

The Built Heritage of the First World War in Scotland

The report of a project commissioned by
Historic Scotland & RCAHMS

Dr Gordon J Barclay
September 2013

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Fig. 1. One of the main buildings of the Stirling Ordnance Depot. Note the loading doors at both ends of the main first floor elevation. (Historic Scotland)

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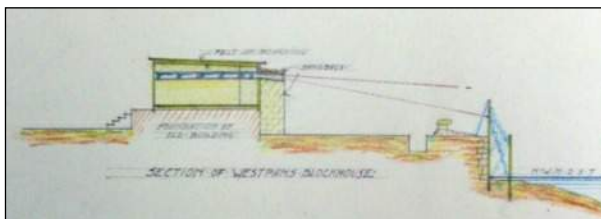


Fig. 2. An elevation and section of a blockhouse erected, by 1916, at Musselburgh, Midlothian. (The National Archives, WO 78/4396)

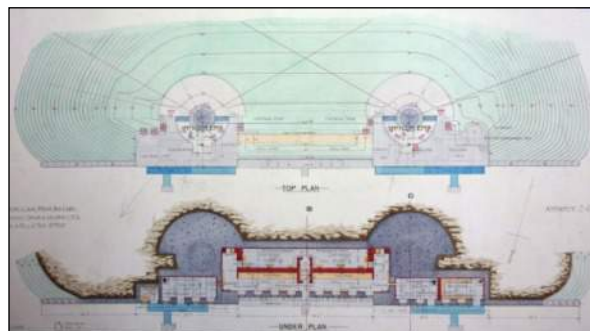


Fig. 3. The surface plan of the 6-inch coast artillery battery at Broughty Castle, Angus, 1916. (The National Archives, WO 78/5195)

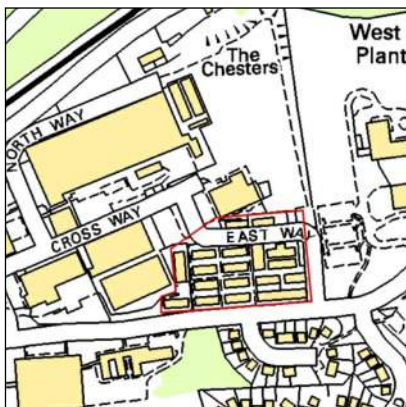


Fig. 4. Extract from the OS 1:10,000 map of Donibristle Industrial Estate, Fife; the red outline shows the location and extent of survival of First World War buildings of the air station. Reproduced by permission of Ordnance Survey on behalf of HMSO. © Crown copyright. All rights reserved. Ordnance Survey Licence number 100020548.



Fig. 5. Some of the surviving First World War buildings at Donibristle air station, Fife. (G J Barclay)



Fig. 6. The surviving, much-altered engine houses at Kinghorn battery, Fife. (G J Barclay)

1. Summary

In preparation for the marking of the centenary of the First World War, Historic Scotland and the Royal Commission on the Ancient and Historical Monuments of Scotland (RCAHMS) wished to characterise the ‘quantity and quality’ of the built heritage in Scotland that related to the prosecution of the war, and to enhance the record of that heritage in RCAHMS's Canmore database. The project definition required an estimate of the proportion of heritage assets already designated, and an assessment of the quality of already-designated sites, and of their representativeness.

The project report lists the places and buildings that were identified, noting where appropriate the existing Canmore record number and whether the ‘asset’ was designated, or worthy of further investigation or review. Introductory text is also provided for all categories and sub-categories.

The project updated or created over 830 records in Canmore, representing over 600 sites, buildings and places, and introduced a greater degree of consistency in how they were described. In addition an outline list of Auxiliary Hospitals and civil hospitals that accommodated military patients was created. This total of over 800 ‘assets’ was considerably in excess of the 300–400 originally expected by the project sponsors.

2. Introduction

In preparation for the marking of the centenary of the First World War Historic Scotland and RCAHMS wished to characterise the ‘quantity and quality’ of the built heritage in Scotland relating to the prosecution of the war, and to enhance the record of that heritage. A contract was let in March 2013 and the final report was delivered on 16 September.

Different aspects of the built heritage of the war had previously been studied thematically or by geographical area; for example, the coast defences of different parts of the country (Saunders, A (1984) ‘The defences of the Firth of Forth’, in Breeze, D J (ed), *Studies in Scottish Antiquity*, 469-80), drill halls (Osborne, 2006), or military aviation (Fife, 2007). But the overall scale and survival of the heritage of the war had not been drawn together in such a way as to allow the comprehension of the scale and character of the whole. The project was intended to provide for the first time an overview of what was built and used, and what survived, across the whole

country. In the absence of previous systematic work it was reasonable of RCAHMS and HS to assume that the majority of the material on which the project was to work was already in the Canmore record in some form, and indeed within the subset of data initially supplied to me. The work of the project, however, quickly began to reveal the far greater than expected extent of the historic environment, both surviving and lost, associated with the prosecution of the First World War.

As noted in the Summary over 830 records were added to or updated in the project's Access database, representing over 600 individual sites and buildings, and over 200 Auxiliary and civil hospitals were separately listed. The vast majority of these 800 or so places had previously been recorded in one way or another (for example, in single subject books, or through the description of a building whose First World War role had been lost sight of) but records or passing mentions had not been collated. The use of primary materials, the easy accessibility of historical mapping, and the capacity to ‘visit’ many places without leaving one's desk using Google Streetview has allowed me to add to, and in some places correct, the observations of earlier workers, who were not blessed with these technological aids, nor perhaps able to focus so completely on the work, nor to work on such a wide canvas.

The outcome of the project has been a significant increase in the number of places recorded in Canmore and an overall improvement in the consistency and comprehensibility (especially for the non-specialist) of the descriptions of many places and buildings. The project has, however, been undertaken over a short time, by one person, using a limited range of resources. There are certainly errors and omissions, and indeed it would be absurd for anyone to claim that they had ‘finished’ the record of any part of Scotland's historic environment. It is to be hoped that wider public interest in the heritage of the war during the marking of the centenary will add more information to the record.

The inevitable time lag between the submission of new records to RCAHMS and the allocation of record numbers means that some sites and buildings listed below do not yet have reference numbers in the RCAHMS Canmore database. These will be allocated in the weeks following the completion of my work.

3. Datasets & Processing

The primary requirement to answer the questions posed by the research contract was a reasonably reliable and complete dataset. The key dataset for the project was RCAHMS's Canmore database. The project began with access to the entire Canmore dataset (281,516 records) and a RCAHMS-created sub-set of possibly First World War sites, totalling 2,038 records (which included a significant number of duplicates, machine-generated by the process of including listing/scheduling information). This dataset did not include hospitals at this stage. The dataset was supplied as a Microsoft Access 2013 database.

The Canmore record represents the accumulation of information for more than a century by many organisations, over a century of RCAHMS's and Historic Scotland's (and its predecessors') own survey and research, half a century of the work of the Ordnance Survey Archaeology Section, and by local authority archaeologists, archaeological contractors, and individuals, using a wide range of approaches, and entered into Canmore and its pre-digital predecessors using protocols that have varied over several decades. The purpose of the dataset has changed from being a repository of data for a small professional constituency to being a database made publicly accessible through the internet, but the underlying database is still the product of its long and complex history of creation.

For these reasons, the Canmore record of a particular monument, building or place may be no more than an accumulation of observations and secondary sources, which on occasion may be mutually contradictory, which has undergone a varied level of checking of observations in the field or in primary archival material. Sources quoted in Canmore, may, by their very inclusion in the formal record, be given an unwarranted authority and a number of 'factoids' – inaccurate observations that had become 'fact' by frequent repetition – were detected. While more modern records included historical or geographical context, and many had been upgraded to provide introductory material comprehensible to a lay audience, many did not provide basic information, such as date, but instead plunged into detailed description of individual structures. Site numbering and sub-numbering often reflected the accumulation of observations over decades: one coast battery might be described under a single number, while another might be split into two or more site numbers,

perhaps with a bewildering array of sub-numbers for a selection of individual structures that reflected different phases of research rather than the original nature of the site. The people adding records, or adding to them, have rarely had the time to overhaul the whole record or to check for consistency over a series of sub-records or with other monuments and buildings of the same type.

Data Supplied

RCAHMS provided a sub-set of the Canmore data created by a series of searches of classification fields. The sub-set of Canmore (WW1_Audit) of types of site or building likely to relate to the First World War comprised 1,679 entries, with a supplement of 359 sites provided a few days later relating to aerodromes and boatyards; these two sets were amalgamated. A further dataset, of 989 hospitals, was not integrated into the WW1_Audit subset. RCAHMS has contributed the following note on their methodology:

RCAHMS carried out a selection exercise on information held in the database. This identified the records that were most likely to contain data about buildings and structures purpose-built for WWI. A further exercise identified additional buildings which may have had significant relevant use during WWI, for example hospitals.

The methodology used was a series of queries, isolating groups of relevant records and then refining the results. The first stage extracted records relating to 'DEFENCE' which were classed as '20th CENTURY' in the RCAHMS database. The resulting records were then refined through the removal of site classification types that were not relevant, for example those relating to specific WWII activities (e.g. radar stations) or to the Cold War. The resulting 1,679 records were provided to the consultant for further refinement and data enhancement.

A similar methodology was used for records relating to 'TRANSPORT' and '20th CENTURY'. This extracted an additional 359 records, which included airfields and boat yards. A final query extracted 989 records for 'HOSPITALS', a percentage of which will have had specific use during WWI.

It was recognised that this method may not have extracted all relevant records, so a complete copy of the Canmore dataset was also provided to the consultant.

The WW1_Audit dataset ranged from clearly-defined sites that were built in or used solely during WW1 (eg some coast artillery), through pre-existing sites and buildings used intensively during the war (regimental depots), to structures whose precise date of use was unclear (eg observation posts; rifle ranges), to a residue of sites whose very nature was unclear and which, even if dated to the First World War, might be considered of little value to the project (eg a single concrete building platform).

While the sub-set provided a good starting point, many sites in Canmore had escaped inclusion. There were a number of reasons, related to the very varied origins of and protocols used in the creation of the records, as noted above. For example, there were variations in the protocols of applying terms in the main classification field – CLASSUB – some operators had recorded only the current or last class of use of a place or structure, rather than its range of uses during its life (for example, a ‘drill hall’ now in other use might only be classed as ‘hall’ or ‘house’, although ‘drill hall’ might appear in the name of the building or its alternative name – the ALTNAME field).

Process

The first stage of the analysis of the WW1_Audit dataset was for me to go through the 2000+ entries (excluding hospitals at this stage) to determine, using the information contained in the site record, whether they fell into one or two of four pre-determined age categories: First World War, Second World War, Cold War and ‘Other’. The variability of information in the Canmore records made some of this quite problematic and laborious, and much cross-checking with web-based and immediately available published sources was necessary to determine or even estimate date. A fifth category, ‘Proximity’, was added where proximity to a site or building of known date might provide a clue on further analysis to the date of a structure (as in the case of rifle ranges). The first trawl through the dataset resulted in a list of 532 buildings, places or monuments that seemed likely to have been in use in the First World War. During the process the absence of sites in the WW1_Audit dataset that were clearly relevant began to prompt check-searches in the full Canmore database to include sites that had not found their way into the WW1_Audit dataset for one reason or another. Beyond that, it became clear at various stages during the project that there were several hundred additional places, buildings and sites that had not been recorded in Canmore.

Single-subject books and web-based resources were useful entry points to categories of data, often providing lists of possible sites and buildings. For example, Mike Osborne’s study of UK drill halls (Osborne 2006), Malcolm Fife’s book on First World War aviation in Scotland (Fife 2007) and Stell’s volume on Scapa Flow in the First World War (Stell 2011) were all very useful, as were lists of prisoner of war camps and hospitals created on sites such as Secret Scotland¹ and Scarletfinders² from a range of sources. However, wherever possible, primary sources were used to check or correct secondary sources or, particularly in coast defence in mainland Scotland, instead of them.

The second stage of the process was to establish categories of data, to structure the data-processing, without relying on Canmore numbering and sub-numbering which, as noted above, could be confusing. A one- or two-level code was applied to as many records as could be readily categorised according to the structure below, and then a number in sequence was applied.

4.1 AA Anti-aircraft

4.2 AS Air stations – sub-category by use –

- AS_L1 Land, fixed wing
- AS_L2 Land, airship
- AS_L3 Land, both fixed wing and airship;
- AS_LK Kite balloon
- AS_Se Seaplane
- AS_LS Land and seaplane

4.3 AC Accommodation

- AC_Ba Barracks (excluding regimental depots)
- AC_PW Prisoner of War camps

4.4 AD Anti-invasion Defences

4.5 CD Coast defence – arranged by port/area

- CD_Cl Clyde
- CD_Cr Cromarty
- CD_Ea Eastern seaboard
- CD_Fo Forth
- CD_Or Orkney
- CD_Sh Shetland
- CD_We Western Seaboard

4.6 ND naval installations

- ND_NB Naval bases and harbours
- ND_Ra Naval radio stations

¹<http://www.secretscotland.org.uk/index.php/Secrets/PoWCampSummaryWWI> accessed September 2013

² <http://www.scarletfinders.co.uk/171.html> accessed September 2013

4.7 TS Training, Support & Supply

TS_Ar Armament & aircraft factories & depots
TS_Ho Hospitals
TS_RD Regimental depots
TS_DH Drill halls
TS_FR Firing ranges
TS_TG Training areas

Thus, all the elements of a coast defence battery that might include several Canmore record numbers and sub-numbers would be coded, for example, CD_Cl_03, being the third battery in sequence on the Clyde.

Each higher-level category is described in the report text in turn, and every category, and some sub-categories, are provided with introductory text, which is intended to provide the basic material for thematic text that might be used with the individual site records.

The next stage of processing was to deal with categories, site by site, using secondary sources judged to be reliable and, wherever possible, primary sources. Problems with RCAHMS site numbering and sub-numbering, as well as corrections to National Grid References were highlighted wherever possible, and suggestions made for amelioration, although the actual allocation/re-allocation of numbers was done at RCAHMS. The requirements of each category and of each site within a category could be different, but ideally each new record would include as many as possible of the following:

- Locational information: NGR/street address
- Dates and character of relevant appearance on OS historical mapping
- Dates of construction/use/alteration
- Description, adapting, adding to or replacing existing material. Contextual material added where relevant (eg purpose of site; relationship to other sites/ places/ activities)
- Associations with particular military formations
- Commentary on previous accounts.
- Designated status
- Images, maps, copies of relevant primary documents
- References

The records were held in a Microsoft Access 2013 database.

The availability of 2nd and 3rd epoch OS mapping through the project GIS, and access to a wider range

of historical mapping through the National Library of Scotland's recently-digitised collections¹, as well the capacity to 'visit' places using Google Streetview² made it far easier for me than for researchers working on this sort of material even a few years ago. It was a matter of moments to check whether a structure appeared on pre- and post-First World War maps, whereas a handful of years ago, immense numbers of physical historical maps would have had to be retrieved from storage in the National Library of Scotland.

Any further maps or plans found in archives were put into the project's geographical information system, so that they too could be accurately located in geographical space; this allowed these primary documents to be overlain on modern and historical maps, to locate sites accurately and, in some cases to identify structures and buildings that had survived from the First World War. Geo-referencing frequently allowed the drawing of boundary polygons, showing the extent of sites, or of elements or periods of sites, or to assign accurate National Grid References. All the geo-referenced maps and plans were supplied to RCAHMS.

Copies of primary documents (for example individual plans or Fort Record Books from the National Archives) were made into Adobe Acrobat PDF files and attached to or supplied alongside the Access database record for the relevant site(s). For surviving buildings a reference to a Google Streetview map was also attached to the record.

The data were processed at RCAHMS by Allan Kilpatrick in parallel with my work – when a category or a discrete part of a category had been completed by the contractor, an extract of the Access database for the affected sites was prepared, along with geo-referenced maps and any archive material and placed in a Dropbox folder for RCAHMS to pick up. Information was supplied in greater or lesser detail as required by the complexity of the material. The first dataset to be supplied to RCAHMS was that for Air Stations, on 21 May 2013.

Allan used the information in the Access database to add new Canmore records or amend existing ones using the information provided, and undertook the proper archiving of accompanying material. He also ensured that the data were structured according to RCAHMS's best modern practice, and undertook sometimes major campaigns of re-numbering of sites to increase clarity. He also checked accuracy

¹ <http://maps.nls.uk/scotland/index.html>

² <http://maps.google.co.uk/intl/en/help/maps/streetview/>

and consistency, and where relevant, consulted datasets not easily available to me (eg high resolution satellite and aerial photography) to check whether features survived: he has, for example, located surviving firing trenches defending the Cromarty coast batteries, which I first detected on 1916 War Office maps. His input was vital to the success of the project.

Categories not systematically studied

The original project design included the category ‘Transportation’ as an area of study. This has not been covered, as the entire road, rail, internal waterway and maritime trade network of Britain and her empire was involved in the prosecution of the war, and a detailed study to draw out the probably rare survivals of transport structures built *specifically* for the war has not been possible in this brief survey. Where railways or tramways were built as part of a military facility (for example the US Naval base at Inverness or the PoW camp at Stobs) these have been mentioned under the site’s main entry.

Likewise, the identification of every factory or workshop engaged in making war materials – ammunition, weapons, food, uniforms and equipment – has been beyond the capacity of this project, and would require an enormous amount of research in primary materials.

Conservation & Designation

As sites, buildings and places were dealt with in the project each record was checked against GIS datasets for listed buildings and scheduled monuments (those provided by HS in March 2013) to see if they were already designated, or whether they, by chance, fell within the designated area of another site. The contract required an estimate of the proportion of heritage assets already designated, and an assessment of the quality of what was already designated, and of their representativeness. The project was also to indicate whether sites, places or building seemed to be suitable for further attention in relation to their future conservation – whether through designation or otherwise. The term ‘Review’ has been added to site and building records below where I believe that some further investigation or consideration of conservation needs may be merited. Occasional errors in the documentation or location of designated entities have been brought to the attention of HS.

4. REPORT ON SELECTED DATASETS

The reports below are set out by data category and sub-category, as described in Chapter 3.

4.1 [AA] Anti-aircraft Sites

First World war anti-aircraft guns were, in general, mobile and their emplacements would normally have been temporary and ephemeral. Identifiable remains of only two more-substantial AA batteries in Scotland definitely survive, both on Orkney, at Burray Ness and Carness. One is scheduled and the other is under review.

Anti-aircraft positions are marked on plans of coast defence batteries (eg Fort Matilda, WO 78/5187) and on maps of the defences of the naval dockyard at Rosyth and the Naval Armaments Depot at Crombie (marked on a map on file WO 78/4396). Allan Kilpatrick has identified what may be the surviving elements of one of the Crombie emplacements but these have not been confirmed by field inspection.

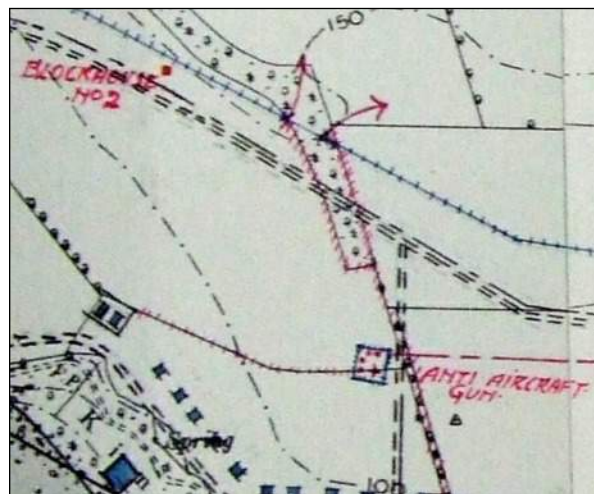


Fig. 7. Detail of the defences at the Royal Naval Armaments Depot at Crombie, Fife, showing the anti-aircraft gun position and one of the blockhouses. (The National Archives, WO 78/4396)

Sources

Stell, G 2011 *Orkney at War. Defending Scapa Flow. Volume 1.*

WO 78/4396 War Office and predecessors: Maps and Plans.
Great Britain. Scotland. Scottish Field Defences. 1:2500.

WO78_5187 War Office and predecessors: Maps and Plans.
Great Britain. Scotland. Firth of Clyde: Matilda Battery.

Table 1. Anti-aircraft emplacements/sites of which there are records.

Data Code	Canmore No.	Name	Notes
AA_01	ND59NW 4	Burray Ness	Well preserved. Not used in WW2. Under review
AA_02	HY41SE 51	Carness	Scheduled
CD_CL_03	NS27NE 96	Fort Matilda coast battery	
ND_NB_01	NT08SE 41	Rosyth naval base	No trace known.
TS_AR_03	NT08SW 104	Crombie naval armaments depot	Possible trace of emplacement

4.2 [AS] Air Stations

The popular image of military flying in the First World War is of gallant fighter actions over France, and Zeppelin raids on London. Scotland was beyond the range of German bombers but forays by Zeppelins towards Scotland's naval bases, and a raid on Edinburgh in 1916, showed that active defence was required (Fife 2007, 97–109).

The most important air activity in Scotland was patrolling the sea, hunting submarines – using seaplanes or non-rigid (and later rigid) airships – or the support of naval activity – land bases of ship-borne aeroplanes, and bases for kite balloons (tethered aerodynamic balloons towed behind ships and providing a raised observation platform). I have used the term 'air station' to cover the bases of fixed-wing land-based and ship-borne aeroplanes as well as airships and kite balloons. Many of the air stations were used for more than one type of flying. Many of them were also ephemeral, especially those landing grounds established around central and southern Scotland, intended to be used only in emergencies by No. 77 Home Defence Squadron; they consisted of little more than a piece of agricultural land cleared of fences and walls, and which was to be cleared of livestock whenever planes were in the air; many never saw a landing (Fife 2007, 106, 109). These landing grounds are marked LG below. Many aerodromes were also used or specifically built for training pilots and air-gunners.

Some of the landing grounds were owned by companies manufacturing airships, seaplanes, fighters and bombers for the government, and some of these had a dual civilian/military presence, the latter there to test and formally 'accept' machines delivered from the factories. Of the vast majority, no trace remains, but virtually every air station in use in the autumn of 1918 was included in a RAF survey – its boundary was mapped and the air station's buildings were described and personnel enumerated (TNA AIR 452/15/312/26 vol. 5).

Some 64 air stations have been identified that were in use during the First World War, using Fife's authoritative study (2007) and primary records. Of these records about 30 are wholly new to Canmore. It has been possible to create reasonably reliable GIS polygons showing the extent of 34 of the stations, mainly based on the 1918 RAF air station survey. For some sites there are multiple separate polygons.

The breakdown of types of air station is approximately as follows:

Seaplane bases: 19 (including one with a kite balloon base and four where land-based planes were also operated).

Fixed wing land aeroplanes: 43 (including four where seaplanes were also operated, and others of mixed use. 17 of the land stations were quite ephemeral landing grounds).

Airships: 6 (including two where fixed wing aeroplanes were also operated).

Kite Balloons: 4 (including one where seaplanes were also operated).

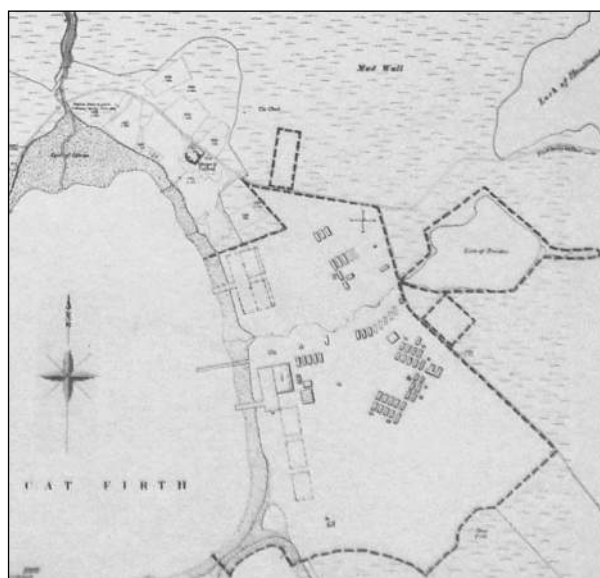


Fig. 8. Cat Firth seaplane, station, Shetland. Some structures survive. (TNA AIR 452/15/312/26 vol 5)

Survival

First World War aerodromes in general were more ephemeral than those of the Second World War, most of which by 1945 had hard runways – First World War flying relied upon resilient and well drained grass (and occasionally sand) surfaces. What mainly survives are buildings, mainly accommodation but some hangars, seaplane slipways and foundations for structures. None of the monumental airship sheds survive.

Physical remains definitely or possibly survive at 17 of the sites. Listing has recognised buildings at three stations (Leuchars, Montrose and East Fortune);

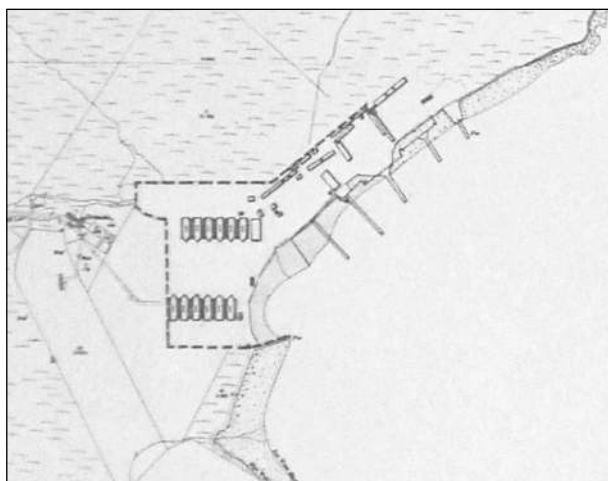


Fig. 9. The kite balloon station at Lerwick. The individual canvas hangars for the 12 balloons stationed here are clearly visible. (TNA AIR 452/15/312/26 vol 5)

scheduling has by chance protected First World War remains at one site (Fort George).

The geo-referencing of the RAF survey maps onto a geographical information system and overlaying them on modern mapping as part of this project has revealed an unexpectedly high number of additional surviving buildings and other features that have not previously been recognised. In some cases buildings had been recorded as pre-1939 but their date was unknown – now it can clearly be demonstrated that many were built by the autumn of 1918. In other cases ‘archaeological’ remains survive - humps and bumps or concrete footings representing the locations of buildings, and even airship ‘nests’ in an Aberdeenshire forest.

The largest collection of First World War air-related structures is at the Loch Doon Gunnery School. The school represents a quite extraordinary example of bad military procurement practices, from the choice of site (the topography and climate would have caused major problems), to its very *raison d'être* (the types of target and training it could offer were obsolete long before completion), and to the lack of control of costs. The project’s management was roundly criticised in Parliament at the time.¹

Sources

The main primary source for the air stations is the 1918 national survey, already mentioned. Each air station had a map and a detailed description (although some maps and descriptions are no longer

on file) and these were used extensively by Fife (2007) in his excellent survey of military aviation in Scotland in the First World War.

The main secondary sources (apart from the Canmore records themselves) have been:

Delve, K *The Military Airfields of Britain: Scotland and Northern Ireland*. 2010.

Fife, M *Scottish Aerodromes of the First World War*. 2007

Smith, D *Action Stations: 7. Military airfields of Scotland, the North-East and Northern Ireland*. 1983

The main primary source is:

National Archives AIR 452/15/312/26 vol 5.



Fig. 10. Donibristle air station, Fife. The landing ground, with the technical buildings and accommodation, to the NE, was linked to the seaplane landing pier, at the SW, by a dedicated railway, on which the seaplanes were transported. (TNA AIR 452/15/312/26 vol 5)

The sites on the list of air stations and landing grounds operational during the First World War, which starts on the next page, are coded as follows:

AS = Airstation

L = Land 1 = fixed wing; 2 = airship; 3 = both fixed wing and airship; K = kite balloon

Se = Seaplane

LS = Land and seaplane

[LG] = probably ephemeral emergency landing ground

Breaks in the code number sequence represent entries in the preliminary sift not carried forward to the final list.

¹ <http://hansard.millbanksystems.com/lords/1918/mar/21/loch-doon-aviation-base>

Table 2. Air Stations in use in the First World War

Data Code	Canmore No.	Name	Notes
AS_Se_01	HP60NW 13.5	Unst, Baltasound	No trace.
AS_LK_02	HU44SE 284	Lerwick Kite Balloon station	No trace.
AS_Se_03	HU45SE 37	Cat Firth	Surviving huts, building plans and hard-standings. Reviewed.
AS_LS_04	HY30SE 2 & HY30NE 31	Smooagro/Swanbister	Surviving building, jetty and crane. Reviewed.
AS_SeK_05	HY30SW 42	Houton Bay	Misc.building platforms and slipways.
AS_Se_06	HY31SW 71	Stenness Loch seaplane station	No trace.
AS_LS_07	HY40NW 32	Scapa seaplane station	No trace.
AS_L2_08	HY41SW 52	Caldale airship station	Wind-screen supports survive. Reviewed.
AS_Se_10	HY44NW 110	Pierowall (Westray) Seaplane Station	Pier listed.
AS_Se_11	ND16NW 410	Thurso Seaplane Station	No trace
AS_Se_13	NH75NE 53	Fort George/Ardsier seaplane station	Slipway may survive. Scheduled within Fort George boundary.
AS_L1_15 [LG]	NH77SW 78	Delny landing ground	Not precisely located
AS_L2_16	NK04SW 25	Longside/Lenabo airship station	Bases of airship sheds may survive within clearings. Review.
AS_Se_17	NK05NE 22	Loch of Strathbeg, seaplane base	Pier and some hard-standing survive.
AS_Se_18	NK14NW 148	Peterhead Bay	No trace.
AS_L1_19 [LG]	NO00SE 71	South Kilduff airfield	No trace.
AS_L1_20 [LG]	NO40SE 1196	Kilconquhar landing ground	No trace.
AS_L1_22	NO42SE 59	Leuchars aerodrome	Significant remains. Some already listed. Additional buildings of the First World War identified. C-listed complex dated to the 1930s may have earlier origins.
AS_L1_23 [LG]	NO43SE 537	Broughty Ferry landing ground	No trace.
AS_Se_24	NO43SW 88	Stannergate, Dundee	No trace.
AS_L1_25	NO53SW 109	Barry airfield	No trace.
AS_L2_26	NO55SE 50	Auldbar airship station	Airship 'nests' - hollows - in woodland. Review.
AS_L1_27 [LG]	NO56NW 51	Milton of Balhall	No trace.
AS_L1_28	NO60NW 49	Crail aerodrome	Listed/scheduled , but probably no WW1 material survives.
AS_L1_29	NO67SW 58	Edzell air station (First World War)	Possible surviving hut footings.
AS_L1_30	NO75NW 31	Montrose (Broomfield)	Elements survive and are listed.
AS_L1_32	NR62SE 27	Campbeltown	No trace
AS_L1_34	NS20NW 33	Turnberry	Hotel listed. Otherwise no trace.
AS_Se_35	NS28SE 35	Rhu (Helensburgh)	Slipway may survive, but precise location/date uncertain
AS_L1_36	NS32SE 84	Ayr airfield (First World War)	No trace
AS_L1_37 [LG]	NS37NW 58	Cardross landing ground	No trace.
AS_LS_38	NS40NE 44	Gunnery School, Bolton Loch [Loch Doon]	Surviving elements of the gunnery school. Hangar bases exposed at low water and airfield drainage system visible.
AS_L3_39	NS46NE 30	Inchinnan	No trace
AS_L1_40	NS47SE 276	Dalmuir	Housing survives. Review.
AS_L1_41	NS55NE 2279	Glasgow, Cathcart, Carmunnock landing ground	No trace.
AS_L1_42	NS56NW 79	Renfrew	No trace.
AS_L1_43 [LG]	NS79NW 88	Dasherhead Farm	No trace.
AS_L1_44	NS79SE 212	Stirling (Raploch)	No trace.
AS_L1_45	NS89SE 238	Alloa airfield	No trace.

