MOD WEST FREUGH (formerly RAF WEST FREUGH),

Wigtownshire

Archaeological Building Investigation

Oxford Archaeology North

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SUMMARY

A desk-based assessment and building investigation was undertaken in March 2004 of buildings to be demolished at MOD West Freugh (formerly RAF West Freugh), Stranraer, Wigtownshire (NX 108 543) by Oxford Archaeology North (OA North). This was following a request by QinetiQ Ltd for the investigation be carried out prior to any demolition taking place due to the historic significance of the buildings.

The buildings recorded comprise a canteen (**E14**), a barrack hut (**F11**), a boiler house (**F24**) and an air raid shelter (**F24a**). The buildings are of similar construction, comprising timber-stud framed walls with corrugated asbestos roofs erected on concrete bases. Externally, the buildings are finished with timber weatherboard, and internally there are asbestos sheet panels. The structures are all varieties of Type A sectional timber hutting (Francis, 1996, 206), with those at West Freugh being amongst the earliest in Britain.

The canteen, **E14**, is a complex, multiphase structure, constructed as a series of interconnecting huts, with later extensions. Despite the difficulty in observing repairs and rebuilds in building materials of this kind, several episodes of remodelling were identified. The brick extension at the northern end of the canteen, is a fine example of a half-brick hut, introduced during World War II, when there was a shortage of timber for the construction of timber huts.

The barrack block itself, comprises two H-shaped blocks, with a boiler house in the southern end and a large hut in the northern end. Later structures, for example the air raid shelter and the oil tank, are located outside this plan. The accommodation was provided in sixteen huts, each H-block comprising two rows of four huts. A lean-to corridor down the inner sides of each block provided access to each hut and to the east/west aligned link blocks. The northern six huts (**F4-6** and **F28-30**) are slightly longer (sixteen bays as opposed to fifteen further south). Each hut appears to have been open plan and with a high ceiling, to allow for the use of bunk beds.

The boiler house provided heating to the entire barrack block. Nothing survives of the original boiler, which was probably located in approximately the same position as the current boilers, and was almost certainly coal-fired. Its chimney has also been remodelled, with access transferred from inside to outside the building.

A subsequent visit to site undertaken during May 2004 recorded the farmhouse (**D3**) and monitored its demolition, following a soft strip. The farmhouse was originally rectangular in plan and of clay mudwall construction, of a style similar to that seen elsewhere in Dumfrieshire. Much of this original fabric survived within the fabric of the remodelled structure. The roof timbers above this structure also appear original and contained many examples of Baltic timber marks, demonstrating the use of northern European pine in the area at the time of construction. The original layout of the building would appear to have been either that of a two-unit cottage, or a double-fronted cottage. Later remodelling included the addition of the north wing and a late outshut.

The desk-based assessment comprised the compilation of a bibliography of available material pertaining to the site, and a brief summary of the historical background of both the area and the airfield. Sources used in this assessment included the Dumfries

and Galloway Council Sites and Monuments Record (SMR), The National Monuments Record Scotland (NMR), the Stranraer Museum, The Royal Commission for Ancient and Historic Monuments Scotland RCAHMS, and the National Library of Scotland. Eighteen references were collated pertaining to the buildings at West Freugh Airfield, with two being unpublished sources. A number of aerial photographs, and historic maps, along with entries from both the NMRS and SMR were also referenced.

ACKNOWLEDGEMENTS

Oxford Archaeology North would like to express its thanks to QinetiQ Ltd for commissioning the work and to Mr Chris Bacon in particular for liaison throughout the project. Kerstie Oliver of QinetiQ at West Freugh is kindly thanked for her time and effort in helping the project run smoothly. Thanks also to Niall Hammond of Defence Estates, for his interest and input into the project, and to BARR contractors for their help and understanding during the demolition recording.

The desk-based assessment was compiled by Hannah Gajos, and the building recording undertaken by Chris Wild, Anthony Lee and Dave McNicol. Chris Wild wrote the report with contributions from Hannah Gajos; Mark Tidmarsh produced the drawings and the project was managed by Alison Plummer. The report was edited by Alison Plummer and Alan Lupton.

1. INTRODUCTION

1.1 CIRCUMSTANCES OF THE PROJECT

1.1.1 QinetiQ Ltd, on behalf of the Ministry of Defence (MOD), is demolishing buildings within MOD West Freugh. The site is a former RAF Station and is presently in Defence Estates/MOD ownership. The buildings include West Freugh farmhouse and RAF service-type buildings. The demolition is proposed in line with the MOD policy of sustainability appraisal, and is supported by Dumfries and Galloway Council (DGC). A brief for the archaeological recording of the buildings, prior to the demolition taking place, was consequently issued by Defence Estates after discussion with Dumfries and Galloway Council Archaeologist (*Appendix 1*). Following approval of a Project Design (*Appendix 2*) Oxford Archaeology North (OA North) was commissioned to undertake a building investigation and desk-based assessment.

1.1.2 The desk-based study was undertaken in order to compile a bibliography of sources relating to the airfield. This comprised a search of both published and unpublished records held by the DGC Sites and Monuments Record (SMR) in Dumfries, the National Monuments Record Scotland (NMRS), Stanraer Museum, and the Royal Commission for Ancient and Historic Monuments Scotland (RCAHMS). Documentary data was also collated in order to allow a brief history of the site to be compiled.

1.1.3 The buildings subject to the archaeological investigation included the farmhouse **D3**, barrack huts **F4-11**, **F20-23** and **F27-30**, and detailed descriptions of buildings **E14**, **F11**, **F24** and **F24a**.

2. METHODOLOGY

2.1 PROJECT DESIGN

2.1.1 A project design (*Appendix 2*) was submitted by OA North in response to a request from the client for an archaeological building investigation of West Freugh Airfield, in accordance with the brief (*Appendix 1)*. Following acceptance of the project design OA North was commissioned by the QinetiQ Ltd to undertake the work. The project design was adhered to in full, and the work was consistent with the relevant standards and procedures of the Institute of Field Archaeologists, and generally accepted best practice.

2.2 DESK-BASED ASSESSMENT

2.2.1 Several archives were visited, in accordance with the project brief and project design.

2.2.2 ***Sites and Monuments Record (SMR):*** the DGC SMR, a database of archaeological sites within Dumfries and Galloway, was accessed. Any references pertaining to the buildings within the airfield were recorded. This included Ordnance Survey maps pertaining to the airfield.

2.2.3 ***National Monuments Record Scotland (NMRS):*** the NMRS was consulted and the records and references pertaining to West Freugh airfield were recorded. This also included digital and photographic images.

2.2.4 ***Stranraer Museum:*** various publications and unpublished reports relating to West Freugh airfield are held within the Stranraer Museum.

2.2.5 ***Royal Commission for Ancient and Historic Monuments Scotland (RCAHMS):*** aerial photographs pertaining to the airfield were recorded using the RCAHMS as a source, as they currently hold the most accessible archive for this media. Various publications relating to the site are also held by the RCAHMS.

2.2.6 ***National Library of Scotland:*** various historic maps pertaining to the study area are held within the National Library of Scotland, including private maps and Ordnance Survey editions.

2.3 BUILDING INVESTIGATION

2.3.1 ***Photographic Record***: this was compiled for all the buildings specified in the project brief, and comprised 35mm monochrome and digital photography, with some additional 35mm colour slides. The overall appearance of each building was photographed, as was the principal external and internal elevations. The photographic detail included the relationship of each building to its setting and the overall appearance of the principal rooms. All Photographs contained a photographic scale where practical. A full index of photographs was compiled, and is appended to this report (*Appendix 7*).

2.3.2 ***Building Survey:*** a RCHME level II to level III-type survey was undertaken for structures **E14**, **F11**, **F24**, and **F24a**. This level of recording is descriptive and produces an analysis of the development and use of the building but not discuss the evidence on which the analysis is based. Recording of the farmhouse (**D3**) and monitoring of its demolition were undertaken to a similar level following a soft strip of internal wall finishes.

2.3.3 ***Site Drawings:*** the following drawings were produced from either existing plans or by instrument survey:

(i) Plans of all main floors annotated to show form and location of any structural features of historic significance and recording the form and location of any significant structural details;

(ii) One sketch cross-section per building;

(iii) Drawings recording the form and location of significant structural details;

(iv) A site plan at 1:1,250 relating the recorded buildings to each other and the landscape will be produced.

2.3.4 ***Instrument survey:*** in the absence of existing detailed plans, new drawings were surveyed by means of a reflectorless electronic distance measurer (REDM). The REDM is capable of measuring distances to a point of detail by reflection from the wall surface, and does not need a prism to be placed. The instrument emits a viable laser beam, which can be visually guided around points of detail. The digital survey data was be captured within a portable computer running TheoLT software, which allows the survey to be directly inserted into AutoCAD software for the production of final drawings.

2.3.5 Where appropriate, existing drawings were corrected/enhanced utilising hand survey techniques. The corrected drawings were digitised into an industry standard CAD package (Autocad Release 14) for the production of the final drawings.

2.4 ARCHIVE

2.4.1 A full professional archive has been compiled in accordance with the project design (*Appendix 1*), and in accordance with current IFA and English Heritage guidelines (English Heritage 1991). The paper and digital archive will be deposited in the National Monuments Record for Scotland, with copies of the report supplied to both Dumfries and Galloway Council SMR and Stranraer museum.

3. BACKGROUND

3.1 TOPOGRAPHY AND GEOLOGY

3.1.1 West Freugh airfield stands within the parish of Stonykirk, Wigton, and is located to the south of Stranraer in the county of Dumfries and Galloway. The parish is bounded on the east by the Bay of Luce, on the south by the parish of Kirkmaiden, on the west by the Irish Channel and the parish of Portpatrick, and by the parishes of Inch and Glenluce on the north (Blain 1799; Anderson 1845).

3.1.2 The parish itself is long and sinuous, and stretches for about seven miles along the coast, with its southern end being only three miles wide. The land to the north-west rises rapidly from the sea to a fairly flat plateau, which has been reclaimed from moss and heath. The surrounding coasts are rocky and precipitous in places, but with several bays which are usable for fishing. The soils to the east and south consist of a sandy loam, with the north and west having a heavier, wetter soil (*ibid*).

3.2 HISTORICAL BACKGROUND

3.2.1 ***Introduction:*** this historical background encompasses both the history of the surrounding areas, and the history of the airfield. It is compiled from secondary sources, including the Statistical Accounts of Scotland – detailed parish reports by the ministers of the Kirk. It is intended only as a brief summary of the study area. The historical accounts of the airfield are mostly compiled from the English Heritage publications concerning conservation of military aviation sites.

3.2.2 ***History of the Parish:*** records of the parish of Stonykirk make reference to '*three earthen mounds of a conical form*', possibly suggesting evidence of Bronze Age activity in the area. The largest of the three was located near to Balgregan House, the residence of Patrick Maitland of Freugh, and measured 460 feet in circumference, 60 feet in height, with an identation on its summit defended by a circular fosse (Blain 1799; Anderson 1845).

3.2.3 Further archaeological remains in the parish include the former residence of the Thanes of Galloway, a square tower at Garthland, which has the date 1274 inscribed on the battlements. Two gold lachrymatories, or tear bottles, were found close by. There is a mention of some ruined Druid's temples and Pictish castles at Ardwell, and the ruins of an old church at Clayshank. There are also several grave stones at Kirkmadrine, which have ancient inscriptions still visible. The Bay of Float, located in this parish, is thought to have been named after vessels from the Spanish Flota, or treasure fleets from the New World, which sank nearby. A number of coins were found at a coastal area named Money Point, but the age of the coins has not been recorded (*ibid*).

3.2.4 During the 18th century the parish was noted for its high agricultural yields of oats, potatoes, flax and grain. More grain was exported from Stonykirk than

any other parish in the west of Galloway. There are references to salt production, although it appears that this was discontinued by the 18th century due to imports from Ireland (Blain 1799). It is probable that the farmland located at West Freugh was part of this arable economy.

3.2.5 ***History of the Airfield:*** the use of aircraft as a military weapon first came to the fore in the years immediately preceding the First World War. A number of different battalions, including the Royal Engineers' Balloon School and the Royal Aircraft Factory, attracted the interest of Government, and lead to the emergence of research and training bases around Britain. During the years of the First World War, coastal stations housing both aircraft and balloons were built around the British Isles. The first Scottish west coast station was opened at Luce Bay in Wigtownshire in 1915, and was used until 1919 when it became a meteorological station. The different bodies working within aviation were amalgamated in 1918 to become the Royal Air Force (RAF) (English Heritage 2003a).

3.2.6 The early post war years were spent consolidating the existing facilities, and focusing on the uses of aircraft as a bombing force. The period between 1923 and 1939 saw a marked increase in the building of airfields, in contrast to the more limited period of retrenchment after the First World War. West Freugh had existed as an RAF station serving various purposes during this time, but was not designated as an actual airfield and camp until 1936 (*ibid*). Evidence of the RAF activity is not shown on the OS popular edition of 1924.

3.2.7 West Freugh Airfield was built in 1936 as a Flying Training (F Training) airfield in response to the need for a strong foundation training required by the RAF. The Government had initiated the Air Training Schemes in 1935, which saw aviation schools across the country provide preliminary training both to pilots and ground crew for eventual careers in the RAF and the RAF Volunteer Reserve. This scheme allowed the training units to concentrate on the intermediate and advanced stages of pilot training, with West Freugh becoming an Advanced Flying Unit (AFU) (*ibid*).

3.2.8 West Freugh's strategic coastal position led to Fleet Air Arm squadrons being based at the airfield during the Second World War, under the overall control of Coastal Command, whose Scottish Division operated out of RAF Stornoway (Fleet Air Arm Archive 2001). However, the site still continued to be defined as a training unit, with a number of Training Command Squadrons also being based there from 1939 to 1944, including 806 Squadron and 819 Squadron (*ibid*). It was also designated as an Observer (O) base, which sent lone pilots out on photographic reconnaissance commissions (*ibid*). West Freugh formed part of the No 29 Flying Training Group, formed in 1942 by splitting No 25 Group. After WWII it was re-absorbed into No 25 Group (*ibid*).

3.2.9 Throughout the Second World War, airfields across the country were being constructed of materials that were only intended to last 'for the duration' (*ibid*). These materials often consisted of pre-fabricated concrete slabs and asbestos. West Freugh was no exception to this tradition, with the buildings materials including concrete, and especially asbestos, used for roof sheets, wall panels, floor tiles, and even in adhesives. However, as with the pre-

fabricated houses built during the post war era, many of these structures in various airfields are still in good condition, due to extensive repair and modification (*ibid*). West Freugh was retained as an RAF station for use in the Cold War period, with many of the present buildings relating to this era.

3.2.10 ***Conservation of Military Airfields:*** military aviation sites within the landscape serve as tangible evidence of the both the advances in technology and the world-wide conflict which characterises the 20th century. The deployment, design and construction of military airfields can provide important insights into the cultural and political situations of the time from the early use of aviation in the First World War, through to the nuclear-based deterrents of the Cold War. These sites have an important archaeological value within our heritage. Within England, military aviation sites have been the subject of a thorough review (English Heritage 2003b), but only a selection of site within other areas of Great Britain were included. The site at West Freugh is not mentioned as a key site in Scotland by the English Heritage Survey of Military Aviation Sites (English Heritage 2003a).

3.2.11 Although not all airfields across England, and the vast majority outside England, either meet, or have been examined against the criteria for listing or scheduling, it was acknowledged by English Heritage (English Heritage 2003b) that many of these sites have a local significance, becoming a landmark in the area, as well as creating personal links between local communities and the airfield. The site will also have particular significance for the squadrons of various nationalities that were based there during World War II. This, it can be argued, gives the airfield a international significance (*ibid*).

3.2.12 The work undertaken by English Heritage provides a framework for the recording of similar sites across Great Britain, not only highlighting the need for similar projects in Scotland, Wales and Northern Ireland, but also, unfortunately, potentially skewing the representation of monuments towards England, where sites of similar criteria exist in other parts of the Union.

4. DESK-BASED ASSESSMENT RESULTS

4.1 INTRODUCTION

4.1.1 The assessment results and bibliography are based on records from the DGC SMR, the NMRS, the National Library of Scotland, the Stranraer Museum, and the RCAHMS, and are presented in table form according to the archive from which they were consulted. Eighteen references were collated pertaining to the buildings at West Freugh Airfield, with two being unpublished sources. A number of aerial photographs, and historic maps, along with entries from both the NMRS and GDC SMR were also referenced.

4.2 SITES AND MONUMENTS RECORD (SMR)

4.2.1 ***SMR database:*** the SMR entry for West Freugh Airfield, number DG 1363 (*Appendix 3)*, gave a brief description of the airfield. There were also several published references which were identical to those recorded in the NMRS, but for the purposes of this report are listed under the DGC SMR bibliography (Table 1). The published sources contained references for background histories of airfields in Britain.

4.2.2 ***Cartographic Sources:*** the SMR contained Ordnance Survey maps of the area. The 1st Edition OS (Wigtownshire) 1850 shows the site as largely comprising large open fields. The farmstead of West Freugh is depicted, and is located in the centre of what was to become the built up area of the airfield. The map shows the farmhouse, and a courtyard of buildings. The 2nd Edition OS (Wigtownshire) 1892 shows the farmhouse has been extended by adding further buildings. Later editions were unavailable from this source.

Author	**Year**	**Title**	**Publisher**
Francis, P	1996	British Military Airfields, from Airships to the Jet Age, **18**	Sparkford, Somerset
Hay, GD and Stell, GP	1986	Monuments of Industry, **233**	Edinburgh
Ordnance Survey	1850	1st Edition Wigtonshire Sheet 22	
Ordnance Survey	1892	2nd Edition Wigtonshire Sheet 22	
Smith, DJ	1983	Action Stations 7: Military Airfields of Scotland, the North-East and Northern Ireland, **217-18**	Cambridge

Smith, DJ	1989	Britain's Military Airfields, 1939-45, **35, 92, 180, 186, 191**	

Table 1: References from Dumfries and Galloway SMR

4.3 NATIONAL MONUMENTS RECORD SCOTLAND (NMRS)

4.3.1 ***NMRS database:*** two entries were recorded in the NMRS for West Freugh airfield (*Appendix 4*). NMRS number NX15SW 22 related to the airfield itself, and contained two photographs and one digital record (*Appendix 5*). NMRS number NX15SW 31 related to West Freugh farmhouse and associated buildings.

4.3.2 There were several published references which were identical to those recorded in the DGC SMR, and for the purposes of this report are listed under the DGC SMR bibliography (Table 1).

4.4 NATIONAL LIBRARY OF SCOTLAND

4.4.1 ***Cartographic Sources:*** the National Library of Scotland also contained historic maps of the area. A copy of John Ainslie's Map of the County of Wigton 1782 was obtained (Plate 1). This showed the village of East Freugh, written as "*Freuch*", but the area of West Freugh is shown as an uninhabited stretch of heathland/marsh. The Ordnance Survey 2nd edition 1895 of Stranraer (Plate 2) shows West Freugh, but is difficult to read as the village has been partially covered by grid lines. However, it is possible to make out at least two buildings. An extract of John Bartholomew's Map of Scotland 1912 (Plate 3) also shows two buildings located in West Freugh, with the late OS edition of 1924 (Plate 4) showing a further building which has been added. It is interesting to note that there is no record of an aviation site on the 1912 or 1924 maps, as although the main airfield had not yet been built, activity at the site had been in existence since the beginning of the century.

