT Development Control Archaeologist will monitor the historic building recording on behalf of the Council.

Reasonable access to the recording in-progress will be provided by the Client to the CPAT DMA in order to monitor the recording. A site tour will be provided to the CPAT DMA if appropriate.

Aeon Archaeology will advise the Client and the CPAT DMA immediately of any significant discoveries and provide regular reports of the recording works. Aeon Archaeology will ensure that any significant results recovered during the historic building recording are brought to the attention of the Client and the CPAT DMA and will notify the relevant organisations as soon as is practicably possible, and certainly within 24 hours.

A consultation between Aeon Archaeology, the Client and the CPAT DMA will be convened towards or at the conclusion of the historic building recording. The purpose of the consultation is to advise all parties on the manner in which the objectives of the project have been addressed and secure agreement that the on-site recording has been concluded to the satisfaction of the Council.

10.0 HEALTH AND SAFETY

All relevant certification will be obtained from the Client and/or their agents and contractors regarding Health and Safety prior to any site works and Aeon Archaeology will conform to arrangements for notification of entering and leaving the site.

Aeon Archaeology will comply with the *Health and Safety at Work Act* (1974), the *Standing Conference of Archaeology Unit Managers Health and Safety Manual* (1991), *Control of Substances Hazardous to Health (COSHH) Regulations* (2002), *Construction Design and Management (CDM) Regulations* (2007), *Management of Health and Safety at Work Regulations* (1999), the *Work at Height Regulations* (2005), the *Confined Spaces Regulations* (1997), the *Personal Protective Equipment at Work Regulations* (2002) and the Council for British Archaeology Handbook No. 6, *Safety in Archaeological Fieldwork* (1989).

While carrying out the historic building recording Aeon Archaeology will operate in accordance with all applicable Health and Safety Legislation. A Health and Safety Plan (including a Risk Assessment) for the historic building recording will be prepared by Aeon Archaeology and submitted to the Client before the historic building recording commences.

The archaeologist(s) will be provided with all necessary protective clothing and equipment.

The archaeologist will wear a safety helmet and reflective jacket/waistcoat at all times on site.

A First-Aid Kit and Accident Book will be kept on site at all times for the duration of the historic building recording.

11.0 INSURANCE

Liability Insurance – Export and General

Employers' Liability: Limit of Indemnity £10m in any one occurrence

Public Liability: Limit of Indemnity £2m in any one occurrence

Legal Defence Costs (Health and Safety at Work Act): £100,000

The current period expires 07/09/21

Professional Indemnity Insurance – Export and General

Limit of Indemnity £500,000 any one claim

The current period expires 07/09/21

12.0 CONFIDENTIALITY

Aeon Archaeology will treat as confidential all information obtained directly or indirectly from the Client in connection with the historic building recording and will not, without the prior consent of the Client, disclose any information relating to the project or publicise the project in any way.

13.0 SOURCES CONSULTED

Chartered Institute for Archaeologists, 2020: Standard and Guidance for the Archaeological Investigation and Recording of Standing Buildings or Structures

English Heritage: Understanding Historic Buildings: a guide to good recording practice (2016)