Data Code	Canmore No.	Name	Notes
AS_L1_46	NT17SE 70	Edinburgh, RAF Turnhouse Airfield	No trace of First World War material.
AS_L1_47	NT18SE 30	Donibristle	Surviving buildings identified at eastern end of main site. Pier and other structures may survive at coast. Review both.
AS_LK_49	NT18SW 393	North Queensferry, kite balloon station	No trace.
AS_L1_50 [LG]	NT26NE 376	Gilmerton (Edinburgh) landing ground	No trace.
AS_L1_51 [LG]	NT26NW 511	Edinburgh Colinton landing ground	No trace.
AS_Se_52	NT27NW 28.12	Granton Harbour, seaplane station	No trace.
AS_L1_53 [LG]	NT27SW 4732	Edinburgh Myreside landing ground	No trace.
AS_Se_54	NT18SE 76	Hawkcraig Point, seaplane base	New. Probably worth a look to see if anything can be found.
AS_L1_55 [LG]	NT35NE 53	Tynehead landing ground	No trace.
AS_LK_56	NT39NE 150	Methil Docks, kite balloon station	No trace.
AS_L1_57 [LG]	NT47SW 183	Hoprig Mains landing ground	No trace.
AS_L1_58	NT47SE 65	Penston airfield (First World War)	Some remains of buildings reported in woodland
AS_L1_59 [LG]	NT56NW 127	Gifford landing ground	No trace.
AS_L3_60	NT57NE 72	East Fortune	Additional First World War buildings now identified in eastern area.
AS_L1_61	NT58SW 68	Drem (Gullane)	Up to four First World War buildings may survive. Review.
AS_Se_62	NT67NE 567	Belhaven Bay, Belhaven landing ground	No trace.
AS_L1_63 [LG]	NT67NE 566	South Belton	No trace.
AS_L1_64 [LG]	NT74NE 34	Eccles Tofts	No trace of First World War structures.
AS_L1_65	NT76SE 30	Whiteburn landing ground	No trace.
AS_L1_66 [LG]	NT77NW 107	Skateraw landing ground	No trace.
AS_L1_67 [LG]	NT85SE 27	Winfield	No trace.
AS_L1_68 [LG]	NT96SW 143	Cairncross	No trace.
AS_L2_69	NX15NW 56	Luce Bay	No trace.
AS_L1_71	NX97NE 153	Dumfries, Heathhall	No trace.
AS_Se_72	NT18SW 392	Rosyth seaplane station	No trace.

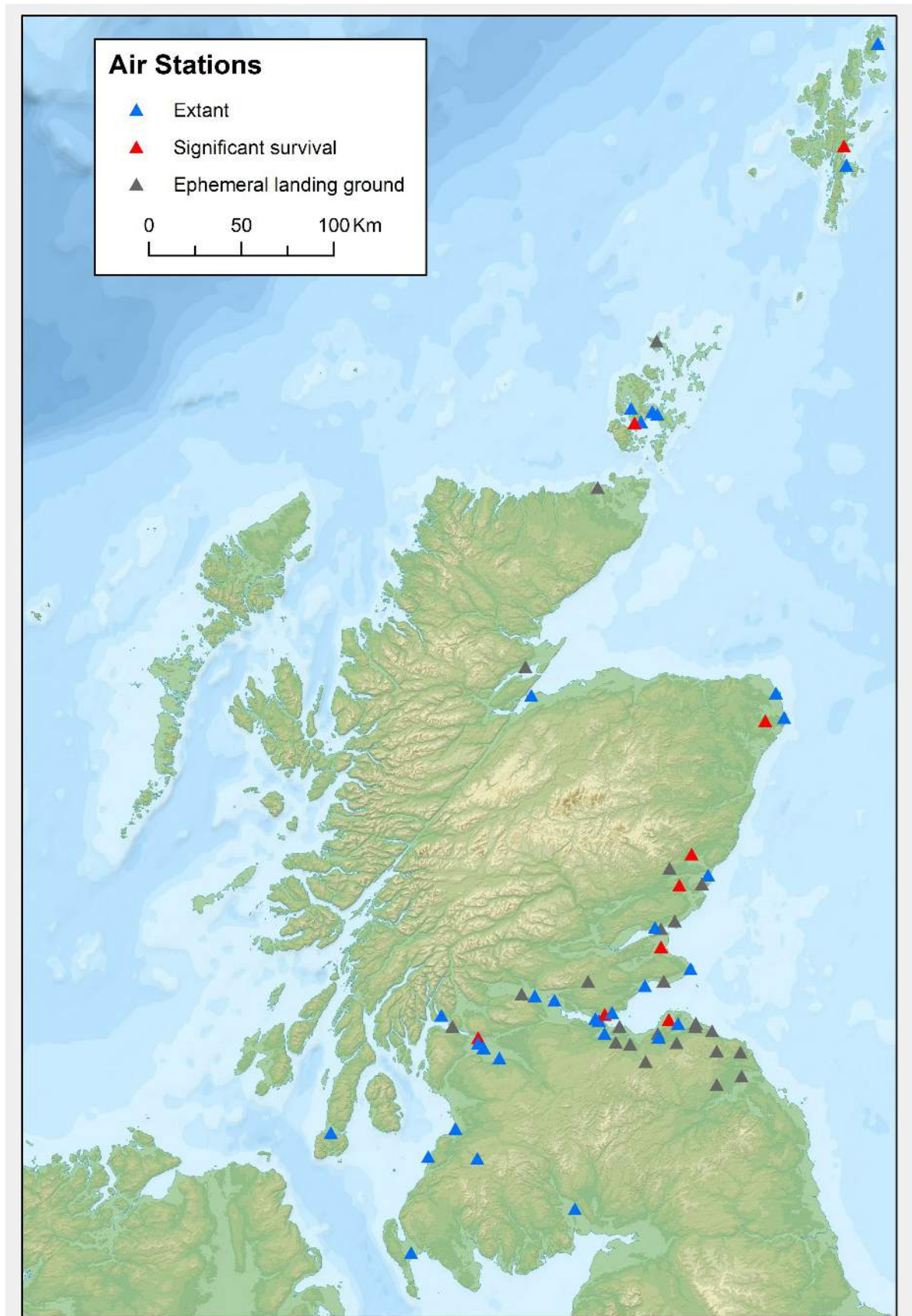


Fig. 11. Air stations in use 1914–19.

4.3 [AC] Accommodation

4.3.1 [AC_Ba] Barracks

The rapid expansion of the armed forces, in particular the Army, from the summer of 1914, required the creation or adaptation of vast amounts of accommodation for the new troops, their officers and their support personnel. Existing barracks were used, as were the regimental depots, and more ephemeral hutted and tented camps were established in many parts of Scotland, associated with other installations, or with training grounds or for garrison/guarding duties, or a mixture of purposes. For example, the Invergordon military camp accommodated the 3rd Battalion Cameron Highlanders, the purpose of which, throughout the war, was the training up of men for the other battalions of the Regiment, serving abroad; the men of the camp also provided part of the guard for the Naval Base, and would have manned the landward defences of the coast batteries, if needed. The large hutted barracks in Greenock, south of Fort Matilda, was used for

training, but probably also provided the infantrymen to guard Fort Matilda and the adjacent torpedo factory, and to man the trench systems that protected these facilities on the landward side.

The Canmore record includes just over 100 records whose class contains the term 'barrack'. Of these around 16 have been identified that seem likely to have been in use in 1914-18. Accommodation on air stations has not been included separately from the entry for the station, nor have the depots of the ten Scottish regiments, which were very much more than mere accommodation, nor the Stobs training camp, nor most of the barracks within naval bases.

The dates that many urban barracks complexes went out of active use is often not clear. The few surviving barracks are, in general, already designated. The Dunbar fragment may be the only possible candidate for further conservation attention.

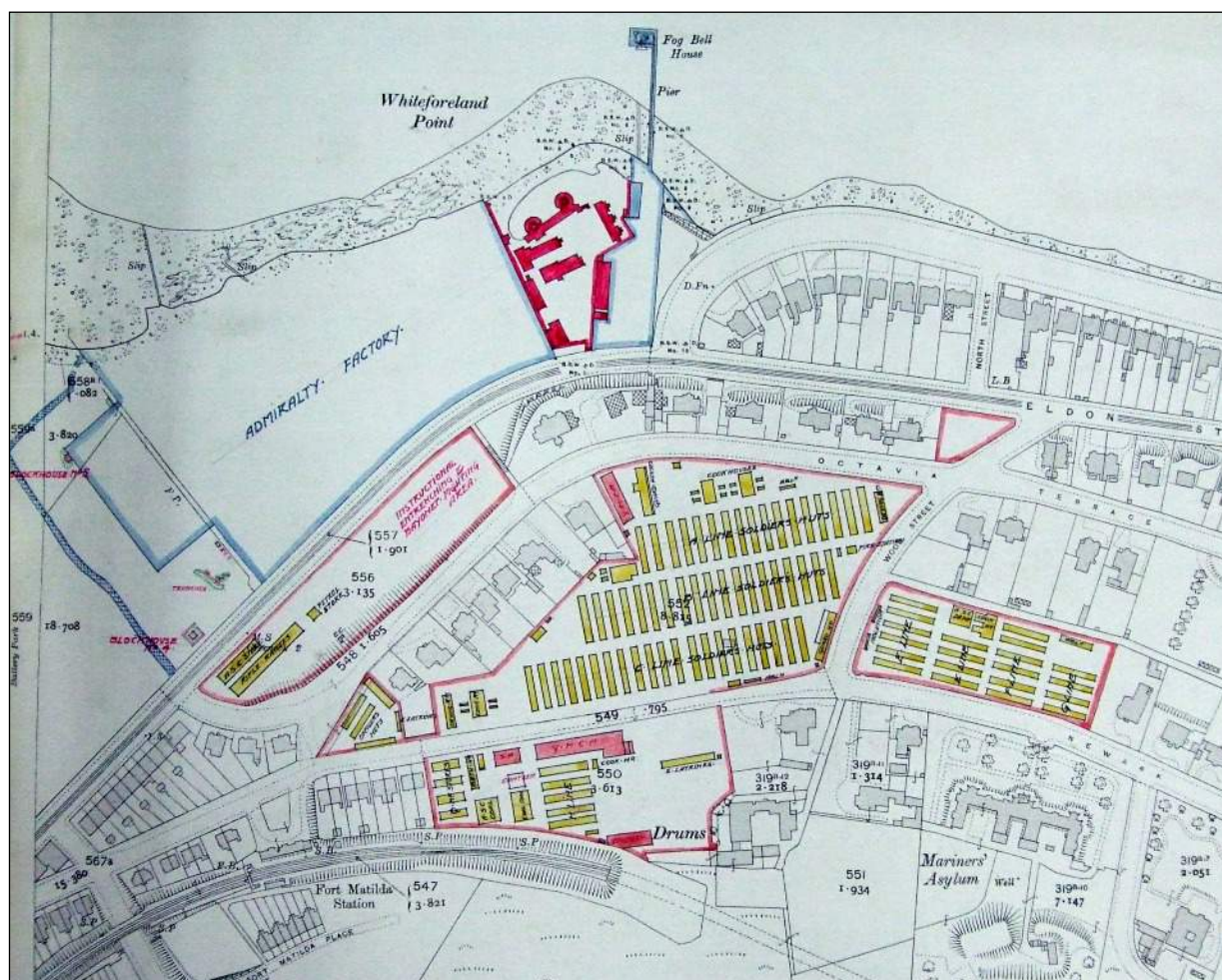


Fig. 12. Fort Matilda, the training barracks, the Admiralty Torpedo Factory, and some of the area's landward defences, Greenock, 1916. (INA WO 78/4396)

Table 3. Barracks

Data Code	Canmore No.	Name	Notes
Ac_Ba_01	NS27NE	Greenock, Fort Matilda	Hutted barracks with training areas. Demolished.
AC_Ba_02	NT17NW 181.8	Port Edgar, naval barracks and hospital	Extant. Listed
AC_Ba_03	NJ90NW 956	Aberdeen, Fonthill Barracks	Demolished.
AC_Ba_04	NO75NW 97	Panmure Barracks, Montrose	Used for Flying Corps personnel WW1. Demolished.
AC_Ba_05	NT09SE 62	Lochend Camp, Dunfermline	Some footings may survive.
AC_Ba_06	NT26NW 53	Redford Barracks, Edinburgh	Extant. Listed
AC_Ba_07	NH76NE 328	Cromarty camp	Pumphouse survives. Two buildings moved to new location.
AC_Ba_08	NO33SE 30	Dudhope Castle, Dundee	Extant. Listed
AC_Ba_09	NO39NE 65	Victoria Barracks, Ballater	Extant. Listed .
AC_Ba_10	NT27SE 4220	Piershill Barracks	Demolished.
AC_Ba_11	NT67NE 369	New Inn Barracks, Dunbar	Part may survive and War Department boundary stones are visible.
AC_Ba_12	NS79SE 177	Stirling Detention Barracks	Listed
AC_Ba_13	NS33NW 237	Gailes camp	Demolished
AC_Ba_14	NS46SE 650	Paisley infantry barracks	Demolished
AC_Ba_15	NT67NE 200	Dunbar, High Street, Lauderdale House	Listed .
AC_Ba_16	NT27NE 288	Leith Fort	Lodges and boundary walls Listed .
AD_18	NT08SE 6.4	Blackness Castle	Coded under anti-invasion defences. Not certainly a barracks. Scheduled .



Fig. 13. Piershill Barracks, Edinburgh, as marked on the OS map surveyed in 1912-13.

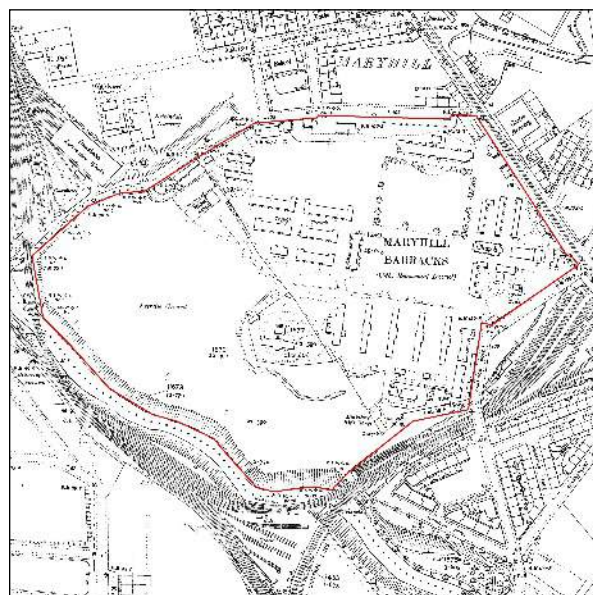
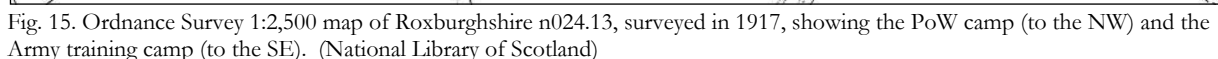


Fig. 14. Maryhill Barracks, Glasgow, as marked on the OS map surveyed in 1909. The military hospital is marked to the SW of the main complex.

In the early months of the First World War the speed and success of the German attack meant that there were few German prisoners of war. There were no systems in place to cope with prisoners, and PoWs arriving in Britain were dealt with by a branch (AG3) of the Adjutant-general's Office. There was much improvisation and existing army camps and barracks were converted for use, but the provision of this sort of accommodation for prisoners was problematic, because the army was itself trying to cope with a rapid and massive expansion. Both Edinburgh Castle and Fort George were used to hold prisoners from early in the war (Jackson 1989,

This period saw a great deal of criticism by both sides of the way their own men who were prisoners were being treated by their captors. As a consequence, representatives of the United States of America and the Red Cross inspected British camps and found them generally satisfactory (Jackson 1989, 135). At the end of 1914 there were 13 camps in the UK, holding 19,000 civilian internees and 7,000 military and naval personnel (Jackson 1989, 135).

In February 1915 responsibility for processing prisoners moved to a new Directorate of Prisoners of



War and Jackson states that by the end of the year there were 27 camps, of which two were in Scotland. There were also 42 detention barracks for PoWs found guilty through due legal process of disciplinary offences. In December 1915 there were 32,272 civilian internees, 12,349 military, and 1,147 naval prisoners in the UK (Jackson 1989, 135).

The Allied offensives of 1916 meant increased numbers of German PoWs. Civilian repatriation had reduced the number of internees to 31,000 but there were 49,572 German army and 1,316 naval prisoners by the end of 1916. Jackson states that by this stage there were eight camps in Scotland.

The number of German prisoners almost trebled during 1917; by the end of the year there were 119,864 German and nine Austrian military prisoners and 1,635 German and one Turkish naval PoWs. The number of German civilian internees remained at about 30,000. Jackson states that by this stage there were 14 camps in Scotland.

‘Other ranks’, unlike officers and senior NCOs, could be used for labour by their captors so long as it was not excessive nor directly connected with the operation of the war. Manpower shortages in Britain resulted in a considerable increase in the number of prisoner labourers during 1917. They were used as labour in Scotland to build a hospital, at least three dams, an aerial gunnery school, and provided labour to the Canadian Forestry Corps. The location of a camp at Rosyth may suggest that PoWs were being used in the construction of the dockyard or other military facilities on the Forth. Jackson states that in the autumn of 1917 some 70,000 men (including 2,000 NCOs) were in the PoW labour force. About 30,000 men were involved in the harvest of 1917 (Jackson 1989, 139–40). In Scotland many prisoners worked on a network of agricultural camps distributed round a base-camp at Auchterarder, and were also working in the iron mine on Raasay. In a limited number of cases First World War PoW camp sites may have been used again in the Second.

Jackson states that by October 1918 there were over 250,000 German PoWs in the UK, and there were 25 camps in Scotland (Jackson 1989, 140). Although this is Jackson’s maximum number, records have been found of 39 camps, although, of course, not all may have been in use at the same time. Thirty-five hospitals were established in the UK for the treatment of prisoners and the 1919 *List of Places of Internment*, specifically mentions the use of other military

hospitals for treating prisoners (at Edinburgh Castle, the 3rd and 4th Scottish General Hospitals in Glasgow, and Dykebar Hospital at Paisley) (Jackson 1989) (page 140).



Fig. 16. A contemporary image of the Stobs PoW camp. From *Flucht zur front: deutsche soldaten entrinnen der Gefangenschaft*, Von Langsdorf, W, 1939 [British Library]

Location & Survival

Only a handful of the camps was previously recorded in Canmore. The ephemeral nature of most of the camps means that few have surviving remains. This also means that, in the absence of information in contemporary lists, the precise location of camps is uncertain. Where there is no clear indication, farm names have been identified and the proposed location of camps is based on the location of farm steadings, tempered by the constraints of topography.

Clearly Fort George and Edinburgh Castle are both in state care, but it is likely that little or nothing *specifically* built for prisoners survives there. The most striking survival is at Stobs Camp, the HQ of the camp system in Scotland. It is clear from modern satellite photographs that virtually the whole of the PoW camp survives as building footings (with the remains of the contemporary training camp and signs of Second World War expansion around, rather than over, the First World War material). The most striking survival at Stobs is of one of the First World War prisoners’ barracks, at the east side of the complex. It is visible on recent aerial photographs and is shown on a number of public-contribution web sites as extant. The Stobs complex is certainly worthy of further research and consideration of its conservation needs.

The miners’ cottages on Raasay - used to house the prisoners - survive but are not listed. The mine itself is scheduled. The camp at Kinlochleven seems to be the only one where hut bases are known to sur-

vive; the layout of the camp is well known from a recent survey. An explosives magazine has been identified at Caolasnacon and the project has identified a PoW graveyard at Braemore. The two building footings at Glen Devon are not certainly of the camp. Allan Kilpatrick reports that bases of the PoW huts bases at Loch Doon are visible on recent aerial photography.

Sources

The following sources were used:

Jackson, R (1989) *The Prisoners 1914-18*.

PoW Information Bureau (1919) *List of Places of Internment*.

A further source was quoted in a number of places on the internet, but unfortunately, incompletely. It was finally located as a MS in the Imperial War Museum, but the disruptions to service at IWM consequent upon its major renovations meant that the document could not be consulted. It is presumed that entries on web-based lists of camps not included in the 1919 list were taken from this source:

Nicol, Nic 2010 *Not necessarily behind barbed wire: places of internment in the United Kingdom of Great Britain and Ireland during the First World War, 1914–1920*. Imperial War Museum ref no. 11/445.

Table 4. Prisoner of War camps

Data Code	Canmore No.	Name	Notes
AC_PW_01	NT40NE 56	Stobs Camp	Outline and infrastructure of camp survive. Hut survives. Review.
AC_PW_02	NN91SW	Auchterarder	None known.
AC_PW_03	NN92SE	Balgowan	None known.
AC_PW_04	NS88NW	Polmaise (Bandeath)	None known.
AC_PW_05	NH54NE	Beaully	None known.
AC_PW_06	NS97NE	Beecraigs	None known.
AC_PW_07	NK14SW	Boddam	None known.
AC_PW_08	NH03SE	Braemore	Graveyard survives. Review.
AC_PW_09	NN16SW	Caolasnacon	Explosives magazine. Review.
AC_PW_10	NO77SW	Conveth Mains	None known.
AC_PW_11	NS92SE	Crawford	None known.
AC_PW_12	NT13NE	Dawyck	None known.
AC_PW_13	NO02NW	Drumbuich	None known.
AC_PW_14	NO34NW	Eassie	None known.
AC_PW_15	NJ93SE	Ellon	None known.
AC_PW_16		Edinburgh Castle	Listed & scheduled.
AC_PW_17	NO01NE	Forgandenny	None known.
AC_PW_18	NO01NW	Forteviot	None known.
AC_PW_19	NH75NE 3	Fort George	Listed & scheduled.
AC_PW_20	NN90NW 58	Glendevon	Two building stances.
AC_PW_21	NS65SW 80	Hairmyres Hospital camp	None known.
AC_PW_22	NT18SW	Rosyth, Inverkeithing	None known.
AC_PW_23	NH82SE	Inverlaidnan	None known.
AC_PW_24	NO45NE	Justinhaugh, Newmill of Craigeassie	None known.
AC_PW_25	NO24SE	Keillor	None known.
AC_PW_26	NN26SW 13	Kinlochleven	Hut stances survive. Review.
AC_PW_27	NO11NW	Kintillo	None known.
AC_PW_28	NO13NE	Leystone Farm	None known.
AC_PW_29	NO24SW	Little Balbrogie	None known.
AC_PW_30	NS40SE 44	Loch Doon	Building stances survive. Review.

Data Code	Canmore No.	Name	Notes
AC_PW_31	NJ01NW	Nethy Bridge	None known.
AC_PW_32	NO34SW	Newtyle	None known.
AC_PW_33	NT47SE	Penston	None known.
AC_PW_34	NG53NE 10	Raasay	Miners' rows survive. Review.
AC_PW_35	NY07SW	Ruthwell	None known.
AC_PW_37	NO03SW	Strathord	None known.
AC_PW_38	NO12NE	Tarrylaw	None known.
AC_PW_39	NT76SE 30	Whiteburn	None known.

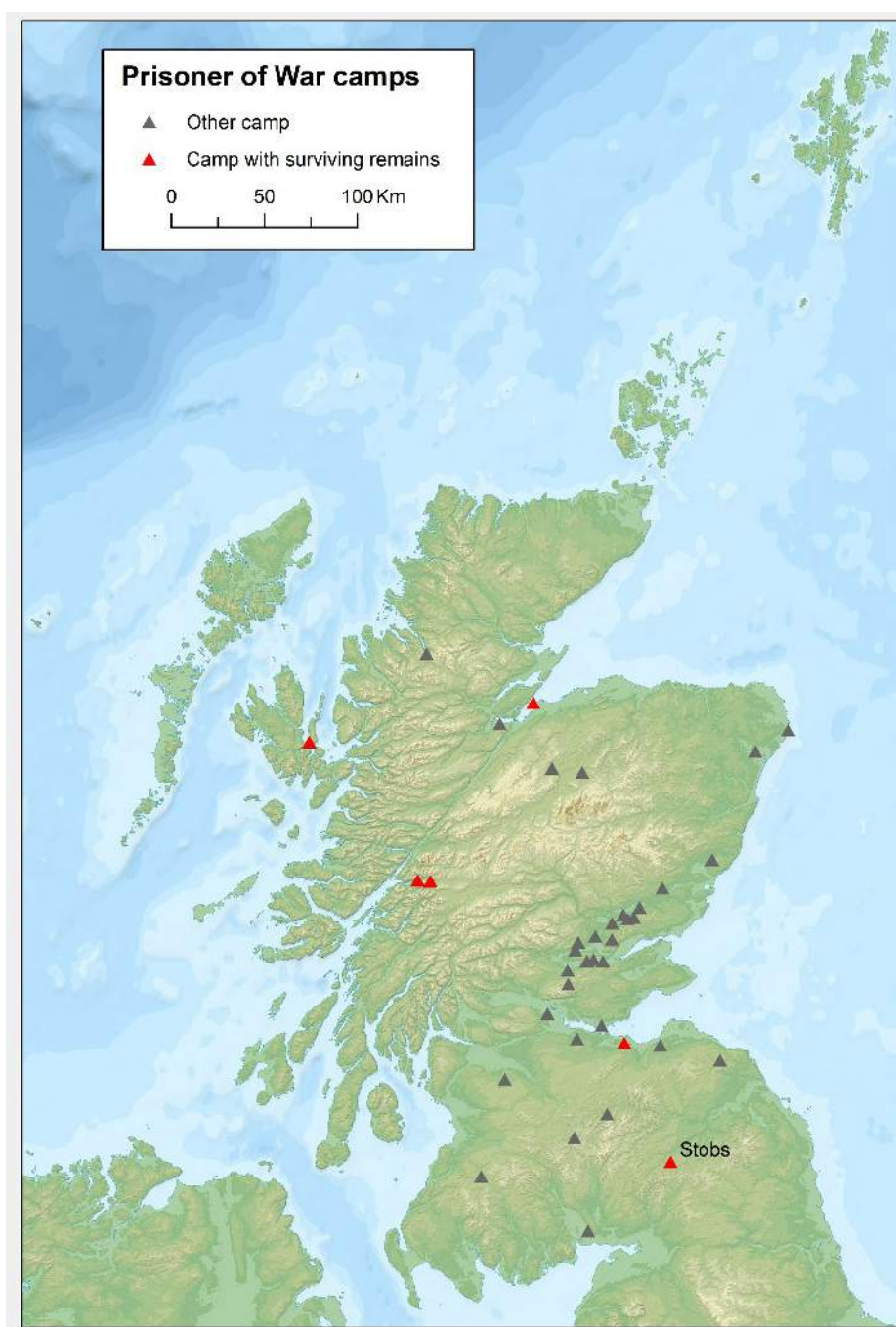


Fig. 17. Prisoner of War camps. The position of the Chief Camp at Stobs is marked.

4.4 [AD] Anti-invasion defences

The research programme revealed an unexpected category of material – defensive systems built to face a German attack by land. It was not, as far as I am aware, previously widely known that extensive systems of trenches, barbed wire entanglements and, in places, pillboxes and blockhouses were built in Scotland. Detailed maps were made by Scottish Command and are now in The National Archives at Kew, on file WO 78/4396 titled, *War Office and predecessors: Maps and Plans. GREAT BRITAIN. SCOTLAND. Scottish Field Defences. 1:2500*. Another file, WO 78/4417, *War Office and predecessors: Maps and Plans. GREAT BRITAIN. Inchcolm & Inchkeith Firth of Forth Middle Defences. Record plans of defences on mobilization. 1:2500*, contains maps of defences on the islands of the Forth.

Some of the maps have, drawn in blank areas, exquisitely detailed and coloured plans, sections and elevations of defence structures, in particular timber blockhouses made bulletproof by banks of turf or sandbags (see Fig. 2; Fig. 21).

Some of the defences were closely associated with specific sites. Coast defence batteries on the Forth, Clyde and at Cromarty had occasionally very strong

landward defences, and the Nobel Company explosives works at Ardeer had a defensive perimeter, marked on a map in the Fort Record Book (TNA WO 192/103) (Fig. 18). These examples have been given data codes appropriate to the main site described, but are included below for completeness.

The most extensive defences were built on the eastern approaches to Edinburgh, in East Lothian, at Musselburgh and on what was then the eastern boundary of the city, extending from the sea at Seafield, to well south of the city (Fig. 19).

Survival

It may be possible, using high definition aerial photography, to identify surviving trenches and other earthworks of the defences, as Allan Kilpatrick has done for the defences of the North Sutor coast batteries; in some cases previously recorded earthworks and cropmarks may now be identified as of First World War date. Allan's work has also shown that the mapped location of defences may not be completely accurate. The 1919 North Berwick pillbox, the purpose of which is unknown, is already scheduled. There is at least one surviving pillbox at Portkil, which is a 'Review' candidate.