4.4.2 Later editions of the area are still within copyright, and so copies could not be obtained without specific permission from the Ordnance Survey. References to the area comprise a 1:10,000 map which was revised before 1930, and published in 1957, a 1 inch map which was revised in 1951 and published in 1955, and a 1:25,000 map which was published in 1972.

Author	**Year**	**Title**
John Anslie	1782	A Map of the County of Wigton
Ordnance Survey	1895	2nd Edition Stranraer Sheet 3
Bartholomew JG	1912	Maps of Scotland, Plate 16: Stranraer
Ordnance Survey	1924	Popular Edition Stranraer Sheet 90

Ordnance Survey	1955	1:10,000 Edition Sheet 90
Ordnance Survey	1957	1 Inch Edition Sheet 90

Table 2 : References from the National Library of Scotland

4.5 STRANRAER MUSEUM

4.5.1 The local museum contains four references to West Freugh airfield. These comprise two published sources about the local history of the airfield, and about the RAF in this part of Scotland. There are also two unpublished surveys on clay-walled cottages in the surrounding areas. These unpublished sources have been included as background information for the survey of the farmhouse at West Freugh. There are no maps, images or any other sources pertaining to the airfield in this museum.

Author	**Year**	**Title**	**Publisher**
Bell, A	1999	Stranraer in World War II	Stranraer and District Local History Society
Murchie, AT	1992	The RAF in Galloway	GC Books, Wigton
Pickin, J	2001	Clay-walled cottage, Lochans – survey	Unpublished Copies in Stranraer Museum and Dumfries and Galloway SMR
Pickin, J	2004	29 Agnew Crescent, Stranraer : a clay-walled house – survey	Unpublished Copies in Stranraer Museum and Dumfries and Galloway SMR

Table 3 : References from the Stranraer Museum

4.6 RCAHMS

4.6.1 A RCAHMS publication, consisting of a general information on farm buildings, was examined. In addition, a sketch plan of the airfield which is not copyrighted to the RCAHMS was examined. If a copy of this sketch plan is required in the future, an application to the RCAHMS must be made, who will then contact the owner.

4.6.2 Aerial photographs of the area are held at the RCAHMS, and references to all photographs held are recorded in *Appendix 6*. There were six sorties flown, creating twenty eight images of the site

Author	Year	Title	Publisher
RCAHMS	1999	Scottish Farm Buildings Survey : 3	Sutherland
RCAHMS	1999	Scotland from the Air 1939-49 vol 1: Catalogue of the Luftwaffe Photographs	RCAHMS

Table 4: References from the RCAHMS

4.7 SECONDARY SOURCES

4.7.1 Ten references were collated from secondary sources, and are listed below:

Author	Year	Title	Publisher
Anderson J,	1845	Parish of Stonykirk, County of Wigton, **vol 4** 162	The Statisical Accounts of Scotland 1791-99
Blain, H	1799	Parish of Stonykirk, County of Wigton, **vol 2** 51	The Statisical Accounts of Scotland 1791-99
Brunskill, RW	2002	Traditional Buildings of Cumbria; the County of the Lakes	London
Council for British Archaeology	2002	*Defence of Britain Survey* Scotland NX15SW Survey 15, Stoneykirk	Council for British Archaeology
English Heritage	2003a	*Survey of Military Aviation Sites and Structures; thematic listing programme*	English Heritage
English Heritage	2003b	*Historic Military Aviation Sites; conservation management guidance*	English Heritage
Francis	1996	*British Military Airfield Architecture*	Patrick Stephens Ltd
Fleet Air Arm Archive	2001	Fleet Air Arm Archive	*www.fleetairarchive.net*

OA North	forthcoming	*An Extensive Survey of Clay Buildings on the Solway Plain*	Unpublished. Copies in OA North Library
Woodside, J	2004	*A catalogue of UK airfields*	*www.homepages.mcb.net/bones/06airfields/UK/uk.htm*

Table 5: References from secondary sources

5. BUILDING INVESTIGATION RESULTS

5.1 BUILDING E14; CANTEEN

5.1.1 The canteen (**E14**) lies on the western edge of the West Freugh complex, outside the current security fence (Fig 2). It comprises several structures, attached by linking blocks and corridors, and is oriented approximately north/south (Figs 3 and 4).

5.1.2 The building is constructed on concrete wall foundations and a concrete floor base. Metal ventilators allow airflow through the foundation walls below the hut. The walls are constructed of 4"x 2" (0.1m x 0.05m) timber-stud framing, with external weatherboarding and internal asbestos sheet panelling. The roof comprises close-set rafters overlain by horizontal tongue-and-groove boarding. It is covered with 3' (0.92m) wide corrugated asbestos sheet roofing, with asbestos rolled ridge and plain bargeboards. The rainwater goods are of cast iron.

5.1.3 The main structure, or western wing of the building (Rooms **1**-**4**), comprises an entrance lobby (**1**), dining room (**2**), bar (**3**) and store (**4**). The northern end is a rendered extension, most probably in brick, with 0.26m x 0.25m buttresses at the midpoint and each end of the long elevations, and two buttresses at ⅓rd spacing on the north gable.

5.1.4 There is a projecting porch with pitched roof positioned centrally on the western, front, elevation, which also contains 12-light steel windows either side of the porch, comprising a four-light top-hung vent over an eight-light side hung casement. To the north and south are five pairs of similar windows, each divided by a boxed timber mullion. The porch also has single light windows.

5.1.5 Steps lead from the porch, which has single-light windows in the north and south elevations, through two pairs of double doors into the lobby (**1**). This has two cloakrooms either side of the main door, with double doors to rooms **2** and **3**. At the south side of the porch is a corridor (**11**) that leads into a central link block.

5.1.6 To the north of the lobby is the dining room (**2**). This has a late sliding partition along the line of the extension at the northern end, and comprised a seating area to the south and a games area and stage to the north. The two windows in the end of the western elevation and the three windows in the north elevation are all blocked internally by the addition of timber panelling around the staged area, which is raised 0.13m above the floor.

5.1.7 In the southern part of the room two pairs of 4"x 2" (0.1m x 0.05m) timber braces were observed projecting from the eastern and western elevations. They are positioned at ⅓rd distances and project from the height of the window transoms in the western elevation, cut into the mullions of the windows.

Angled at *c* 45° into the ceiling, the braces are presumably related to the stabilisation of the roof trusses.

5.1.8 To the south of the lobby is Room (**3**), known as the 'club'. It has similar windows and braces (six pairs) to Room **2**. There are also two windows in the eastern elevation. A central buttress projecting 0.12m from the east and west elevations, carries a boxed beam overhead. In the north-eastern corner of the room is a bar (Plate 8), which, although unlikely to be original to the building, is an interesting and well-preserved mid-twentieth century example. At the southern end of the room is an east/west partition, which separates the southern bay into a store (Room **4**). Access is currently via a door at the eastern end, although it appears that there was a similar doorway at the western end, visible inside the store.

5.1.9 At the eastern end of the lobby (**1**) is a small office (**8**), which has a doorway into corridor **11** to the south. It has two angled braces in the east elevation, as in Rooms **2** and **3**, either side of a pair of 12-light steel windows, with top hung four-light vents, separated by a boxed timber mullion. Below the window is an original cast iron radiator, and two safes are located in the south-east corner. The upper safe is a Mark IV Manifoil safe, sitting on top of a Chatwood (Shrewsbury) safe.

5.1.10 To the east of the southern end of Room **2** is a north/south-aligned extension with a pitched roof. It is of similar construction to the original part of the main structure (Rooms **1-3**), and comprises three rooms (**6**, **7** and **7a**) and a corridor. The northern room (**6**) was the washing room for the kitchen, and has late stainless steel fittings. The windows differ to the main block, being eight-light steel windows with the uppermost row forming a top hung vent. All five windows in the north elevation have internal flyscreens. A fusebox cover, for the potato peeler, in the eastern elevation may be an original feature (Plate 9). Doorways at either end of the southern elevation lead into the servery (**7**). This also has late stainless steel fittings and is arranged in a canteen style. Double doors at either end of the western elevation allow one way flow of people to and from the dining room (**2**). There are two pairs of windows at either end of the southern elevation, comprising steel six-light side hung casements below four-light top-hung vents. Between the windows is a store room (**7a**), containing shelves storing crockery, possibly added onto the original extension.

5.1.11 Towards the northern end of the eastern elevation of Room **2** is a late rendered brick extension (**5)**. It has a flat roof with projecting concrete window sills externally, and comprises a toilet block and fire escape. The windows are four-light steel windows, with the top light forming a hung vent. Internally, the structure has a central partition between the Gentlemen's (**5a**) and Ladies (**5b**), each having Armitage Shanks fittings. The water heater in Room **5b** is probably original and is a Santon heater. A similar-sized, but differently-constructed toilet block (**9)** also adjoins the southern end of the eastern elevation of Room **3**. It is of timber-stud construction with external weatherboard, and comprises two phases. The earlier, northern part is of similar construction to the main block to the west, but has a felt-covered pitched roof, probably being re-roofed when it was extended to the south on a

five-course brick-base and with a cat-slide felted roof. The block has three steel eight-light windows, two of which are side-hung casement. Internally, the block is a single room, with Armitage Shanks fittings.

5.1.12 Attached to the north-east corner of Room **3** is an east/west-aligned link block (Rooms **16**-**19**) with a pitched roof containing two skylights on the southern pitch. Corridor **11** runs along the northern side of the block, providing access into the eastern wing of the present building. The corridor has 10-light steel windows in its northern elevation, comprising four-light top-hung vents over six-light side-hung casements. A loft hatch at the western end of the corridor revealed that the roof of the main block to the west has braced king-post trusses. Rooms **16** and **17** are accessed from the rear of the bar in Room **3**, and form the main part of the link block. Room **16** is a kitchen area with no windows, and leads to storeroom, **17**. The dividing door between the two is a four-panelled door with beaded frame, suggesting some status. A blocked doorway in the southern elevation of the storeroom formerly led to the outside of the building. The original west wall of the east wing has been partially removed within Room **17**, surviving as a 'beam' 0.3m deep over the majority of Room **17**, and is extant to the south of the link block.

5.1.13 The northern part of the east wing comprises a large kitchen (**10**) and storerooms and office (**12-15**). The kitchen has modern appliances and fittings, with the cookers arranged around a central, rectangular column (measuring 0.83m x 2.77m) which presumably acted as the fireplace/flues for the original cookers. The stack is brick with a single-course stepped tier below a simple ceramic pot. To the north and south of the chimney the roof has raised central skylights, allowing more light into the kitchen. The southern skylight was blocked by the insertion of a new ceiling in the kitchen.

5.1.14 The kitchen also has angled 4" x 2" braces from the long walls into the roofspace; three survive in the east elevation, with only the central one surviving to the west. There are two pairs of windows in both east and west elevations, comprising steel four-light vents over six-light side-hung casements. Doorways from the kitchen lead to Corridor **11** and Dining Room **20** to the south, Servery **7** to the west, and Rooms **12-15** to the north.

5.1.15 Room **12** is accessed via the fire escape corridor. It houses freezers and shelving, and was probably used as a larder. It has two eight-light steel casement windows in the north elevation, separated by a boxed timber mullion, and with two-light top-hung vents. The western vent has been replaced with a timber frame. The room retains a possible original light switch.

5.1.16 To the east is the Kitchen Office, **13**, which has a Thomas Withers and Sons Ltd safe bricked/concreted into the south-western corner of the room. The window in the north elevation is a replacement timber three-light casement. Room **15** is a cleaner's storeroom, with a ten-light steel window in the eastern elevation, comprising a four-light vent over a six-light casement. The light switch may be original. To the west of Room **15** is a short corridor housing the main fuse board. This retains a possibly original Bill Royal RF503 fuse cover. The corridor leads to an office (**14**) which has a window similar to Room **15** in

the east elevation, with an angled 4"x 2" brace from the mullion to the ceiling, as in Kitchen **10**. To the north is a single toilet cubicle with Armitage Shanks furniture, a single 10-light window in the east elevation and an eight-light window in the northern elevation.

5.1.17 South of Kitchen **10** is a central corridor, the return of Corridor **11**. A loft hatch towards the southern end revealed braced king post roof trusses similar to those in the west wing. To the west of the corridor is a locked small storeroom, **19**, built into the north-east corner of Room **17**. To the south, a second partitioned cubicle accessed from Room **17** houses a Millners Safe Co Ltd (London and Liverpool) safe. The door into this cubicle is similar to that into Room **16**, and has a beaded frame. A late plasterboard east/west-aligned partition to the south creates Room **18**. This room serves as a storeroom and has an eight-light window in the south elevation and two eight-light windows in the west elevation, with an angle brace to the ceiling between. A door leads into corridor **11**, with a late fire escape door at the western end of the south elevation.

5.1.18 Adjoining the kitchen (**10**) and to the east of the corridor is a small dining room, **20**, presumably for Officers. The room has two pairs of 10-light vent/casement steel windows at either end of the eastern elevation, with a single window of similar style 0.46m north of the southern pair. The east wall also houses two cast iron radiators.

5.1.19 South of the dining room is a disabled toilet, **21**, with late Armitage Shanks furniture and a 10-light steel window in the eastern elevation. A late partition separates it from the ladies toilet, **22**, which comprises a vestibule at the northern end, with two 10-light casement/vent steel windows in the eastern elevation above a cast iron radiator. The toilet cubicles are housed in a late rendered extension with a cat-slide roof, which fills the gap between the east wing and a boiler house located to the south. The toilet block has two eight-light steel windows, Armitage Shanks toilets and Twyfords basins.

5.1.20 The boiler house located to the immediate south of the canteen appears to be of similar style to **F24** (*see Section 5.3 below*).

5.2 BUILDING F11: BARRACK HUT

5.2.1 This building is the south-western hut of a complex of sixteen similar structures that formed the main barrack block in the centre of the camp (Fig 2). Like the other such structures it is redundant, but is much less altered for late usage than several of the other barrack huts.

5.2.2 The structure is approximately east/west-aligned and comprises fifteen bays, constructed on concrete wall foundations and a concrete floor base (Figs 5 and 6). Metal ventilators allow airflow through the foundation walls below the hut. The walls are constructed of 4" x 2" (0.1m x 0.05m) timber-stud framing forming 5' (1.43m) wide panels. Each panel comprises a bottom and top rail, four vertical posts, trimming rails at mid-height, and angled braces from the central posts to the outer posts below the trimming rails. Each frame is bolted

vertically into the concrete base, and laterally to the adjoining frame. Most of the frames are modified, most probably at the time of construction, for the insertion of metal window frames. Externally, the frames are covered with horizontal weatherboard; the older *in-situ* boards have tongue and groove joints, and may be original, whilst the later boards have a deeper chamfer at the top, allowing the upper board to overlap completely. At the longitudinal junction of the boards, typically the length of the 5' frame but some much wider, vertical battens protect the joints. Internally, the stud frames are covered with asbestos sheeting, attached with galvanised nails. Louvered ventilators in the roofspace of both gables allow air into the stud-framing.

5.2.3 The roof comprises close-set rafters on 0.5m centering, with every third rafter forming a truss of two rafters bolted together and clasped by collars at ceiling level. Horizontal tongue and groove board overlies the rafters, above which 3' (0.92m) wide corrugated asbestos sheet create the roof material, which has asbestos rolled ridge and plain barge boards. Rainwater goods are of cast iron, with two downpipes on each long elevation at ⅓rd distances, into concrete-lined brick drains. The eastern downpipe on the north elevation is damaged.

5.2.4 The structure has 15 opposing windows in the north and south elevations. These are all metal eight-light casement windows, the majority of which have a two-light top-hung vent in the upper row, however several of the windows are side-hung. The western and central windows in each elevation are set close, forming 16-light windows with a boxed timber mullion, which displaces the symmetry of a window in each bay.

5.2.5 Internally, the ceiling height is raised 0.4m above wall-head height, presumably allowing greater headroom with the use of bunk-beds. Late plasterboard and timber stud walls have been inserted in the eastern end of the building, associated with its late use as a store. These comprise a north/south-aligned partition from the north elevation to the west of the central window, returning east slightly south of centre, and north again to the western side of the east window. A further division, east of the window east of centre, divides the whole building into two, with double doors in the corridor created along the southern side.

5.2.6 A large pair of batten doors, measuring 2.33m width, located in the west gable have a concrete ramp to the road to the west. It is probable that these were inserted after the buildings use as a barrack hut, but the only visible evidence is a ragged cut in the asbestos sheeting immediately to the north internally.

5.3 BUILDING F24: BOILER HOUSE

5.3.1 The boiler house is a six bay, north/south-aligned structure (Figs 7 and 8) located at the southern end of the barrack block, between huts **F11** and **F20**. It is of similar concrete, timber stud, asbestos and weatherboard construction to the barrack huts (*see Section 5.2 above*), but with several modifications: the southern bay is constructed of concrete to a height of 1.15m, internally projecting 65mm to form a plinth. The internal elevations are cement-rendered over the asbestos sheets; rainwater goods on the east elevation have been

replaced with uPVC; the louvered vent in the south gable has a plyboard canopy. A 1.48m^2 brick-built chimney butts the south-western corner, projecting slightly beyond the southern elevation of the boiler house. It is of alternate header and stretcher construction to a height of 6.4m, with three courses of stepped bricks above providing a base to a 1.0m^2 stack.

5.3.2 A 2'^{2} (0.61m^2) top-hung steel hatch was inserted into the base of the western elevation of the chimney, with 0.1m wide rebuilds either side, and an inserted concrete lintel. A similar-sized steel plate was observed in the concrete wall of the southern end of the eastern elevation, although this was retained with a transverse strap, rather than being hinged.

5.3.3 Internally, the southern two bays house two oil-fired boilers, fed from a tank located to the south of **F20**. The eastern boiler, marked 'boiler 1' is a Potterton boiler sitting on a base of edge-set brick, several of which appear to be frogged spelling out 'IFWAR'. The western boiler (boiler 2) is a Stelrad Ideal Viceroy ES boiler, and has a concrete skim over the course of the edge-set bricks forming its base. Oil supply pipes at the rear of the boilers and electric cabling ducts in front of the boilers are encased in rounded concrete ramps at floor level, presumably to avoid trip hazards. Hot water pipes run from the top of each boiler around the ceiling and into the other rooms of the boiler house. Whilst the pipes appear late, and are lagged, many of the valves may be original. A round hole in the north-east corner of the boiler room floor, with metal cover, appears to have housed a pump. Two large flues lead from the rear of the boilers into the chimney in the south-west corner, which is brick-faced on the internal elevation.

5.3.4 The second bay of the boiler room has 16-light metal casement windows, with central mullions and top-hung two-light vents, in both the east and west elevations, with a similar window in the fourth bay of the western elevation. A pair of louvered batten doors allow access into the structure in the third bay within the eastern elevation. The fifth bay is separated from the boiler room by a partition of horizontal timber boards, with a batten door at the west end, and a second doorway 1.43m from the east elevation. The bay is divided with a north/south-aligned asbestos sheet/timber-stud partition. The eastern part of the bay is also boarded with horizontal timbers, and has evidence of a blocked 2' wide (0.61m) 1'10" high (0.55m) hatch in the eastern elevation, with rebates for top-hung hinges internally. The western part of the bay houses two late Grundfos UPC 50-120 water pumps. These have altitude/pressure gauges mounted on the northern wall, both of which appear re-used, the western one measuring feet of water only, and manufactured by Joseph Tomey and Sons Ltd, Birmingham.

5.3.5 The northern bay has water pipes at floor level along the southern side, with a late box-step inserted in the doorway to the eastern part of the fifth bay to the south. The pipes go into the floor just inside the external elevations and pass underground into 2'2" (0.67m) wide, 2' (0.61m) deep ducts to the east and west before rising up the outer walls of the barrack blocks onto the roofs.

5.4 BUILDING F24A: AIR RAID SHELTER

5.4.1 There are two air raid shelters at West Freugh, one, ARS2, to the west of the farmhouse, the other, **F24a** (ARS1) to the immediate south of barrack hut **F11**. Both are of identical construction, although the latter has been modified for recent use as a wormery, with the addition of an internal plastic sheet lining and shelving.

5.4.2 The shelter walls and roof are constructed of pre-cast, reinforced U-shaped concrete panels, 0.105m thick and 0.285m wide. The floor appears to be sand and soil, with fibreboard overlying it in places. The structure is sunken *c* 1.5m below ground level, and is accessed by six concrete steps leading to a timber-framed doorway at the western end of the southern elevation. This gives access to a porch, which is separated from the main shelter by a continuation of the pre-cast concrete wall forming the east jamb of the main doorway. This has a central four-panel timber door. There are no fittings predating the wormery within the shelter.

5.4.3 Externally, the shelter is covered with a mound of sand and turf (Plate 15). At the eastern end of the top of the mound is a concrete flagstone with a plastic pipe projecting vertically from the shelter immediately to the north. The flagstone most probably caps an exit, whilst the pipe appears to relate to the wormery. It is usual for steel steps in the wall-face to be associated with the exit hatch (Chris Bacon *pers comm*), but if present, they were obscured by the wall coverings associated with the structure's use as a wormery.

5.5 BUILDING D3: FARMHOUSE

5.5.1 The farmhouse is a one-and-a-half storey structure, of basic L-shaped plan, on the northern side of the West Freugh complex. The original part of the building comprises a rectangular east/west-aligned wing, with an extension on the northern side flush with the western gable (Figs 10 and 11). A further single-storey extension is located in the northern re-entrant angle.

5.5.2 The structure is presently cement rendered, with a Welsh slate roof. This comprises an east/west-aligned pitch with a lower north/south-aligned pitch, which butts the north-western end of the higher roof. Both roofs are angled at approximately 40°. The slates are rectangular, laid in regular courses below V-shaped concrete ridge tiles. All of the roof valleys are leaded, as are those to the gabled porch, located centrally on the front, southern, elevation. The building has three rectangular chimney stacks, located on the northern, western and eastern gables. The stacks are rendered and each has a simple oversailing course and no water-tabling. The northern and western chimneys are flush with the external face of the gable, whilst that above the eastern gable is flush with the inner wall face. The extension in the north-east re-entrant has a concrete-tile single-pitched roof, except where it projects beyond the original east gable, where there is one row of tiles forming a southern pitch to the extension.

5.5.3 The northern gable has a plain closed verge, with red sandstone raking copings, interrupted by the flush chimney stack. The eastern and western gables have wide projecting purlins, faced with plain bargeboards. The south elevation has exposed rafters with fascia boards along the eaves.

5.5.4 The ground floor windows, with one exception, are balanced two-light eared sash windows. These are located either side of the doorway in the southern elevation, in the western wall of the northern wing, and in the southern part of eastern gable of the original structure. The latest extension on the northern side has a similar, but frosted, window in the north elevation, and a four-light top-hung casement in the east elevation, where it overlaps the original structure. The roofspace, which forms an upper storey, has a mixture of skylights and dormers. Sash dormers, of similar style to those on the ground floor, but with glazed angled reveals, are located above the ground floor windows in the south and west roof pitches. All of the dormer windows have gables, with slate-hung cheeks. A two-light metal-framed skylight is located on the south pitch above the entrance door, with a similar skylight on the catslide roof of the late extension. A three-light metal-framed skylight is located at the southern end of the east pitch, above the stairwell.

5.5.5 The original building was of clay mudwall construction, the majority of which survives, and comprised a rectangular planned, east/west-aligned structure. The clay mudwalls were constructed on foundation plinths of angular rough local stone, which appears to have been bonded with a pale lime and sand mortar. The walls comprise layers of between 0.12m and 0.18m thickness of clay mass, 2' (0.61m) thick, to a height of 10' (3.05m). The clay mass comprises a mixture of puddled clay and occasional (<1%) small rounded pebbles mixed thoroughly with straw (10%). The internal wall face is flat, the clay layers having been trimmed with a paring iron. The stone-built plinths rise up to the corners of the building, and to the central doorway in the southern elevation, forming walls 4' (1.22m) high, protecting vulnerable parts of the structure from damage.

5.5.6 The eastern end of the structure retains all the original clay wall, comprising the east gable to the base of the chimney stack, the south long-wall, except the western 18" (0.46m), which has been rebuilt in brick and stone, and approximately 60% of the north elevation (15' (4.58m)). The western end of the north long-wall was removed after the insertion of the north wing, with the exposed end of the clay wall finished with brick. The western gable, which was presumably originally clay, is rebuilt in brick, most probably during the construction of the north wing.

5.5.7 Nothing survives of the original internal layout, but many original features survive within the clay walls. The doorway in the southern elevation is 45" (1.14m) wide, but ragged stones forming the western jamb, compared to faced stones to the east, suggest it may have been widened slightly. The doorway is also 8'6" (2.59m) high, strongly suggesting that the height of the doorway was raised when the porch was added to the south. The large 4' (1.22m) wide sash windows either side of the doorway also appear late. It is most probable that the original windows were much smaller, cut out from the clay walls, with no sills or lintels. Removal of brick stopping below these windows revealed an

earlier phase of windows than those now present. Plastered, angled rebates were observed, to floor level, apparently representing the base of boxed sash windows. The western window aperture was positioned 3" (0.08m) east of the present aperture, and was 6" (0.15m) narrower. A similar situation was observed in the eastern gable, with 2½" (0.06m) thick red sandstone flags observed within each rebate, suggesting that this was the floor surface at the time of the earlier windows. Clay wall was also observed below the southern window, demonstrating that brick-facing observed externally was a single-skin facing repair.

5.5.8 Two further features were observed cut into the clay of the eastern gable at ground floor level. At the southern end was a 32" (0.81m) wide, 13" (0.33m) deep 88" (2.24m) high alcove. It appears to have been cut out of the clay wall and had a late concrete floor. It is of unclear function, but the floor suggests it is a relatively late feature. To the south of the northern window aperture is a 32" (0.81m) wide, brick-blocked fireplace. It cuts through the wall plinth and has a late concrete hearth projecting into the room, suggesting that it is not an original feature.

5.5.9 In the remains of the northern elevation two features were observed cutting into the clay wall. Opposite the doorway in the southern long-wall was a 27" (0.69m) wide, 20" (0.51m) high aperture, 16" (0.41m) below wall-head height. It was brick-blocked through to the external elevation, and appears to have been a window, possibly original, and probably relating to the position of the staircase. To the east is a narrow 5" (0.13m) aperture, 1' (0.30m) high, also brick-blocked to the external face. This feature is of unclear function.

5.5.10 The height of the eastern gable suggests that the original structure was built as a one-and-a-half storey dwelling, rather than a single-storey cottage. This infers that the roofspace was always intended for use as a room. A small sub-rectangular opening, 17" (.043m) high, and 14" (0.36m) wide, from the south elevation, narrows to 11" wide in the external elevation, and appears to represent a small window into the original roofspace. This feature was blocked, both internally and externally. Three rough rows of small rectangular sockets, 2" (0.05m) wide, 1" (0.03m) high and 1½" (0.04m) deep, in the eastern gable represent the attachment stakes for stud panelling. A central, 34" (0.86m) wide upper floor fireplace is brick blocked, and has a brick chimney stack above, constructed of mould-thrown brick bonded with a pale lime and sand mortar, similar in appearance to those in the western gable.

5.5.11 The roof structure comprises simple trusses with collars, with the tie beams forming the floor joists for the attic floor. All timbers are of low scantling, 6¼" x 3¼" (0.16m x 0.08m) pit-sawn pine. There are seventeen trusses, on approximately 2' (0.61m) centering, the apexes half-lap jointed on alternate east and west sides, with collars nailed onto the eastern face of each truss. Purlins are only present beyond the outer trusses, three on each pitch, tying the roof structure into each gable and projecting slightly beyond. The tie beams are cut into the clay wall heads and project 2" (0.05m) beyond the external face. The outer face of the clay wall has subsequently been ramped over the top of the tie beam, up to 5" (0.13m) high, for weatherproofing, sealing the tie beams, which have the rafters lap-jointed and nailed to their eastern sides,

within the clay wall. During demolition it was clearly observed that the tie beams sat on the top of a clay layer, rather than having been cut partially into it. Several of the rafters were waney edged, and five Baltic timber marks were observed prior to demolition on rafters and joists. During demolition *c* twenty examples of Baltic timber marks were observed and recorded, suggesting that the roof was constructed entirely of imported northern European pine.

5.5.12 The majority of the trusses were overlain by 6" (0.15m) wide, ⅞" (0.02m) thick tongue-and-grooved boards, underlying felt and Welsh slate. However, at the western end of the north pitch, to the west of the staircase, earlier laths overlay the trusses. These were 2" (0.05m) x 1" (0.03m), laid on 5" (0.13m) centrings. The remains of a round-headed, most probably Cumbrian, slate was observed nailed to one of the laths (Plate 28).

5.5.13 The western gable and the north wing are constructed of what appears to be mould-thrown brick, bonded in a pale grey lime and sand mortar with many lime inclusions. It is three skins thick, constructed in English garden wall bond, with a single skin of stretcher bond on the internal face. It appears to be one phase of construction, replacing the clay-built west gable at the same time as the construction of the north wing. It is unclear whether the 18" (0.46m) length of brick and stone wall at the western end of the southern elevation represents a refacing/rebuilding of the end of the clay wall, or a slight extension of the structure.

5.5.14 The gable has a central projecting chimney breast 16' (4.88m) wide. It has a central 5' (1.52m) wide alcove, 15" deep (0.38m), which possible represents the position of a large fireplace. A single skin, east/west-aligned wall projects from the centre of the alcove, splitting the western part of the structure into two rooms to the west of the staircase. A small 34" (0.86m) wide brick-blocked fireplace was observed at the southern end of the chimney breast, whilst the sash window in the west wall of the north wing is cut through the chimney breast.

5.5.15 The gable of the north wing has a central doorway, and a late clinker-block partition to the east, which returns 7' (2.13m) from the north gable, creating a room in the north-east corner of the north wing. This was utilised as a boiler room, which houses a late 20th century boiler and fittings, and is accessed by an inserted doorway in the gable, similar to that to the west.

5.5.16 Within the attic, the gable has a chimney breast, 69" (1.75m) wide, projecting 4" (0.10m), and offset west of centre. It has a blocked central 34" (0.86m) wide fireplace. The roof structure of the north wing is similar to that to the south, comprising fifteen trusses, all half-lap jointed on the southern side at the apex. The timbers appear to be circular sawn, and no waney-edged timbers or Baltic timber marks were observed.

5.5.17 In the re-entrant angle between the original structure and the north wing is a later outshut, constructed of a double skin of extruded brick in English garden wall bond. This is accessed by a doorway cut into the original clay-built north elevation, but appears to have originally been accessed via a doorway cut into the eastern elevation of the north wing to the south of the boiler room. The

outshut originally had an internal brick partition, presumably dividing toilet facilities.

5.5.18 Externally, there is a 7" (0.18m) wide, 10" (0.25m) high plinth at the base of the outshut. It is roughly cut at its northern and southern ends, apparently having 9" (0.23m) wide returns to the east. This appears to represent the foundation of a possibly contemporary structure that lay to the east, but was subsequently demolished.

5.5.19 The porch, located centrally on the southern elevation, is of double-skin-brick construction, in irregular English garden wall bond, with pale grey lime and sand mortar, similar to that in the west gable and north wing. It has a 41" (1.04m) wide, 5' (1.52m) high brick-blocked window in its eastern elevation, which provided a natural light source to the porch. Elements of tongue-and grooved matchboard panelling were observed in the south-east corner of the porch, presumably inserted when the window was blocked. Within the porch, remains of earlier render of the external clay wall were preserved around the doorway. The render was lime and sand with grit and lime inclusions, coated with many coats of limewash.

5.5.20 The floor of the main building (including the north wing) comprised a suspended timber floor. This was removed in the original structure to reveal supporting walls for the floor joists below. Two sleeper walls are aligned north/south, from the main door in the south elevation to the staircase, with three east/west-aligned sleeper walls to the east, and a single east/west-aligned sleeper wall to the west, south of the internal brick wall. The flooring to the north of the internal brick wall was not removed. All of the sleeper walls, with the exception of that in the west, which was constructed of mid/late twentieth century grey frogged bricks, were constructed of rough local stone with occasional mould-thrown bricks and brick fragments, bonded in a lime and sand mortar. These overlay compacted dark brown sand, which appears to have formed a levelling layer for the earlier red sandstone flag floor observed around the windows in the east gable. Within the porch is a tiled mosaic floor, laid on a concrete base, comprising square 4" (0.10m) and 2⅛" (0.05m) ceramic tiles.

5.5.21 The dog-legged staircase, located centrally was inserted in the late twentieth century, and, according to local knowledge, replaced an earlier stair of similar style.

5.6 THE BARRACK BLOCK

5.6.1 The barrack hut (**F11**) described above (*Section 5.2*) forms only a small part of the barrack block complex. The hut described is typical of the sixteen barrack huts, although some have been more heavily remodelled for late use. The barracks are arranged in two H-blocks, with four huts either side of a link block. Lean-to corridors run along the inner faces of the H-shape, providing entry into all huts and into the link blocks. The six northern barrack huts are slightly longer than the ten to the south, comprising sixteen bays, as opposed to fifteen. It is, at present, unclear whether they have been extended, or

whether the southern huts of the block, **F7** and **F27**, have been shortened, or whether the current layout is original.

5.6.2 In the southern end of the southern H-block is the boiler house, **F24**, whilst in the northern end of the northern H-block is a large hut, **F32**, latterly used as a workshop. A smaller hut, **F3**, of similar construction, to the barracks, with an extension at the east end, similar to that at the west end of the west range of the canteen **E14** (*see Section 5.1.3 above*), is located immediately to the north of the western barrack hut **F4**.

6. DISCUSSION

6.1 INTRODUCTION

6.1.1 Whilst the majority of the buildings investigated are of relatively modern origin, they represent the physical remains of a very important episode of 20th century history. It is not known, at present, how many military domestic buildings survive from World War II, and few, if any, have been recorded in any detail. Therefore, this recording programme is significant for the future preservation of such structures within the archaeological record. Whilst some generalised recording of 20th century military aviation sites has been undertaken in England (English Heritage 2003a), it is confined to, what are considered to be, the most significant sites within Scotland, making regional comparison impractical. The English Heritage work was also focused listing criteria towards the technical structures (e.g. hangars), including only domestic buildings of exceptional architectural quality.

6.1.2 The airfield at West Freugh formed an important role in the defence of Britain during WWII. It was one of a number of bases within the region, associated not only with battle sorties, but also with training, forming part of No. 25 Group and No. 29 Group. Similar Group 29 Advanced Flying units were located at Wigtown (Baldoon Airfield) and Dumfries (Woodside 2004). The former closed in 1948 as a military site, but continues in use as a private airfield, whilst the latter continued in use as a Maintenance Unit until 1957, and is now part of an industrial estate (*ibid*). It is unlikely that airfield domestic buildings are preserved at either location. The A Cults/Stranraer airfield, located at Castle Kennedy, also formed part of No. 29 Group, acting as an Air Gunnery School, closing in 1945, but with 'some remains' (*ibid*). At Low Eldrig, Balgowan, *c*10km to the south of West Freugh, A Maintenance and Storage Unit was operated in the summer months only, closing in 1944 (*ibid*), with a more permanent Maintenance Unit, which formed part of No.57 Group, located on the eastern side of Wig Bay, near Cairnryan. This ceased military operations in 1957 (*ibid*). An anchorage was also provided on Loch Ryan, immediately to the south, with moorings at Kirkcolm (Corsewall) on the west side of Loch Ryan (*ibid*). Further north, in South Ayrshire, further Training Units were located at Turnberry (No17 Group Operational Training Unit (closed 1945)), Dundonald (Gailes Airfield (No 44 Group Transport Training (closed 1945)) and Prestwick (No 44 Group Transport Training (subsumed into modern airport) *ibid*). On the opposite side of the Solway Firth, an Elementary Flying Training School (No 51 Group) was located at Kingstown, Carlisle (demolished), with Coastal Operational Training Units at Great Orton and Silloth (both No 17 Group), neither having surviving structures (*ibid*). Two further No 29 Group training sites were located on the Isle of Man, at Andreas (Air Gunnery School) and Jurby (Air Navigation and Bombing School). Many buildings of this period survive at Jurby, whilst those at Andreas are largely demolished (*ibid*).

6.1.3 Thus West Freugh formed part of an integral network of airfields, training bases and naval sites within the region, but is noteworthy for the completeness

of survival of original domestic buildings, matched only by Jurby. These buildings reflect the technology of the period, with heavy use of concrete, and especially asbestos, used for roof sheets, wall panels, floor tiles, and even in adhesives. They are highly functional structures, their 'flat-packed' materials allowed a rapid assembly to easily adaptable construction templates. However, their ease of repair and alteration makes phasing of any such features very difficult.

6.1.4 The basic timber framed form of the buildings was first used in 1914, when barrack requirements exploded from *c*175,000 men to over 1,000,000 (Douet 1998, 195f). Whilst many men were billeted in tents, rapid timber-framed 'hutment camps' (*ibid*) were also erected, and continued in use throughout the war. Asbestos cement-panelled timber-framed structures dating from this period survive at Netheravon, Wiltshire (English Heritage 2003a). The buildings at West Freugh, although relating to WWII rather than WWI, represent a similar political climate, when there was a need for a rapid expansion of the armed forces, with an associated increase in the building stock.