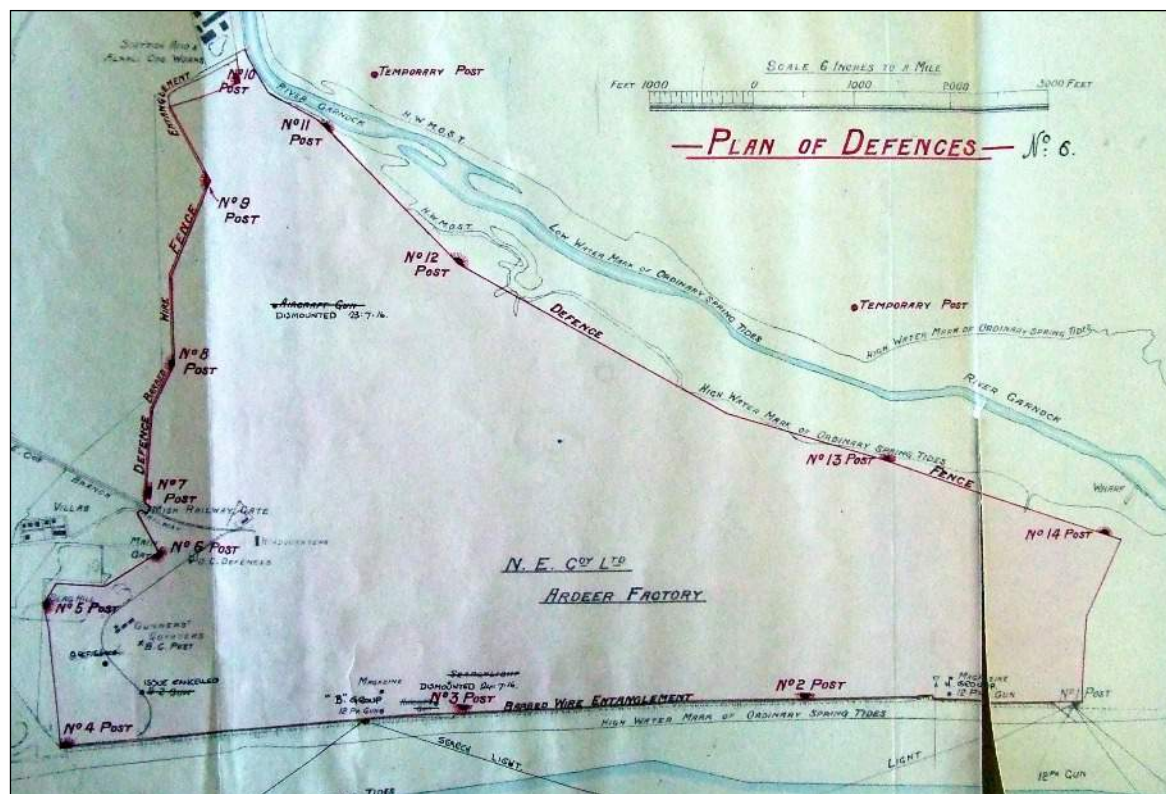


Fig. 18. The defensive perimeter and the location of the coast artillery guns at Ardeer. (TNA WO 192/103)

Table 5. Location of individual or groups of anti-invasion defences.

Data Code	Canmore No. (where allocated)	Location
AD_01	NO30SE 15	Landward defences of the Tay
AD_02	NT40SW	Lundin Links NT30SE and NT40SW
AD_04	NT29SW 15	Lochgelly
AD_05	NO51NW 743	St Andrews area
AD_06	NT39NW 37	East Wemyss area
AD_07	NT39NW 285	Balfour
AD_08	NT48SE 196	Gullane SW
AD_09	NT48SE 197	Gullane NW and Haddington
AD_10	NT67NW 77	Hedderwick Hill Plantation, anti-invasion defences
AD_11	NT37SE 308	Tranent defences
AD_12	NO43NE 80	Pitairlie Moor, anti-invasion defences
AD_13	NO 43SE 540	Law Hill, anti-invasion defences
AD_14	NO53SW 80	Tay Bridge, outer defence
AD_15	NO42SW 203	Tay Bridge, outer defence
AD_16	NO42NW 136	Wormit, Wormit Hill, Tay Bridge, inner landward defences
AD_17	NO42NE 179	Tayport, Spiershill Fort
AD_18	NT08SE 6	Blackness Castle
AD_19_01	NT27NE 6127.1	Edinburgh landward defences, northern sector
AD_19_02	NT27SE 6127.2	Edinburgh landward defences, middle northern sector
AD_19_03	NT26SE 6127.3	Edinburgh defences, southern sector
AD_20	NT37SW 1217	Musselburgh, Balcarres Road, blockhouse
AD_20	NT37SE 306	West Pans, blockhouse
AD_21	NT58NW 131	North Berwick pillbox. Scheduled.

The table continues on the next page.

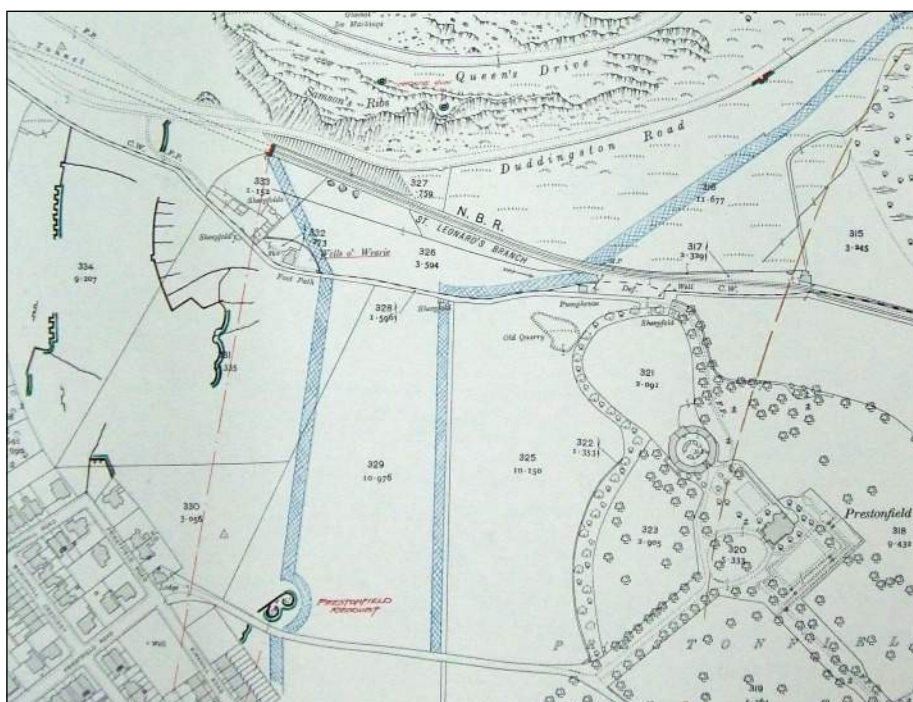


Fig. 19. The anti-invasion defences of Edinburgh; the section between Holyrood Park and Prestonfield House. (TNA WO 78/4396)

Data Code	Canmore No. (where allocated)	Location
ND_Ra_01	NT18SW 222	Fife Ness, defences and radio station
ND_Ra_02		Castlandhill radio station. Review
ND_NB_03		Invergordon naval base landward defences
CD_Cl_01		Ardhallow battery, landward defences
CD_Cl_03		Fort Matilda battery, landward defences
CD_Cl_04		Portkil battery, landward defences
CD_Cl_05		Ardeer explosives works, perimeter defence
CD_Cr_01		Cromarty, North Sutor battery landward defences
CD_Cr_02		Cromarty, South Sutor battery, landward defences
CD_Fo_01		Kinghorn & Pettycur batteries, landward defences
CD_Fo_02		Inchkeith blockhouses, trenches etc
CD_Fo_05		Braefoot Point landward defences
CD_Fo_10		Downing Point battery, landward defences
CD_Fo_11		Carlingnose battery, landward defences
CD_Fo_13		Hound Point battery, landward defences
CD_Fo_14		Dalmeny battery, landward defences

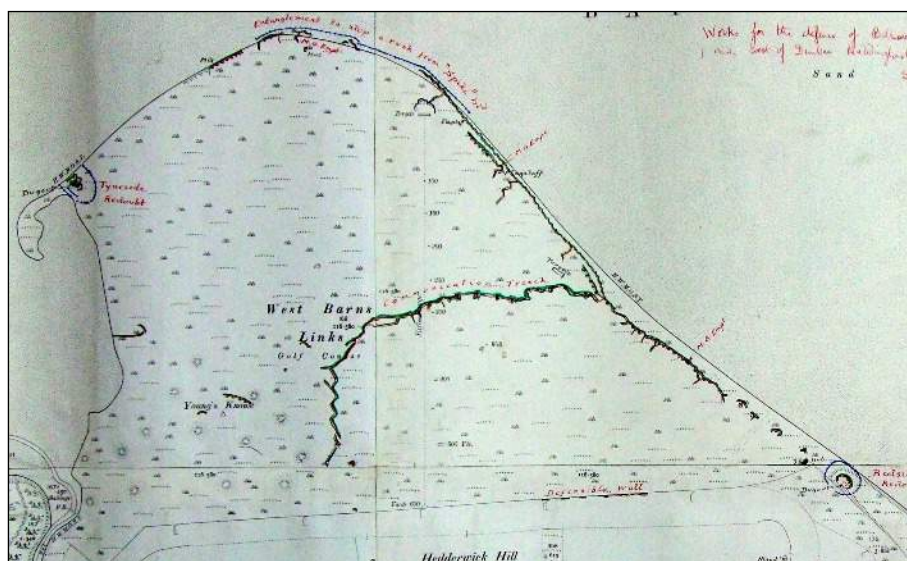


Fig. 20. Anti-invasion defences to the west of Dunbar. The same beach was defended in 1940–41. (TNA WO 78/4396)

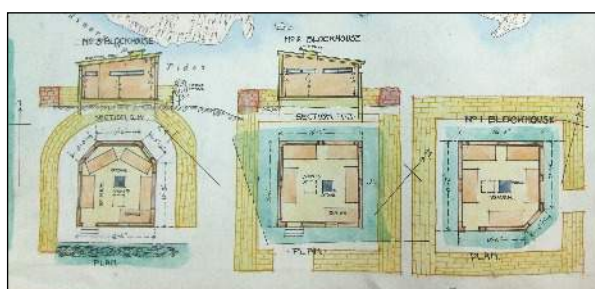


Fig. 21. Drawings of blockhouses in the margin of a map of anti-invasion defences. (TNA WO 78/4396)

4.5 Coast Defence

4.5.1 Introduction

The purpose of Coast Artillery (note ‘coast’, not ‘coastal’ in the terminology of the military) in Britain was first set out clearly by the War Office in 1911, as summarised by Maurice-Jones in his *History of Coast Artillery in the British Army*: ‘while the Navy was carrying out its customary business of seeking out the enemy’s fleets and ships wherever they were to be found, there might be occasions when there would be a temporary loss of command in certain waters left uncovered by our main fleets and squadrons. Fixed defences, manned by Coast Artillery, were therefore necessary [in the UK and throughout the Empire] for the protection of Naval Bases, to secure harbours whose positions were of strategic value, and to protect commercial ports so that trade might be disturbed as little as possible’ (Maurice-Jones, 1959).

While a key role of coast defence was the protection of the Navy’s bases, the ‘Blue Water School’ of naval strategy considered spending on what they saw as purely defensive structures as better spent on more ships, to ensure that there would be no ‘loss of command’ of the seas. Given the impossibility of building defences at every place that might be attacked, and the influence of the ‘Blue Water School’ in government circles in Britain, Coast Artillery had, throughout its 500 year history, often been starved of resources and financed adequately only at times of national crisis. The beginnings of both World Wars saw some key ports and anchorages inadequately defended to provide the Royal Navy with secure bases of operation. That the risk of German naval attack on ports was real was shown by the German bombardment of Yorkshire coastal towns in December 1914, where Coast Artillery batteries played an important role in driving off the attacking ships.

In addition to guns to fight surface ships, the development of effective submarines meant that defences against them had to be developed. In the First World War this was most often done by hanging heavy nets of steel from floating booms to block access to a port. The Admiralty had decided before 1914 that such booms were not a good idea, but the Senior Naval Officer at Cromarty, Captain Donald John Munro, implemented them in the first months of the war on his own responsibility; the Admiralty eventually gave its support and these ‘Cromarty Model’ booms were widely implemented.

If a friendly surface ship wished to enter a port it had to pass through a ‘gate’, where the boom could be opened briefly by one of the military trawlers that were positioned on the boom, to allow it through. The Clyde, the Forth, the Cromarty Firth and Scapa Flow all had these booms during the First World War. In some places nets were strung below the surface, at a depth to allow a smaller surface vessel to pass, but shallow enough to stop a submerged submarine (Girvin & Cosens, 1919). In one place, at Clestrain in Scapa Flow, a huge barrier made up of steel rails was built to block off access through one channel; old ships (‘blockships’) were sunk to obstruct other channels. It was past one of these into Scapa Flow that, in the Second World War, Lt Commander Prien slipped the German submarine U-47 on 14 October 1939, sinking the battleship HMS Royal Oak. Similar surface booms, but without nets, were positioned in the Forth and at Scapa Flow to stop fast vessels such as destroyers and torpedo boats breaking into anchorages. Also, lighter weights of netting were used to protect anchorages, such as the ‘Indicator Nets’ used in the Forth - if a submarine became entangled with one of these, a section would break off and a bright flare on the surface would automatically light - surface vessels could then follow the progress of the submarine as it towed the net and flare, and attack it. The Grand Fleet, when exercising in the Forth, outside the anti-submarine boom, was also protected by movable nets, supported by floats, and moved by military trawlers based at Granton (Girvin & Cosens 1919).

It has been suggested (eg Stell 2011, 47) that only about six coast batteries were in position before the First World War. However, depending on how one counts the batteries on Inchkeith, there were in fact between 12 and 17 in place before 1914. During the First World War, complexes of Coast Artillery batteries defended the ports and anchorages in Scotland that are listed below; fairly frequent movement of guns between batteries, especially in the Forth, and between one port and another, and the adding and closure of batteries during the course of the war, makes it difficult to quote meaningful simple numbers of guns.

The Clyde – 5 batteries of 6-inch and 4.7-inch guns, of which three were in place before 1914.

Scapa Flow – 15 batteries of 6-inch and smaller calibre guns, none of which were in place in August 1914.

The Cromarty Firth – 4 batteries mounting 9 guns – although it is widely believed that none of these guns was in place in August 1914, construction was well-advanced and guns may have been mounted.

The Forth – (depending on how one counts), 13–c23 separate batteries (Inchkeith could count as between 1 and 7; Inchcolm, 2 to 4) mounting guns of a range of calibres: 9.2-inch, 6-inch, 4.7-inch, 4-inch, 12-pdr.

Dundee – 2 batteries (2x6-inch; 2x4.7-inch guns), both in place before the war.

Aberdeen – 1 2x6-inch gun battery, in place before the war.

Shetland – 4 batteries; 3 on approaches to Lerwick

Corran Point – 1 battery, established 1918; protecting US Naval mine landing anchorage.

Kyle of Lochalsh – 1 battery, established 1918; protecting US Naval mine landing anchorage..

St Kilda – 1 single-gun battery, established 1918.

A ‘practice battery’ for training Coast Artillery personnel was maintained at Stornoway, but the main training effort in Scotland was on the Forth, until it was transferred to Broughty Castle in 1909, where it operated throughout the First World War (Fig. 30).

Manning

On the outbreak of the First World War the existing Coast Artillery batteries were manned by locally raised Territorial Royal Garrison Artillery (RGA) units (the heirs to a variety of volunteer artillery units active since the 18th century). The RGA, on the outbreak of war in 1914, was well-organised and well-led, where guns existed, with companies on the Clyde, Forth, Tay and at Aberdeen, and on Orkney (specifically to man the yet-to-be-built defences of Scapa Flow) (Maurice-Jones, 1959). The two wartime bases of the British ‘Grand Fleet’, the Cromarty Firth (Invergordon) and Scapa Flow, however, had no guns actually mounted on the outbreak of war, although plans drawn up in 1913 for Cromarty were in hand before war was declared. At Scapa Flow 3-pdr and 12-pdr guns were moved ashore from ships to temporary mounts and jointly manned by Royal Marines and local RGA men under Marine officers. These relatively light guns were replaced in time by heavier 4-inch, 5-inch and 6-inch guns. The Cromarty defences were, from the first, under Royal Navy control, manned by Royal Marines.

Weapons

At least 10 different types of gun were used in Coast Artillery in the First World War, intended to tackle attacks by different types of ship, the larger sizes (9.2-inch and 6-inch) to hold off battleships and cruisers, the smaller guns to tackle ships trying to block ports, or to smash booms (see below), or to deal with attacks by fast-moving small craft. QF ‘Quick Fire’ guns had been developed to deal with faster vessels. In a QF gun the shell and the explosive used to propel the shell were contained within a single brass case, as opposed to separate shell and propellant cartridge loaded one after the other.

Table 6. Coast defence guns in use in Britain in the First World War. Main source: Hogg & Thurston 1972.

Gun	Projectile wt (lbs)	Rate of fire	Range (yds)
9.2-inch	120	1–3	29,200
6-inch	100	6	12,000
5-inch (obsolete but in use)	43.5	8	10,500
4.7-inch QF	45	5–6	11,800
4.7-inch QF (Mk 8 at Scapa)	31	15	15,500
4-inch QF Mk 3	25	15	7,500
15-pdr (Corran Ferry & Kyle)	15		5,570
7.5-inch howitzer (Corran Ferry) *	100	6	2,100
12-pdr QF	12.5	15	8,000
3-pdr QF Hotchkiss	3.25	25	4,000

* shells could be fitted with hydrostatic valve to explode at set depths, for use against submarines; also used on armed trawlers in the North Sea (Girvin & Cosens 1919).

Survival

This section is broken down into seven sub-sections by port/anchorage/seaboard: Clyde; Cromarty; Eastern Seaboard; Forth; Orkney; Shetland; Western Seaboard. Coast defence batteries are already well represented in the schedule, but there are gaps. On the **Clyde** there were five batteries; of these part of one (Cloch Point) is already scheduled, but might repay further investigation. Substantial parts of the batteries at Ardhalow and Portkil survive, the latter rather encumbered by caravans etc, and would merit

investigation. The **Cromarty** batteries of both WW1 and WW2 survive virtually intact; they are not currently designated. On the three batteries on the **Eastern Seaboard** those at Aberdeen and Broughty Castle are scheduled; the battery at Castle Green, Broughty Ferry may survive under earthen embankments on the site. The many batteries on the **Forth** islands are scheduled, apart from Cramond. Of the mainland batteries in the Forth outer defence line, elements of the Kinghorn/Pettycur batteries survive. In the middle line the Braefoot Battery is already scheduled. Of the inner defences, Downing Point, Hound Point and Dalmeny batteries survive in good condition. On **Orkney** the batteries at Ness No. 3, Clestrain, Houton, Innan Neb and Breckan/Holm have recently been assessed by Historic Scotland. Three of the four **Shetland** batteries are already scheduled. On the **Western Seaboard**, St Kilda is already scheduled. At least one gun platform survives at Corran Ferry, under the local war memorial.

Sources

The secondary sources used in the survey (in addition to the Canmore records themselves) are:

Girvin, B & Cosens, M (1919) *Log of H.M.S. "Gunner". Granton Naval Base. From 14th August 1914 to 15th July 1919.*

Hogg, I V & Thurston, L F (1972) *British artillery weapons and ammunition, 1914-1918.*

Maurice-Jones, K W (1957) *The History of Coast Artillery in the British Army.*

Stell, G (2011) *Orkney at War: defending Scapa Flow. Volume 1; World War 1.*

Contains a useful snapshot of the coast defence in Scotland during the First World War, although the project's work in the primary records has allowed some additions and corrections.

Primary sources are listed under each section.

The defences of Orkney, in particular through Stell's detailed and well-illustrated volume, have been far more thoroughly investigated and described than the other defended ports, leaving little for this project to do in the way of improving the Canmore record. The Clyde, Forth, Cromarty, Aberdeen and Dundee are better furnished with primary material than Scapa Flow, and some of it does not seem to have been extensively used in the writing of the few available accounts.

The Fort Record Books of the batteries (in the National Archives series WO 192) have been useful;

most of these have been used by previous researchers, but new observations and conclusions have been possible; for example, the geo-referencing of a map on the Ardeer Fort Record Book (TNA WO 192/103) has allowed the coast defence guns to be located. A FRB was a book of plain cartridge paper, onto the pages of which, and into the pockets and front and rear, specific categories of material were to be attached, such as firing tables, plans of the battery, sea charts of the waterway, standing orders and, importantly, a history of the battery. Even where a FRB was in use through two wars, material can survive, stuck into the book or in the pockets, even when superseded. In one case, a near-contemporary description of all the batteries of the Forth in the First War was slipped into the FRB for Inchcolm.

The National Archives series WO 78 (Miscellaneous Maps and Plans) contains detailed record drawings prepared by Royal Engineer draughtsmen of the majority for the non-Orkney batteries. Some charts on the files are of the defences of the whole of an estuary (and these can often have armament tables for all the batteries attached); most of these drawings are explicitly records of what was built, rather than what was proposed.

Drawings for individual batteries or islands usually include plans of the top surface of the battery, plans of the underground buildings, such as magazines, and plans, cross-sections and elevations of battery structures. The files usually contain charts showing the arcs of fire of guns and the illumination areas of searchlights. They also often contain drawings of additions to the battery, such as new Fire Control Posts or Defence Electric Light emplacements (DELs were powerful searchlights, with either a fixed or moveable beam, the purpose of which was to illuminate targets for the guns at night). Most are dated, giving a clear picture of changes over time. And crucially, on complex sites such as Inchkeith, they provide information on the frequently baffling and oft-changed number/letter codes for individual guns or groups of guns.

As already mentioned, under [AD] Anti-invasion Defences, two particular National Archives files in the WO 78 series (WO 78/4396 and WO 78/4417) contain maps showing the landward defences (1914-15 and 1916) of many batteries in Clyde, Cromarty and Forth, as well as anti-invasion defences round Edinburgh, in East Lothian, Fife and Angus. Maps of the defences of some batteries include invaluable detail of the layout of the batteries themselves. In

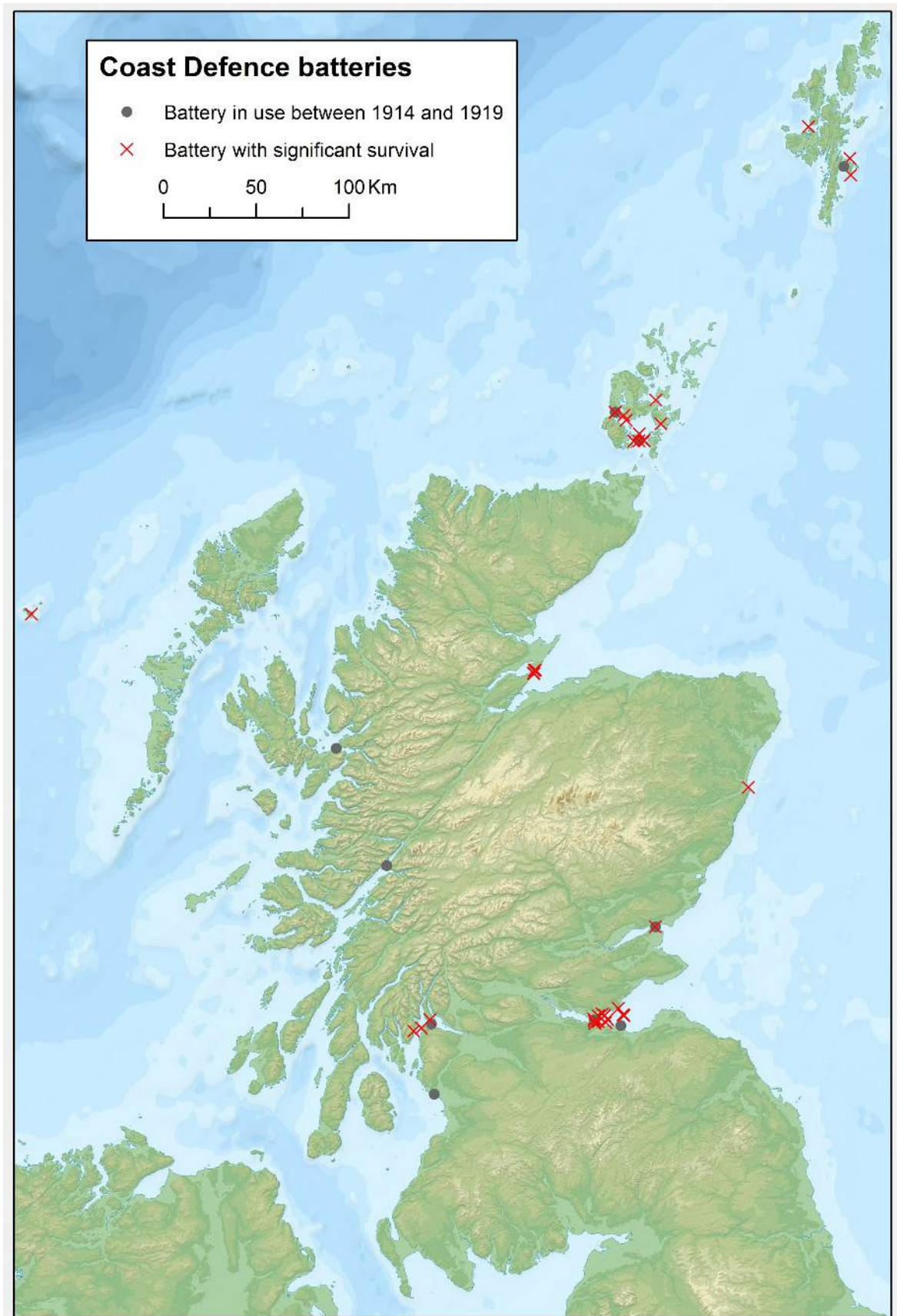


Fig. 22. The location of cast defence batteries in use in the First World War.

some cases it has been possible to pin down the date of battery structures and defences (including pill-boxes) to the First World War or earlier.

In the port-by-port account below, all coast defence structures have been given a data code CD with a subsidiary code for the port or area: **Cl** – Clyde; **Cr** – Cromarty; **Ea** – Eastern seaboard; **Fo** – Forth; **Or** – Orkney; **Sh** – Shetland; **We** – Western seaboard.

4.5.2 [CD_Cl] Firth of Clyde

Designed to protect the approaches to the strategically vital port and ship-building centre, the Clyde was defended by four main batteries: two covering the river in its middle stretches, about Dunoon, where the river is a little over 3km wide; and two in the upper approaches to the port and shipbuilding area, between Kilcreggan and Greenock, where the river is a little over 2km wide. A fifth battery is usually considered as part of the Clyde defences, at Ardeer, on the Ayrshire coast, specifically to protect the strategically vital Nobel Company explosives works.

The oldest battery still in use in the First World War was Fort Matilda, which had been built in the early 19th century. It was radically rebuilt for modern guns in the first five years of the 20th century, when the batteries at Ardhallo and Portkil were also built. The batteries at Cloch Point and Ardeer were added during the First World War.

The guns of the batteries at Fort Matilda and Portkil covered a controlled minefield (in which the mines could be detonated individually or as a group from a shore-based control station) that blocked most of the width of the river; the minefield had first been put in place in the 1880s, serviced from a submarine mining station just east of Fort Matilda. The battery at Cloch Point covered the eastern side of an anti-submarine boom, the western end of which was at Dunoon. In the First World War Dunoon was the site of two Defence Electric Lights to illuminate targets for the guns at Cloch Point. The Ardhallo Battery lay a short distance to the south of Dunoon.

During the First World War the batteries were equipped with 6-inch guns, designed to tackle middle-sized enemy ships, and 4.7-inch Quick Firing guns intended to tackle fast-moving craft. To avoid more than one battery firing at the same target, each battery had a specified part of a target ship to fire at: 6-inch Portkil – amidships; 4.7-inch Portkil – forward of funnels; 4.7-inch Fort Matilda – aft of

funnels; 6-inch Ardhallo – amidships. Also, if more than one torpedo boat was approaching, each gun in each battery had instructions on which which boat to engage, in what order.

The batteries at Portkil, Fort Matilda and Ardhallo were protected by extensive complexes of landward defences – trenches, barbed wire entanglements and blockhouses – which were unknown before the project. Surviving pillboxes had generally been dated to the Second World War. The Fort Matilda battery lay between the submarine mining station and an important Admiralty torpedo factory. Just to the south there was a large infantry training barracks (Fig. 12), which no doubt also had a role in defence. Original War Department maps show the presence of related structures, for example, the water reservoir for the battery accommodation, still surviving behind Cloch Point Battery.

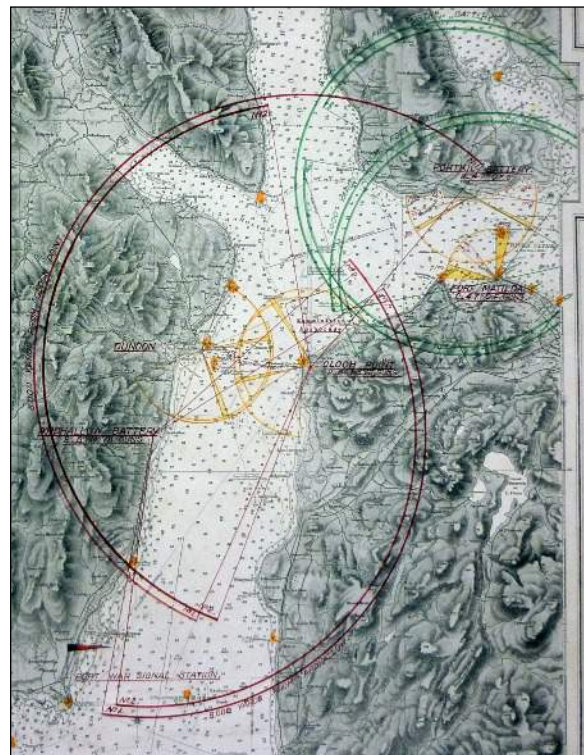


Fig. 23. Chart showing the locations, arcs of fire and arcs of illumination of the four batteries in the mid and upper reaches of the Clyde estuary, and the arcs of illumination of the Dunoon DELs, January 1917. (TNA WO 78/5182)

Survival

Parts of the defences of the Clyde survive in remarkably good condition. Of the Clyde's five batteries two appear to have been demolished almost completely (Fort Matilda and Ardeer). Of the remaining three, one (Cloch) is partly scheduled (the battery

control position), and the other two (Portkil and Ardhallo) seem to be in good condition albeit cluttered up by modern structures. Of these Portkil was used only in the First World War, Ardhallo in both. Additionally, elements of the submarine boom are already scheduled. Some elements of the landward defences may survive. In two places round Portkil existing archaeological earthworks can probably be identified as part of the defences. At the Gallow Hill (Portkil) defences earthworks are visible on aerial photographs and at least one of Portkil's pillboxes survives (Fig. 24).