6.1.5 The barrack block and associated buildings at West Freugh represent a culmination of this technology, with the rapid and cheap construction methodology being combined with current high-technology and economical materials. They were one of the earliest installations of 'Type A' timber sectional hutting, designed in 1935, and first used 1936 at St Athan (South Glamorgan), Cardington (Bedfordshire), Pembrey (Carmarthenshire), Jurby (Isle of Man), Penrhos (Gwynedd), Evanton (Ross), Acklington (Northumberland), Henlow (Bedfordshire), Cranwell (Lincolnshire), Cosford (Shropshire) and West Freugh (Francis 1996, 206). It is noteworthy that the English Heritage survey undertaken for military aviation sites in England (English Heritage 2003a) generally ascribes buildings of the construction style and fabric of West Freugh to the period 1940-1945.

6.1.6 The inclusion of a clay-walled farmhouse within the military site, further demonstrates the need for economical structures at that time, and shows a flexibilty not often associated with military practices. The structure was most probably used by officers, and would probably not have been compared favourably with the officers' mess at HMS Deadalus, constructed during similar RAF expansion in the South of England (English Heritage 2003b) at roughly the same time that the farmhouse at West Freugh was acquired!

6.2 THE CANTEEN, E14

6.2.1 The basic plan of the canteen comprises four huts, with several later additions. The original layout appears to have been two north/south aligned 28' (8.54m) span, Type A timber huts, comprising Rooms **1**, part of **2**, **3** and **4** in the western hut and Rooms **10**-**15**, most of **17**, and **18**-**22** in the eastern hut, possibly with a link block (Rooms **11**, **16** and the remainder of **17**). The position of the boiler house, flush with the southern end of the west hut and the eastern face of the east hut, suggests that it is probably contemporary.

6.2.2 The original internal arrangement of the huts is somewhat conjectural, however, there is sufficient evidence to suggest a possible layout. Given the position of the porch, in the centre of the extended structure, it is unlikely that it is an original feature, suggesting the lobby is also later. Therefore, it appears that the western hut comprised a single, large dining room. The chimney stack in room **10**, with its raised skylight roof, suggests that the structure was intended to serve as a kitchen. It is quite likely that there would be a separate dining room for officers, possibly in its original position, but extending further to the south. There may have been provision for toilets at the southern end, in the position of the present ladies toilet, Room **22**. Toilets would also have been required for the main dining room in the western hut, suggesting that the northern part of the toilet block at the southern end (Room **9**) is also an original structure. The office, **13**, in the centre of the north part of the kitchen is original, with its large secured safe, and a single pantry and store on either side. Rooms **17-19** originally comprised one room on the west side of corridor **11**, or might have formed part of the dining room.

6.2.3 The position of the kitchens in the east hut, and the main dining room in the west hut, created the need for a covered link between the two. The southern link block (Rooms **11, 16** and **17**), is aligned perpendicular to the two huts, and has well-jointed roof valleys. It is the likely option for a contemporary linking structure. The beading around the doors in the south elevation of Room **17** and into Room **16** suggests that this may have formed the original entrance into the dining room, with the narrow Room **17** forming a porch, and the larger Room **16**, a lobby.

6.2.4 The fourth main structure, comprising Rooms **6** and **7**, appears to relate to an expansion of the kitchen, probably due to the expanding population of the airfield immediately prior to, or early in, World War II. The continued use of Type A huts (20' (6.10m) span), supports this idea, as shortage of timber during the war, lead to the increased use of Type X, Y and Z (18' (5.49m) span only) lesser timber huts, and corrugated iron Nissen huts, where supply of Type A panels had run out (Francis 1996, 204-207).

6.2.5 This national shortage of timber, and Type A panels in particular, is perfectly demonstrated at West Freugh, with the erection of the 30' (9.15m) extension at the northern end of Room **2** (Fig 3). This was constructed as a half-brick hut, comprising a single skin, stretcher bond wall, with piers on 10' (3.05m) centres, as per guidelines laid down by Drawing Numbers 220/40, 223/40 and 3323/40 (*ibid*).

6.2.6 The insertion of the lobby (**1**) probably dates to a post-war remodelling, once population numbers had fallen at the airfield, and is probably contemporary with the partitioned store at the southern end of the building (Room **4**), and the enlargement of the toilets (Room **9**). Toilet blocks **5** and **22a** appear to represent the final phase of construction.

6.3 THE BARRACK BLOCK

6.3.1 The barrack block, comprising buildings **F11** and **F24** subject to the building investigation, and twenty other structures, is a well-preserved example of 18' (5.49m) span, Type A sectional timber huts. Although two structures, **F34** and **F59**, appear to be have been added to the northern H block, and the huts have been partitioned, much of the original fabric remains. The vast majority of windows survive, as do cast iron gutters and down-pipes. The boiler house and large hut (the original function of which is presently unclear) filled the ends of the two H-blocks, effectively creating a rectangular plan. The two link blocks presumably functioned as washrooms. The boiler house, **F24**, is also a Type A sectional timber hut, but of 18' (5.49m) span.

6.3.2 The geometric layout of the block is a continuation of the earliest principles of barracks construction, dating back to the 17th century (Douet 1998), where the regiment was traditionally housed around the parade ground. Although much smaller in scale, and less architecturally grand, than barrack blocks of the late nineteenth century, the layout is still designed around functionality. Sectional hutting of this type was designed in 1935, primarily for those RAF stations that were intended to be temporary (Francis 1996, 206). Type A huts had a required lifespan of 10 to 15 years, based on the use of corrugated asbestos roofing and Canadian cedar (which contains a natural preservative and is obnoxious to rodents) weatherboarding, compared to a 5 year life-expectancy of the timber and felt roofed Type B huts (*ibid*). The sectional nature, and variety of truss spans, allowed for the construction of many types of building, as demonstrated at West Freugh. The design was used throughout the UK (*see Section 6.1.6 above*), demonstrating the lack of vernacular architecture within military buildings of the period. By the 1930s, the improvements in construction technology and standards meant that almost identical building fabrics could be sourced throughout the United Kingdom, and indeed further afield, as demonstrated by the use of Canadian cedar in Type A huts (*ibid*), and that the billeting needs of servicemen of similar rank within all armed forces and in all areas of the UK were broadly comparable.

6.3.3 The air-raid shelter, located immediately to the south of the barrack huts, should also be included as part of the block. It is likely to have been added slightly later than the original huts, with the imminent threat of bombing in WWII, explaining its location outside the rectangular block. The same is true of the oil tank store, which is an even later addition, located presumably at a safe distance from the nearest hut. There is no evidence for the original boiler, but it is probable that it was coal-fired. The chimney appears to have been originally cleaned from inside the structure, the hatch on the outer face being a later insertion, presumably related to the change to an oil-fired boiler. The hatch in the eastern elevation of the boiler house is for the transfer of coal into the boiler house.

6.4 THE FARMHOUSE

6.4.1 Clay mudwall is the commonest form of mortar wall found in Scotland (Historic Scotland 1996, 45). Although its use extends over half of Scotland from Dornoch in Sutherland, to Dumfries and Galloway in the west (*ibid*), earth structures remain relatively rare, and are poorly quantified and studied. A recent extensive survey of clay 'dabbins' on the Solway Plain (OA North forthcoming), revealed only 300 structures that incorporate original clay, many of which had been extensively modernised and retained little fabric of significance.

6.4.2 There are several methods of construction for clay walled buildings, including mudwall, clay block (adobe), clay brick, pisé, and clay and bool, with regional variances in the use of each type. The farmhouse at West Freugh is of mudwall construction, comprising layers ranging from 0.12m to 0.18m thick, similar to the 0.15m to 0.20m thickness stated as typical for Dumfrieshire (Historic Scotland 1996, 48). This is consistent with typical layer thickness observed on the Solway Plain (OA North forthcoming), but the nature of the clay is somewhat different. The mixture at West Freugh is much more homogenous, with straw mixed throughout the clay matrix, whilst on the Solway Plain the straw is most commonly used as a distinct layer between successive layers of clay, creating a more visible striped, layered effect.

6.4.3 The roof timbers of the early part of the building appear original, and the use of northern European pine suggests a construction date from the mid-eighteenth to the mid-nineteenth century. Baltic timber marks are poorly understood and documented features, with only limited examples having been published (e.g. Green 1996). Green's work was based on a warehouse of 1830, and managed to draw some preliminary conclusions about the meaning of letters incorporated within timber marks. The letter K denoted crown (best quality) timber, whilst W denoted second quality, as a replacement for the earlier use of B. Both Letters K and W were observed within the farmhouse (e.g. Plates 26 and 27). However, Green's work did not manage to establish dates for the instigation or abandonment of the use of Baltic timber marks, which were certainly in use, in similar form, in Manchester by the turn of the nineteenth century (OA North 2004). Future study may allow more precise dating and provenancing of such timbers. The photographic catalogue produced by the survey will add to the relatively small body of data. The pitch of the roof and its style of construction are not consistent with a thatched roof. The fragment of Cumbrian slate (Plate 28) is quite likely to be a remnant of the original roofing material. The proximity of the trusses suggests that they were intended to act as floor joists to the attic in the original construction.

6.4.4 Nothing remains of the original internal plan, but the features within the clay walls do allow for speculation on the original layout. The presence of only one entrance, located centrally in the southern elevation, demonstrates that this was not a cross-passage house, and that it was unlikely to have been built as a longhouse-style structure, with animals occupying one end of the ground floor. However, given the replacement of the western gable, and the removal of the western end of the north elevation, this cannot be entirely discounted, particularly as animal doors were often located in the gable wall.

6.4.5 The position of the main door would suggest a two-unit cottage, having a central doorway, with kitchen and parlour below an attic bedroom. However, if the western end of the southern elevation represents an extension, then the doorway would have originally been offset, more typical of a double-fronted cottage (Brunskill 2002, 90). This would place the doorway west of centre, opening into the parlour, with a fireplace in the western gable, a position which appears to have been retained with the 5' (1.53m) wide aperture in the rebuilt brick wall. The fireplace in the eastern gable is of interest in that it is offset to the north of that in the attic, implying that it was a later addition. This suggests that the kitchen range was located in a cross-wall to the east of the door, a feature also typical of a double-fronted cottage plan form.

6.4.6 The window in the clay wall, opposite the main door (Plate 25) probably served as a stair window, and its blocking at the time of the construction of the north wing, which would have made it an internal aperture, suggests that this relates to the original position of the stairs. The slot feature to the east may relate to stair attachment, but the precise location remains unclear.

6.4.7 The addition of the north wing coincided with a change of status of the structure. The first refenestration of the structure, observed below the present windows (Plates 22 and 24), was probably undertaken at this time, and the red sandstone flag floor is likely to be contemporary. The porch also appears to have been added to the south elevation.

6.4.8 The upper floor underwent a major refurbishment, with the insertion of fireplaces, certainly into the western and northern walls, and most probably into the eastern gable. The presence of three fireplaces suggests the upper floor was partitioned, with the western part of the original north pitch obscured, and thus preserved in its original form. The chimney stacks are of similar style, although that on the east gable is positioned flush with the internal wall face, rather than the external wall face. This is due to its insertion into a clay wall, as opposed to being a designed part of the later brick construction.

6.4.9 The dormer windows (Plate 19) possibly date from this time, but their style might suggest they are later. A skylight inserted at the southern end of the eastern pitch is the more probable window of the period, allowing light over the staircase, which was probably also replaced with a dog-legged stair similar to that currently *in-situ*.

6.4.10 An internal re-arrangement appears to have taken place around the turn of the twentieth century, comprising the partitioning of the structure. This involved the construction of an internal brick dividing wall, from the centre of the west gable to the staircase, blocking the central fireplace. A smaller fireplace was inserted in the smaller room created to the south, and a similar fireplace was inserted in the eastern gable at this time. If this were the low-end of the structure, incorporating the kitchen, (as discussed in *Section 6.4.5* above), then original provision for cooking must have been in the wall to the east of the door, if no hearth existed in the original gable. There is no evidence of a north/south wall to the east side of the doorway in the south elevation, suggesting it was replaced with a timber partition at this time. If it were originally constructed of clay, it would have been 2' (0.61m) thick, and its

removal would have been beneficial for the internal enlargement of the structure. The current windows (Plates 17 and 18) probably also relate to this sub-phase of internal rearrangement.

6.4.11 The third major structural phase relates to the insertion of the outshut in the north-east re-entrant (Plate 18). This appears to have been constructed for use as a cloakroom, a use which continued until abandonment. It is probably at this time that the boiler room was partitioned, or possibly slightly later. The suspended timber floor is also of roughly the same period. With the insertion of the boiler, central heating would have been introduced, and it is likely that all the fireplaces were blocked at this time. The blocking of the porch window is of similar style and appears to relate to this phase, or the earlier phase of rearrangement.

6.4.12 The most recent structural alteration was the insertion of a doorway into the outshut within the northern clay wall. This was accompanied by a blocking of the original entrance from the south side of the boiler room.

6.5 CONCLUSION

6.5.1 Both the desk-based assessment and the building investigation have demonstrated the local, regional and national importance of the huts at West Freugh. The site was among the first to utilise the Type A sectional timber hutting, which became standard throughout the UK in the late 1930s until the early years of WWII, and was one of only two sites in Scotland to incorporate such structures by 1936. The other, Evanton, closed in 1947 (Woodside 2004). Of the other nine sites, within England, Wales and the Isle of Man (*see Section 6.1.6 above*), all in England, with the exception of Acklington, survive as airfields, and all had buildings recommended for listing by the English Heritage survey (English Heritage 2003a). However, none of the recommendations included Type A timber sectional hutting, the survival of which is unclear at these sites. None of the other sites, lying outside mainland England, were recommended for listing (*ibid*). The airfield at Jurby is intact, but mainly disused (Woodside 2004), whilst Penrhos appears to have been demolished. The other two sites in Wales remain active, but again, the survival of the hutting on these sites is unclear.

6.5.2 It is clear, therefore, that the barrack block and associated domestic buildings at West Freugh, represented a rare intact survival, in good condition, of very early sectional timber hutting. They also clearly demonstrate the transition to half-brick huts during WWII, brought about by a national shortage of timber. Buildings of this type have generally not been considered for preservation (e.g. English Heritage 2003a), although the only surviving example of similar temporary hutting used during WWI, is Grade II Listed, and is given great significance in the development of airfield history (e.g. Francis 1996; English Heritage 2003a).

6.5.3 It is most likely that, without statutory protection, the number, and variety, of temporary WWII structures will continue to diminish, particularly given the current policy of disposal of buildings for which maintenance is considered

too costly. Such structures form an important role in the history and technology of military airfields, and whilst this is beginning to be recognised for technical buildings, the same cannot be said of domestic buildings, like those at West Freugh. The recent English Heritage survey (English Heritage 2003a) has taken a first step, for England, by highlighting the importance of the structures at Netheravon, but draws an unhelpful distinction in significance between WWI and WWII, a period of only *c*30 years. Whilst those relating to WWII are currently slightly more common, they are becoming less so.

6.5.4 The desk-based assessment has highlighted the disparity in the published work regarding 20th century military sites, between England and the rest of Great Britain. Work of a similar nature to that undertaken by English Heritage (English Heritage 2000a), needs to be continued elsewhere. The defence of Britain was undertaken nationally, with all geographic areas having important roles. Subsequent political regionalisation has lead to a situation where, at present, the political and military centralisation of WWII is not reflected in the archaeological record, demonstrating the importance of the recording work at West Freugh.

6.6 RECOMMENDATIONS

6.6.1 The building investigation has recorded several elements of the pre-WWII camp due to be demolished. However, several other structures believed to be of the same period, remain unrecorded. Most important of these are the link blocks (**F25** and **F31**) and internal corridors that form an integral part of the barrack block. Without further recording, the importance of these vital parts of the barracks, without which they would not function, may be overlooked or misinterpreted. The same may be argued for structure **F32** in the northern end of the northern H block, which appears to be integral to the block, and is of different dimensions to the rest of the huts. Hut **F3** to the north may also be related, and is again of different construction.

6.6.2 Two other large structures, the T-shaped medical centre (**E13**) north of the canteen (also of Type A construction) and a large nissen hut (**E49**) are also due for demolition. Both are stylistically different to the other structures, and although they are roughly contemporary with the structures included in the project, they remain unrecorded.

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ILLUSTRATIONS

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based upon the Ordnance Survey 1:2500
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Scale 1:2500

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Figure 3 : Plan of E14 canteen