Understanding of the batteries and their landward defences would be aided considerably by more detailed field survey and recording, in part to determine their relationship to the modern structures built on and around them.



Fig. 24. One of the surviving pillboxes defending the Portkil Battery, on the north bank of the Clyde. (Google Streetview)

Sources

It was unfortunately not possible to have access to a copy of Dorman & Guy's *The coast artillery defences of the Firth of Clyde* (2010) as none could be located in RCAHMS, Historic Scotland, the National Library of Scotland or the British Library. References to the volume had, however, been incorporated into some Canmore records. I amended or added records solely using the following primary records in the National Archives, Kew.

- WO 78/2443 War Office, Maps and Plans, Great Britain, Renfrewshire, Fort Matilda
- WO 78/4396 War Office and predecessors: Maps and Plans. Great Britain. Scotland. Scottish Field Defences. 1:2500.

- WO 78/5182 War Office and predecessors: Maps and Plans. Great Britain. Scotland. Firth of Clyde: Index Plans
- WO78/5183 War Office and predecessors: Maps and Plans. Great Britain. Scotland. Firth of Clyde: Admiralty Charts showing defences.
- WO78/5184 War Office and predecessors: Maps and Plans. Great Britain. Scotland. Firth of Clyde: Portkil Battery.
- WO78/5185 War Office and predecessors: Maps and Plans. Great Britain. Scotland. Firth of Clyde: Cloch Point Battery.
- WO78/5186 War Office and predecessors: Maps and Plans. Great Britain. Scotland. Firth of Clyde: Ardhallo Battery.
- WO78/5187 War Office and predecessors: Maps and Plans. Great Britain. Scotland. Firth of Clyde: Matilda Battery.
- WO192/102 Commander-in-Chief and War Office: Fort Record Books. Great Britain. Scotland. Scottish Command. Fort Matilda, Clyde 1814–1920.
- WO192/103 Commander-in-Chief and War Office: Fort Record Books. Great Britain. Scotland. Scottish Command. Ardeer Battery, Stevenston, Ayrshire 1914-1919
- WO192/105 Commander-in-Chief and War Office: Fort Record Books. Great Britain. Scotland. Scottish Command. Ardhallo Battery, Firth of Clyde 1899-1944.
- WO192/106 Commander-in-Chief and War Office: Fort Record Books. Great Britain. Scotland. Scottish Command. Cloch Point Battery Firth of Clyde.

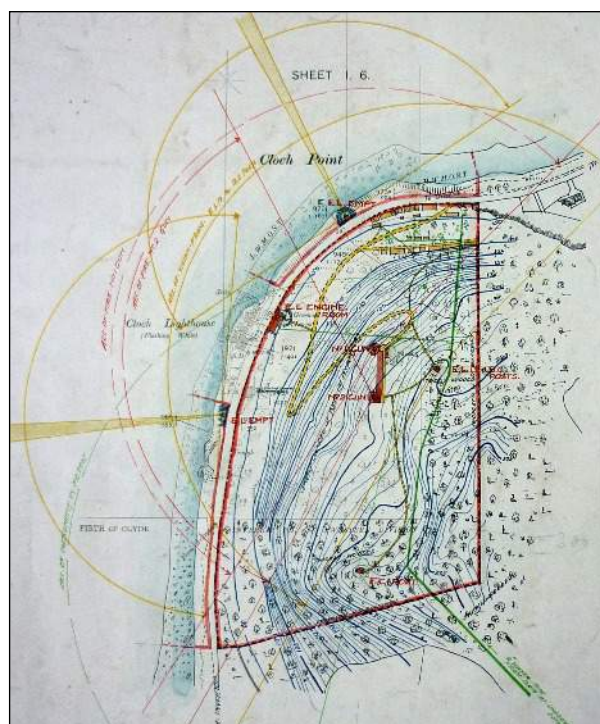


Fig. 25. Map of the Cloch Point Battery, on the east bank of the Clyde, showing the boundary of War Office property, and the locations of the guns, DELs and other significant features. The arcs of fire of the guns and the areas of illumination of the Defence Electric Lights are also shown. (TNA WO 78/5185)

Data

All coast defence structures have been given a data code CD_Cl and a number. Thirty-one revised existing or new records have been submitted to RCAHMS for ten coast defence sites and three

related places, as summarised below. RCAHMS has also been supplied with copies of the many charts, maps, plans and other drawings and copies of the Fort Record Books from the National Archives.

Table 7. Coast defence and related sites on the Clyde.

Data Code	Canmore No.	Name	Notes
CD_Cl_01	NS17SE 6	Ardhallow Battery	Used 1904-1956. Much survives. Review.
CD_Cl_02	NS27NW 21	Cloch Point Battery	Used 1916- >1945. Part scheduled. Review.
CD_Cl_03	NS27NE 40	Fort Matilda Battery	Used 1904-1956. Much survives. Review.
CD_Cl_04	NS28SE 39	Portkil Battery	Used 1904-1928. Significant survival. Review.
CD_Cl_05	NS24SE 127	Ardeer Battery	Demolished.
CD_Cl_06	NS27NW 173 & 137	Cloch Point to Dunoon anti-submarine boom	One end scheduled
CD_Cl_07	NS27NE 414	Portkil to Fort Matilda Minefield	Removed (one trusts)
CD_Cl_08	NS72NE 97	Fort Matilda, submarine mining station	Buildings may survive. Review.
CD_Cl_09	NS16NW 84	Port War Signal Station, Toward	Does not survive
CD_Cl_10	NS17NE 26	Dunoon Castle Battery	Elements may survive.
<i>Related sites</i>			
AC_Ba_01	NS72NE 413	Fort Matilda Barracks	Large hutted barracks. No trace.
TS_Ar_01	NS27NE 375	Greenock, Eldon St torpedo factory	Partly listed
TS_Ar_02	NS24SE 47.12	Ardeer, Nobel explosives factory	Defensive perimeter. No trace.

4.5.3 [CD_Cr] Cromarty

It was not decided until the eve of the First World War whether the Cromarty Firth or Scapa Flow would be the main operational base of the Grand Fleet. In the end, Scapa Flow was chosen as better-suited to the task of blockading Germany. The Invergordon Naval Base (see entry for ND_NB_02) remained an important oiling station and base for the fleet, and in the later part of the war was the home of US Naval Base 17, one of the bases established for the laying of the Northern Mine Barrage (see entry for ND_NB_03).

Plans were drawn up and construction began in 1913 for of a series of coast batteries for the port, but the defences were not complete when the war began (Allan Kilpatrick of RCAHMS suggests that some of the guns may have been operational before the outbreak of war). From 1914 the entrance to the Cromarty Firth was protected from seaward attack by guns to fight off surface ships, by nets stretched across the entrance to the Firth to stop German submarines from entering, and by a controlled minefield (where mines tethered to the seabed could be set off from a controlling station on land). The anti-subma-

rine boom was erected on his own initiative by the Senior Naval Officer of the base, Captain Munro, in the autumn of 1914 and then widely copied. The precise location of the First World War anti-submarine boom is not known, but contemporary photographs suggest that it was further east than the Second World War boom, nearer the eastern end of the mouth of the Firth.

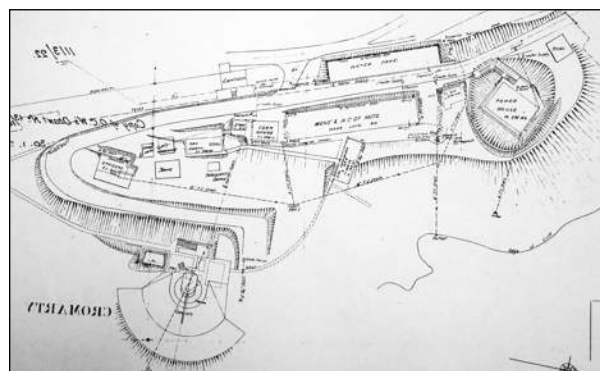


Fig. 26. Plan of the single 9.2-inch battery on the South Sutor, dated March 1913, and annotated 'Work as Executed'. Despite the 'backwards' writing, the image is the right way round – ink has transferred from another drawing. (TNA WO 78/5192)

Four coast artillery batteries were built on the two headlands flanking the entrance to the Cromarty Firth – North Sutor and South Sutor. The stronger North Sutor batteries were armed with two 9.2-inch guns, the largest calibre mounted in coast batteries, and intended to tackle the largest enemy ships that might be sent to attack the base, and four 4-inch Quick Firing guns, to tackle faster-moving vessels – destroyers or torpedo boats – trying to break through the boom. The batteries were equipped with two or three Defence Electric Lights. The South Sutor batteries were armed with a single 9.2-inch gun and two 4-inch guns, and each battery was provided with two DELs. The batteries were also provided with magazines, engine rooms to power the guns and lights, command posts and accommodation (the latter in wooden huts). The concrete-built structures have largely survived.



Fig 27. The anti-submarine boom controlling access to the Cromarty Firth, 1918. (US Navy)

The landward approaches to the batteries were defended by complexes of firing trenches and barbed wire entanglements, closing off the peninsulae on which guns were situated. Allan Kilpatrick has managed to identify surviving elements of the trench system on modern aerial photographs.

Survival

The larger gun sites were re-occupied in the Second World War, while the 4-inch gun batteries were not. Many parts of the First World War batteries survive in the area.

Sources

Only the primary records at Kew have been used. They are much less full than for the Forth and Clyde estuaries, the defences of which evolved over several decades, but the plans and maps are adequate to establish the nature and extent of the First World War defences.

WO 78/4396 War Office and predecessors: Maps and Plans. Great Britain. Scotland. Scottish Field Defences. 1:2500.
WO 78/5192 War Office and predecessors: Maps and Plans. Great Britain. Scotland. Cromarty Firth: North and South Sutor Batteries.

Data

Fourteen new and amended records were submitted to RCAHMS for four batteries and related sites. The maps of the batteries and landward defences were georeferenced and polygons and descriptions created. RCAHMS already had a very good selection of contemporary images.

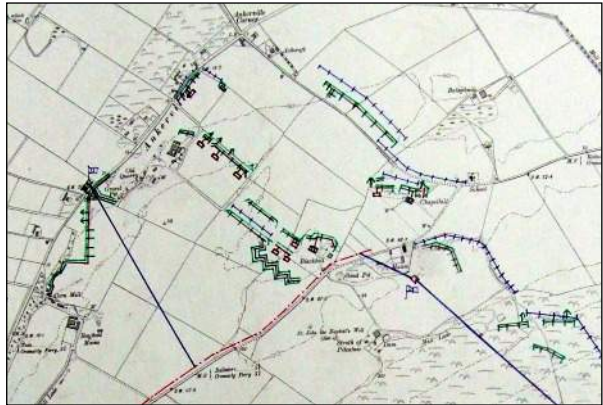


Fig. 28. The landward defences of the batteries on the North Sutor., 1916. (INA WO 78/4396)

Table 8. The coast defences of the Cromarty Firth.

Data Code	Canmore No.	Name	Notes
CD_Cr_01	NH86NW 9 Defences NH87SW 56	North Sutor	Well-preserved, with WW2 material. Under review.
CD_Cr_02	NH86NW 11 Defences NH76NE 297	South Sutor	Well-preserved, with WW2 material. Under review.
CD_Cr_03	NH86NW 17	Nigg-Cromarty anti-submarine boom	Unclear if same position in both wars.

4.5.4 [CD_Ea] Eastern Seaboard

Defences were erected at the two major ports on the east coast between Forth and Cromarty – Dundee (the Tay Estuary) and Aberdeen. At Dundee a submarine mining station was established next to Broughty Castle in the 1880s. The extent of the controlled minefield was depicted on a map drawn between 1905 and 1907, as lying just west of Broughty Castle and has been added to the record. The limited artillery of the Castle was replaced in the first years of the 20th century by a battery of two 4.7-inch guns on the castle itself and a battery of two 6-inch guns immediately adjacent on Castle Green. Port War Signal Stations were recorded at Carnoustie (as late as 1913) and at Buddon Ness (by 1922). Broughty Castle became the training school for Coast Artillery in Scotland in 1909 and remained in use throughout the First World War; one of the plans at Kew shows the detailed layout of the school in 1921.

The research has also thrown up some new information on the Torry Battery in Aberdeen, a 19th-century fort, including a 1913 date and detailed drawings for a pillbox visible on Second World War aerial photographs and hitherto dated to that period (Barclay 2013, 76).

There were no records of any close landward defences, other than on the battery perimeters (unlike the batteries on the Clyde, the Forth and at Cromarty). Landward defences of Dundee and the Tay rail bridge were, however, recorded and are dealt with above, under Anti-invasion Defences.

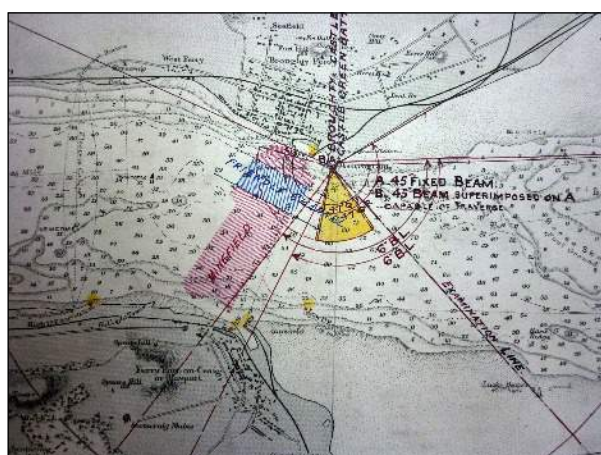


Fig. 29. Broughty Ferry & Broughty Castle Batteries. The firing arcs of the 4.7-inch and 6-inch guns, the illumination area of the Defence Electric Lights (one fixed, the other moveable), and the location of the controlled minefield (map drawn between 1905 and 1907) are shown. (TNA WO 78/5193)

Survival

Torry Battery and Broughty Castle are scheduled; a building of the Submarine Mining Station is listed. Nothing else is known, although elements of the 6-inch battery may survive under an earthen mound occupying the site.

Sources

The new and amended records were based on the following primary records at the National Archives, Kew.

WO 78/5193 War Office and predecessors: Maps and Plans. Great Britain. Scotland. Firth of Tay: Admiralty Charts showing defences.

WO 78/5195 War Office and predecessors: Maps and Plans. Great Britain. Scotland. Broughty Castle: Castle Green Battery

WO 78/5196 War Office and predecessors: Maps and Plans. Great Britain. Scotland. Broughty Castle: Castle Green and Torry Point Batteries, Admiralty Chart

WO 78/5198 War Office and predecessors: Maps and Plans. Great Britain. Scotland. Aberdeen: Torry Point Battery

Data

All eastern seaboard coast defence structures have been given a data code (CD_Ea and a number). Seven revised or new records have been submitted to RCAHMS for seven Coast Defence sites, as summarised below. RCAHMS has also been supplied with copies of all the charts, maps, plans and other drawings copied at Kew. No First World War Fort Record Books for these batteries were located at Kew.



Fig. 30. Plan of the Coast Artillery School at Broughty Castle, 1921. (TNA WO 78/5195)

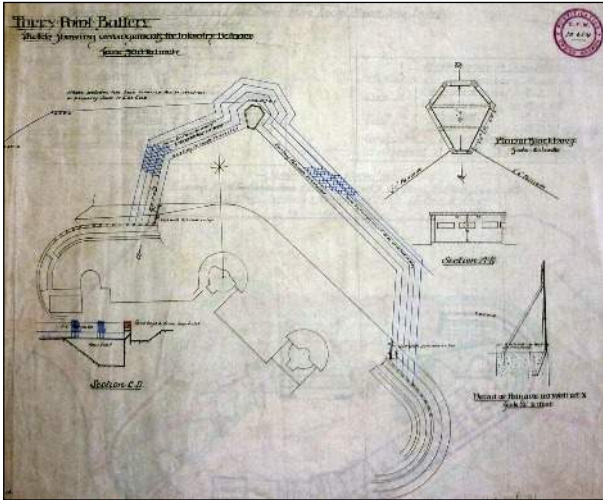


Fig. 31. Plan of May 1913 showing the close infantry defence of the Torry Point Battery, Aberdeen, showing barbed wire entanglements and a pillbox. (TNA WO 78/5198)

Table 9. Coast defences on the eastern seaboard.

Data Code	Canmore No.	Name	Notes
CD_Ea_01a	NO43SE 69	Broughty Ferry Battery (6-in battery)	Pre-1914.. Demolished but some elements may survive under earthen mound on site.
CD_Ea_01b	NO43SE 10.1	Broughty Castle (4.7-in battery)	Pre-1914. Surviving, scheduled .
CD_Ea_02	NO53SE 63	Tay Defences, Port War Signal Station, Carnoustie	Until at least 1913. No trace.
CD_Ea_03	NO53SW 110	Tay Defences, Port War Signal Station at Buddon Ness	In use by 1922. No trace.
CD_Ea_04	NO43SE 75	Tay defences, Submarine Mining Station.	Probably closed c 1909. One building listed .
CD_Ea_05	NO42NE 538	Tay Defences, Controlled minefield	Removed.
CD_Ea_06	NJ90NE 22	Aberdeen, Torry Battery (6-inch)	Victorian fort. Scheduled .

4.5.5 [CD_Fo] Firth of Forth

The Forth was the most heavily defended Scottish port in Scotland, even before the First World War. The Kinghorn Battery was established in 1863; in 1880 a battery of four Rifled Muzzle Loader 10-inch guns was installed there, and three batteries had also been established on the island of Inchkeith, in 1879. All were expanded and developed through the late 19th century and the first decade of the 20th. Two of Kinghorn's RML guns were still in place in June 1903 as part of the live armament of the estuary, while the 9.2-inch and 6-inch guns were being installed (TNA WO 78/5179).

The decision in 1903 to construct the Naval Base at Rosyth resulted in an upgrading of the defences according to the most modern thinking. But there were already between six and 11 modern batteries (depending on how Inchkeith's numerous guns are counted) in existence. In the First World War three

lines of defence were established, Outer, Middle and Inner. The Outer was on a line from Burntisland to Leith, through the island of Inchkeith. The Middle defence ran from Braefoot Point in the north, to Cramond Island on the south, through the islands of Inchcolm and Inchmickery. The Inner defence lay just to the east of the Forth Railway Bridge, with batteries at Downing Point and Hound Point on the north and south coasts of the estuary, and further batteries to the west, at Inverkeithing and Dalmeny, and on the island of Inchgarvie, on which the Forth Bridge rests one of its piers. Each line of defence had an associated anti-submarine barrier.

During the First World War, in 1916–17, the changing use of the river (in particular the use of water east of the railway bridge for anchoring vessels) resulted in guns being moved from the Inner Line to strengthen the Middle and Outer.

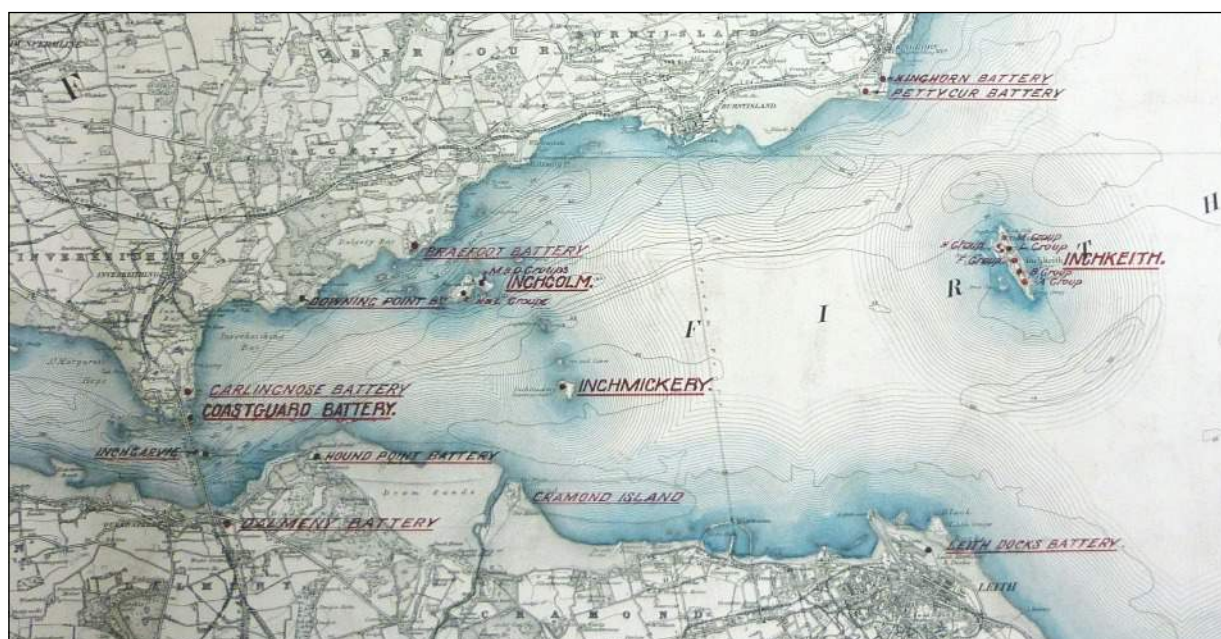


Fig. 32. Chart showing the batteries in the Forth in use in the First World War. (TNA WO 78/5156)

In the Second World War the increased speed and range of ships and their guns meant that a new Outer defence line was established, over 20km further to the east, between Elie and North Berwick, in part to protect the designated convoy mustering area in Largo Bay. This was not a particularly great innovation, as Largo Bay was also a convoy muster point in the First World War, and the Elie–Fidra line had already been established in the second half of the First World War, defended by 8 miles of nets, serviced from Granton Naval Base. This net boom was laid at a depth to allow the large surface ships of the Grand Fleet to pass over at speed (Girvin & Cosens 1919). In the Second World War the First World War Outer and Middle lines became the new Middle and Inner lines, and most of the old ‘Inner’ defences were abandoned.

Of the c23 recorded individual batteries in the First World War Forth defences, many were not re-used in the Second World War; even where they were re-used original fittings were adapted or have survived.

Table 10. The number of guns mounted in the Forth Defences in 1914 and 1918. (TNA WO 192/108)

Gun Type	1914	1918
9.2-inch	4	4
6-inch	2	14
4.7-inch QF	2	4
4-inch QF	nil	8
12-pdr QF (12 cwt)	4	2
12-pdr (18 cwt)	nil	12
Total	12	44

Several of the batteries on both sides of the estuary had extensive landward defences to protect them from being attacked from the rear and neutralised. Kinghorn was particularly heavily defended.



Fig. 33. Forth Defences — see next section. The surviving DEL emplacement on the breakwater at Pettycur Battery. (G J Barclay)

Survival

Only four of the battery sites have no or limited survival. Of the rest, the complexes on the islands, apart from Cramond, are scheduled in their entirety. The complex on Cramond Island and the batteries at Downing Point, Dalmeny (S Queensferry) and Hound Point might have their conservation needs reviewed. Elements of the Kinghorn/Pettycur battery, including one of the few remaining First World War pillboxes on the mainland, survive.

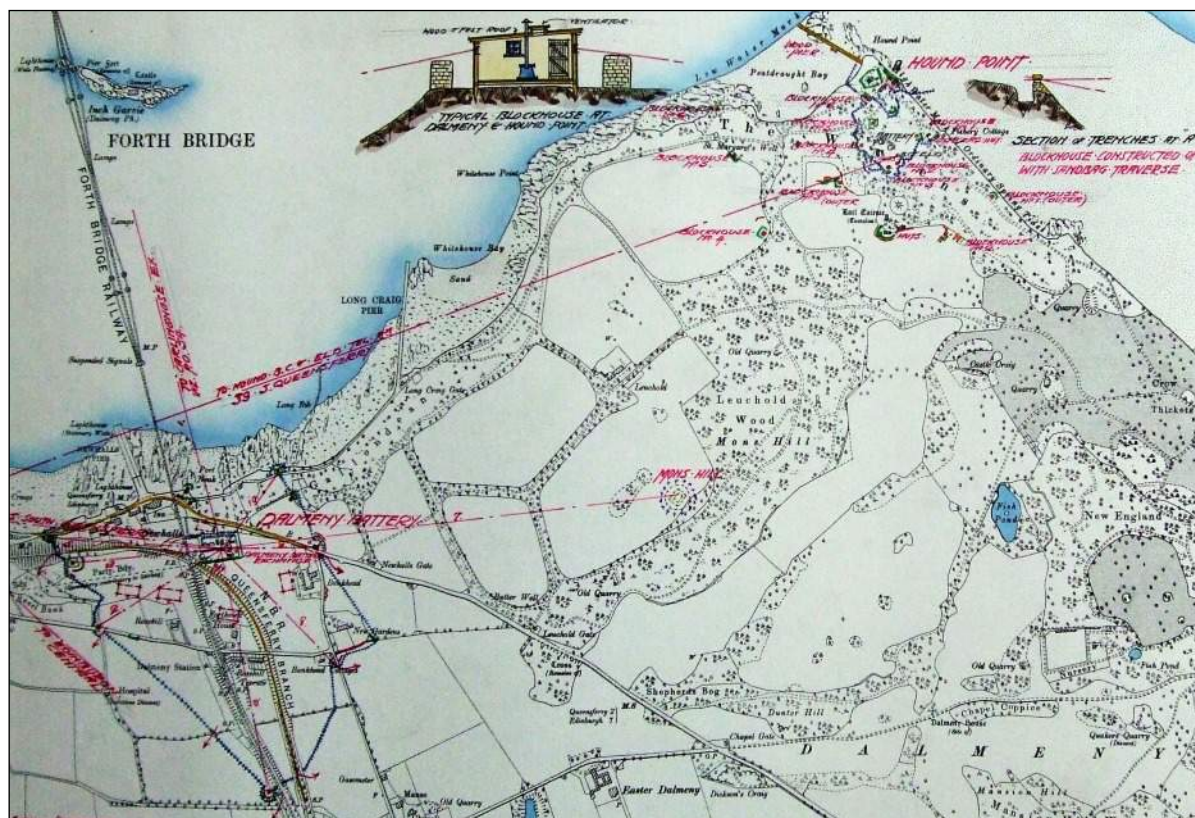


Fig. 34. The landward defences of the Dalmeny and Hound Point Batteries in 1916, including a detail of one of the blockhouses. (TNA WO 78/4396)

Sources

By the time the work of the project reached the Forth defences (having already tackled the Clyde, Tay and Aberdeen) I had determined to rely only on the rich primary sources, rather than any previous study. War Office file WO 78/5179 contains maps that show actual and/or planned defences of the Forth at six dates: 1903, 1913, August 1916, October 1916, 1921 (and 1936, showing two outer batteries that were finally built in other positions). The landward defence maps held on file WO 78/4396, as for the Clyde, included useful material relating to the batteries themselves.

WO 78/4396 War Office and predecessors: Maps and Plans.
Great Britain. Scotland. Scottish Field Defences. 1:2500.

WO 78/4417. War Office and predecessors: Maps and Plans. Great Britain. Inchcolm & Inchkeith Firth of Forth Middle Defences. Record plans of defences on mobilization. 1:2500.

WO 78/5156 War Office Maps and Plans, Great Britain, Scotland, Firth of Forth Index Plans.

WO 78/5158 War Office and predecessors: Maps and Plans. Great Britain. Scotland. Firth of Forth: Inchkeith "F" Group Artillery.

WO 78/5159 War Office and predecessors: Maps and Plans. Great Britain. Scotland. Firth of Forth: Inchkeith No. 3 South Battery.

WO 78/5165. War Office and predecessors: Maps and Plans.

Great Britain. Scotland. Firth of Forth: Downing Point Battery.

WO 78/5175 War Office and predecessors: Maps and Plans. Great Britain. Scotland. Firth of Forth: Carlingnose Battery.

WO 78/5178 War Office and predecessors: Maps and Plans. Great Britain. Scotland. Firth of Forth: Kinghorn and Crying Hill Battery.

WO 78/5179 War Office and predecessors: Maps and Plans. Great Britain. Scotland. Firth of Forth: Admiralty Charts showing defences.

WO 78/5161 War Office and predecessors: Maps and Plans. Great Britain. Scotland. Firth of Forth: Inchkeith Water Supply.

WO 78/5162 War Office and predecessors: Maps and Plans. Great Britain. Scotland. Firth of Forth: Inchkeith Defences.

WO 78/5163 War Office and predecessors: Maps and Plans. Great Britain. Scotland. Firth of Forth: Inchmickery, Electric Light Emplacements.

WO 78/5166. War Office and predecessors: Maps and Plans. Great Britain. Scotland. Firth of Forth: Dalmeny, Electric Light Installations.

WO 78/5169 War Office and predecessors: Maps and Plans. Great Britain. Scotland. Firth of Forth: Braefoot Point Battery.

WO 78/5172 War Office and predecessors: Maps and Plans. Great Britain. Scotland. Firth of Forth: Inchgarvie Battery.

WO 78/5173 War Office and predecessors: Maps and Plans. Great Britain. Scotland. Firth of Forth: Hound Point Battery.

WO 78/5176 War Office and predecessors: Maps and Plans. Great Britain. Scotland. Firth of Forth: Leith Docks Battery.

WO 78/5177 War Office and predecessors: Maps and Plans. Great Britain. Scotland. Firth of Forth: Leith Docks Battery.

WO 78/5179 War Office and predecessors: Maps and Plans. Great Britain. Scotland. Firth of Forth: Admiralty Charts showing defences.

WO 78/5180 War Office and predecessors: Maps and Plans. Great Britain. Scotland. Firth of Forth: Inchkeith Battery.

WO 78/5181. War Office and predecessors: Maps and Plans. Great Britain. Scotland. Firth of Forth: Inchcolm Batteries.

WO 192/100 Fort Record Books; Home Commands, Scottish Command, Inchgarvie Battery, Firth of Forth 1900–1927.

WO 192/101 Commander-in-Chief and War Office: Fort Record Books. Home Commands. Scottish Command. Carlingnose Battery, Firth of Forth.

WO 192/104 Commander-in-Chief and War Office: Fort Record Books. Home Commands. Scottish Command. Queensferry Battery, Firth of Forth 1900–1939. [Coastguard Battery]

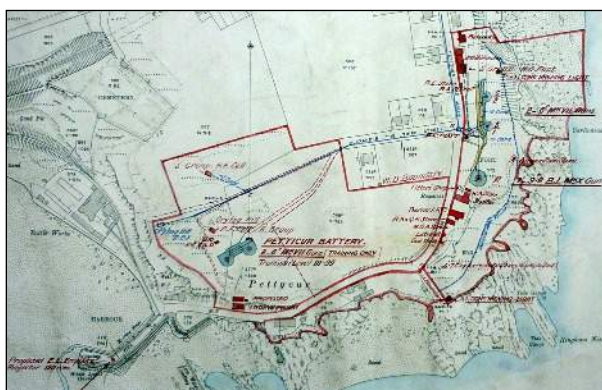


Fig. 35. Kinghorn and Pettycur Batteries, as recorded in July 1919, showing the location of key structures. The DEL emplacement shown at bottom left is the surviving one illustrated in Fig. 33. (TNA WO 78/5156)

WO 192/108 Commander-in-Chief and War Office: Fort Record Books. Home Commands. Scottish Command. Inchcolm Fire Command, Firth of Forth (1914–1944).

WO 192/250 Commander-in-Chief and War Office: Fort Record Books. Home Commands. Scottish. Firth of Forth: Kinghorn Fort (1863–1953).

WO 192/251 Commander-in-Chief and War Office: Fort Record Books. Home Commands. Scottish. Firth of Forth: Inchkeith Battery (1896–1953).



Fig. 36. Part of the defensive loop-holed wall of Kinghorn Battery. (G J Barclay)

Data

The Canmore records for the Forth defences were particularly problematic: the numbering and sub numbering of the two most powerful forts (Kinghorn and Inchkeith) was confusing and references were overlapping. While many of the primary records contained valuable first-hand accounts of the remains, secondary sources on the history and sequence were on occasion contradictory and sometimes misleading. Some of the confusion was caused by the Royal Artillery's tendency to change the designation numbers and letters of batteries, making it difficult to know which was being referred to. One of the outputs from the project was the clarification and simplification of the numbering and construction sequence of Kinghorn/Pettycur and Inchkeith forts (Annex A is the summary of the Inchkeith construction sequence, which had to be written to allow

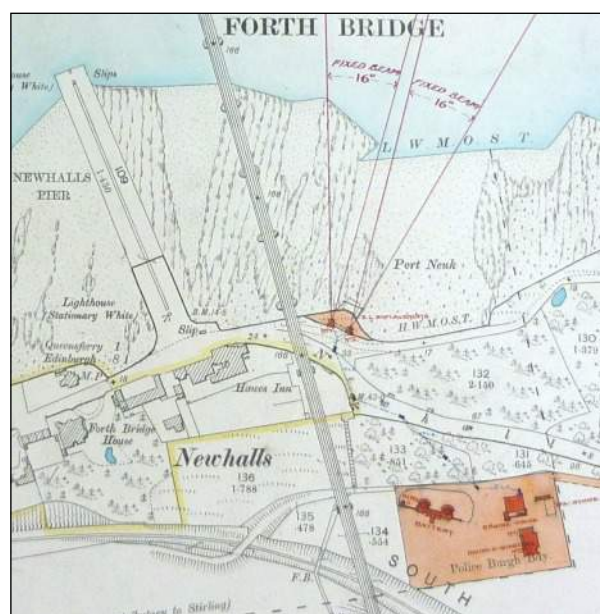


Fig. 37. A map dated 1903 of the Dalmeny Battery and its Defence Electric Lights; the housing of the DELs, by the shore, is now a dwelling. (TNA WO 78/5166)



Fig. 38. The surviving engine houses, much altered as dwellings, that powered the DELs for Kinghorn and Pettycur Batteries. (G J Barclay)

the editing/creation of what are now 29 site records).

Appropriate charts, maps and plans were georeferenced and sequences of activity (and changes in battery labelling) were established. General introductory text was prepared for batteries or groups of batteries. Suggestions were made for re-numbering of batteries and their elements. Unexpected survivals were identified (the engine house (Fig. 38), a loop-holed boundary wall (Fig. 36), two houses and a searchlight housing (Fig. 33) at Kinghorn, hitherto unrecorded and unrecognised as part of the battery) and individual elements (eg the surviving pillbox at Kinghorn (Fig. 39) were securely dated to the First World War.

Polygons were drawn for most of the batteries and for large numbers of discrete battery elements. Images were identified in the collections of the



Fig. 39. The surviving pillbox behind the Crying Hill Fire Control Post and Position Finding Cell serving the Kinghorn and Pettycur Batteries. (G J Barclay)

Imperial War Museum and the Scottish National War Museum.

Ninety-six new and amended records were submitted to RCAHMS for 13 forts and a range of other defence-related structures. The Forth Naval Bases – Rosyth, Port Edgar and Granton – are dealt with separately, although Granton played an important role in minesweeping the river and maintaining the booms.

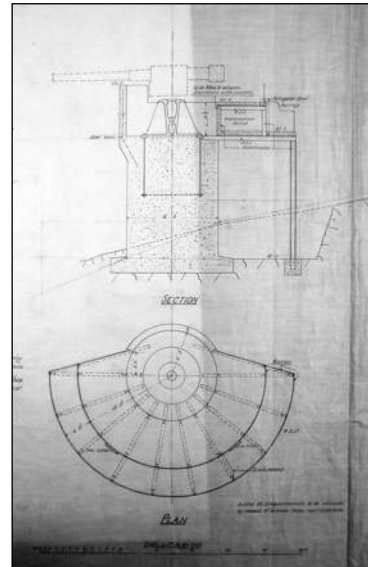


Fig. 40. Plan and cross section of the 'temporary' gun mountings at Hound Point in about 1915. The mounting is still standing. (TNA WO 78/5173)

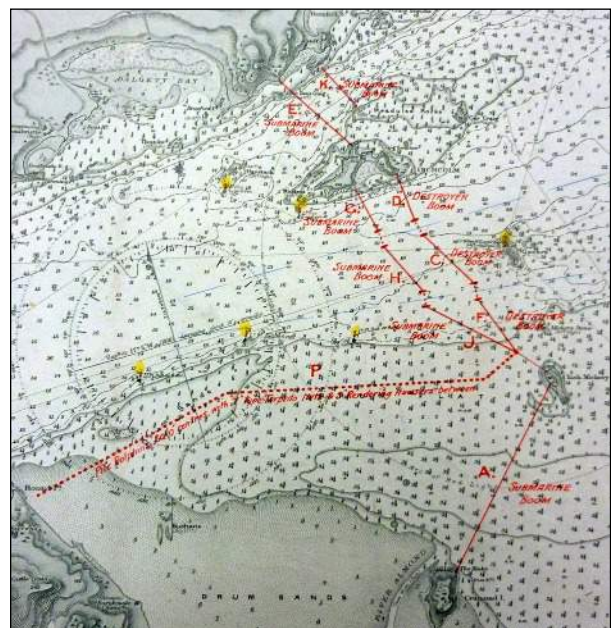


Fig. 41. The First World War boom defences in the middle defences of the Forth. (TNA WO 78/5179)

Table 11. The outer defences of the Forth in the First World War.

Data Code	Canmore No.	Name	Notes
CD_Fo_01	NT28NE 47 & 48	Kinghorn & Pettycur Batteries	Used 1863-1950s. Pettycur from 1916. Surviving elements. Review.
CD_Fo_02	NT28SE 5	Inchkeith batteries	Used 1879-1953. Virtually complete. Scheduled
CD_Fo_03	NT27NE 162	Leith Docks	Used 1917-1950s. No trace.
CD_Fo_04	NT28SE	Outermost submarine boom Inchkeith to Leith; outer from Burntisland to Granton.	

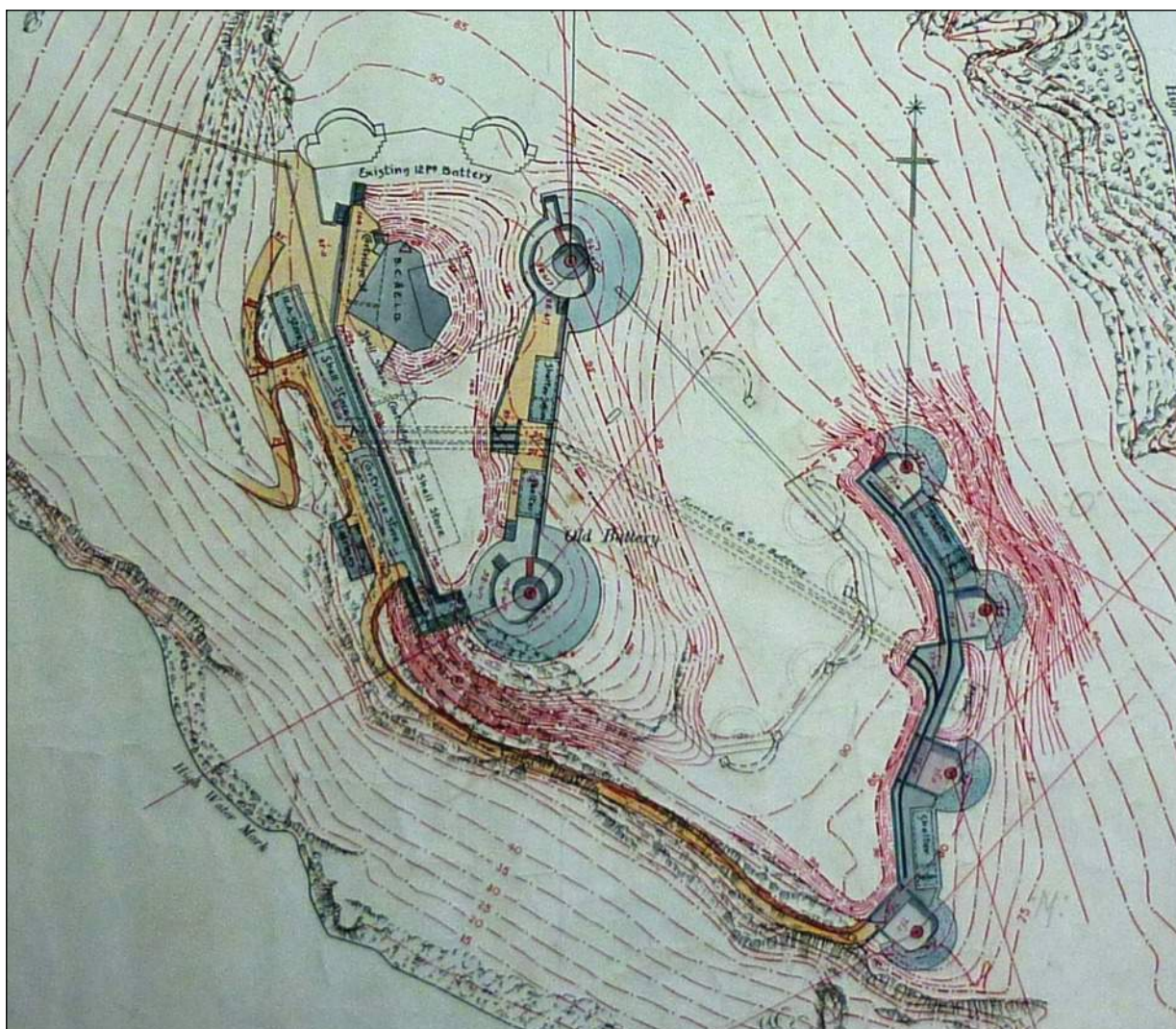


Fig. 42. The 6-inch, 4-inch and 12-pdr batteries on the eastern 'lobe' of Inchcolm island, 1916. (TNA WO 78/5181)

Table 12. The middle defences of the Forth in the First World War.

Date Code	Canmore No.	Name	Notes
CD_Fo_05	NT18SE 25	Braefoot Point	2x9.2-inch. 1915–17. Excellent preservation. Scheduled.
CD_Fo_06	NT18SE 22	Inchcolm	8x12-pdr; then 2x12-pdr, 4x4-inch, 4x4.7-inch, 2x6-inch. 1915–1920s. Re-armed WW2. Excellent preservation. Scheduled.
CD_Fo_07	NT28SW 1	Inchmickery	4x12-pdr then 4x4-inch. 1915–1920s Excellent preservation. Scheduled.
CD_Fo_08	NT17NE 71	Cramond Island	2x12-pdr. 1915–c1920 Re-armed WW2. Moderate preservation. Review.
CD_Fo_09	NT17NE 286	Middle submarine boom; Cramond, Inchmickery, Inchcolm, Braefoot. Mooring block	scheduled.

Table 13. The inner defences of the Forth in the First World War.

Data Code	Canmore No.	Name	Notes
CD_Fo_10	NT18SE 24	Downing Point	2x4.7-inch then 2x12-pdr. 1915. Mounts and some buildings survive. Review.
CD_Fo_11	NT18SW 105	Carlingnose	2x6-inch. 1901-1915. Significant survivals. Listed.
CD_Fo_12	NT18SW 119	Coastguard	2x12-pdr. 1901-1939 (post-war training use). A buried DEL emplacement survives.
CD_Fo_13	NT17NE 70	Hound Point	2x6-inch then 2x12-pdr. 1914-24. Very good preservation. Review.
CD_Fo_14	NT17NW 177	Dalmeny	2x4.7-inch during war. 1902-16. Significant preservation. DEL emplacement now house on shore. Review.
CD_Fo_15	NT17NW 192	Inchgarvie	2x12-pdr, then 2x4-inch, then 4x12-pdr. 1901-20. Significant remains. Scheduled.
CD_Fo_16		Inner submarine boom	

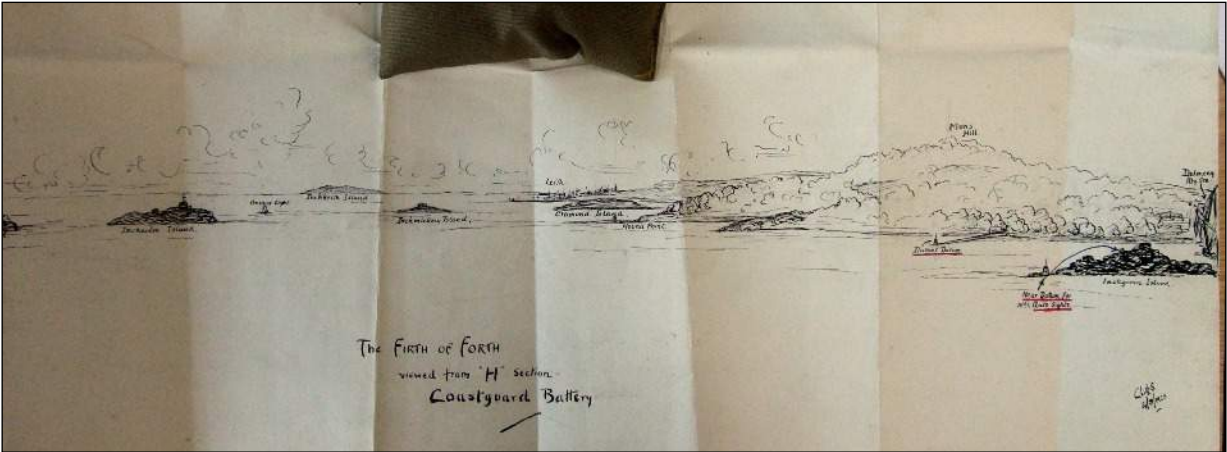


Fig. 43. Drawn panorama of the Forth in the Fort Record Book of the Queensferry ('Coastguard') Battery. (TNA WO 192/104)

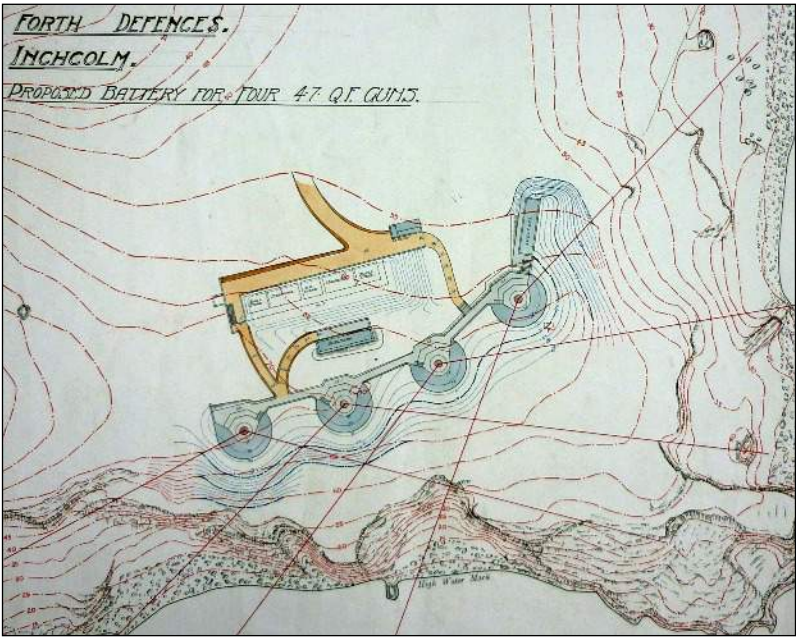


Fig. 44. The 4.7-inch battery on the western 'lobe' of Ichcolm island, July 1916. (TNA WO 78/5181)

4.5.6 [CD_Or] Orkney

Because the decision to make Scapa Flow the main operating base for the Grand Fleet was taken only shortly before the outbreak of war, the defences of Scapa Flow grew from non-existent in August 1914 to a substantial series of batteries, block-ships, anti-submarine and anti-destroyer booms and the massive scaffolding barriers erected across Scapa Flow (the ‘Clestrain Hurdles’).

The defences of Scapa have received more archaeological and historical attention than the rest of the coast defence system in Scotland put together, and have had the benefit not only of Stell’s comprehensive description (2011) but also of recent fieldwork by Historic Scotland’s designation teams, which have made recommendations about scheduling and list-

ing. Sites visited in this programme are marked ‘Reviewed’. As a consequence, the project has not produced evidence of new material and the level of my intervention in individual records has been limited, beyond including more consistent introductory material.

Survival

Of the unscheduled batteries, a number preserve significant remains, particularly those where sites were not re-used in WW2.

Source

Stell, G ND [2011] *Orkney at War: Defending Scapa Flow. Volume 1. World War I.*

Table 14. The defences of Scapa Flow in the First World War.

Data Code	Canmore No. [Re-used in WW2]	[Orkney Fire Command] Name	Notes
CD_Or_01	HY20NW 28 [N]	[W] Ness No. 1	Demolished.
CD_Or_02	HY20NW 27.2 [Y]	[W] Ness No. 2	Two gun positions visible amongst WW2 remains. Scheduled.
CD_Or_03	HY20NW 27.1 [N]	[W] Ness No. 3	Three gun positions survive in golf course. Reviewed.
CD_Or_04	HY20NE 76 [N]	[W] Clestrain (Upper Sower)	Four gun platforms survive. Reviewed.
CD_Or_05	HY30SW 40 [Y]	[W] Houton	No clear WW1 remains. Reviewed.
CD_Or_06a	ND39SE 11.2 [Y]	[S] Stanger Head, Flotta	Fragmentary? Under review.
CD_Or_06b	ND39SE 11.3 [Y]	[S] Stanger Head, Flotta	May survive. Scheduled. Under review.
CD_Or_07	ND39NE 1 [N]	[S] Roan Head, Flotta	Scheduled.
CD_Or_08	ND39NE 41.1 [Y]	[S] Innan Neb, Flotta	Surviving remains. Reviewed.
CD_Or_09a	ND49SW 27.05 [Y]	[S] Hoxa Head, S Ronaldsay	Scheduled.
CD_Or_09b	ND49SW 27.01 [Y]	[S] Hoxa Head, S Ronaldsay	Scheduled.
CD_Or_10	HY40SE 12 [Y]	[S] Breckan/Holm	WW1 parts well preserved. Reviewed.
CD_Or_11	HY41SE 51 [Y]	[S] Carness	WW1 elements visible. Scheduled
CD_Or_12	HY20NE 8001-2	Clestrain Hurdles	Fragment. Under investigation by HS
CD_Or_13	ND39NE	Booms ‘A’ & ‘B’. Flotta - S Ronaldsay	Removed
CD_Or_14	HY20SE	Boom ‘C’. Flotta - S Walls	Removed
CD_Or_15	HY20SE	Boom ‘D’. Mainland - Hoy	Removed
CD_Or_16	HY30SW	Boom ‘G’ & ‘J’. Hoy - Cava	Removed
CD_Or_17	ND49NW	Boom ‘H’. Easter sounds	Removed
CD_Or_18	ND39SE	Destroyer boom	Removed
CD_Or_19	ND49NW	The Grinds, boom & minefield	Removed

4.5.7 [CD_Sh] Shetland

There were four First World War batteries in Shetland, three to protect the approaches to Lerwick, but with the most powerful battery on the archipelago protecting the Swarbacks Minn anchorage. All four survive, three in a superb state of preservation, with

guns in situ. The three most complete batteries are scheduled. The batteries are already well-recorded and described, with excellent quality images and plans, and the project introduced little that was new.

Table 15. The First World War coast defences of Shetland.

Data Code	Canmore No.	Name	Notes
CD_Sh_01	HU54SW 24	Bressay North	1x6-inch covering north approach to Lerwick. Superb preservation. Scheduled.
CD_Sh_02	HU53NW 11	Bressay South	1x6-inch. Covering south approach to Lerwick. Superb preservation, with gun in situ. Scheduled.
CD_Sh_03	HU44SE 91	The Knab, Lerwick	Protection of Lerwick. Has been remodelled as viewpoint. Reviewed.
CD_Sh_04	HU26SE 4	Swarbacks Head, Vementry	2x6-inch covering Swarbacks Minn anchorage. Superb preservation with both guns in situ. Scheduled.

4.5.8 [CD_We] Western Seaboard

Three coast defence batteries were built late in the war to protect important or vulnerable places on the west coast.

The two batteries at Corran Point and on Skye, opposite Kyle of Lochalsh, were established to protect two anchorages, or in the former case, the approach to an anchorage, where the US Navy was landing mines. The mines were shipped from America to the railhead at Kyle of Lochalsh and to the SW end of the Caledonian Canal at Corpach, in a disassembled form. They were then moved by rail from Kyle to Invergordon and by water from Corpach to Inverness, where the US Navy had two bases for assembling the mines and loading them onto US Navy vessels for placing in the Northern Mine Barrage between Scotland and Norway.

The gun at St Kilda was ready for action only in October 1918, after the village had been bombarded by a German submarine in May of that year.

The practice battery at Stornoway was established in the 19th century but the guns were relegated to non-firing practice in the 1890s.

Survival

The Kyle and Corran batteries were of small guns on simple temporary mounts, with all the buildings made of wood, and, apart from one or two gun holdfasts, little survives. The St Kilda gun survives in situ and is already scheduled. The site of the Stornoway battery has been built over but the two 6-inch guns are displayed close by.

Sources

The two histories of the US Naval bases and the Northern Mine Barrage provide background and note the existence of the Corran and Kyle batteries and explain their purpose. They have also been the subject of a recent brief account (Guy 2013). The Corran Point battery is well illustrated in a series of photographs in the Imperial War Museum and the Royal Marine Museum.

Anon (1919) *The Northern Barrage, Mine Force, United States Atlantic Fleet, the North Sea, 1918*. US Naval Institute.

Guy, J (2013) ‘The 15-pdr breech-loading converted field gun used in Coast defence Service during WW1’, *Casemate*, 98, 50-1.

United States. Office of Naval Records and Library., Fullinwider, Simon Peter (1920) *The Northern barrage and other mining activities*.



Fig. 45. Two 15-pdr guns manned by Royal Marine crews, at Corran Point, protecting the approaches to the US Naval Base at Corpach, 1918. (Imperial War Museum)

Table 16. Coast defences on the western seaboard.

Data Code	Canmore No.	Name	Notes
CD_We_01	NN06SW 35	Corran Point	2x15-pdr, 1x7.5-inch howitzer. 1918-19. One gun platform survives under the war memorial. Review.
CD_We_02	NG72NW 11	Kyle of Lochalsh (actually on Skye)	2x15-pdr. 1918-19. Removed.
CD_We_03	NF19NW 61	St Kilda	1x4-inch. Scheduled.
CD_We_04	NB43SW 128	Battery Point, Stornoway, practice battery.	2x6-inch Mk II (not for firing after 1890s). Built over. Guns extant but re-sited.



Fig. 46. The 4-inch gun placed on St Kilda near the end of the war, after a German U-Boat bombarded the village. (RCAHMS)

4.6 [ND] Naval Dockyards & other installations

There are 11 places in this category. There are three large Royal Navy complexes at Scapa Flow, Invergordon and Rosyth, and two smaller bases in the Forth, at Port Edgar and Granton. There were, in addition, two major US Navy bases, at Inverness and Invergordon, with supporting facilities at Corpach and Kyle of Lochalsh. Two Royal Navy radio installations have also been identified in Fife. The Invergordon Naval Base included a naval hospital (NH76NW 64.6) and extensive landward defences.

Sources

RCAHMS has provided me with contemporary plans of Invergordon and further analysis of the development of the three bases may be both interesting and productive.

Anon. (1919) *The northern barrage, Mine force, United States Atlantic fleet, the North Sea, 1918.*

Girvin, B & Cosens, M (1919) *Log of H.M.S. 'Gunner'. Granton Naval Base. From 14th August 1914 to 15th July 1919.*

United States. Office of Naval Records and Library. Fullinwider, Simon Peter (1920) *The Northern Barrage and other Mining Activities.*

Table 17. Royal Navy and US Navy Naval Bases and installations.

Data Code	Canmore No.	Name	Notes
ND_NB_01	NT08SE 41	RNB Rosyth	Reviewed.
ND_NB_02	NH66NE 23; NH76NW [New]	US Naval Base 17, Invergordon	Distillery HQ survives.
ND_NB_03	NH76NW 64 & 107	RNB Invergordon	Piers and housing survive. Review.
ND_NB_04	ND29NE 8	Scapa Flow/Lyness	Reviewed.
ND_NB_05	NT17NW 181	Port Edgar Naval Base	Review.
ND_NB_06	NT27NW 28	Granton Naval Base	
ND_NB_07	NH64NE ??	US Naval Base 18, Inverness	Demolished.
ND_NB_08	NG72NE ??	US Naval Base, Kyle of Lochalsh	No trace.
ND_NB_09	NN07NE	US Naval Base, Corpach	House may survive.
ND_Ra_01	NO60NW	Fife Ness radio station	Demolished
ND_Ra_02	NT18SW 222	Castlandhill radio station	Much altered. Surviving pillbox, WW2?

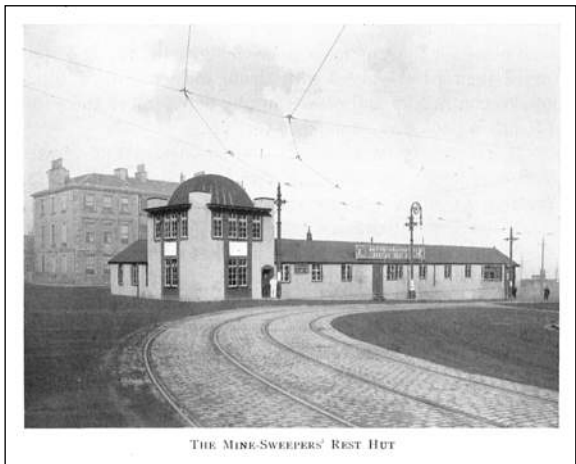


Fig. 47. The Minesweepers' Rest Hut in Granton Square. (Girvin & Cosens 1919)

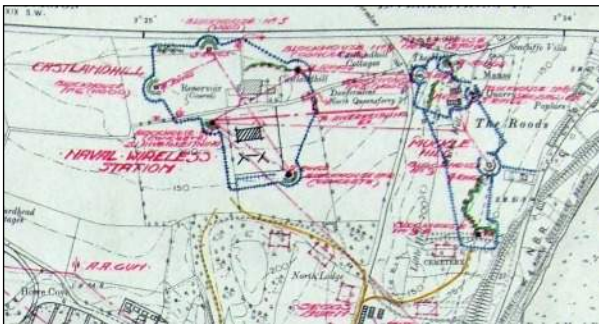


Fig. 48. The Castlandhill Naval Wireless Station, its defences and the defences of other installations in the area, 1916. The anti-aircraft gun marked in the bottom left is on the edge of the Rosyth dockyard. (TNA WO 78/4396)

4.7 [TS] Training, Support & Supply

This category covers a wide range of sites that provided the infrastructure that supported the war:

Ar - Armaments factories and depots and aircraft factories

HO – Hospitals

RD – Regimental Depots

DH – Drill halls

FR – Firing Ranges

TG – Training areas

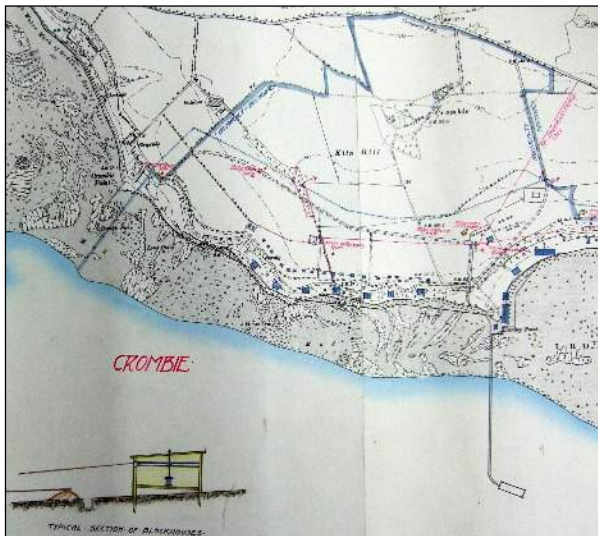


Fig. 49. The naval armaments depot at Crombie, just west of Rosyth, in Fife, 1916. (TNA WO 78/4396)

4.7.1 [TS_Ar] Armaments factories and depots and aircraft factories

The manufacture of weapons, from rifles to 15-inch naval guns, ammunition, ships, aeroplanes, uniforms, equipment for men and horses, was undertaken at a vast number of factories and workshops, from massive industrial complexes to sub-contractors literally involved in cottage industries. The munitions industry alone occupies over 60 individual

volumes of the Official History of the War, and the enumeration of places associated with manufacturing would be a piece of research well beyond the capacity of the present project.

A limited number of sites associated with the manufacture, storage and testing of armaments and aeroplanes was, however, identifiable within the initial WW1_Audit dataset and a preliminary search of the Canmore database, and also emerged from other aspects of the project.