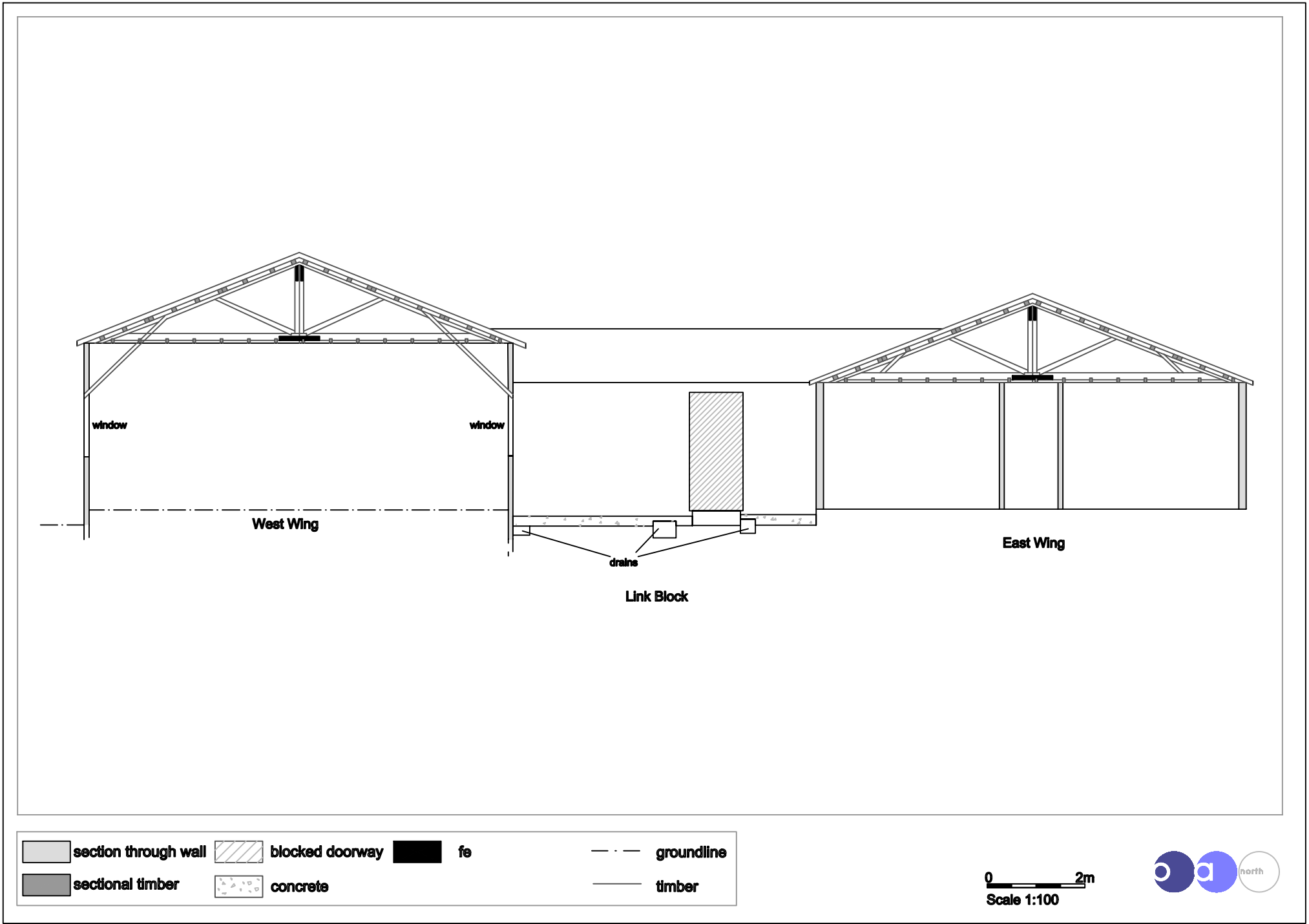

Figure 4 : Section of E14 Canteen, facing south

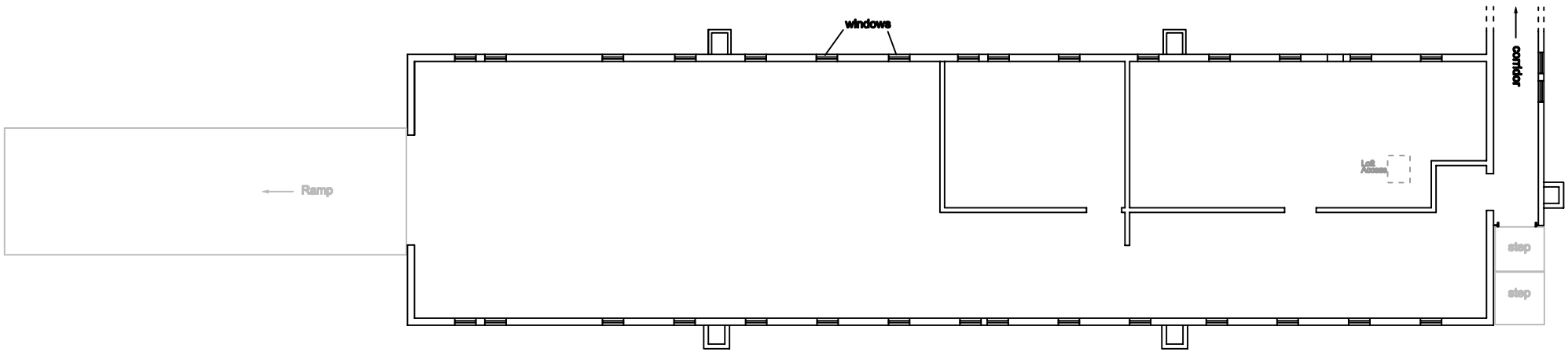

Figure 5 : Plan of F11 barrack hut

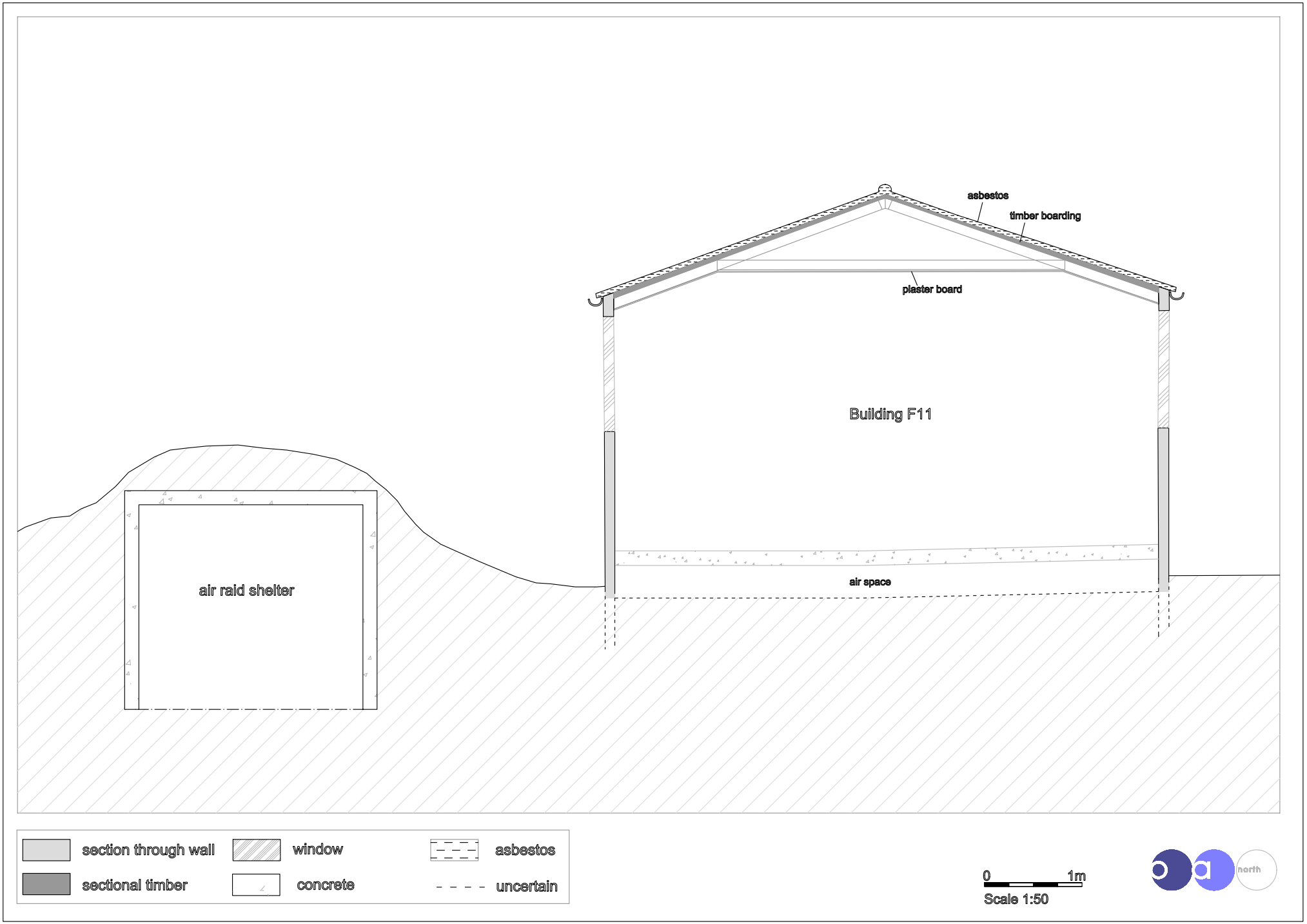

Figure 6 : Section of F11 barrack hut and F24a air raid shelter, east-facing

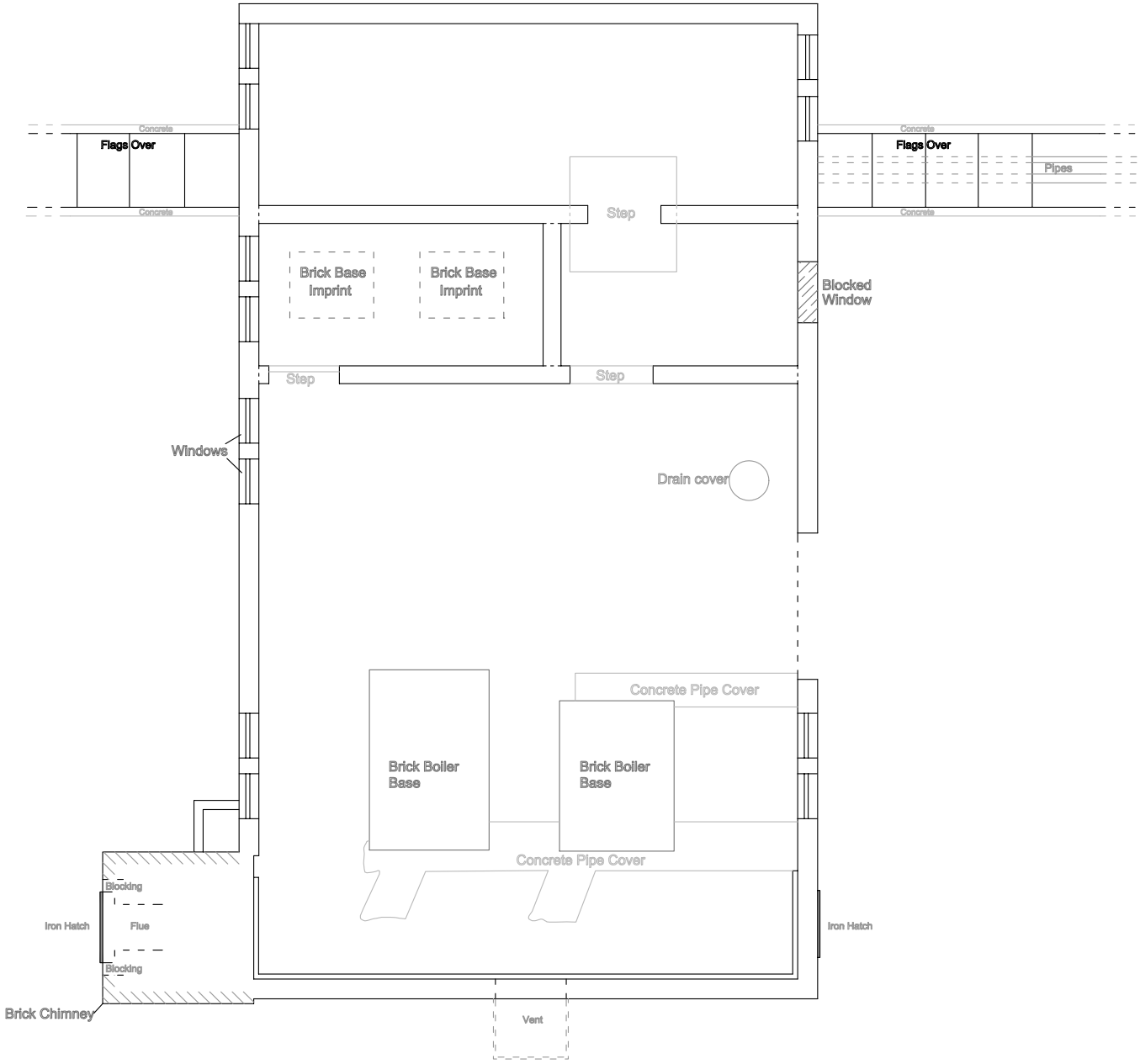

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Figure 7 : Plan of F24 boiler house

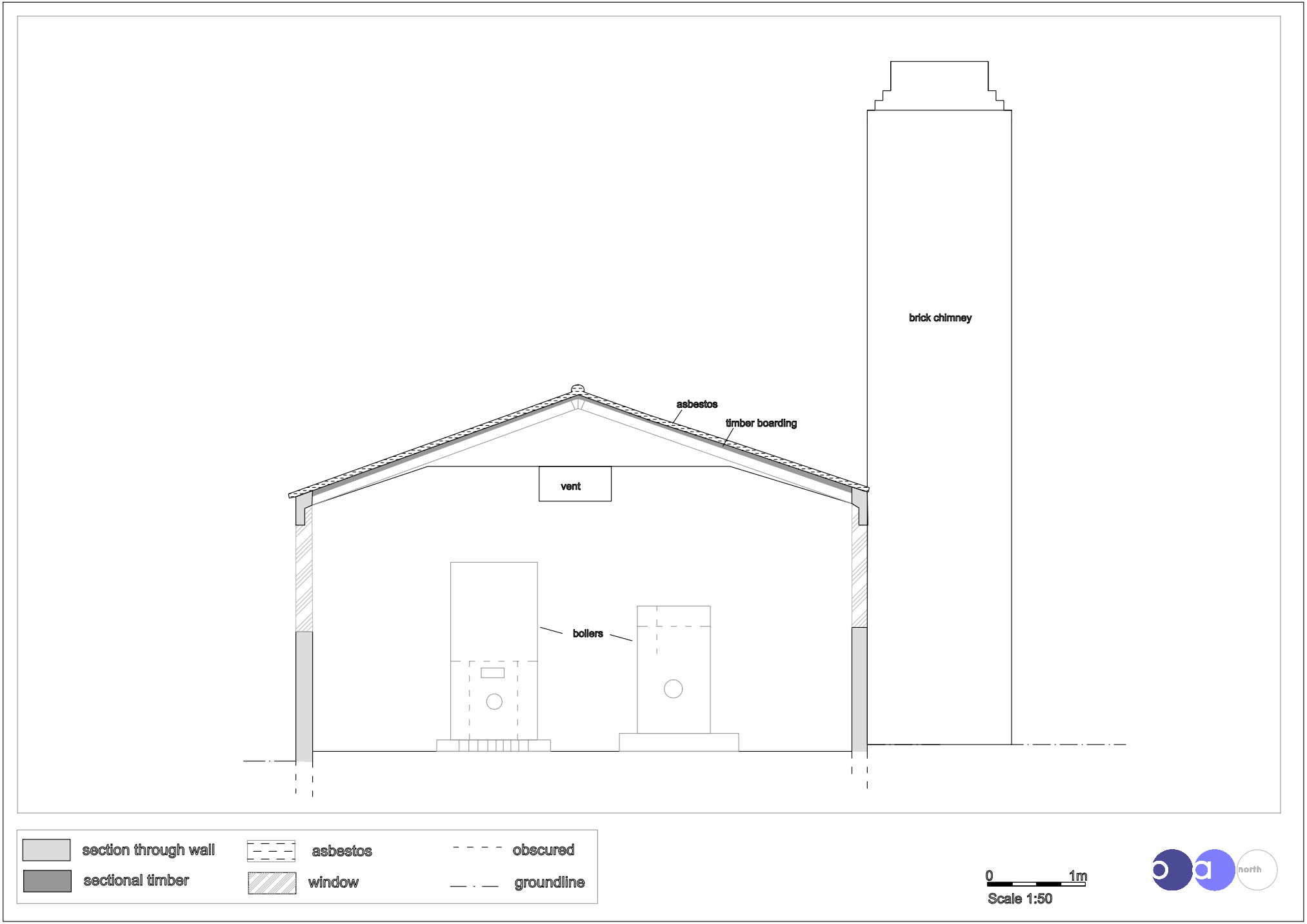

Figure 8 : Section of F24 boiler house, north-facing

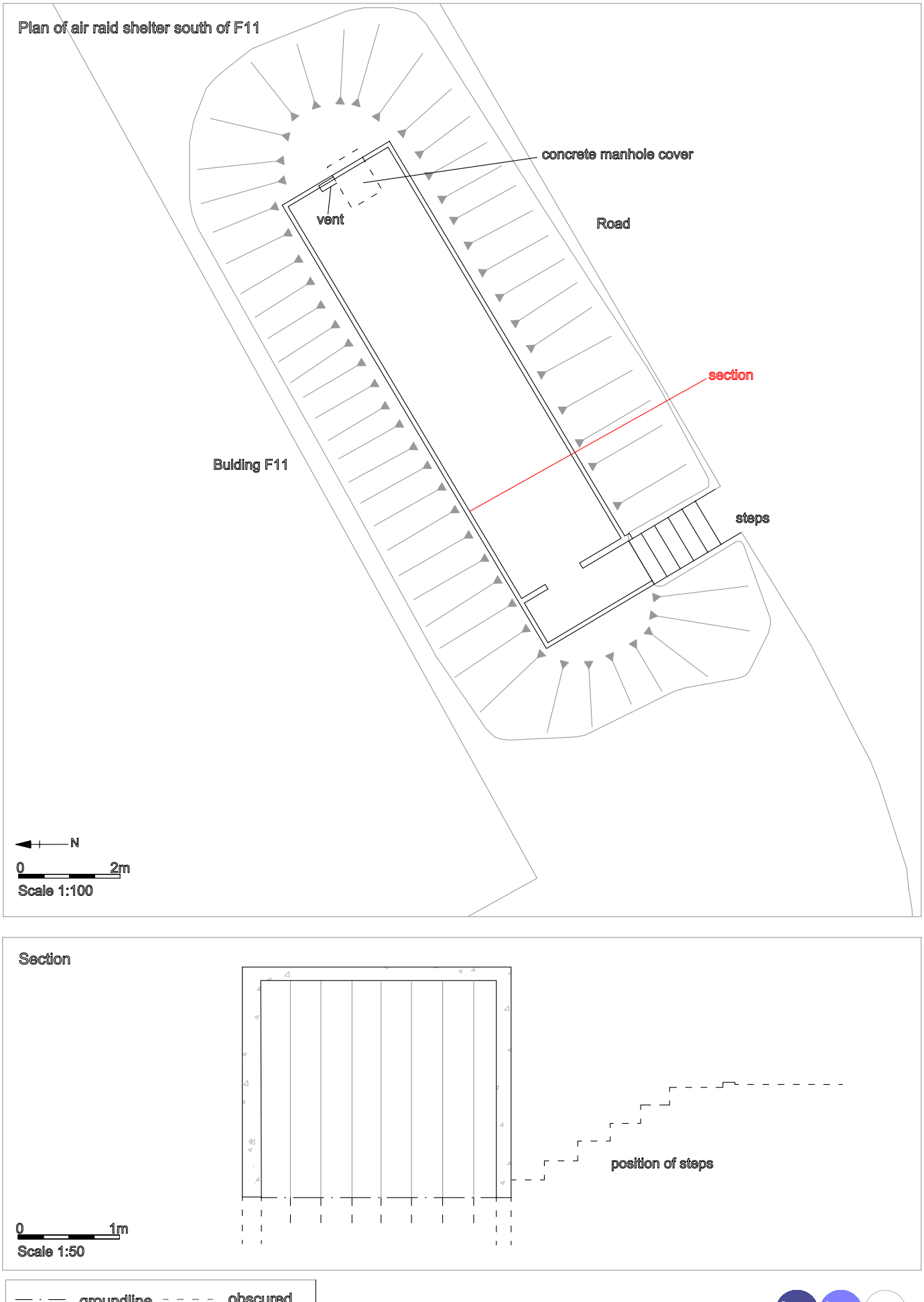

Figure 9 : Plan and south-west facing section of F24a air raid shelter

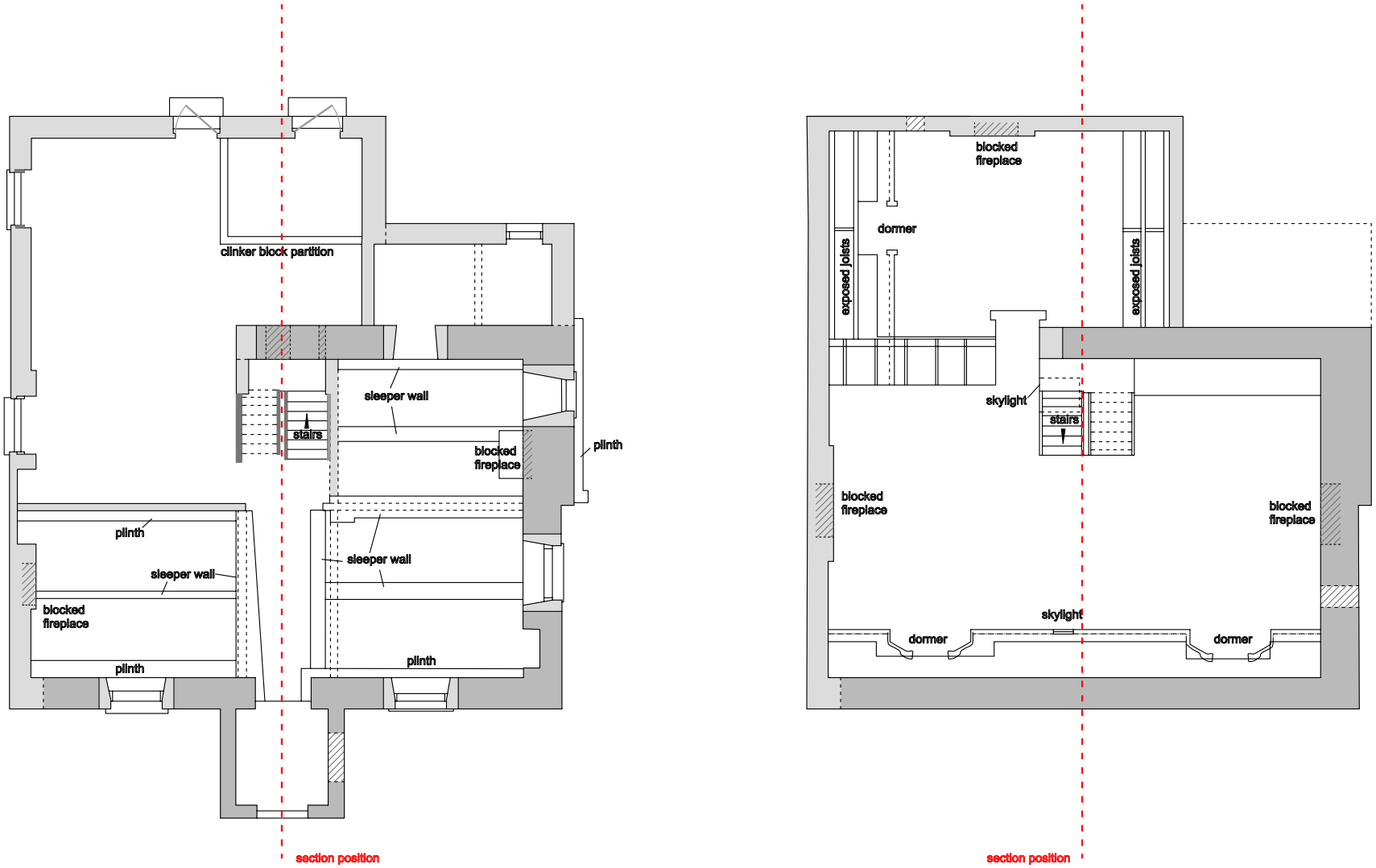

Figure 10 : Ground and first floor plan of the farmhouse

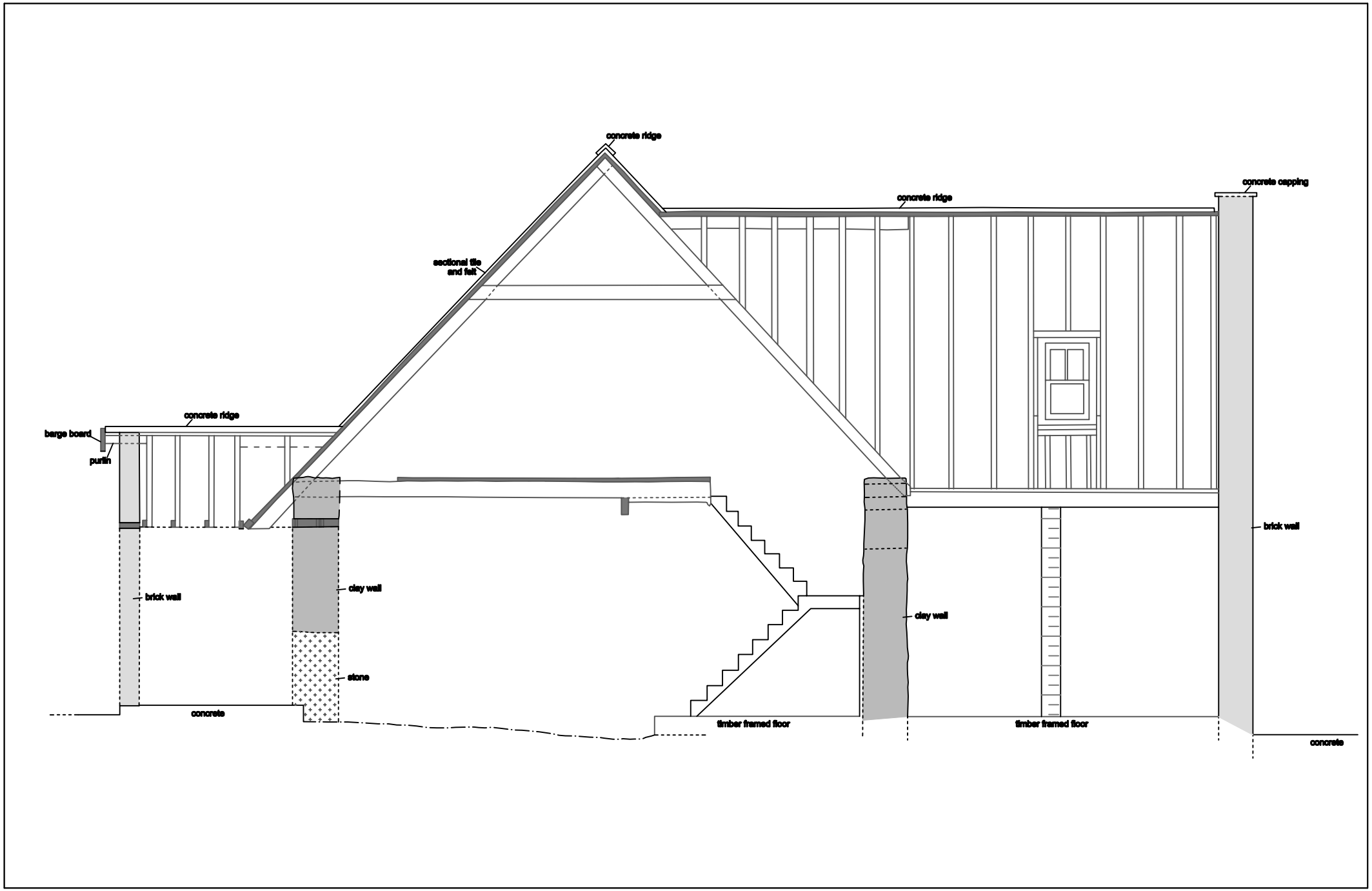

Figure 11: East-facing cross-section through the farmhouse

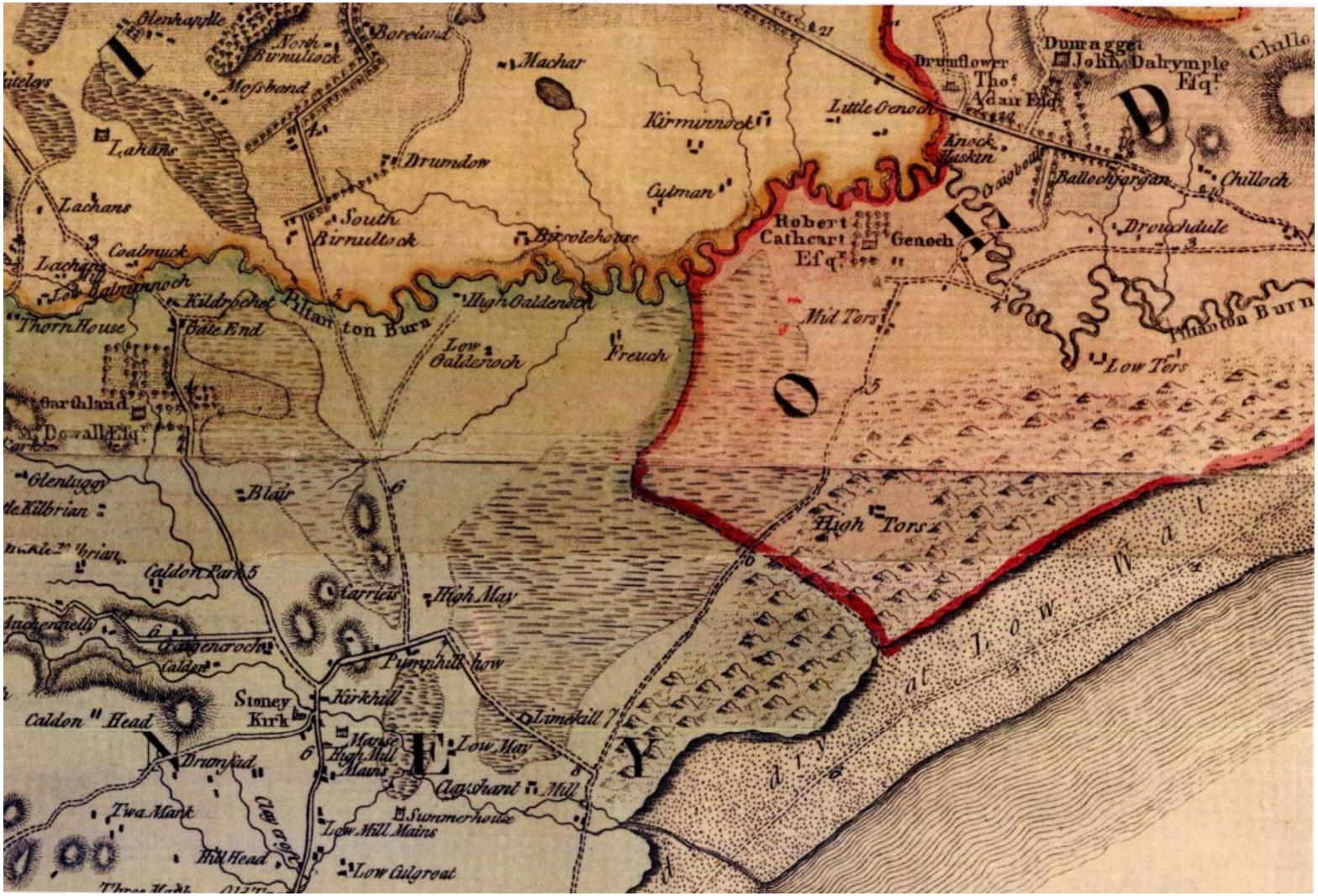

Plate 1: John Ainslie, 1782, A Map of the County of Wigton

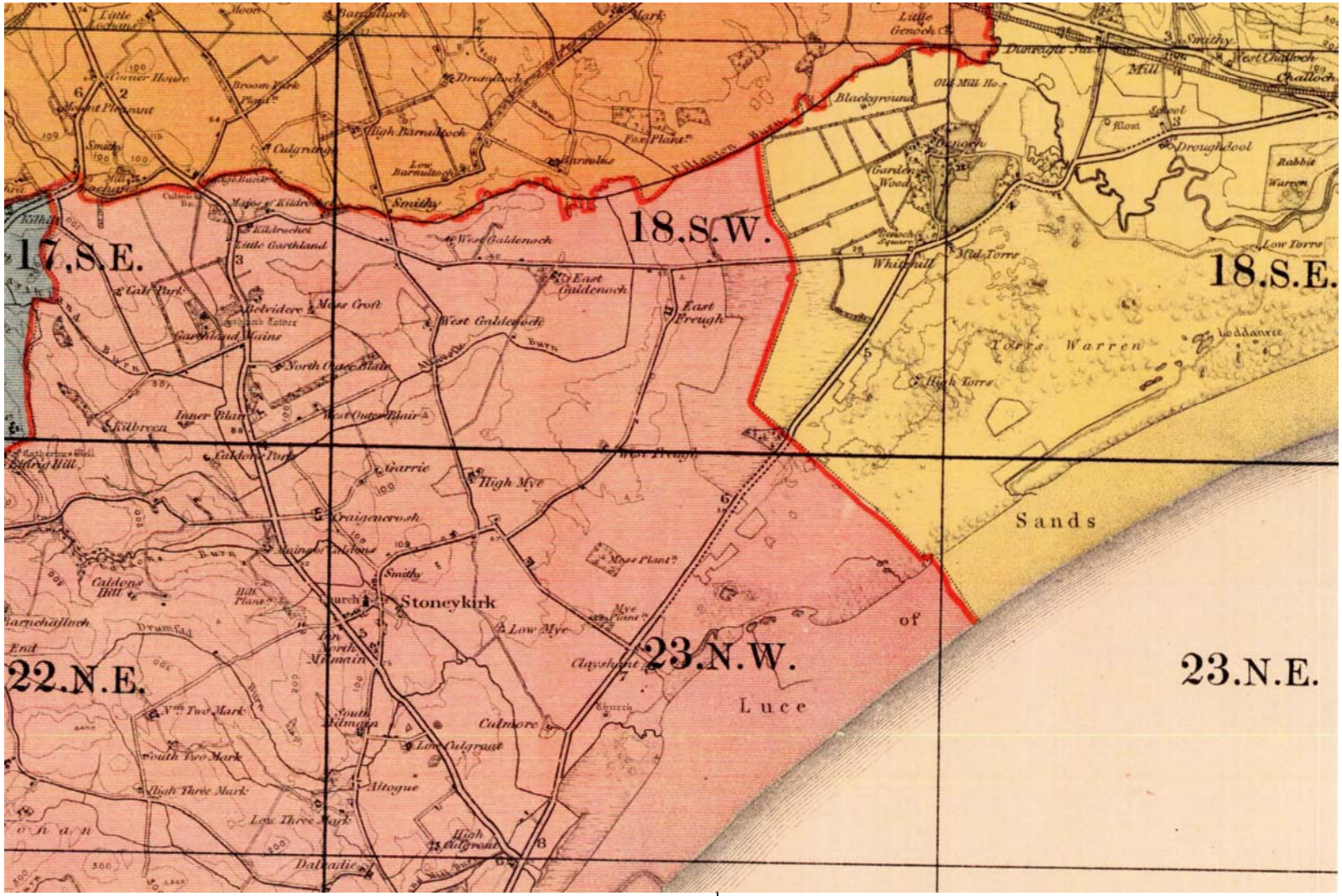

Plate 2: Ordnance Survey, 1895 2nd Edition, Stranraer Sheet 3

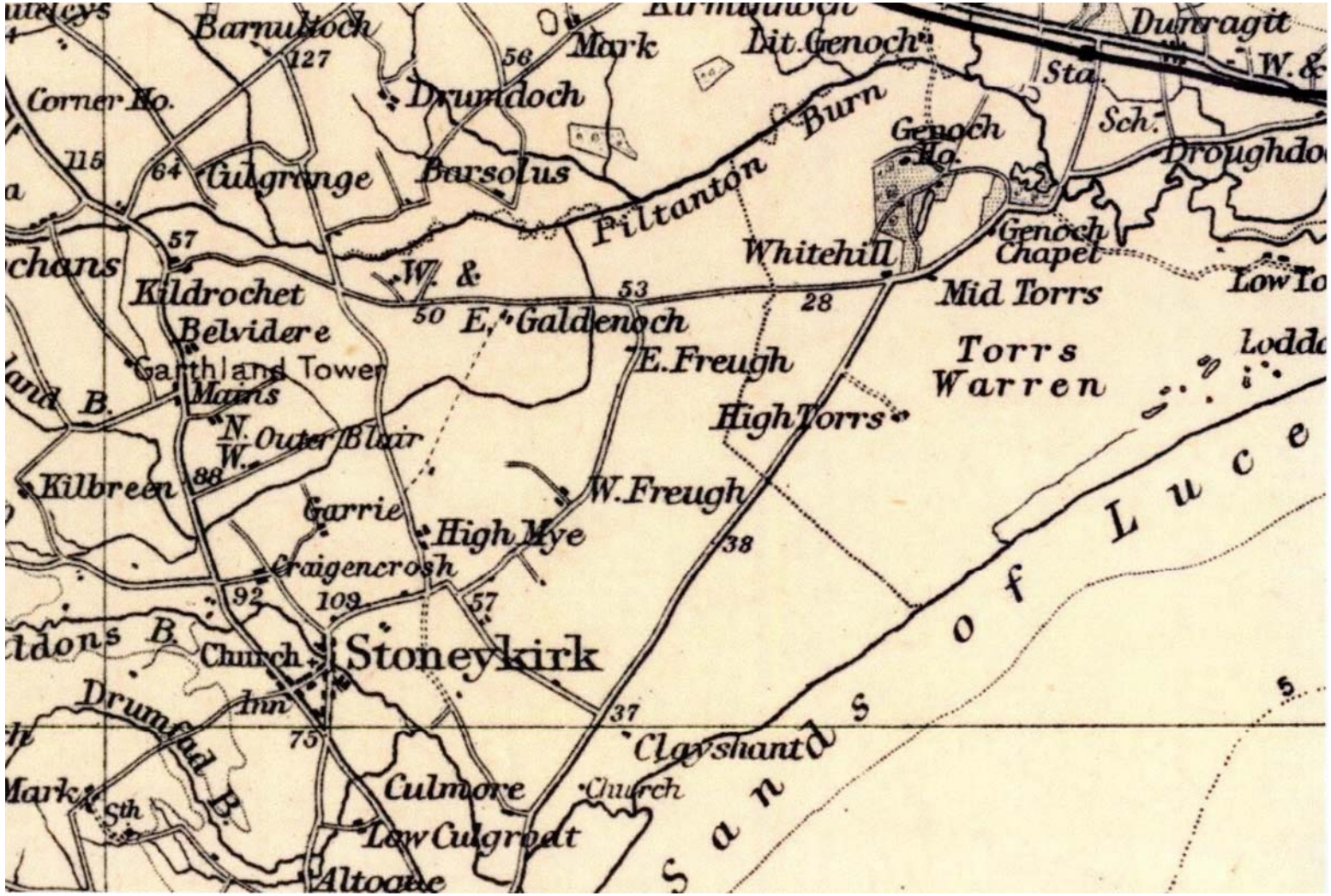

Plate 3: J.G. Bartholomew, 1912, Maps of Scotland, Plate 16: Stranraer

Plate 4: Ordnance Survey, 1924, Popular edition, Stranraer Sheet 90

Plate 5: View of **E14**: Canteen, facing west

Plate 6: Northern gable of **E14**

Plate 7: Window detail, **E14**

Plate 8: Bar within Room **3**, **E14**

Plate 9: Fusebox within Room **6**, **E14**


Plate 10: Kitchen **10**, **E14**

Plate 11: View of Barrack Hut **F11**, facing north

Plate 12: Interior of Barrack Hut **F11**

Plate 13: View of Boiler House **F24**

Plate 14: Hatch in east elevation, **F24**

Plate 15: View of Air Raid Shelter **F24A**

Plate 16: Hatch and pipe, **F24A**

Plate 17: View of Farmhouse **D3,** looking north


Plate 18: View of Farmhouse **D3,** looking west

Plate 19: Detail of dormer windows, **D3**

Plate 20: Detail of clay-wall construction, **D3**

Plate 21: East external gable, **D3**

Plate 22: South internal elevation, **D3**

Plate 23: North internal elevation, **D3**

Plate 24: East internal gable, **D3**

Plate 25: Blocked apertures in north internal elevation, **D3**

Plate 26: Baltic timber mark *in-situ*, **D3**

Plate 27: Baltic timber mark recorded during demolition, **D3**

Plate 28: *In-situ* slate from original roof structure, **D3**

APPENDIX 1: PROJECT BRIEF

Part B of Contract CU015 - 075158

CONTRACT CU015 - 075158

BUILDING RECORD OF BUILDINGS TO BE DEMOLISHED

AT

WEST FREUGH

BUILDING RECORD SPECIFICATION

1 In advance of development work at the former RAF West Freugh, basic recording and documentation of several buildings is required. Some 60 buildings are to be demolished but many are of a standard form of construction. One of the tasks of the Supplier is to select representative samples for survey and recording in accordance with this Building Record Specification. One of the buildings that is to be recorded will be the Farmhouse, (see below).