Of these, four or five may present opportunities for further investigation. Substantial elements of the First World War parts of the Stirling Depot survive, largely in good condition

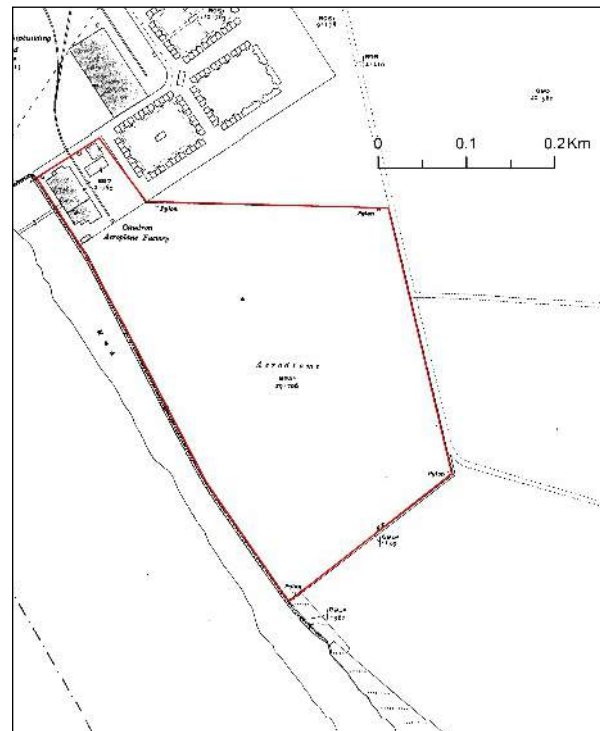


Fig. 50. The Caudron aeroplane factory and landing ground at Alloa, on the banks of the Forth, as marked on the 3rd epoch OS Map of Clackmannanshire (sheet 139.08, revised 1920).

Table 18. Armaments factories and depots, and aircraft factories.

Data Code	Canmore No.	Name	Notes
TS_AR_01	NS27NE 375	Greenock, Eldon Street torpedo factory	Elements extant. Listed
TS_AR_02	NS23NE 47	Ardeer, Nobel explosives works	Survival not known.
TS_AR_03	NT08SW 104	Crombie (Charlestown) Naval armaments depot	Elements may survive. Review.
TS_AR_04	NS89SW 149	Stirling, ordnance depot	Elements extant. Review.
TS_AR_05	NN20SE 28	Arrochar torpedo testing station	Demolished
TS_AR_06	NS46NW 36	Georgetown ammunition filling factory	Elements extant. Review.
TS_AR_07	NS89SE 76	Bandeath naval armaments depot	Elements extant. Review.
TS_AR_08	NS47SE 75	Dalmuir, aircraft factory	Condition unknown.

Data Code	Canmore No.	Name	Notes
TS_AR_09	NX97NE 159	Dumfries, Arrol-Johnston aircraft factory	Extant. Listed.
TS_AR_10	NJ90NW 2711	Aberdeen, Forbesfield Road, aircraft factory	Demolished.
TS_AR_11	NS56NW 496	Scotston, Coventry Ordnance Works	Demolished/replaced
TS_AR_12	NS56NW 82	Clydeholme, aircraft factory	Demolished
TS_AR_13	NY26SE 10	Gretna, HM Explosives Factory	In use.
AS_L1_41	NS55NE 2279	Cathcart, aircraft factory	Logged under Air Stations. No trace
AS_L1_42	NS56NW 79	Renfrew, aircraft acceptance park	Logged under Air Stations. No trace
AS_L1_45	NS89SE 238	Alloa, aircraft factory	Logged under Air Stations. No trace

4.7.2 [TS_Ho] Hospitals

The Official History of the Great War includes a dozen volumes on Medical Services. Chapter 5 of Volume 1 deals with the provision of military medical services within the UK, concentrating largely on Army provision and the information below is largely drawn from that source (Macpherson and Mitchell 1921). Before the First World War there were about 7,000 beds in military hospitals in the UK, of which about 2,000 were occupied. By the time of the Armistice there were 364,133 beds, including 18,378 for officers. The enormous increase in capacity was achieved in a number of ways: additions to military hospitals; Territorial Force hospitals were opened and then extended; new War Hospitals were constructed or were installed in existing buildings; special War Hospitals were established in asylums, Poor Law institutions and other public buildings; civil hospitals allocated beds to military patients in return for a standard daily payment; a large number of Auxiliary Hospitals was prepared by the Red Cross and by other voluntary effort. Before 1914 none of the large and medium-sized military hospitals (with 200 or more beds) was in Scotland, but there was a naval hospital at Butlaw, South Queensferry. On 15 November 1918 there were, in Scottish Command, 1,112 equipped hospital beds for officers and 23,179 for other ranks (a total of 24,291 of a UK total of 364,133). About 1/6th of medical profession in Scotland had taken up temporary commissions in the Royal Army Medical Corps by February 1915 (Macpherson & Mitchell 1921, 83).

There were three ‘Territorial Force General Hospitals’ in Scotland:

1st Scottish. Aberdeen. Beds for 34 officers and 1,385 other ranks. The hospital was accommodated in four City of Aberdeen Education Board's Schools (the Girl's High School; Central;

Rosemount; and Westfield) and in the Aberdeen Poorhouse, with added huts and tentage.

2nd Scottish. Edinburgh. Beds for 30 officers and 1,002 other ranks, the the Craighleith Poorhouse (now the Western General Hospital).

3rd Scottish and *4th Scottish*, Glasgow. The hospitals had, respectively, beds for 1,163 other ranks and 1,180 other ranks. Both hospitals were accommodated within Glasgow Parish Hospital, Stobhill.

In October 1914 hutted camps were being constructed for New Army troops throughout Britain. Within Scottish Command camps were built at Cromarty and Invergordon. At first there was no provision for fully equipped hospitals at these camps, but hutted hospitals were later constructed for hutted camps, at a scale of 1-2.5% of the total accommodation. The Cromarty Military Hospital was equipped with a hutted military hospital with beds for 20 officers and 206 other ranks.

‘War Hospitals’ were opened in asylums, poorhouses and other civil buildings. Resident superintendents of these institutions would be given a temporary commission in the RAMC and the normal staff of the institutions would be retained but could be supplemented by RAMC staff. The more modern Poor Law and asylum buildings, built in the 20 or so years before the war, were ideal, as they were not only well-equipped with stores and modern kitchens and accommodation, but also had pleasant grounds and often facilities for concerts and theatricals. Within Scottish Command the official lists recorded three main ‘War Hospitals’ within asylums:

Edinburgh War Hospital, Bathgate. This was accommodated within recently-completed asylum buildings at Bangour. There were beds for 55 officers and 2,571 other ranks.

Murthly War Hospital was accommodated in the Murthly asylum north of Perth. It had beds for 350 other ranks.

Dykebar War Hospital, Paisley, was accommodated in an asylum and had beds for 500 other ranks.



Fig. 51 One of the surviving 'villas' at Murthly War Hospital (Perth District Lunatic Asylum). (Google Streetview)

Six 'War Hospitals' were accommodated in the 'more important Poor Law premises' (in addition to the 1st Scottish and 2nd Scottish General Hospitals, already mentioned):

Dundee War Hospital. Beds for 6 officers and 462 other ranks.

Perth War Hospital. Beds for 100 other ranks.

Merryflats War Hospital, Govan. Beds for 488 other ranks in part of a poorhouse.

Oakbank War Hospital, Glasgow. Beds for 250 other ranks.

Leith War Hospital. Beds for 165 officers and 420 other ranks.

Crookston War Hospital, Nitshill. Beds for 350 other ranks.

Military Hospitals

A number of 'Military Hospitals' are listed in various sources. These were, in Scotland, small hospitals located in or near the Regimental Depots or barracks and sometimes labelled separately on contemporary Ordnance Survey maps. Most are coded under their parent barracks/depot; others are given numbers in the [Ho] hospitals series.

Reception Hospitals

A number of what were known as 'Reception Hospitals' were established; the only definition I have

been able to find is in the Official History, where the category is described as for the 'temporary reception and detention of lighter cases pending their distribution to hospitals throughout the country, or their discharge to duty (Macpherson & Mitchell 1921, 108). Thus, we see a 'reception' hospital on the fortress island of Inchkeith, in the middle of the Forth, in the HQ of the Forth Defences.

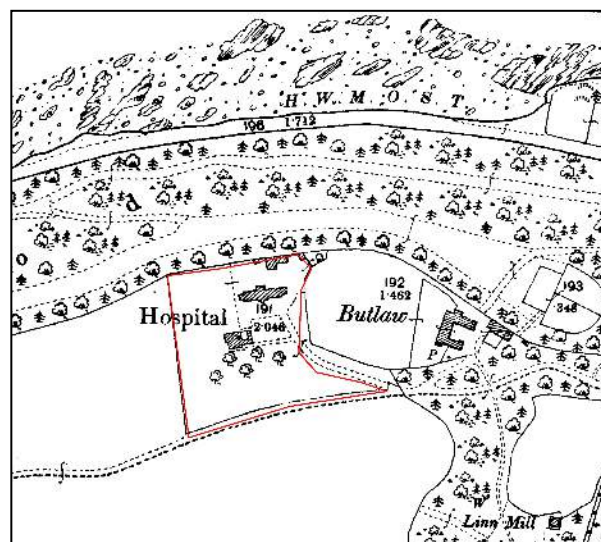


Fig. 52. The Queen Mary and Princess Christian Emergency Naval Hospital at Butlaw, South Queensferry, as marked on the OS map surveyed in 1914. The Port Edgar Naval Base lies just to the NE.

Auxiliary Hospitals

A significant proportion of the military beds was provided in hospitals established and equipped by voluntary aid organisations and private individuals. Some 1,600 small hospitals were established in the UK, with between 6 and 200+ beds. The Official History does not separately enumerate those in Scotland but a list on the 'Scarletfinders' website has been used as a starting point.

From March 1917, the minimum size for a new voluntary hospital was 20 beds for an officers' hospital and 40 beds for an other ranks' hospitals. Small, local voluntary hospitals were, however, kept open, even when uneconomic, specifically to link small communities to the war, allowing them to 'do their bit' and in part to expose them to the realities of the conflict, with which they had little other contact as a community (rather than as the families of individual combatants). As it was put in the Official History: 'One medical officer, in an isolated country town in Wales, wrote in May, 1915, to the director-general emphasizing this point. "We do not wish," he wrote, "to close down, as these small hospitals do a good

work in keeping alive the people's interest in the war and we feel that if for no other reason than this, it would be unwise to remove the only object-lesson which an isolated country district like this can possibly have of the existence of our national struggle" (Macpherson & Mitchell 1921, 83).

Convalescent homes and hospitals were also established. One at Moffat, for officers, had somewhere between 200 and 264 beds. Other recuperating soldiers were accommodated at Base Depots, where they could be prepared for a return to the active service.

Lists & Survival

A preliminary list of hospitals in military and naval use has been prepared below. The Official History is mainly concerned with medical matters in the various campaigns and fronts, and the coverage of the Home Front is brief and quite generalised. Some well-known hospitals, such as Craiglockhart, are not mentioned, and specialist hospitals and units (eg neurological; venereal) are also not mentioned in the general history – there may be more somewhere in the other 11 volumes of the Official History. The Official History of Naval Operations does not, as far as I am aware, cover the infrastructure of the Navy, including its hospitals. The main sources for the list are the Official History, the Secret Scotland Website, and a list of hospitals (including Auxiliaries) on the Scarletfinders website. Where possible I have tried to confirm the identification of any hospitals not included in the Official History tables; in many cases the histories of individual buildings or hospitals mention their use in the First World War.

In most of the large state-run hospitals surviving buildings are usually listed, but much has been demolished. There are some significant survivals not at present listed. For example, at Murthly War Hospital at least three, and possibly more, large detached 'villas' seem to survive within modern housing and the core buildings of 2nd Scottish General Hospital, now the Edinburgh Western General Hospital, also survive.

More work remains to be done in the identification of local, voluntary, Auxiliary Hospitals, many of which were in public buildings or substantial private houses, which have reverted to other uses and indeed may already be listed buildings.

Some 239 hospitals of one kind and another have been identified. The lists below have been divided as

far as possible into the categories set out above, to summarise:

Central Hospitals – large military hospitals run by the state.

Military Hospitals – small military hospitals attached to or adjacent to regimental depots and barracks.

Reception hospitals – smaller units used to hold patients prior to allocation to other hospitals or to discharge.

Auxiliary hospitals and *Civilian Hospitals* – providing military beds, ranging from large Red Cross run hospitals at one end of the spectrum to hospitals with a handful of beds provided by local charity. Many were in country houses.

There are uncertainties about the status of some hospitals, which only further research will clarify. Full information below and in the Access database could be provided only for the Central Hospitals and the Military Hospitals. A brief listing with Canmore number, where identified, is provided for the rest.



Fig. 53. Oldmill War Hospital (now Woodend hospital), Aberdeen. (Workhouses.org.uk)

Sources

Scarletfinders web page on hospitals in Scottish Command:
<http://www.scarletfinders.co.uk/171.html>

A site dedicated to British workhouses and poorhouses:
<http://www.workhouses.org.uk/>

The Official History:

Macpherson, W G & Mitchell, T J 1921 *History of the Great War. Medical Services, General History.*

Table 19. Central Hospitals

Data Code	Canmore No.	Name	Notes
TS_Ho_01	NJ90NW 233.3, 233.4, 393, 714, 434; NJ80NE 65	1st Scottish General Hospital, Aberdeen	All elements listed .
TS_Ho_02	NT27NW 34	2nd Scottish General Hospital, Edinburgh	Review .
TS_Ho_03a	NS66NW 48	3rd Scottish General Hospital, Stobhill, Glasgow	Listed .
TS_Ho_03b	NS66NW 48	4th Scottish General Hospital, Stobhill, Glasgow	Listed .
TS_Ho_04	NT27SW 1689	Craiglockart War Hospital, Edinburgh	Listed .
TS_Ho_05	NN70SE 95.03	Dunblane War Hospital	Queen Victoria School. Listed .
TS_Ho_06	NO33SE 333	Dundee War Hospital	West Poorhouse. Demolished.
TS_Ho_07	NS46SE 312	Dykebar War Hospital, Paisley	Listed .
TS_Ho_08	NT07SW 18	Edinburgh War Hospital, Bangour	Elements listed .
TS_Ho_09	NO10NE 88	Glen Lomond War Hospital, Perth & Kinross	Specialist neurological section. Not listed. Not clear what survives.
TS_Ho_10	NT27NE 113	Leith War Hospital	Edinburgh Eastern General Hospital. Elements listed .
TS_Ho_11	NS56NW 62	Merryflats War Hospital, Glasgow	Glasgow Southern General Hospital. Listed .
TS_Ho_12	NO12SW 525	Perth War Hospital.	Poorhouse. Listed .
TS_Ho_13	NO13NW 44	Murthly War Hospital	Perth District Lunatic Asylum; military mental hospital after January 1917. Elements listed . Review .
TS_Ho_14	NS66NW 472	Robroyston War Hospital	Specialist VD hospital. Demolished.
TS_Ho_15	NT40NE 56	Stobs PoW Hospital	Ground plan survives. Review .
TS_Ho_20	NT27SW 3007.1	Royal Victoria Hospital, Edinburgh	Neurological. Admin. Block listed .

Table 20. Military and Naval Hospitals

Data Code	Canmore No.	Name	Notes
TS_Ho_21	NT27SE 1.41	Edinburgh Military Hospital, Edinburgh Castle	Listed/scheduled
TS_Ho_17	NT17NW 319	Butlaw Naval Hospital	Demolished.
AC_Ba_07	NH76NE	Cromarty Camp hospital	Probably part of camp complex at Newton. 226 bed hutted camp, 20 of these beds for officers
ND_NB_03	NJ76NW 64.6	Invergordon Naval Hospital	A large hospital is marked on the plan of the dockyard and may be this hospital. A smaller hospital on the base may be the 'Receiving Hospital' listed below.
AC_Ba_12		Stirling Detention Barracks	Small venereal diseases unit. Listed .
TS_HO_25	NJ90NW 2710	Aberdeen Military Hospital	Just outside Castlehill Regimental Depot.(TS_RD_09). Demolished.
AC_Ba_13	NS33NW 237	Gailes Camp hospital	Hospital within large Army camp. Demolished.
TS_RD_07		Fort George Military Hospital	Regimental depot. See separate entry.

Table 20 (continued)

TS_RD_02	Ayr Military Hospital	Regimental depot. See separate entry.
TS_RD_03	Berwick-upon-Tweed Military Hospital	Regimental depot. See separate entry.
AC_Ba_11	Dunbar Military Hospital	See entry for barracks.
TS_Ho_16	Dumbarton Military Hospital	Probably Dumbarton Castle
TS_RD_06	Maryhill Military Hospital	Regimental depot; hospital marked on 3 rd epoch OS map.
TS_RD_01	Glencorse Military Hospital	Regimental depot. See separate entry. Elements listed .
TS_RD_04	Hamilton Military Hospital	Regimental depot; hospital marked on 3 rd epoch OS map.
AC_Ba_04	Montrose Military Hospital	Probably Panmure Barracks.
TS_RD_05	Perth Military Hospital	See entry for Black Watch Regimental Depot.
AC_Ba_12 or TS_RD_10	Stirling Military Hospital	Stirling detention barracks or Stirling Castle (Regimental Depot)

Table 21. Reception Hospitals

Data Code	Canmore No.	Name	Notes
TS_HO_19	NS40NE NS 48765 06535	Camlarg Reception Hospital	Camlarg House
TS_HO_22	NS27NE 254	Lindores Reception Hospital, Greenock	Lindores Manor [Hotel] 61 Newark St.
TS_HO_28		Inchkeith Reception Hospital	In the fortress. Scheduled .
TS_HO_26		Invergordon Reception Hospital	Probably the smaller of the two hospitals marked on dock-yard plan.
TS_HO_27	NS20NW 49	Turnberry Reception Hospital	Turnberry Hotel. Also used as Air Station as officers' mess. Listed .

Auxiliary Hospitals and Civil Hospitals with military beds

I have attempted to identify the buildings used during the war. A great number were in large or medium-sized country houses, but some seem to have been in village halls: further investigation is needed to identify which local halls were used in this way. Auxiliary hospitals may not always have been within the institution that ran them – for example St

George's School's auxiliary hospital in Edinburgh was some distance from the school, in a house in Church Hill. Large civilian hospitals in the list below would have provided military beds within the hospital, for which they received a payment, per day, for each occupied bed.

Table 22. Auxiliary hospitals and civil hospitals providing some military beds. Information about whether a building is listed could not included in this table.

Data Code	Canmore No. or NGR	Name	Notes
TS_HO_23	NS56SE 462	Scottish National Red Cross Hospital, Cardonald/Bellahouston, Glasgow	a.k.a Scottish National Auxiliary Hospital. In Bellahouston Park. Demolished.
TS_HO_24	NS46SE 76	Royal Alexandra Infirmary, Paisley	Royal Alexandra is modern building on site of asylum.
TS_HO_18	NS47SE 1	Princess Louise Scottish Hospital for Limbless Sailors and Soldiers. Erskine House Hospital, Glasgow	Mar Hall.
TS_HO_29		Aberdeen Royal Infirmary, Aberdeen	Civil hospital.
TS_HO_30		Morningfield, Aberdeen	Not identified.
TS_HO_31		Fae-Me-Well Auxiliary Hospital, Aberdeen	Not identified.
TS_HO_32	NJ65SW. NJ 62861 52550	Rose Innes Auxiliary Hospital, Aberchirder	Cottage hospital. 2nd epoch map.
TS_HO_33	NO02SE 21	Aberdalgie Auxiliary Hospital, Aberdalgie	Possibly Aberdalgie House.

Table 22 (continued)

Data Code	Canmore No. or NGR	Name	Notes
TS_HO_34	NN84NE NN 85781 49243	Aberfeldy Auxiliary Hospital, Aberfeldy	Possibly Cottage Hospital.
TS_HO_35	NJ24SE NJ 26726 42706	Fleming Hospital, Aberlour	Still a hospital
TS_HO_36	NJ24SE 53	Orphanage Hospital, Aberlour	
TS_HO_37	NO59NW 5	Aboyne Castle Auxiliary Hospital, Aboyne	
TS_HO_38	NJ51NW 21	Breda House Auxiliary Hospital, Alford	
TS_HO_39	NY16NW 19	Kinmount Auxiliary Hospital, Annan	Kinmount House
TS_HO_40		Alexandra Place Auxiliary Hospital, Arbroath	Arbroath Infirmary is in Alexandra Place. Not identified as a separate entity.
TS_HO_41	NO64SW 194	Arbroath Infirmary, Arbroath	Civil hospital.
TS_HO_42	NS24SW 83	Ardrossan Auxiliary Hospital	Best candidate is Seafield House, now residential school.
TS_HO_43	NN91SE 70	Cloan Auxiliary Hospital, Auchterader	
TS_HO_44	NS32SW 217	Carrick House Auxiliary Hospital, Ayr	
TS_HO_45	NS32SW 387 & 230	Ayr County Hospital, Ayr	Demolished.
TS_HO_46	NO55SW 81	Lawson Sanatorium, Balgavies	Probably Balgavies House.
TS_HO_47	NX18SW NX 11727 83567	Laggan Auxiliary Hospital, Ballantrae	Laggan House.
TS_HO_48	NO39NE NO 37020 95922	Victoria Hall Auxiliary Hospital, Ballater	Formerly Albert Memorial Hall, now Victoria & Albert Hall, Station Square.
TS_HO_49	NN17NW 26	Lochiel Auxiliary Hospital For Officers, Banavie	Probably what was then Lochiel Arms Hotel, Banavie. Demolished.
TS_HO_50	NJ66SE 94	Chalmers Auxiliary Hospital, Banff	
TS_HO_51	NS57SW 123	Schaw Home, Bearsden	
TS_HO_52	NS67SW 10	Cawder House Auxiliary Hospital, Bishopbriggs	
TS_HO_53		Bishopton	Not identified
TS_HO_54	NN86NE 5	Blair Castle Auxiliary Hospital, Blair Atholl	
TS_HO_55	NO14NE 212	Buchanan House Auxiliary Hospital, Blairgowrie	
TS_HO_56	NT08SW 8	Carriden Auxiliary Hospital, Boness	
TS_HO_57	NS75NW 130	Hillpark Auxiliary Hospital, Bothwell	The Donald Institute, built on the site of Hillpark House
TS_HO_58	NO66SW 41	Brechin Infirmary, Brechin	Civil hospital.
TS_HO_59		Hyndwood Auxiliary Hospital, Bridge Of Allan	Web searches turn up a Hyndwood School, but not located.
TS_HO_60		Portessie Auxiliary Hospital, Buckie	No obvious building located in Portessie village, Buckie. Matron decorated 1918.
TS_HO_61		Inverleny Auxiliary Hospital, Callander	Not located. Leny and Inverleny are on west side of town.
TS_HO_62	NS65NE 54	Caldergrove Auxiliary Hospital, Cambuslang	
TS_HO_63		Cambuslang War Hospital, Cambuslang	Not located.
TS_HO_64	NX76SE NX 76758 62205	Castle Douglas Auxiliary Hospital, Castle Douglas	Possibly the Diamond Jubilee Cottage Hospital.
TS_HO_65	NX16SW 27	Lochinch Auxiliary Hospital, Castle Kennedy	Lochinch Castle.
TS_HO_66		Carnoustie Auxiliary Hospital, Carnoustie	Not identified
TS_HO_67	NS76SW 117	Drumpelzier Auxiliary Hospital, Coatbridge	
TS_HO_68	NT85SW 24	Manderston Auxiliary Hospital, Coldingham	

Table 22 (continued)

Data Code	Canmore No. or NGR	Name	Notes
TS_HO_69	NT84SE 27	Lennel Auxiliary Hospital, Coldstream	
TS_HO_70	NT74SE 28	Eccles Auxiliary Hospital, Coldstream	
TS_HO_71	NT17NE 34	Cramond House Auxiliary Hospital, Cramond	
TS_HO_72	NN82SW 38	Ochertyre Auxiliary Hospital, Crieff	
TS_HO_73	NN82SE 183	Ruberslaw Auxiliary Hospital, Crieff	
TS_HO_74		The Hall Red Cross Hospital, Cullen	Not located. Village hall?
TS_HO_75	NO31SE NO 39286 11938	Ceres Auxiliary Hospital, Cupar	Could be large building marked on 2nd edition as Leith Holiday Home.
TS_HO_76	NO31SW NO 34925 11827	Edenfield Auxiliary Hospital, Cupar	Edenfield House
TS_HO_77	NN94NE 1	Dalguise Auxiliary Hospital, Dalguise	
TS_HO_78		Denny Auxiliary Hospital, Denny	Not located
TS_HO_79	NJ50SE 77	Dess House Auxiliary Hospital, Dess	
TS_HO_80	NJ81SE 40	Parkhill House Auxiliary Hospital, Dyce	
TS_HO_81		Seaforth Auxiliary Hospital, Dingwall	Not located
TS_HO_82		Douglas Auxiliary Hospital, Douglas	Not located
TS_HO_83	NJ34SW 78	Mount Stephen Auxiliary Hospital, Dufftown	
TS_HO_84	NX97SE NX 296681 74815	Broomlands Auxiliary Hospital, Dumfries	
TS_HO_85		Dunbar Terrace Auxiliary Hospital, Dumfries	Not located
TS_HO_86		Maxwelltown Auxiliary Hospital, Dumfries	Not located
TS_HO_87	NT67NE 284	Battery Auxiliary Hospital, Dunbar	
TS_HO_88	NS79NE 43	Keir House Auxiliary Hospital, Dunblane	
TS_HO_89	NO32NE 246	Caird Rest, Dundee	
TS_HO_90	NO33SE 139	King's Cross Infectious Diseases Hospital, Dundee	
TS_HO_91	NO33SE 453	Lochee School Hospital, Dundee	
TS_HO_92		Dundee Royal Infirmary, Dundee	Civil hospital.
TS_HO_93	NO43SE 517	The Lodge Auxiliary Hospital, Broughty Ferry, Dundee	
TS_HO_94		Dunfermline Auxiliary Hospital	Not located.
TS_HO_95	NO04SW 123	Dalpowie Auxiliary Hospital, Dunkeld	NGR in Canmore is wrong - should be same as NO03NE 63.
TS_HO_96	NS44NW 8	Dunlop Auxiliary Hospital, Dunlop	Referred to as Dunlop House Auxiliary Hospital in London Gazette note of award of medal.
TS_HO_97	NT75SE 279	Southfield Auxiliary Hospital, Duns	Southfield House. Now council offices.
TS_HO_98		Kirkton Hall Auxiliary Red Cross Hospital, Durris	'Kirkton' on Scarletfinders list. Not located within tiny hamlet. Public hall?
TS_HO_99		Deaconess Hospital, Edinburgh	NT27SE 3395
TS_HO_100		Magdala, 6 Oswald Road, Edinburgh	Oswald Rd has been renumbered. 5 (now 25) is on opposite side of road. Suggest house at NT 25504 71198 as 'Magdala' at No. 6.
TS_HO_101	NT27SE 4513	March Hall Auxiliary Hospital, Edinburgh	
TS_HO_102		Mayfield Auxiliary Hospital, Edinburgh	Probably NT27SE 4543. But could be NT27SE 2577 or NT27NW 415 - both named 'Mayfield'.
TS_HO_103		Edinburgh Royal Infirmary, Edinburgh	Civil hospital

Table 22 (continued)

Data Code	Canmore No. or NGR	Name	Notes
TS_HO_104	NS56SE 1931	8 Moray Place, Edinburgh	
TS_HO_105	NT27SW	St. George's Auxiliary Hospital, 7 Church Hill, Edinburgh	See school history.
	NT 24656 71711		
TS_HO_106	NT27SE 2638	St. Leonard's Red Cross Hospital, Edinburgh	On hospital list as St Leonard's <u>Road</u> , but actually St Leonard's House.
TS_HO_107	NJ26SW 64	Gray's Hospital, Elgin	
TS_HO_108	NJ26SW 346	Braemoriston Auxiliary Hospital, Elgin	
TS_HO_109		Dalchroy Auxiliary Hospital, Elgin	Not identified within Elgin.
TS_HO_110	NT49NE 79	Craigforth Auxiliary Hospital, Elie	
TS_HO_111	NS87NE 150	Arnothill Auxiliary Hospital, Falkirk	
TS_HO_112	NS87NE 81	Falkirk Infirmary Auxiliary Hospital	
TS_HO_113	NS87NE NS 85760 79910	Wallside Auxiliary Hospital, Falkirk	
TS_HO_114	NJ35NE 7	Gordon Castle Hospital, Fochabers	
TS_HO_115	NO45SW 38	Briar Cottage Auxiliary Hospital, Forfar	Briar Cottage is name on 2nd epoch
TS_HO_116	NJ05NW 227	Leancoil Auxiliary Hospital, Forres	
TS_HO_117	NJ50NW 215	Forres Hall Red Cross Hospital, Forres	Forres House?
TS_HO_118	NH30NE 6	St. Benedict's Abbey Auxiliary Hospital, Fort Augustus	
TS_HO_119	NJ96NE NJ 99507 66740	Walker's Auxiliary Hospital, Fraserburgh	
TS_HO_120		Fyvie Club Auxiliary Hospital, Fyvie	Not located.
TS_HO_121	NJ73NE 137	Fyvie Cottage Hospital, Fyvie	
TS_HO_122	NT43NE 137	Wilder House Auxiliary Hospital, Galashiels	Probably Wilderhaugh House.
TS_HO_123	NO34NE 1	Glamis Castle Auxiliary Hospital, Glamis	
TS_HO_124	NS56SE 480	Aitkenhead Auxiliary Hospital, Cathcart, Glasgow	
TS_HO_125	NS56SE 675	Hillhead House Auxiliary Hospital, Glasgow	Canmore NGR needs correction to NS 56248 60471
TS_HO_126	NS57SE 59 or NS56NE 1903	Garscube Auxiliary Hospital, Maryhill, Glasgow	Either Garscube House NS57SE 59 or Cottage hospital NS56NE 1903
TS_HO_127	NS56SW 31	Pollock House Auxiliary Hospital, Pollokshaws, Glasgow	
TS_HO_128	NS56SE 1132	Matheran Auxiliary Hospital, Pollokshields, Glasgow	Named 'Matheran' on 3rd epoch map.
TS_HO_129		Glasgow Royal Infirmary, Glasgow	Civil hospital.
TS_HO_130		Western Infirmary, Glasgow	Civil hospital.
TS_HO_131	NS56SE 611 or 114	Yorkhill War Hospital, Glasgow	Not clear what hospital buildings here in WW1.
TS_HO_132	NS27NE 95	Smithston War Hospital, Greenock	In poorhouse/asylum.
TS_HO_133	NT48SE 127	The Gables Auxiliary Hospital, Gullane	
TS_HO_134	NS85NE 100	Hartwoodhill Auxiliary Hospital, Hartwood	Country house predating later Hartwoodhill Hospital.
TS_HO_135	NT51SW 100	Hawick War Hospital Hawick	Known as Drumlanrig Hospital. Former workhouse.
TS_HO_136	NT51NE 89	Wells Auxiliary Hospital, Hawick	
TS_HO_137	NS28SE 231	Hermitage House Auxiliary Hospital, Helensburgh	
TS_HO_138	NJ53NW 75	Huntly Cottage Hospital, Huntly	