1.1 This Statement of Requirement outlines the general approach, standards and methods to be adopted by the contractor. These are based on standards and documentation adopted by MOD and developed by the former RCHME (now English Heritage). When submitting a tender for the work any additional items felt necessary to fulfil the brief but not specifically identified should be noted.

1.2 The 1st Edition Ordnance Survey mapping of the area (1850) shows the site as being largely comprised of large, regular open-fields. One group of buildings are depicted, the farmstead of West Freugh, centrally located within what was to become the built up area of the airfield. The 1850 maps clearly shows the farmhouse and a courtyard of buildings open on it's SE side located immediately to the west of the farmhouse. The 2nd Edition Ordnance Survey depicts further development of this building group; most notably the farmhouse appears to have been extended.

West Freugh existed as a RAF station serving various Air Force purposes for many years before its development as an airfield and camp in 1936. The first west coast Airship Station was opened at Luce Bay in1915 and was used until 1919 when it became a Meteorological station, before closing down in 1936. West Freugh Airfield and camp were built in 1936 during a period of expansion in Britains' air defences to counter the perceived rising threat of German re-armament. From 1939 to 1944 a number of Training Command and Fleet Air Arm squadrons were based at West Freugh. The attached copy of an aerial photograph was probably taken during WW. II and shows the fully operational base.

Although altered and added to during the post-war period, much of the WW.II infrastructure remains at the site, although largely unaltered externally, most if not all internal period detail has been altered or removed.

West Freugh farmhouse (Building D3) still survives within the site. The external appearance of the Farmhouse is of a 19th century rendered cottage with dormer attic space. However during a programme of alteration to this building carried out in the early 1980's clay and straw walls were found in this building. The current internal layout of this building dates from the

1980's, however earth walls survive. A glass panel on the stair exposes a section. The extent of this walling is not known as dry lining and rendering hide it both internally and externally.

The airfield at West Freugh is now closed but other facilities on the site are operated on behalf of the MOD by QinetiQ.

2 Recording Methods

2.1 Recording work is required to provide a basic record of the building(s) both in advance of demolition and to provide a baseline description of building and available archive material for future study and research.

2.2 To this end a comprehensive photographic record of the building(s) is required, supplemented by a textual description. This needs to be supplemented by a researched bibliography of material available in local and national archives as identified below. A brief appraisal of the below ground archaeological potential of the site should also be prepared. The following should be noted,

- All the buildings are located within 100m or one or another of other buildings that are to be demolished.

- Buildings F4-11, F20-23 and F27-30 are all basically the same types of wooden sheds which, over the years, have been fitted out for different internal uses. It is not considered necessary to record the external elevations of all of these buildings. Only two examples should be recorded in detail, as described below. A selection of record photographs of these buildings as a group should however be taken and the exteriors examined to record any particularly notable features photographically e.g. building names.

- Demolition will be to slab level only.

2.3 The record should be to a mixed Level 2/3 standard of the Royal Commission on the Historic Monuments of England *Recording Historic Buildings: a Descriptive Specification* (1996) should be adopted, together with the drawing convention described in the same publication. In particular the work should include the following.

- A written account will be compiled, comprising: the precise location of buildings by name, parish, National Grid Reference
- designated status (ie. listed, scheduled)
- date of record and name of recorder
- a broad historical and architectural discussion of the building(s) as a group indicating building type, plan, form, purpose, development sequence, materials from easily available sources
- A search of records held by the National Monuments Record Scotland, SMR, and local museum, to compile a detailed bibliography of reference material available relating to all buildings.
- a consideration of the potential for below ground archaeology

2.4 A photographic record will be made, to consist of:

- The building's overall appearance
- Principal external and internal elevations (see para. 2.2 above)
- the building's relationship to its setting
- the overall appearance of the principal rooms and any specific architectural detail both internal and external.

Black and white print format will be sufficient for this record, and should be replicated for all views by colour digital photography. The majority of this photographic record should be retained as an indexed archive and does not need to be reproduced in full in the published report. While this project does not require photogrametric principles to be adopted, all images should be as close as possible to parallel with the elevation being recorded and include a suitable scale such as a ranging rod in each image.

2.5 If not available from existing sources (MOD records, architects plans, NMR, SMR etc.), drawings of the buildings will be carried out to facilitate the recording of locations of photographs. This should not be a full instrument survey but the minimum necessary to legibly record the information.

- A site plan at 1:1,250 relating the buildings to each other and landscape features and against copies of earlier plans should be provided.

2.6 In addition to photographic recording of West Freugh farmhouse, the earlier earth walled form of the building should be more fully recorded, samples of the original earth walling taken and a basic analysis of the component materials should be carried out and reported on.

This building recording will need to take place after the internal dry lining has been removed from the walls, but before the roof is removed or the building becomes unsafe. QinetiQ will notify the Supplier when the internal dry lining has been removed from West Freugh farmhouse and allow time for drawn, (suggested scale 1: 50) and photographic recording of the internal elevations, where these relate to the original and pre MOD, development of the farmhouse of West Freugh. The demolition contractor should also facilitate removal of external render under the instruction of the Supplier where this will inform the record of the building.

The Supplier should liase with John Pickin of Stranraer Museum on this particular item of the recording programme. (Tel: 01776 705088).

3. Report and Archive Preparation

3.1 A report shall be produced to the model suggested in the *IFA Standard and Guidance for the Archaeological Investigation and Recording of Standing Buildings or Structures*). The report will constitute a stand-alone report, but may well be summarised and referenced in other planning related and interpretation documents relating to the history of the site, for which the author will be duly acknowledged.

3.2 Report Format and production.

3.2.1 The report should be presented in an ordered state prefaced with contents listing and also include an index and cross-referencing where appropriate. Paper copies of the report should be robustly bound within a protective cover or sleeve. The report should contain a title page listing the site and or project name, district and County together with site NGR, the name of the archaeological contractor and client. The report should be page numbered and supplemented with sections and paragraph numbering for ease of reference.

3.2.2 Bound paper copies (9 in No), of the report will be required. In addition the report should be provided in digital format on CD (3 copies), as both a text only rtf. file and with digital images of figures and illustrations as presented as tiff files. All images should be either digital originals saved as high and low resolution images or scanned at both high and low resolution, where high equates to 800-1200 dpi and low to 200dpi. The whole document

should also be provided on the CD as a complete text and image file in pdf format. The CD should also contain the digitised survey information geo-referenced to the OS. This should be provided in ArcView shape file format.

3.2.3 Meta-data providing copyright information as described in section 4.1 below, together with a written description of conventions used in the survey and the digital presentation of GIS information and an intuitively based GIS file naming format should also be provided. Mapping data should also include details on source and scale, method of survey and/or data capture accuracy levels achieved and description of data attributes and fields.

3.2.4 Accuracy of digitised mapping data should conform to Defence Estates adopted practice. In particular;

- Grid reference should be 12 figure numerical in all cases and where possible also presented using OS grid 100KM square letter prefixes.
- Digitising accuracy should +/- 0.2meteres at base scale
- Monument/building surveys should achieve a minimum accuracy of +/- 2 metres in relation to OS background, although obviously survey information itself will be expected to be significantly improved on this.

3.2.5 The project archive, comprising all records relating to that project will be retained and will be prepared to at least the minimum acceptable standard defined in MAP2 (English Heritage)

3.2.6 The archive comprising written, drawn, photographic and electronic media, will be fully catalogued, indexed, cross-referenced and checked for archival consistency.

4. Copyright

4.1 Under the Copyright, Designs and Patents Act 1988, all material and supporting data generated by this contract shall be vested in QinetiQ Ltd unless and except where such material or data is existing material or data acquired from a third party. In the latter case, the contractor will supply details of data sources, a description of what the data shows, the terms under which the material or data was acquired and where possible a contact name and address.

5. Other Matters

5.1 A detailed specification and methodological proposal and health and safety statement for the work will be agreed prior to commencement of work. The detailed specification and methodological proposal and health and safety statement are a fundamental element in the selection of the contractor to carry out the task. The Bidder should therefore include comprehensive statements with his Tender.

5.2 Access to the QinetiQ West Freugh is restricted and will be arranged by QinetiQ.

5.3 Health and Safety: In line with the Health and Safety at Work Act 1974, The Management of Health and Safety Regulations 1992 and The Construction (Design and Management) Regulations 1994 QinetiQ will require to see copies of contractors Health and Safety Policies and project specific Risk Assessments prior to the commencement of work. The Supplier is to a nominate a safety officer, and provide appropriate safety clothing as advised in the SCAM manual on archaeological health and safety and further identified in the site specific risk assessment.

5.4 The Supplier is to carry his own appropriate insurance for public liability and staff, brief details should be included in the Tender.

5.5 The area of survey is on the domestic area of the site.

5.6 The Supplier Contractors will be required to undertake a safety briefing prior to commencing work.

6. Deposition of Archive and results

6.1 In accordance with Scottish law all artefacts should be reported to the Treasure Trove Advisory Panel Secretariat for appraisal. Contractors should note that a copy of the report will be lodged by Defence Estates with Dumfries and Galloway SMR, Stranraer Museum and the NMRS for inclusion in publicly accessible records

6.2 Digital mapping and copies of appropriate documentation where available, can be provided to the contractor. To be discussed on appointment of contractor.

APPENDIX 2: PROJECT DESIGN

Oxford Archaeology North

February 2004

BUILDING RECORDING OF BUILDINGS TO BE DEMOLISHED AT WEST FREUGH, WIGTOWNSHIRE

ARCHAEOLOGICAL BUILDING INVESTIGATION PROJECT DESIGN

Proposals
The following project design is offered in response to a request by QinetiQ Proprietary, for an archaeological building investigation of building investigation of buildings to be demolished at West Freugh, Wigtownshire.

1. INTRODUCTION

1.1 PROJECT BACKGROUND

1.1.1 Approximately fifty buildings within the domestic area of the former RAF West Freugh, Wigtownshire, Scotland are to be demolished in advance of development work. These include RAF service-type buildings and West Freugh farmhouse.

1.1.2 The farmstead is shown on the 1st edition Ordnance Survey (1850) with some development evident on the 2nd edition. The building is known to retain clay and straw walls behind its 19th century external appearance.

1.1.3 West Freugh became a RAF airfield and camp in 1936. From 1939 to 1944 a number of training Command Fleet Air Arm squadrons were based at the airfield. Much of the WWII infrastructure remains at the site.

2 OBJECTIVES

2.1 The survey aims to preserve by record the buildings destined for demolition and to offer proposals for the detailed recording of additional buildings. To this end, the following programme has been designed, in accordance with the brief provided by QinetiQ. The required stages to achieve these ends are as follows:

2.2 ***Archaeological Survey****:* to implement a programme of building recording for the buildings programmed for demolition. The results may be used to formulate;

- a strategy for the preservation or management of any archaeological remains, and/or
- an appropriate response or mitigation strategy to planning applications or other proposals which may adversely affect any such archaeological remains
- a proposal for further archaeological investigation within a programme of research.

2.3 ***Report and Archive:*** a written report will assess the significance of the data generated by this programme within a local and regional context. It will present the survey and would make an assessment of the archaeological potential of the area, and would make recommendations for further work.

3. METHOD STATEMENT

3.1 RESEARCHED BIBLIOGRAPHY

3.1.1 In order to supplement the programme of building recording a bibliography of material relating to the buildings on site will be compiled. The bibliography will be compiled following a search of records held by the National Monuments Record Scotland, the relevant SMR and the local museum. The

bibliography will outline the contents and relevance of each source listed. It will include both primary and secondary sources and maps.

3.2 BUILDING SURVEY

3.2.1 ***Photographic Record***: this will be compiled for all the buildings on site and will comprise 35mm monochrome and digital photography. The overall appearance of each building will be photographed, as will the ***principal*** external and internal elevations (external shots will be taken of two examples only from buildings F4-11, F20-23 and F27-30). The photographic detail will include the relationship of each building to its setting and the overall appearance of the principal rooms (including architectural detail). Photographs will contain either a photographic scale or ranging rod. A full index of photographs will be compiled.

3.2.2 ***Building Survey:*** a RCHME level II to level III type survey will be undertaken for two of the wooden huts and the farmhouse.

3.2.3 ***Site Drawings:*** the following drawings will be produced from either existing plans or by instrument survey:

(i) Plans of all main floors annotated to show form and location of any structural features of historic significance and recording the form and location of any significant structural details;
(ii) One sketch cross-section per building;
(iii) Drawings recording the form and location of significant structural details;
(iv) A site plan at 1:1,250 relating the recorded buildings to each other and the landscape will be produced.

3.2.4 ***Instrument survey:*** in the absence of existing plans the proposed plans will be surveyed by means of a reflectorless electronic distance measurer (REDM). The REDM is capable of measuring distances to a point of detail by reflection from the wall surface, and does not need a prism to be placed. The instrument to be used will be a Leica T1010 theodolite coupled to a Disto electronic distance meter (EDM). The disto emits a viable laser beam, which can be visually guided around points of detail. The digital survey data will be captured within a portable computer running TheoLT software, which allows the survey to be directly inserted into AutoCAD software for the production of final drawings.

3.2.5 Detail captured by the instrument survey will include such features as window and door openings, quoin stones, outline of decorative detail, an indication of ground and roof level, and changes in building material.

3.2.6 The drawings will usually be produced at a scale of 1:100. Where necessary the client's drawings will be corrected/enhanced utilising hand survey techniques. The corrected drawings will be digitised into an industry standard CAD package (Autocad Release 14) for the production of the final drawings.

3.2.7 ***Interpretation and Analysis:*** a visual inspection of the buildings will be undertaken utilising the OA North buildings proforma sheets. An outline description will be maintained to RCHME Level II to III type survey. This level of recording is descriptive and will produce an analysis of the development and use of the building but not discuss the evidence on which the analysis is based.

3.2.8 ***Access and Attendances****:* the client will be required to arrange access to the site.

3.3 SAMPLING AND ANALYSIS

3.3.1 During the recording of the farmhouse a sample of the earth wall will collected for analysis.

3.3.2 A bulk sample would be taken from the feature and assessed for its component parts. A small sub-sample would be suspended in water and examined under the microscope. The ratio of mineral and organic particles would be assessed and the particle size of the mineral material measured to identify whether clay and silt are present. If there is a significant quantity of organic material in the sample, a further sub-sample would be wet sieved through a series of sieves of known mesh size. The residues retained on the meshes would be examined with a binocular microscope and all organic material easily identifiable would be recorded. The data would be presented in a written report and, if possible, a conclusion as to what material-type might have been used would be discussed.

3.4 ARCHIVE/REPORT

3.4.1 ***Archive:*** the results of all archaeological work carried out will form the basis for a full archive to professional standards, in accordance with current English Heritage guidelines (*Management of Archaeological Projects*, 2nd edition, 1991). The project archive represents the collation and indexing of all the data and material gathered during the course of the project. The deposition of a properly ordered and indexed project archive in an appropriate repository is considered an essential and integral element of all archaeological projects by the IFA in that organisation's code of conduct. OA North conforms to best practice in the preparation of project archives for long-term storage. This archive will be provided in the English Heritage Centre for Archaeology format and a synthesis will be submitted to the Dumfries and Galloway Council SMR (the index to the archive and a copy of the report). OA North practice is to deposit the original record archive of projects with the NMRS.

3.4.2 ***Report:*** eight bound copies of a written synthetic report will be submitted to the client, and a further three copies on CD. The report will include a copy of this project design, and indications of any agreed departure from that design. It will present, summarise, and interpret the results of the programme detailed above and will include a full index of archaeological features identified in the course of the project, together with appropriate illustrations, including plans of the location of archaeological features.

3.4.3 This report will identify areas of defined archaeology. An assessment and statement of the actual and potential archaeological significance of the identified archaeology within the broader context of regional and national archaeological priorities will be made. Illustrative material will include a location map, section drawings, and plans. This report will be in the same basic format as this project design.

3.4.5 ***Confidentiality:*** all internal reports to the client are designed as documents for the specific use of the Client, for the particular purpose as defined in the project brief and project design, and should be treated as such. They are not suitable for publication as academic documents or otherwise without amendment or revision.

4 WORK TIMETABLE

4.1 The client has provided a timetable within which the works must be undertaken. This will be adhered to in full.

5 STAFFING

5.1 The project will be under the direct management of **Alison Plummer BSc (Hons)** (OA North senior project manager) to whom all correspondence should be addressed.

5.2 The research will be undertaken by **Daniel Elsworth BA.** Daniel regularly undertakes research into historic buildings and sites of all types.

5.3 Chris Wild BSc (Hons) will supervise the building investigation in the field (OA North project officer). Chris has a great deal of experience in the recording and analysis of historic buildings, including both vernacular and industrial sites.

5.4 Chris will be assisted in the field by a team of two archaeologists.

5.5 Assessment of any building material samples which may be taken will be undertaken by **Elizabeth Huckerby MSc** (OA North project officer).

6 INSURANCE

6.1 OA North has a professional indemnity cover to a value of £2,000,000; proof of which can be supplied as required.

REFERENCES

English Heritage, 1991 *Management of Archaeological Projects*, 2nd edn, London

Institute of Field Archaeologists (IFA), 1992 *Guidelines for data collection and compilation*, London

APPENDIX 3: DGC SMR ENTRIES

Type of Site: West Freugh Airfield

SMR Number: **DG 1363**

Map Reference: NX 110 545

Parish: Stoneykirk

Council: Dumfries and Galloway

Archaeology Notes: This is the only airfield in this part of Scotland still surviving. West Freugh dates back continuously to August 1936 when the building of a camp and associated ranges was begun. At this time the land cost £19,400 for 2,700 acres. It took its name from a farm engulfed by the aerodrome. It was used by Bombing Trials Unit and subsequently absorbed into the Royal Aircraft Establishment, and used for missile testing (Smith DJ, 1983).