Table 22 (continued)

Data Code	Canmore No. or NGR	Name	Notes
TS_HO_139	NJ43NW 28	Invermarkie Lodge Hospital, Huntly	
TS_HO_140	NJ62NW 86	Drumrossie Red Cross Hospital, Inch	
TS_HO_141	NS27SW 20	Ardgowan Auxiliary Hospital, Inverkip	
TS_HO_142	NH64SE 389	Hedgefield Auxiliary Hospital, Inverness	
TS_HO_143	NH64SE 163	Leys Castle Auxiliary Hospital, Inverness	
TS_HO_144	NS33NW NS 30755 39971	Bogside Auxiliary Hospital, Irvine	
TS_HO_145	NS33NW NS 30760 39976	Irvine Auxiliary Hospital, Irvine	
TS_HO_146		Johnstone & District Auxiliary Hospital, Johnstone	Not located.
TS_HO_147	NJ45SW NJ 42820 50868	Earlsmount Red Cross Hospital, Keith	Not named but referred to in disposal by county council.
TS_HO_148	NT73NW 16	Newton Don Auxiliary Hospital, Kelso	
TS_HO_149	NT73NE 27	Eden Hall Hostel, Kelso	
TS_HO_150	NJ52NW 4	Leith Hall Auxiliary Hospital, Kennethmont	
TS_HO_151		Woodland Auxiliary Hospital, Kilcreggan	House not identified but reported on Shore Road.
TS_HO_152	NS43NW 168	Dick Institute Auxiliary Hospital, Kilmarnock	
TS_HO_153	NS34SW 80	Montgreenan Auxiliary Hospital, Kilwinning	
TS_HO_154		Kinghorn Auxiliary Hospital, Kinghorn	Not located
TS_HO_155	NX36SW NX 30912 61705	Glendarroch Auxiliary Hospital, Kirkcowan	House on 2nd and 3rd epoch maps.
TS_HO_156	NS67SE 44	Gartshore Auxiliary Hospital, Kirkintilloch	
TS_HO_157	NO35SE 195	St. Andrew's Auxiliary Hospital, Kirriemuir	Possibly associated with St Andrew's Church, Glamis Road. 'Webster's Seminary' building behind church?
TS_HO_158	NS03NW 28	Arran Auxiliary Hospital, Lamlash	Not certain.
TS_HO_159	NS84SE 259	Lady Hozier Home, Lanark	
TS_HO_160	NS84SE 41	Lockhart Auxiliary Hospital, Lanark	Marked Lockhart Hospital on 3rd epoch map.
TS_HO_161	NS84SE 181	St. Mary's Auxiliary Hospital, Lanark	Canmore NGR inaccurate for the St Mary's building in use between 3rd and 4th epoch maps (1909–1940). Correct NGR is 88506 43571.
TS_HO_162	NY38SE 111	Langholm Auxiliary Hospital, Langholm	In Mission Hall, run by Lady Ewart. Lots of pictures of the hospital in use at web site referenced in Access.
TS_HO_163		Barra House Auxiliary Hospital, Largs	Barra House Hotel, but not located.
TS_HO_164	NT54NW 7	Thirlestane Castle Hospital, Lauder	
TS_HO_165	NS67NW 34	Lennox Castle Auxiliary Hospital, Lennox-town	Later (1930s) developed as major mental hospital.
TS_HO_166	NS84SW 30	Auchtyfardle Auxiliary Hospital, Lesmahagow	
TS_HO_167		Braeside Auxiliary Hospital, Leven	There was a street called Braeside in Methil, but no hospital traced.
TS_HO_168	NY17NW 8	Castlemilk Auxiliary Hospital, Lockerbie	
TS_HO_169	NY18SW 146	Dryfeholm Auxiliary Hospital, Lockerbie	
TS_HO_170		Lockerbie Auxiliary Hospital, Lockerbie	Not identified

Table 22. (continued)

Data Code	Canmore No. or NGR	Name	Notes
TS_HO_171	NO34NW 5	Ruthven Auxiliary Hospital, Meikle	
TS_HO_172		Tillyrie Auxiliary Hospital, Milnathort	Both Upper and Nether Tillyrie appear on 3rd epoch map.
TS_HO_173	NS57NE 70	Craigmaddie Auxiliary Hospital, Milngavie	
TS_HO_174		Moffat Auxiliary Hospital, Moffat	Not located.
TS_HO_175		Monifieth Hall Auxiliary Hospital, Monifieth	Not located.
TS_HO_176	NO75NW 171	Montrose Infirmary, Montrose	
TS_HO_177		Montrose Hall Auxiliary Hospital, Montrose	Not located
TS_HO_178		No.2 Montrose Hospital, Montrose	Not located
TS_HO_179	NS75SE 1	Dalzell Auxiliary Hospital, Motherwell	
TS_HO_180	NH45SE 21	Fairburn Auxiliary Hospital, Muir Of Ord	
TS_HO_181	NJ80SE 85	Murtle House Auxiliary Hospital, Murtle	
TS_HO_182	NH85SE NH 88120 56373.	Ivybank Auxiliary Hospital, Nairn	Note that NGR for adjacent NH85SE 69 should, according to 2nd epoch, be NH 88036 56412.
TS_HO_183	NS45NE 103	Cowdenhall Auxiliary Hospital, Neilston	
TS_HO_184	NS56SW 141	Crookston War Hospital, Nitshill	Ross Hall hospital.
TS_HO_185	NT58SE 96	Edington Cottage Hospital, North Berwick	
TS_HO_186	NT18SW 319	Fernbank Hospital, North Queensferry	
TS_HO_187	NT17NW 116	Sealscraig Hospital, South Queensferry	In hospital lists as North Queensferry, but probably Sealscraig Hotel, South Queensferry.
TS_HO_188	NH66NW 46	Novar House Auxiliary Hospital, Novar	
TS_HO_189	NM82NE 127	Dungallon Auxiliary Hospital, Oban	
TS_HO_190	NS56SW 165	Barshaw Auxiliary Hospital, Paisley	
TS_HO_191	NS46NE 72	Gallowhill Auxiliary Hospital, Paisley	
TS_HO_192		Paisley War Hospital, Paisley	Not located
TS_HO_193	NS56SW 166	Ralston Auxiliary Hospital, Paisley	
TS_HO_194	NS46SE 76	Royal Alexandra Infirmary, Paisley	Civil hospital.
TS_HO_195	NT24SE NT 25349 40300	Moreland Auxiliary Hospital, Peebles	http://historyofpeebles.com/Page121.html
TS_HO_196	NT24SE 19	Venlaw Auxiliary Hospital, Peebles	http://historyofpeebles.com/Page121.html
TS_HO_197	NT42SW 117	Peebles War Hospital, Peebles	http://historyofpeebles.com/Page121.html
TS_HO_198	NT24SE 97	Peebles Naval Hospital	http://historyofpeebles.com/Page121.html
TS_HO_199		Perth Red Cross Auxiliary Hospital, Perth	Not located.
TS_HO_200	NO12SW NO 12522 23764	Rosebank Auxiliary Hospital, Perth	House in Kinnoul on east bank of Tay.
TS_HO_201		Perth Royal Infirmary, Perth	Civil hospital.
TS_HO_202		The Hall Red Cross Hospital, Peterhead	Not located.
TS_HO_203	NN95NW 120	Fonab Auxiliary Hospital, Pitlochry	
TS_HO_204	NJ73NW 45	Kinbroon Auxiliary Hospital, Rothienorman	
TS_HO_205	NT26SE 93	Whitehill Auxiliary Hospital, Rosewell	
TS_HO_206	NS70NE 9	Eliock Auxiliary Hospital, Sanquhar	
TS_HO_207	NT42NW 16	Bowhill Auxiliary Hospital, Selkirk	
TS_HO_208	NT27SW NT 21063 70366	Kingsknowe Auxiliary Hospital, Slateford	
TS_HO_209	NT07NE 13	Hopetoun Auxiliary Hospital, South Queensferry	

Table 22 (continued)

Data Code	Canmore No. or NGR	Name	Notes
TS_HO_210	NT17NE 37	Dalmeny Auxiliary Hospital, South Queensferry	
TS_HO_211	NO51NW 215	Castlecliffe Auxiliary Hospital, St. Andrews	
TS_HO_212		Stirling Royal Infirmary, Stirling	Civil hospital.
TS_HO_213	NS79NE 225	Southwood Auxiliary Hospital, Stirling	Could be Southwood, Henderson St, Bridge of Allan.
TS_HO_214	NO88NE 198	St. Leonard's Auxiliary Hospital, Stonehaven	
TS_HO_215		Letters Lodge Auxiliary Hospital, Strachur	Not located
TS_HO_216	NH45NE 129	The Spa Hospital, Strathpeffer	
TS_HO_217	NH45NE 26	Nicolson Red Cross Hospital, Strathpeffer	
TS_HO_218	NJ83SE 42	Haddo House Auxiliary Hospital, Tarves	
TS_HO_219	NX89NE 13	Drumlanrig Auxiliary Hospital, Thornhill	
TS_HO_220	NS33SW 73	Craigronach Auxiliary Hospital, Troon	
TS_HO_221	NJ74NW NJ 71969 49952	Turriff Hall Red Cross Hospital, Turriff	Village hall?
TS_HO_222	NT39NW 14	Wemyss Castle Auxiliary Hospital, Wemyss	
TS_HO_223	NT15SE NT 15259 52317	Lynehurst Auxiliary Hospital, West Linton	
TS_HO_224	NS96SW 45	Polkemmet Auxiliary Hospital, Whitburn	
TS_HO_225	NX43NW 13	Physgill Auxiliary Hospital, Whithorn	

4.7.3 [TS_RD] Regimental Depots

The depots of the ten Regular Army Scottish infantry regiments were distributed from Ayr and Penicuik in the south, to Fort George and the Cameron Barracks in Inverness, in the north. One of the regimental depots, of the Kings Own Scottish Borderers, is in England, in Berwick-upon-Tweed barracks. The depots contained barracks, but had a wider role than mere accommodation – they were the literal heart and soul of the regiment. The Colours, regimental silver and other iconic artefacts and the very traditions of the regiment were curated here. At all times, but especially during the war, the depot lay at the heart of the effort to recruit, train and equip men, and prepare them to be drafted off to join the various battalions of the regiment, scattered across Britain, Europe and the Empire.

Survival

The historic fabric of the regimental depots of the 1914-18 war has not fared well. Most were very large complexes near city centres, demolished between the wars or after 1945. Thus, the 1914-18 depots of the Gordon Highlanders, Highland Light Infantry, Cameronians, the Black Watch and the Royal Scots Fusiliers have all been completely demolished (apart from the odd boundary wall or guardhouse). Glencorse Barracks (Royal Scots) has been rebuilt to a great extent. Fort George and Stirling Castle (Seaforth and Argyll & Sutherland Highlanders respectively) survive in a relatively similar condition to their wartime existence, but the only substantially-surviving purpose-built 19th-century regimental depot to have survived is the Cameron Barracks in Inverness, still in military use and listed.

Table 23. Scottish Regimental Infantry Depots

Data Code	Canmore No.	Depot	Location of Regimental Museum
TS_RD_01	NT26SW 64	Royal Scots. Glencorse Barracks. Elements listed.	Edinburgh Castle
TS_RD_02	NS32SW 378	Royal Scots Fusiliers. Ayr Barracks. Demolished.	518 Sauchiehall Street, Glasgow
TS_RD_03	NU05SW	King's Own Scottish Borderers, Berwick Barracks.	Berwick Barracks.
TS_RD_04	NS75NW	Cameronians (The Scottish Rifles). Hamilton Barracks. Demolished.	Low Parks Museum, Hamilton
TS_RD_05	NO12SW 423	Black Watch. Queen's Barracks, Perth. Demolished	Balhousie Castle, Perth

Table 23 (continued)

Data Code	Canmore No.	Depot	Location of Regimental Museum
TS_RD_06	NS56NE 1603	Highland Light Infantry. Maryhill Barracks. Largely demolished.	518 Sauchiehall Street, Glasgow
TS_RD_07	NH75NE 3	Seaforth Highlanders. Fort George. Scheduled/listed/in care.	Fort George
TS_RD_08	NH64NE 161	Queen's Own Cameron Highlanders. Cameron Barracks, Inverness. Listed.	Fort George
TS_RD_09	NJ90NW 167	Gordon Highlanders. Castlehill Barracks. Demolished.	Viewfield Road, Aberdeen
TS_RD_10	NS97SE 6	Argyll & Sutherland Highlanders. Stirling Castle. Scheduled/listed/in care.	Stirling Castle

4.7.4 [TS_DH] Drill Halls

In addition to the Regimental Depots, the Territorial battalions and companies of these regiments, and Territorial companies and batteries of Royal Artillery (including Royal Garrison Artillery – see Coast Defences), Royal Engineers and the local Yeomanry (cavalry) regiments had drill halls across Scotland. The Territorial Force had grown, in 1908, out of the Volunteers of various kinds established in the late 18th and 19th centuries. Most of the drill halls were purpose-built in the second half of the 19th century and the early years of the 20th. Where there is no direct evidence, it has been assumed that a drill hall built before 1914 and still mapped as one in post-war Ordnance Survey maps continued in military use between 1914 and 1918. Mike Osborne's UK-wide survey of drill halls (2006) was the key data source, but the easy availability to the project of different epochs of historical mapping on a geographical information system has meant that new or 'lost' halls have been found. It is certain, however, that further drill halls, including some marked on OS maps but not formally recorded, remain to be identified.

While war memorials came, after the war, to symbolise communities' engagement with the war, during the war the drill halls were the link between communities and the men in the locally-affiliated units. The Dalmeny Street drill hall in Leith (already a listed building) exemplifies this most clearly: on Friday 22 May 1915 a south-bound troop train crashed into a stationary local train outside the signal box at Quintinhill, near Gretna, and was then hit by a north-bound express. Four hundred and eighty five officers and men of the 7th battalion of the Royal Scots, whose HQ was at Dalmeny Street, were on the train, and about 215 of them were killed (Rolt 1976, 212). Relatives of the soldiers gathered outside the drill hall seeking news, and eventually a list of the dead was read out from a window, before being

posted up outside. By Sunday the bodies had been transported from Gretna to Leith Central Station, and were taken to the drill hall then functioning as a temporary mortuary.



Fig. 53. Dalbeattie drill hall.

The processing of the drill hall dataset was particularly problematic. The initial WW1_Audit dataset contained about 14 entries; Canmore in total had a total of about 36 that were immediately identifiable as drill halls, but without 'drill hall' being included in CLASSUB. The Secret Scotland website had tabulated most (but not all) of Osborne's Scottish halls, and that table and a copy of Osborne's volume itself were the basis of the initial survey.

The drill halls range from simple corrugated iron and wooden huts to small, simple halls of stone or brick, albeit with occasional architectural flourishes, to substantial (occasional almost palatial) complexes that formed the HQ of one or more territorial battalions as well as drill station for up to half a dozen

of its constituent Companies. Internally, they varied very much, according to size of the local unit and whether any administration was based there. The larger halls had a separate 'front block' containing offices and other smaller rooms, with a large hall attached behind. Frequently there was accommodation, often in a separate building, for a resident drill instructor.

Some were built with the patronage of the dominant local landowner, others by collectives of well-off middle class professional men, who formed the officer corps of the Territorials.

Survival

After removing halls that had clearly been built after 1918, and entries for regimental depots, covered above, there were about 340 entries in the prelimi-

nary list. These were examined county by county, checking against historical maps and Canmore, and searching for mentions on the internet, resulting in a final total of around 288 drill halls likely to have been in use in the First World War.

Of these about 189 survive, of which 49 seem already to be listed. Some 104 of the remainder have been identified as worth 'review' as to their future conservation. The lists below are arranged by historical (pre-1973) counties, as the recruiting areas of the Territorial units were largely defined by these administrative units.

Sources

Osborne, M (2006) *Always Ready. The drill halls of Britain's Volunteer Forces.*

Rolt, L T C (1976) *red for danger. A history of railway accidents*

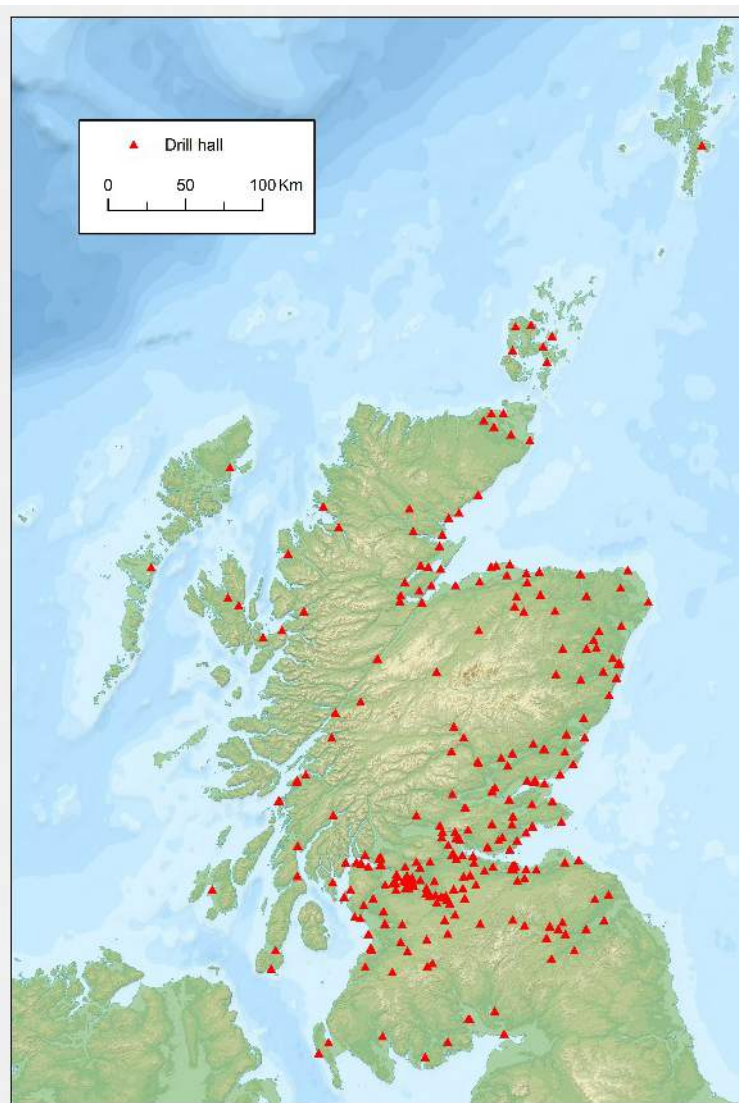


Fig. 54. Drill halls in use around the time of the First World War.

Aberdeenshire (including Aberdeen city)

Nineteen drill halls in use in 1914 were identified in the historical county of Aberdeenshire and the City of Aberdeen. Of these only one was recorded in Canmore before the project began. All were recorded by Osborne (2007), although this project has improved the quantity and quality of informa-

tion recorded for some sites. Of the 19 halls, nine are definitely extant, while one could not be located. None of the halls seems to be listed, although some are architecturally quite ambitious (for example, Fraserburgh; Inverurie; Huntly). A number remain in TA/cadet use.

Table 24.

Data Code	Canmore No.	Name	Notes
TS_DH_01	NJ90NW 2702	Aberdeen, 14 Union Wynd, Albert Hall.	Demolished.
TS_DH_02	NJ90NW 1430	Aberdeen, 28 Guild Street	Extant. Review.
TS_DH_03	NJ90NW 2703	Aberdeen, 80 Hardgate	Demolished.
TS_DH_04	NJ90NW 2704	Aberdeen, North Silver Street	Demolished.
TS_DH_05	NJ90NW 2705	Aberdeen, Woolmanhill	Demolished.
TS_DH_06	NO59NW 127	Aboyne, Croft Road.	Extant.
TS_DH_07	NJ51NE 229	Alford, Kingsford Road	Not located.
TS_DH_10	NJ80NE 209	Bucksburn, Station Road	Demolished.
TS_DH_11	NJ93SE 74	Ellon	Demolished.
TS_DH_12	NJ96NE 254	Fraserburgh, Grattan Place	Extant. Review.
TS_DH_13	NJ54SW 47	Huntly, Deveron Road	Extant. Review.
TS_DH_14	NJ72SE 373	Inverurie, Jackson Street	Extant. Review.
TS_DH_16	NJ71NW 234	Kemnay, off Station Road	Extant. Review.
TS_DH_17	NJ71NE 256	Kintore, School Road	Extant. Review.
TS_DH_18	NJ82NW 230	Oldmeldrum, 4 King Street	Extant.
TS_DH_19	NJ80SW 188	Peterculter, Malcolm Road	Demolished.
TS_DH_20	NK14NW 518	Peterhead, Kirk Street	Demolished.
TS_DH_21	NJ95NW 80	Strichen, Hillview	Demolished.
TS_DH_22	NJ74NW 204	Turriff, Balmellie Street	Extant. Review.

Angus (including Dundee city)

Fourteen drill halls probably or certainly in use during the First World war were recorded. Of these six were previously recorded in Canmore and nine were recorded by Osborne. Nine definitely survive.

Two of the 14 seem to be listed. Others have some architectural pretension (eg Kirriemuir, Arbroath East Abbey Street).

Table 25.

Data Code	Canmore No.	Name	Notes
TS_DH_40	NO64SW 115	Arbroath, 22-26 East Abbey St	Extant. Review.
TS_DH_41	NO64SW 116	Arbroath, Marketgate	Extant. Review.
TS_DH_46	NO56SE 99	Brechin, 13 Bank Street	Extant. Listed.
TS_DH_53	NO54NE 95	Friockheim Armoury, Millgate	Not identified.
TS_DH_55	NO75NW 289	Montrose, Mill St	Demolished.
TS_DH_56	NO33SE 504	Dundee, Parker Square [Bell Street, West]	Demolished.
TS_DH_57	NO33SE 681	Dundee, 11 Douglas Street	Extant. Review.
TS_DH_58	NO32NE 422	Dundee 52 Taylor's Lane	Demolished.
TS_DH_60	NO75NW 599	Montrose, Wellington St	Extant.
TS_DH_61	NO45SE 386	Forfar Brechin Rd/Lochside Rd	Extant. Review.
TS_DH_62	NO45SE 387	Forfar, New Road	Demolished.
TS_DH_74	NO53SE 62	Carnoustie, Links Avenue	Extant.
TS_DH_75	NO35SE 275	Kirriemuir, Roods	Extant. Review.
TS_DH_76	NO43SE 408	Dundee, Broughty Ferry, 51 Queen Street	Extant. Listed.

Note that the coastal battery at Broughty Castle (CD_Ea_01) was also the HQ and base for the Territorial Royal Garrison Artillery unit (No. 3 Company) that manned the battery there.

Some confusion has crept into the Dundee drill hall list and the locations of units in 1914–18. The 1911–12 Dundee Directory provides some clues. The directory refers to

‘the Drill Hall’ to mean the Parker Square drill hall (its telephone number is 365, and this is a useful clue to a unit’s HQ’s location, if one is not otherwise given); the directory specifically refers to ‘the Dudhope Drill Hall’ to mean that at 11 Douglas Street. Osborne’s ‘Albany Quarters’ seem to be part of the Parker Square drill hall complex.

Argyllshire & Bute

Fourteen drill halls were identified in the historical counties of Argyllshire and Bute, of which four were

previously recorded in Canmore. Seven survive and one of these is currently listed.

Table 26.

Data Code	Canmore No.	Name	Notes
TS_DH_160	NN05NE 35	Ballachulish, Loanfern	Extant. Review.
TS_DH_161	NR35NW	Bowmore, Jamieson Street/Main Street	Extant. Review.
TS_DH_162	NR72SW 323	Cambeltown, Kinloch Road	Extant. Review.
TS_DH_163	NM93SW	Connel drill hall	Demolished.
TS_DH_164	NS17NE	Dunoon, James Street	Demolished.
TS_DH_165	NM71NW	Easdale	Demolished.
TS_DH_166	NM71NW 17	Easdale Island	Extant. Review.
TS_DH_167	NN00NE	Inverary, Barn Braes	Demolished.
TS_DH_168	NR88NE	Lochgilphead	Extant. Review.
TS_DH_169	NR60NE	Southend	Extant. Review.
TS_DH_170	NM83SE	Oban, Albert Lane	Demolished.
TS_DH_171	NM82NE	Oban, Albany Street	Demolished.
TS_DH_172	NS06SE 528	Rothsay, Broadcroft Lane	Extant.
TS_DH_173	NR86NE	Tarbert	Demolished.

Ayrshire

Eighteen drill halls were identified in the historical county of Ayrshire, seven of which were previously

recorded in Canmore. Of these ten definitely survive and five are listed.

Table 27.

Data Code	Canmore No.	Name	Notes
TS_DH_143	NS24SE	Ardeer Halls, Shore Road	Extant.
TS_DH_144	NS24SW	Ardrossan, Castle Hill	Fragments only survive.
TS_DH_145	NS32SW 662	Ayr, 24 Wellington Square, drill hall	Extant. Listed.
TS_DH_146	NS32SW 658	Ayr, 16 Wellington Square, yeomanry riding school	Extant. Listed.
TS_DH_147	NS32SW 346	Ayr, Chalmers Road	Extant. Listed.
TS_DH_148	NS32SW 346	Ayr, 1–7 Burns Statue Square	Extant. Listed.
TS_DH_149	NS32SW	Ayr, Fort Street	Demolished.
TS_DH_150	NS35SE	Beith, Crumnock Street	Extant.
TS_DH_151	NS52SE	Cumnock, Townhead	Possibly extant.
TS_DH_152	NS24NE	Dalry, James Street	Extant. Listed
TS_DH_153	NS52NW	Largs, Brisbane Road	Demolished.
TS_DH_154	NS43NW 353	Kilmarnock, 43 Titchfield Street	Extant. Listed.
TS_DH_155	NS20NE	Maybole, Whitehall	Demolished.
TS_DH_156	NS15NE 64	Millport, Howard Street/5 Clifton Street	Extant. Listed.

Data Code	Canmore No.	Name	Notes
TS_DH_157	NS62NE	Muirkirk, off Main Street	Condition unknown
TS_DH_287	NS53NW	Muirkirk, Greenside	Demolished.
TS_DH_158	NS44NW	Stewarton, Standalane	Extant. Listed.
TS_DH_159	NS33SW	Troon	Not located.
TS_DH_174	NS52NW 45	Catrine, Bridge Lane	Demolished.

Banffshire

Six drill halls were recorded in the historical county of Banffshire. Three are new records for Canmore, although recorded by Osborne. Five are definitely extant, while the sixth may be. One is listed.

Table 28.

Data Code	Canmore No.	Name	Notes
TS_DH_15	NJ45SW 159	Keith, Union Street	Extant. Review.
TS_DH_23	NJ66SE 458	Banff, 6 Castle Street	Extant. Review.
TS_DH_24	NJ66SE 459	Banff, Bridge Street	May be extant.
TS_DH_25	NJ46NW 42	Buckie, West Church Street	Extant. Review.
TS_DH_26	NJ33NW 64	Dufftown, Church Street	Extant. Review.
TS_DH_38	NJ24SE 59	Aberlour, 7 The Square	Extant. Listed.

Caithness

There are records of seven drill halls in Caithness, of which six seem to have been in use in the First World War. All seven survive. One (the pre-1914 hall) is listed. The Castletown, Thurso (Sinclair Street) and Wick drill halls are all of some architectural interest.

Table 29.

Data Code	Canmore No.	Name	Notes
TS_DH_109	ND16NE 76	Castletown	Extant. Review.
TS_DH_110	ND15NW 99	Halkirk, Church Street	Extant. Review.
Out of use by 1914	ND16NW 207	Thurso, Olrig St	Extant. Review.
TS_DH_111	ND16NW 245	Thurso, Sinclair Street	Extant. Review.
TS_DH_112	ND35SE 228	Wick, Dempster Street	Extant. Review.
TS_DH_142	ND25SW 74	Watten	Extant.
TS_DH_289	ND06SE	Lieurary, Westfield	Extant.

Clackmannanshire

Five drill halls are known in this small county. Of these two were previously recorded in Canmore and three in Osborne (2006). Four of the five survive. One is listed. Two of the halls used pre-existing buildings (Alloa and Dollar). The other two surviving halls are architecturally ambitious.

Table 30.

Data Code	Canmore No.	Name	Notes
TS_DH_86	NS89SE 154	Alloa, Marshall. Ochil House	Extant. Listed.
TS_DH_87	NS89NE 161	Alva, 77 Park St	Extant. Review.
TS_DH_88	NS99NW 107	Clackmannan, North (Back) Street	Demolished.
TS_DH_89	NS99NE 135	Dollar, Hillfoot Road	Extant.
TS_DH_90	NS89SE 257	Sauchie, Rosebank	Extant. Review.

Dumfries & Galloway

Eleven drill halls were identified in the three historical counties within Dumfries & Galloway. Seven of these definitely survive, one of these is listed.

Table 31.

Data Code	Canmore No.	Name	Notes
<i>Kirkcudbrightshire</i>			
TS_DH_175	NX86SW	Dalbeattie, Burn Street	Extant. Review
TS_DH_178	NX65SE	Kirkcudbright, Dee Walk	Extant. Review
<i>Dumfriesshire</i>			
TS_DH_176	NX97NE 494	Dumfries, Newall Terrace	Extant. Listed
TS_DH_177	NS71SW	Kirkconnel, Main Street	Extant
TS_DH_179	NY18SW 166	Lockerbie, Main Street	Demolished
TS_DH_180	NX97NE	Maxwelltown, Dumfries, Lauricknowe Place	Extant
TS_DH_183	NS71SE	Sanquhar, Station Road	Extant. Review
TS_DH_184	NY16NE	Annan, Solway Street	Demolished
<i>Wigtownshire</i>			
TS_DH_181	NX46SW	Newton Stewart, Queen Street	?Demolished
TS_DH_182	NW95SE	Port Patrick, harbour	Demolished
TS_DH_285	NX06SE	Stranraer, Bellevilla Road	Extant. Review

Dunbartonshire

Records of ten drill halls in use in 1914-18 were found in Dunbartonshire, of which three were previously in Canmore. Only four survive. One is listed.

Table 32.