APPENDIX 4: NMRS ENTRIES

Type of Site: Defence/ Military/ Airfield

NMRS Number: **NX15SW 22**

Map Reference: NX 110 545

Parish: Stoneykirk

Council: Dumfries and Galloway

Archaeology Notes: This pre-war airfield dates to 1936, and was still used for Ministry of Defence trials until recently (Smith, DJ 1983). A sketch plan of the airfield drawn in April 1943 shows that the main type of aircraft based here were Avro Ansens with some Hampdens. There was also a WAAF presence and most of the normal airfield facilities such as NAAFI and Sports and Fire Services (RCAHMS, 2001).

Type of Site: Farmstead

NMRS Number: **NX15SW 31**

Map Reference: NX 1084 5434

Parish: Stoneykirk

Council: Dumfries and Galloway

Archaeology Notes: A farmstead comprising one unroofed building, two roofed buildings, one of which is arranged around a courtyard, and two enclosures. These buildings are shown on the 1st Edition of the OS 6" map (Wigtonshire 1850, sheet 22). This site lies within West Freugh airfield (RCAHMS 1999).

APPENDIX 5: NMRS COLLECTION ITEM DETAILS: IMAGES

Catalogue Number	**SC 449544**
Notes	Digital image of West Freugh airfield
Copyright	RCAHMS

Catalogue Number	**C 47691**
Collection	Luftwaffe
Description	Aerial view of West Freugh airfield
Date	1940
Copyright	RCAHMS

Catalogue Number	**C 47691 S**
Collection	Luftwaffe
Description	Aerial view of West Freugh airfield – black and white prnt
Date	1940
Copyright	RCAHMS

APPENDIX 6: AERIAL PHOTOGRAPHS

Sortie	**Frames**	**Scale**	**Date**	**Film Type**
106G/Scot/UK 42	3127, 3128, 3129, 4127, 4128	1:10000	4.5.1946	Positive
OS/67/134	019, 020, 021, 050, 051, 052	1:7500	1.6.1967	Negative
OS/70/109	312, 313, 314, 392, 393, 394	1:7500	15.5.1970	Negative
All Scotland Survey 62488	038, 039	1:24000	11.6.1988	Negative
106G/DY 31	6179, 6180	1:29800	6.10.1994	Positive
Photoair Ltd V97049 'Torrs Warren'	001, 002, 003, 004, 017, 018, 019	1:10000	17.5.1997	Negative

Underlined frames are the minimum required to cover the site from each sortie.

All cover quoted is vertical, stereoscopic, black and white and cloud free.

APPENDIX 7: DIGITAL PHOTOGRAPHIC INDEX

OXFORD ARCHAEOLOGY NORTH DIGITAL PHOTOGRAPHIC INDEX

Project name: West Enough | Project Code: L9259 | Site code:

Digi JPG No.	Date	Site	Description	Dir	Scale Bar Size	Photo-grapher
0614	25/3/04	C2	External front elevation	W	2m	TL
0615	"	"	Internal west elevation	"	"	"
0616	"	"	" " "	"	"	"
0617	"	"	General location shot	NW	"	"
0618	"	C5	Pumps. General View	NE	"	"
0619	"	"	Pumps. From Front	E	"	"
0620	"	C6	External front elevation	W	"	"
0621	"	"	General Shot (oblique)	SW	"	"
0622	"	"	Internal Shot	S	"	"
0623	"	C5	Pumps General View	W	"	"
0624	"	C7	Front external elevation	E	"	"
0625	"	"	General location shot	NE	"	"
0626	"	"	Internal Shot	E	"	"
0627	"	C20	Front external elevation	N	"	"
0628	"	"	General location shot	NE	"	"
0629	"	"	Internal Shot	W	"	"
0630	"	C31	General location	NW	"	"
0631	"	"	Front external elevation	N	"	"
0632	"	"	Internal Shot	N	"	"
0633	"	C21	Front external elevation	S	"	"
0634	"	"	" " "	"	"	"
0635	"	"	General location shot	SE	"	"
0636	"	"	Internal (room in SE 'corner')	SSE	"	"
0637	"	D6	(Front) External east elevation	W	"	"
0638	"	"	General Building Shot (External)	SW	"	"
0639	"	"	Internal (Door Open)	W	"	"
0640	"	"	Internal (Door Closed)	W	"	"
0641	"	D6A	Front External Elevation	W	"	"
0642	"	"	Oblique External Shot	NW	"	"
0643	"	F43	Principal External Elevation	E	"	"
0644	"	"	Oblique External Shot	SE	"	"
0645	"	"	Internal	E	"	"
0646	"	F44	Principal External Elevation	E	"	"
0647	"	"	Oblique External	NE	"	"
0648	"	"	Internal	W	"	"
0649	-	-	-	-	-	-
0650	25/3/04	F45	Principal External Elevation	W	2m	TL
0651	"	"	Oblique Shots of F45-53	SW	"	"
0652	"	F45	Internal East Elevation	E	"	"
0653	"	F46	Principal External	W	"	"

DIR = THE DIRECTION IN WHICH THE CAMERA IS POINTED, EXPRESSED AS A COMPASS POINT EG NW

OXFORD ARCHAEOLOGY NORTH DIGITAL PHOTOGRAPHIC INDEX

Project name: West Freugh	Project code: L9359	Site code:

Digi JPG No.	Date	Site	Description	Dir	Scale Bar Size	Photo-grapher
0654	25/3/04	F49	Principal External Elevation	W	2m	TL
0655	"	F50	" " "	"	"	"
0656	"	F53	" " "	"	"	"
0657	"	"	Oblique View of F53, F50, F49, F46, F45	NW	"	"
0659	"	F46	Internal East Elevation	E	"	"
0660	"	"	" " "	"	"	"
0661	"	F49	Internal East Elevation	E	"	"
0662	"	F50	Internal East Elevation	E	"	"
0663	"	F53	Internal East Elevation	E	"	"
0664	"	G5	Oblique Shot	SW	"	"
0665	"	"	External North Elevation	S	"	"
0666	"	"	Internal - West Elevation	W	"	"
0667	"	F58	Principal External Elevation	E	"	"
0668	"	"	Oblique Shot	NE	"	"
0669	"	"	Internal West Elevation	W	"	"
0670	26/3/04	F49A	Principal External Elevation	E	"	"
0671	"	"	Oblique Shot	SE	"	"
0672	"	"	Internal Shot	N	"	"
0673	"	F48	Principal External Elevation	W	"	"
0674	"	"	Oblique Shot	SW	"	"
0675	"	"	Internal Shot	W	"	"
0676	"	F58A	Principle External Elevation	N	"	"
0677	"	F58A	Oblique Shot	NW	"	"
0678	"	"	Internal Shot	E	"	"
0679	"	OP23	Principal External Elevation	E	"	"
0680	"	"	Oblique Shot	NE	"	"
0681	"	"	Internal Shot	SW	"	"
0682	"	D8A	Principle External Elevation	N	"	"
0683	"	"	Oblique Shot	NW	"	"
0684	"	"	Internal Shot	N	"	"
0685	"	D11B	Principle External Elevation	S	"	"
0686	"	"	Oblique Shot	SE	"	"
0687	"	"	Internal Shot	E	"	"
0688	"	AR1	Principle External Elevation	N	"	"
0689	"	"	Oblique Shot	NE	"	"
0690	"	"	Internal Shot	N	"	"
0691	"	General	General Site Shot (from AR1)	W	"	"
0692	"	E7	Principle External Elevation	S	"	"
0693	"	E7	Oblique Shot	SE	"	"
0694	"	E7	Internal Shot	S	"	"

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OXFORD ARCHAEOLOGY NORTH DIGITAL PHOTOGRAPHIC INDEX

Project name: West Freugh	Project code: L9359	Site code:

Digi JPG No.	Date	Site	Description	Dir	Scale Bar Size	Photo-grapher
0695	26/3/04	E13	Principle External Elevation	S	2m	T.L.
0696	"	"	Oblique Shot	N	"	"
0697	"	"	Internal Shot	SE	"	"
0698	"	E50	Principle External Elevation	S	"	"
0699	"	"	Oblique Shot	SE	"	"
0700	"	"	Internal Shot	N	"	"
0701	"	E46	Principle External Elevation	N	"	"
0702	"	"	Oblique Shot	NE	"	"
0703	"	"	Internal Shot	N	"	"
0704	"	E49	Internal (workshop)	N	"	"
0705	"	"	Principle External Elevation	W	"	"
0706	"	"	Oblique Shot	SW	"	"
0707	"	"	Internal (cinema)	S	"	"
0708	"	F3	Principle external Elevation	E	"	"
0709	"	"	Oblique Shot	NE	"	"
0710	"	"	Internal Shot	W	"	"
0711	"	F59	Principle External Elevation	E	"	"
0712	"	"	Oblique Shot	NE	"	"
0713	"	"	Internal Elevation	E	"	"
0714	"	F60	Principle External Elevation	S	"	"
0715	"	"	Oblique Shot	SW	"	"
0716	"	F62	Principle External Elevation	E	"	"
0717	"	"	Oblique Shot	SE	"	"
0719	"	"	Internal Elevation	E	"	"
0720	"	F61	Principle External Elevation	N	"	"
0721	"	"	Oblique Shot	NW	"	"
0722	"	"	Internal Shot	NW	"	"
0723	"	F45B	Principle External Elevation	N	"	"
0724	"	"	Oblique Shot	NW	"	"
0725	"	"	Internal Elevation	NW	"	"
0726	"	F45A	Principle External Elevation	E	"	"
0727	"	"	Oblique Shot	NE	"	"
0729	"	"	Internal Shot	E	"	"
0730	"	F33	Principle External Elevation	S	"	"
0731	"	"	Oblique Shot	SE	"	"
0732	"	"	Internal Elevation	W	"	"
0733	"	F25	Principal External Elevation	S	"	"
0734	"	"	Oblique Shot	SW	"	"
0735	"	"	Internal Shot	E	"	"
0736	"	F34	Internal Shot	E	"	"

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OXFORD ARCHAEOLOGY NORTH DIGITAL PHOTOGRAPHIC INDEX

Project name: West Freugh			Project code: L9359		Site code:	
Digi JPG No.	Date	Site	Description	Dir	Scale Bar Size	Photo-grapher
0737	26/3/04	F34	Principle External Elevation	W	2m	T.L.
0738	“	F2	“ “ “	S	2m	“
0739	“	“	Oblique Shot	SE	“	“
0740	“	C25	Principle External Elevation	S	“	“
0741	“	“	Oblique Shot	SE	“	“
0742	“	D3	Principle Elevation	S	“	“
0743	“	“	Oblique Shot	SE	“	“
0744	“	F2	Internal Shot	SW	“	“
0745	“	F50	Principle View	E	“	“
0746	“	“	Oblique View	NE	“	“
0747	“	medical dept HFT	Principle View	N	“	“
0748	“	med. dept. (E13) HFT	Oblique View	NW	“	“

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OXFORD ARCHAEOLOGY NORTH DIGITAL PHOTOGRAPHIC INDEX

Project name: West Freugh	Project code: L9359	Site code:

Digi JPG No.	Date	Site	Description	Dir	Scale Bar Size	Photo-grapher
1249	09/03/04	ARS 1	General View of Air Raid Shelter	E	-	C.W.
1250	"	E14	Roof space over Rooms (17) + (18)	SW	_	"
1252	"	"	Roof space over room (3)	SW	_	"
1253	10/03/04	"	I.D. Shot	-	-	"
1254	"	"	General Shot Room (2)	NW	2m-0.2	"
1255	"	"	" " " (3)	S	"	"
1256	"	"	Detail of Bar in Room (3)	NE	"	"
1257	"	"	Detail of Window Room (3)	W	"	"
1258	"	"	General Shot Room (4)	W	"	"
1259	"	"	Detail of Blocked Door Room (4)	NW	"	"
1260	"	"	Detail of Window Room (5A)	E	"	"
1261	"	"	Water Heater Room (5B)	S	"	"
1262	"	"	Window Detail Room (6)	N	"	"
1275	"	"	Fuse Switch Room (6)	W	"	"
1263	"	"	General Shot Room (7)	SE	"	"
1264	"	"	Safes in Room (8)	SE	"	"
1265	"	"	General Shot Of Kitchen (10)	SE	"	"
1266	"	"	Safe in Room (13)	S	"	"
1267	"	"	Detail of Safe Door Room (13)	S	"	"
1268	"	"	Fuse Box Room (14)	W	"	"
1269	"	"	Light Switch Box (14)	S	"	"
1270	"	"	Door in Room (16/17)	W	"	"
1271	"	"	Cutaway Wall (17)	E	"	"
1272	"	"	Safe in Room (17)	E	"	"
1273	"	"	Detail of Safe Door Room (17)	SE	"	"
1274	"	"	General Shot Room (18)	S	"	"
1276	"	"	" " (20)	SE	"	"
1277	"	"	Window Detail Room (22)	E	"	"
1278	"	"	" " " (22A)	E	"	"
1279	"	"	West Facade South End	E	"	"
1280	"	"	West Facade North End	"	"	"
1281	"	"	West Facade Overall	SE	"	"
1282	"	"	Detail of Buttress & Joint in West Elevation	NE	"	"
1283	"	"	Detail of Porch	"	"	"
1284	"	"	Detail of Window	E	"	"
1285	"	"	North Gable Room (2)	S	"	"
1286	"	"	North End East Part of (e14)	S	"	"
1287	"	"	Cast Iron Plate on North Elevation Room (6)	S	"	"
1288	"	"	South External Elevation (west Side)	N	"	"

1289	"	"	South External Elevation (centre/eastside)	N	"	"

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OXFORD ARCHAEOLOGY NORTH DIGITAL PHOTOGRAPHIC INDEX

Project name: West Freugh | Project code: L9359 | Site code:

Digi JPG No.	Date	Site	Description	Dir	Scale Bar Size	Photo-grapher
1290	10/3/04	Canteen E14	External South/East Corner of West Range	NW	2m	C.W.
1291	"	Canteen Room 18	External South/East Elevation	NE	"	"
1292	"	Canteen E14	East External Elevation	NE	"	"
1293	"	F11	Working shot	N	-	T.L
1294	"	F11	" "	S	-	T.L
1296	11/3/04	F11	General View of Interior	W	2m-0.2 Grad.	C.W.
1297	"	"	" " " "	SE	"	"
1299	"	"	Detail of Window Closer	SW	"	"
1300	"	"	" " " "	S	0.3m 0.1 Grad	"
1301	"	"	Cast Iron Radiator	N	"	"
1302	"	"	Detail of Roof Space	SW	-	"
1304	"	"	" " " "	W	-	"
1305	"	"	South External Elevation	N	2m 0.2Grad	"
1306	"	"	Window Detail	N	-	"
1307	"	"	Drain Pipe Detail	NW	2m	"
1308	"	"	West Gable	E	"	"
1309	"	"	East End - North Elevation	SE	"	"
1310	"	"	West End - " "	SW	"	"
1311	"	"	East Gable and Corridor	NW	"	"
1312	"	F24A	Air Raid Shelter	N	"	"
1313	"	"	Air Raid Shelter entrance	N	"	"
1314	"	"	Air Raid Shelter Interior	E	"	"
1315	"	"	Air Raid Shelter - Vent Cover East End	E	"	"
1316	"	"	" " " " " " " "	W	"	"
1317	"	F24	Exterior of Boiler House - South Elevation	N	"	"
1318	"	"	" " " " " " " "	NE	"	"
1319	"	"	Chimney - Exterior 'Hatch'	E	"	"
1320	"	"	Boiler House - North Elevation	S	"	"
1321	"	"	Boiler House - East Elevation (showing entrance)	NW	"	"
1322	"	"	Interior Boilers	S	"	"
1323	"	"	Valve Handle	W	0.10m Grad 0.30m	"
1324	"	"	Pressure Gauges	N	"	"
1326	"	F20	East Elevation	W	2m	"
1327	"	F21	" "	"	"	"
1328	"	F22	" "	"	"	"
1329	"	F23	" "	"	"	"

1330	"	F27	" "	"	"	"
1331	"	F28	" "	"	"	"
1332	"	F29	" "	"	"	"
1333	"	F30	" "	"	"	"

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OXFORD ARCHAEOLOGY NORTH DIGITAL PHOTOGRAPHIC INDEX

Project name: West Freugh	Project code: L9359	Site code:

Digi JPG No.	Date	Site	Description	Dir	Scale Bar Size	Photo-grapher
1334	11/3/04	F30	North Elevation	S	2m	C.W.
1335	"	-	General Shot of Barrack Blocks	"	"	"
1336	"	F20	Indoor - East Elevation	SE	"	"
1337	"	F21	" " "	E	"	"
1338	"	"	Roof as Observed through Hole in Ceiling	W	-	"
1339	"	F22	Indoor - East Gable	E	2m	"
1340	"	F23	Indoor - East End	E	"	"
1341	"	"	Connecting Block	S	"	"
1342	"	F31	" "	N	"	"
1343	"	F10	Principle exterior Elevation (west gable)	E	"	"
1344	"	F9	" " " " "	E	"	"
1345	"	F8	" " " " "	"	"	"
1346	"	F7	" " " " "	"	"	"
1347	"	F6	South Elevation	NE	"	"
1348	"	F5	North Elevation	SW	"	"
1349	"	F4	South Elevation	NE	"	"
1350	"	F3	North Elevation	S	"	"
1351	"	Cinema	Nissen Hut	SE	"	"
1352	12/3/04	F10	General Internal View	W	"	"
1354	"	"	" " "	"	"	"
1355	"	"	" " "	"	"	"
1356	"	"	" " "	"	"	"
1357	"	"	" " "	"	"	"
1358	"	"	" " "	"	"	"
1359	"	"	" " "	"	"	"
1360	"	"	Model of Airbase	E	-	"
1361	"	"	" " "	"	-	"
1362	"	"	" " "		-	"
1363	"	F32	General Shot of Exterior	S	2m 0.24 grad	"
1364	"	F30	General Interior View	E	"	"
1365	"	"	Detail of Machine Base	"	0.3m 0.1m Grad	"
1366	"	F29	General Interior View	E	2m 0.2 Grad	"
1367	"	F28	View of office in Photo Lab.	NW	"	"
1368	"	F27	General internal View	E	"	"
1369	"	F20	External F20 + Corridor	SE	"	"

1370	“	F11-F6	General Shot	NE	“	“
1371	“	Farmhouse	(front) South Elevation	N	“	”
1372	“	“	“ “ “	“	“	“
1373	“	“	West Elevation	E	“	“
1374	“	“	(rear) North Elevation	S	“	“

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OXFORD ARCHAEOLOGY NORTH DIGITAL PHOTOGRAPHIC INDEX

Project name: West Freugh | Project code: L9359 | Site code:

Digi JPG No.	Date	Site	Description	Dir	Scale Bar Size	Photo-grapher
1375	12/3/04	Farmhouse	East Elevation	W	2m	C.W.
1376	“	F Blocks	General View of Blocks	S	“	“
1377	“	“	“ “ “ “	“	“	“
1378	“	Medical Centre	General View		“	“