Data Code	Canmore No.	Name	Notes
TS_DH_185	NS37NE	Alexandria, 1-5 Overton Street	Extant. Review
TS_DH_186	NS37NE	Bonhill, Burn Street	Extant
TS_DH_187	NS56NW	Clydebank, North Douglas Street	Demolished
TS_DH_188	NS37NE	Dumbarton, Risk Street	Demolished
TS_DH_189	NS47NW	Dumbarton, Latta Street	Extant
TS_DH_190	NS47NW 65	Dumbarton, Latta Street, Hartfield House	Extant. Listed. Battalion HQ
TS_DH_191	NS28SE 151	Helensburgh, East Princes Street	Demolished.
TS_DH_192	NS38SE	Jamestown, Milton Loan	Demolished
TS_DH_193	NS67SE 101	Kirkintilloch, 19 Cowgate	Demolished
TS_DH_195	NS57SE	Milngavie, Strathblane Road	Demolished

East Lothian

Three drill halls are recorded in East Lothian. All are new records. Two are extant.

Table 33.

Data Code	Canmore No.	Name	Notes
TS_DH_266	NT57NE	East Linton, High Street	Extant. Review.
TS_DH_267	NT47SW	Tranent, Well Wynd	Demolished.
TS_DH_268	NT67NE	Dunbar, High Street	Extant.

Fife

Seventeen drill halls were recorded in Fife of which 14 survive, albeit one ruinous. Two of the extant buildings are listed, but some others are of some architectural pretension, for example, East Wemyss, Lochgelly, Newburgh, Clinton Street (an 18th-century church).

Some confusion has crept into the Dunfermline drill hall records. Osborne (2006) notes two drill halls in

Dunfermline: ‘Bruce House, 53 Elgin Street’ and ‘Bothwell House’, also Elgin Street. Both are currently TA depots. The latter is stated as being ‘pre-WW1’ but, while the building is indeed 19th-century, it was the office block of the large works behind it until the 1930s. He has omitted what appears to be a third drill hall (another Bruce Hall, but in Bruce Street), possibly because of the confusion of names.

Table 34.

Data Code	Canmore No.	Name	Notes
TS_DH_08	NT28NW 255	Burntisland, Leven St	Extant. Listed.
TS_DH_47	NT39NW 45	East Wemyss, 9-11 The Haugh	Extant. Review.
TS_DH_49	NT19SE 139	Cowdenbeath, Stenhouse Street	Demolished
TS_DH_51	NT08NE 92	Dunfermline, Bruce Street	Extant. Review.
TS_DH_54	NO50SE 379	Anstruther Easter, Backdykes	Extant. Listed.
TS_DH_59	NT08NE 484	Dunfermline, Bruce House, 53 Elgin Street	Extant. Review.
TS_DH_63	NT92SE 529	Kirkcaldy, Hunter Street	Extant. Review.
TS_DH_64	NO30SE 236	Leven North St	Extant
TS_DH_65	NO30SE 237	Leven, Glenlyon Road	Extant
TS_DH_66	NT19SE 100	Lochgelly Bank St	Extant. Review.
TS_DH_67	NO51NW 741	St Andrews, Market Street	Demolished
TS_DH_68	NO51NW 742	St Andrews, City Road	Demolished
TS_DH_69	NO21NW 329	Newburgh, Clinton Street	Extant. Review.
TS_DH_70	NO20SW 150	Leslie, Murray Place	Ruinous
TS_DH_71	NO42NE 178	Tayport, Queen St	Extant. Review.
TS_DH_73	NO31SE 403	Cupar Castlebank Rd	Extant
TS_DH_286	NO20NE 261	Falkland, South Street	Extant. Review.



Fig. 55. The front block of the Tayport drill hall. The building beyond has in the past been erroneously identified as the drill hall in the past, but the actual hall is clearly marked on 1893 and 1914 epoch OS maps. (G J Barclay)

Inverness-shire

Twelve drill halls were located in the historical county of Inverness-shire (taking in the Isle of Skye and the southern portion of the Western Isles). All had previously been noted by Osborne and six were already included in Canmore. Of the dozen known,

seven are definitely extant, while three have definitely been demolished. The identification and state of two are uncertain. Only one of the dozen, at Skeabost, is listed, but some seem of architectural merit, for example, Fort Augustus and Kingussie.

Table 35.

Data Code	Canmore No.	Name	Notes
TS_DH_99	NH54NW 168	Beauly, Croyard Rd	Demolished.
TS_DH_100	NG62SW 117	Broadford, Skye, Old Pier Lane	Possibly demolished.
TS_DH_101	NH30NE 5	Fort Augustus	Extant; identification not certain. Review.
TS_DH_102	NN17SW 95	Fort William, Mary Street	Extant. Review.
TS_DH_103	NH64NE 518	Inverness, Margaret Street	Demolished.
TS_DH_104	NH64NE 763	Inverness, Rose Street	Extant. Review
TS_DH_105	NH64NE 826	Inverness, Academy Street	Demolished.
TS_DH_106	NH70SE 97	Kingussie, High Street	Extant. Review.
TS_DH_107	NN28SE 30	Roy Bridge	Extant.
TS_DH_108	NG44NW 12	Skeabost, Skeabost House	Extant. Listed.
TS_DH_133	NF96NW 56	Lochmaddy	Condition unknown.
TS_DH_141	NG44SE 135	Portree	Extant.



Fig. 56. Fort William. (Google Streetview)

Kincardineshire

The project recorded four drill halls in Kincardineshire in use in 1914–18. Of these one was previously

recorded in Canmore. Three are extant. All were noted in Osborne. None is listed.

Table 36.

Data Code	Canmore No.	Name	Notes
TS_DH_09	NO69NE 126	Banchory, Kinneskie Road	Extant. Review.
TS_DH_27	NO77SW 92	Laurencekirk, High Street	Extant.
TS_DH_28	NO99NW 83	Portlethen, Jubilee Hall	Extant. Review.
TS_DH_29	NO88NE 383	Stonchaven, High Street	Demolished.



Fig. 57. Portlethen drill hall. (Google Streetview)

Lanarkshire (including much of Glasgow)

Lanarkshire has a large number of drill halls, especially in the more densely populated northern part, which includes much of Glasgow city centre, where there were many architecturally-ambitious halls. Many have been swept away in urban renewal.

Records of 38 halls were found, of which only eight were previously recorded in Canmore. Of the total 15 definitely survive and the survival of a 16th is unknown. Of these 15, five are listed.

Table 37.

Data Code	Canmore No.	Name	Notes
TS_DH_196	NS76NE	Airdrie, Craig Street	Demolished.
TS_DH_197	NS03NW 189	Biggar, Corn Exchange	Extant. Listed.
TS_DH_198	NS56NE	Blantyre, Logan Street	Extant.
TS_DH_199	NS75NW	Bothwell, Langside Road	Demolished.
TS_DH_200	NS75NW	Bothwell, Green Street	Demolished.
TS_DH_201	NS85SW	Carluke, Market Road	Demolished.
TS_DH_202	NS76NW	Coatbridge, Quarry Street	Demolished.
TS_DH_203	NS75NW	Hamilton, Bothwell Road/Muir St	Demolished.
TS_DH_204	NS75SE	Larkhall, Victoria Street	Extant. Review.
TS_DH_205	NS66SW	Rutherglen, Queen St	Demolished.
TS_DH_206	NS75NE	Motherwell, Whamond Street	Demolished.
TS_DH_207	NS86SE	Shotts, Windsor Street	Demolished.
TS_DH_208	NS83SW	Douglas	Demolished.
TS_DH_209	NS85SW	Law, Station Road	Demolished.
TS_DH_210	NS85NW	Newmains	Extant. Review.
TS_DH_211	NS84SE	Lanark, 40 Broomgate	Extant.
TS_DH_212	NS83NW	Lesmahagow, drill hall	Not known.
TS_DH_213	NS56NSE 1187	Glasgow (Pollockshaws) 230 Auldhouse Rd	Extant. Listed.
TS_DH_214	NS66NE	Uddingston, Main Street	Extant.
TS_DH_215	NS85SW	Wishaw, Dimsdale Road	Demolished.
TS_DH_216	NS75NE	Wishaw, Marshall Street	Demolished.
TS_DH_227	NS56SE	Cathcart, Earlsbank Avenue	Extant. Review.
TS_DH_228	NS59SW	Forth, Main Street	Demolished.
TS_DH_229	NS56NE 1916	Glasgow, Yorkhill Street	Extant. Listed.
TS_DH_230	NS56NE	Glasgow, Berkeley Street	Extant. Review.
TS_DH_231	NS56SE	Glasgow, Greendyke Street	Demolished.
TS_DH_232	NS56NE	Glasgow, West Princes Street	Extant. Review.
TS_DH_233	NS56NE	Glasgow, Cathedral Street	Demolished.
TS_DH_234	NS56NE 1974	Glasgow, Hill Street	Extant. Review.
TS_DH_235	NS66SW	Glasgow, Main Street, Bridgeton	Demolished.
TS_DH_236	NS56NW	Glasgow, Elder Street	Demolished.
TS_DH_237	NS56SE 2178	Glasgow, Govan, Whitefield Rd	Extant. Review.
TS_DH_238	NS56SE 1156	Glasgow, Govanhill, Coplaw St	Extant. Listed.
TS_DH_239	NS56SE	Glasgow, Govanhill, Coplaw St	Extant. Review.
TS_DH_240	NS56NE 2870	Glasgow, Govanhill, Butterbiggins Road	Demolished.
TS_DH_241	NS56NE	Glasgow, Hotspur Street	Demolished.
TS_DH_242	NS56NE 2176	Glasgow, Maryhill, Lochburn Road	Extant. Listed.
TS_DH_243	NS66NW	Glasgow, Keppochhill Road	Demolished.
TS_DH_288	NS56NE	Glasgow, Yorkhill Parade, drill hall & riding school	Demolished.

Midlothian (Including Edinburgh)

There are records of 15 drill halls or headquarters buildings in Edinburgh, probably in use in 1914. Of these only five are new to Canmore. Only three of the buildings have been demolished and of the 12 survivors nine are already listed.

Table 38.

Data Code	Canmore No.	Name	Notes
TS_DH_269	NT27SW 3128	Edinburgh, Grindlay St	Extant. Listed
TS_DH_270	NT27SE 3575	Edinburgh, 18 Dundonald Street	Extant. Listed
TS_DH_271	NT27NE 175	Edinburgh 124 McDonald Road	Extant. Listed
TS_DH_272	NT27SE 3466	Edinburgh, 28 York Place	Extant. Listed
TS_DH_273	NT27SE 474	Edinburgh, 5 Forrest Hill	Extant. Listed
TS_DH_274	NT27SW 3812 & 4553	Edinburgh, 31-35 Gilmore Place	Extant. Listed
TS_DH_275	NT27NE	Edinburgh, 89 East Claremont Street	Extant. Review
TS_DH_276	NT27NE	Edinburgh, 9 Brandon Terrace	Demolished
TS_DH_277	NT27SE	Edinburgh, 10 Dublin Street, Brigade HQ	Extant. Listed
TS_DH_278	NT36NW	Dalkeith, Eskbank Road	Demolished
TS_DH_279	NT27SW 3805	Edinburgh, 71 Gilmore Place	Extant. Listed
TS_DH_280	NT27NE 1113	Edinburgh, Dalmeny Street	Extant. Listed
TS_DH_281	NT26NE	Loanhead, 6 Academy Lane	Extant. Review
TS_DH_282	NT37SW	Musselburgh, New Street	Extant. Review
TS_DH_283	NT27SE 3206	Edinburgh, Easter Road, barracks and drill hall	Demolished.

Morayshire & Nairnshire

Nine drill halls were recorded in Moray and only one in Nairn, in the town itself. Of these two were recorded in Canmore and eight by Osborne. Eight are extant and one is listed. Some of the structures are of some architectural pretension, for example, Rothes Town Hall and Elgin Cooper Park.

Table 39.

Data Code	Canmore No.	Name	Notes
<i>Morayshire</i>			
TS_DH_30	NJ26SW 594	Elgin, Cooper Park	Extant. Review
TS_DH_32	NJ35NW 262	Fochabers, Westmorland Street	Demolished
TS_DH_33	NJ05NW 420	Forres, High Street	Extant. Review
TS_DH_34	NJ36SW 66	Garmouth, Spey Street	Extant. Listed
TS_DH_35	NJ02NW 162	Grantown-on-Spey, Forest Road	Extant. Review
TS_DH_36	NJ27SW 128	Lossiemouth, Church Street	Extant
TS_DH_39	NJ24NE 67	Rothes, New Street	Extant. Review
TS_DH_72	NJ16NW 125	Burghead, Grant Street	Demolished
TS_DH_284	NJ16NW	Hopeman, Farquhar Street	Extant
<i>Nairnshire</i>			
TS_DH_37	NH85NE 183	Nairn, King Street	Extant. Review

Orkney & Shetland

There are records of seven drill halls in Orkney and Shetland probably or certainly in use during the First World War. Canmore had records of two. Osborne had recorded the existence of the five not in Can-

more, but had not been able to locate the actual hall buildings for three – this has now been done, through the easier availability of historical mapping.

Table 40.

Data Code	Canmore No.	Name	Notes
TS_DH_134	HY32NE	Evie	Extant. Review.
TS_DH_135	HY40SE	St Mary's [Holm]	Extant.
TS_DH_136	HY51NW	Shapinsay	Extant. Review.
TS_DH_137	HY20NE	Stromness, Helliahole Street	Extant. Review.
TS_DH_138	HY22 SE 107	Twatt	Extant. Review.
TS_DH_139	HY41SW	Kirkwall, Junction Street	Extant. Review.
TS_DH_140	HU44SE 233	Lerwick, Market Street	Extant. Listed.

Perthshire & Kinross-shire

Seventeen drill halls in use in 1914 have been recorded in the historical county of Perthshire, with a further hall in Kinross-shire. Of the Perthshire ones one is more a unit HQ than a drill hall. At least 15 of the 18 survive (two were not located and only a single hall has been demolished). Nine of the halls were recorded in Canmore and six are listed, or listed in part. One hall has two Canmore records and

only one of the two main buildings is listed. Osborne recorded all but one of these halls. As in other counties some are attractive domestic-scale buildings (eg Pitlochry) while others, built that way or adapted from pre-existing buildings, are on a grander scale (eg Dunblane). Some are merely utilitarian (eg Kinross).

Table 41.

Data Code	Canmore No.	Name	Notes
<i>Perthshire</i>			
TS_DH_31	NO04SE 97 & 141	Dunkeld Cathedral St/High St	Extant. Part listed
TS_DH_42	NN91SW 130	Auchterarder, Montrose Road	Extant. Review
TS_DH_43	NN91SW 131	Auchterarder, Castle Wynd	Extant
TS_DH_44	NO04SW 168	Birnam, Perth Road	Extant. Listed
TS_DH_76	NN84NE 198	Aberfeldy, Home Street	Extant
TS_DH_45	NO14NE 252	Blairstown, Union Street	Extant. Review
TS_DH_48	NN82NE	Crieff, Meadow Place	Extant. Review
TS_DH_50	NO24SW 119	Coupar Angus, Causewayend	Extant. Review.
TS_DH_52	NO24NW 137	Alyth, St Ninian's Road	Not located.
TS_DH_77	NN86NE 56	Blair Atholl, High Street	Extant. Listed
TS_DH_78	NN60NW 113	Callander, South Church St	Extant. Listed
TS_DH_79	NN70SE 108	Dunblane, 124-6 High St	Extant. Listed
TS_DH_80	NO33SW 180	Invergowrie	Not located.
TS_DH_81	NO12NW 129	New Scone, Queens Rd	Extant. Review.
TS_DH_82	NO12SW 1243	Perth Tay St	Demolished
TS_DH_83	NO12SW 1047	Perth, 2 Charlotte St	Extant. Listed
TS_DH_84	NN95NW 98	Pitlochry, Armoury Road	Extant. Review.
<i>Kinross-shire</i>			
TS_DH_85	NO10SW 167	Kinross, Swansacre	Extant. Review.

Renfrewshire

There are ten drill halls in the historical county of Renfrewshire, of which two were previously recorded. Of the ten known, half have been demolished. One of the surviving five is already listed.

Table 42.

Data Code	Canmore No.	Name	Notes
TS_DH_217	NS45NE	Barrhead, Paisley Road	Extant. Review
TS_DH_218	NS27NW	Gourock, Binnie Lane	Demolished
TS_DH_219	NS27NE	Greenock, South Street	Extant
TS_DH_220	NS27NE	Greenock, Finnart Street	Demolished
TS_DH_221	NS27NE	Greenock, Esplanade, Seafield	Demolished
TS_DH_222	NS46SW 309	Johnstone	Extant. Review
TS_DH_223	NS46SE	Paisley, Whitehaugh Avenue	Extant. Review
TS_DH_224	NS46SE 323	Paisley, 76 High Street	Extant. Listed
TS_DH_225	NS37SW	Port Glasgow, King Street	Demolished
TS_DH_226	NS56NW	Renfrew, Campbell Street	Demolished

Ross & Cromarty

In the historical county of Ross & Cromarty (including the northern portion of the Western Isles) there are records of 14 drill halls, all of which had been noted by Osborne, and five had previously been recorded in Canmore. Eleven of the 14 definitely

survive, two have definitely been demolished, while the condition of the last is unknown. Of the survivors three are listed. Of the other eight some may be of architectural merit and interest, for example, Cromarty, Gairloch and Munloch.

Table 43.

Data Code	Canmore No.	Name	Notes
TS_DH_119	NC00NW 54	Achiltibuie, village hall	Extant. Review
TS_DH_120	NH66NE 145	Alness, Perrins Road	Possibly extant.
TS_DH_121	NH76NE 273	Cromarty, High Street	Extant. Review
TS_DH_122	NH75NW 160	Fortrose, Cathedral Square, Mackerchar Hall	Extant. Listed
TS_DH_123	NG87NW 51	Gairloch, Auchtercairn	Extant. Review
TS_DH_124	NH76NW 134	Invergordon, Joss Street	Demolished
TS_DH_125	NG72NE 111	Kyle of Lochalsh, Church Road	Extant
TS_DH_126	NG93NW 9	Lochcarron, Main Street	Extant. Review
TS_DH_127	NH55SW 86	Muir of Ord, Seaforth Road	Extant. Review
TS_DH_128	NH65SW 78	Munloch, Millbank Road	Extant. Review
TS_DH_129	NH78SE	Tain, Castle Brae	Demolished
TS_DH_130	NH19SW 28 & 71	Ullapool, Custom House Street	Extant. Listed
TS_DH_131	NH55NE 195	Dingwall, Ferry Road	Extant. Review
TS_DH_132	NH43SW 184	Stornoway, Church Street	Extant. Listed

Roxburgh, Selkirk, Peeblesshire & Berwickshire

The four border counties had 14 drill halls in use in 1914, of which 11 are new records to Canmore. A fifteenth, pre-WW1, record is also included, to avoid confusion with a slightly later hall in the same street, but on the opposite side of the road (Peebles, Walk-

erhaugh). Of the 15 recorded halls 12 survive, and of these four are already listed and seven would repay further attention. The current survival of one hall (Kelso) is not known.

Table 44.

Data Code	Canmore No.	Name	Notes
<i>Roxburghshire</i>			
TS_DH_252	NT43NE	Galashiels, St John Street, volunteer hall	Extant. Listed
TS_DH_253	NT43NE	Galashiels, Paton Street	Extant. Review
TS_DH_254	NT51NW	Hawick, Dovecot Street	Demolished
TS_DH_255	NT62SE 64	Jedburgh, Abbey Place, Public Hall	Extant. Listed
TS_DH_256	NT73SW	Kelso, Bowmont Street	Possibly extant
TS_DH_257	NT53SW 106	Melrose, Abbey Mill	Extant. Review
TS_DH_258	NT53SE	St Boswells, Main Street, village hall	Extant. Review
<i>Selkirkshire</i>			
TS_DH_259	NT42NE 188	Selkirk, Back Row	Extant. Listed
<i>Peeblesshire</i>			
TS_DH_260	NT33NW	Innerleithen, High Street	Extant
TS_DH_261	NT24SE	Peebles, Walkerhaugh, drill hall (1906)	Extant. Review
TS_DH_not WW1	NT24SE	Peebles, Walkerhaugh, drill hall (1897)	Extant – included to avoid confusion with 1906 hall on other side of street. Review.
<i>Berwickshire</i>			
TS_DH_262	NT85NE	Chirnside, High Street	Extant. Review.
TS_DH_263	NY83NW	Coldstream, Church Lane	Extant
TS_DH_264	NT75SE 125	Duns, Langtongate	Extant. Review
TS_DH_265	NT53NE	Earlston, Westfield Road	Demolished

Stirlingshire

Eight drill halls in the historical county of Stirlingshire have been recorded. Of these Canmore previously had records of two. All were recorded by

Osborne. Three are extant and the status of one building is not known. Two of the halls are listed.

Table 45.

Data Code	Canmore No.	Name	Notes
TS_DH_91	NS79NE 112	Bridge of Allan, Henderson St Museum Hall	Extant. Listed
TS_DH_92	NS88NW 103	Cowie, Station Road	Extant
TS_DH_93	NS87NE 209	Falkirk, Cow Wynd	Extant. Review.
TS_DH_94	NS98SW 99	Grangemouth, Talbot St	Demolished
TS_DH_95	NS88SE 289	Stenhousemuir, Tryst Rd	Demolished
TS_DH_96	NS88SE 290	Larbert	Demolished
TS_DH_97	NS79SE 484	Stirling, Princes St	Extant. Listed
TS_DH_98	NS77NW 176	Kilsyth, Shuttle St	Demolished
TS_DH_194	NS67NW	Lennoxton, Greenhead Road	Demolished

Sutherland

There are records of six drill halls in the historical county of Sutherland, all of which survive. Osborne noted five of them, while Canmore had records of

two. Of the six, two are listed. Some of the halls are of some architectural interest, or even pretension, for example, that at Brora.

Table 46.

Data Code	Canmore No.	Name	Notes
TS_DH_113	NH69SW 149	Bonar Bridge, Lairg Road	Extant. Review
TS_DH_114	NC90SW 90	Brora, Gower Street	Extant. Review
TS_DH_115	ND01NW 114	Helmsdale, Dunrobin Street	Extant. Review
TS_DH_116	NH78NE 81	Dornoch, The Square	Extant. Listed
TS_DH_117	NC80SW 67	Golspie, Old Bank Street	Extant. Listed
TS_DH_118	NC50NE 141	Lairg, Main Street	Extant.

West Lothian

West Lothian had eight drill halls in use in 1914–18, of which all but one survive. Unusually, four of the halls (Bathgate, Fauldhouse, Broxburn and West Calder) are clearly variations on the same design – a door with one or two bay windows under a shared shallow porch; a first floor triple window – usually a Venetian window – and a second floor window in a

gable to the street. All the halls were associated with the 10th (Cyclist) Battalion, the Royal Scots. Only one of the halls was previously registered on Canmore. A further example is known as an outlier, in Midlothian, in the village of Loanhead, associated with another Royal Scots battalion. The four variants merit further investigation.

Table 45.

Data Code	Canmore No.	Name	Notes
TS_DH_244	NS96NE 119	Bathgate, Torphichen Street	Extant. Review
TS_DH_245	NS98SE	Bo'ness, Corbiehall	Extant. Reviewed
TS_DH_246	NS96NW	Armadale, High Academy Street	Extant
TS_DH_247	NS96SW	Fauldhouse, Bridge Street	Extant. Review
TS_DH_248	NT17SW	Kirkliston, Main Street	Extant. Review
TS_DH_249	NT07NW	Linlithgow, Hiagh Street	Demolished
TS_DH_250	NT07SE	Broxburn, West Main Street	Extant. Review
TS_DH_251	NT06SW	West Calder, Young Street	Extant. Review



Figs. 58 and 59. The drill halls, clearly by the same hand, at Broxburn (left) and Fauldhouse. (Google Streetview)

4.7.5 [TS_FR] Firing Ranges

The WW1_Audit subset of the Canmore data included 54 records for rifle and firing ranges. Of these, some could be identified as part of larger training establishments and are included with them in the category TS_TG. The remainder – the majority – are ranges recorded on 1st and 2nd and sometimes later edition OS maps. In the majority of cases I found no easily accessible published information on period of use. A handful of ranges lay adjacent to or very close to drill halls known to have been in use in the First World War (eg Peterculter and Dingwall); others lay within 1 or 2km, while others were longer distances away.

Often, the distance from a likely-associated drill hall was determined by the availability of a suitable site. Wherever ranges were set up, the first priority was safety – to ensure that stray shots would not endanger passers-by. They were therefore set up very often close to beaches (eg Dingwall), in the nearest rough ground (eg on the slopes of the Eildon Hills at Melrose), on arable land firing towards woodland,

or on the lower terraces of rivers and burns, where the face of a higher terrace lay behind the targets. Thus, a range might have to be some distance from a unit's base. Perhaps the difficulty of finding suitable sites explains the great number of drill halls that were provided with indoor shooting ranges.

There are likely to be firing ranges marked on 2nd and 3rd edition maps that have not yet been incorporated into the Canmore record, and I made no systematic attempt to find unrecorded firing ranges. In the end, about 20 ranges could be identified where there was either evidence of use in the First World War, or where such use seemed reasonably likely. It is entirely possible that evidence may turn up that some of the 'rejected' ranges were after all in use in the First World War.

I have not suggested that any of these ranges require further review for conservation purposes.

Table 48. Firing ranges.

Data Code	Canmore No.	Name	Notes
TS_FR_01	NH55NE 167	Dingwall	Upstanding remains.
TS_FR_02	ND34NE 15	Old Wick	Unknown condition.
TS_FR_03	NC70SW 141	Allt bad a' Chrasgaidh	Upstanding remains.
TS_FR_04	NH76NE 294	Cromarty	Upstanding remains.
TS_FR_05	NH75NE 27.2	Fort George	Upstanding remains.
TS_FR_06	NJ06SW 108	Findhorn Bay, Volunteers Rifle Range	Upstanding remains.
TS_FR_07	NJ51SE 40	Guisse Wood	Upstanding remains.
TS_FR_08	NJ80SW 159	Cornhyhaugh	Unknown condition.
TS_FR_09	NC00NW 44	Achlochan	Upstanding remains.
TS_FR_10	NN79NE 27	Dellmore of Kingussie	Upstanding remains.
TS_FR_11	NY18SE 51	Broom Hill	Unknown condition.
TS_FR_12	NS06SE 408	Bute, Craigberoch Wood	Unknown condition.
TS_FR_13	NT57NW 145	Garleton Hills	Unknown condition.
TS_FR_14	NN80SW 27	Whiteston	Upstanding remains.
TS_FR_15	NT53SW 110	Melrose, Dingleton Common	Upstanding remains.
TS_FR_16	NO31NW 61	Denmuirhill	Upstanding remains.
TS_FR_17	NS27NW 145	Gourock, Drumshantie	Demolished.
TS_FR_18	NT16NE 117	Malleny	Unknown condition.
TS_FR_19	NT27SE 3950	Edinburgh, Holyrood Park, Hunter's Bog	Upstanding remains.
TS_FR_20	NO12SE 108	Kinfauns Castle Policies	Unknown condition.

4.7.6 [TG] Army Training Areas

The places listed here range from isolated practice trenches to large training areas. The isolated trenches can be associated with other military facilities nearby (eg those near Invergordon and Stirling Castle, and in the Castlelaw/Dreghorn training area). Examination of historical aerial photographs of the Stobs Camp area may well reveal such trenches there too.

Firing ranges are included below only when part of a larger training area. Survival

The two extant sections of practice trench near Invergordon are probably worth further investigation, as are the six large and two smaller sections of trench south of Edinburgh on Castlelaw/Dreghorn.

Table 49. Training areas and facilities.

Date Code	Canmore No.	Name	Notes
TS_TG_01	NH67SE 61	Rhicullen, practice trenches	Visible. Review.
TS_TG_02	NH77SW 77	Broomhill, practice trenches	Surviving as field monument. Review.
TS_TG_03	NH75NE 27.0 &27.2	Fort George	In active use. Unlikely that WW1 material survives later re-working.
TS_TG_04	NN80SW 23.0; 23.2; 23.3	Sheriffmuir	Scheduled apart from 23.3
TS_TG_05	NO53SE 37; NO53SW 83, 84, 92	Barry Links	Vast multi-period training landscape. In very active military use.
TS_TG_06	NS79SE 890	Stirling, King's Park	Reburied.
TS_TG_09	NT26NW 472 & 512 NT26SW 117 & 135	Dreghorn, Castle Knowe, Castlelaw	Large training area still in part in active use. At least six major sets of WW1 practice trenches
TS_TG_10	NT28NE 203	New Kinghorn	Cropmark
TS_TG_11	NT40NE 56; 57	Stobs Camp; training camp; trenches; firing ranges	Significant surviving remains requiring further investigation. Review.
TS_TG_12	NT48SE	Gullane east	On map WO 78/4396
AD_20		Musselburgh blockhouse	Trench marked on map of anti-invasion defences on file WO 78/4396 as for instructional purposes
CD_Ea_01b		Broughty Castle, Coast Artillery Training School	Included under Coast defence.



Fig. 60. The Stobs training camp in use before the First World War.



Fig. 61. Aerial photograph of the Stobs training camp, with its First World War extent (RCAHMS).

5. SOURCES OF ILLUSTRATIONS

The original contract document laid stress on identifying sources of illustrations of sites. Wherever possible illustrations were identified from web sources and linked to the relevant access records. However, the significantly larger than expected number of sites for which basic records had to be created, and the unexpected amount of work in revising some categories of record, meant that less time could be spent on this aspect of the work. In particular, resources were not available for the level of visiting of repositories that would have been required. It was agreed with the project steering group that a prioritised list of archives and other sources would be provided instead.

National Museums Scotland - Scottish War Museum, Edinburgh

http://www.nms.ac.uk/our_museums/war_museum.aspx

Contact: Dr Stuart Allan [s.allan@nms.ac.uk]

High priority for further image research. Preliminary contact with the museum suggests that they hold relevant images relating to the Inchkeith Fort, hospitals in Edinburgh (including in the Castle), soldiers at Gullane in 1916 (where there were anti-invasion defences). Appointment necessary.

National Museums Scotland - Museum of Flight, East Fortune

http://www.nms.ac.uk/our_museums/museum_of_flight.aspx

Contact: Ian Brown, Asst Curator, Aviation

[I.Brown@nms.ac.uk]

High priority for further image research. Many images credited to NMS - Museum of Flight have been used in books and articles about military aviation. The collection will be a good source for images on this subject. There is no on-line catalogue. Some images are digitised on SCRAN. Appointment necessary.

Imperial War Museum, London

<http://www.iwm.org.uk/collections-research/research-facilities>

High priority for further image research. I made a visit to the IWM photographic collection and have supplied photocopies of relevant images to RCAHMS; it is clear that there are likely to be many more relevant images, but they will not be easy to

find. The IWM's online catalogue is not a useful tool in finding images, as it appears to be a partial catalogue only. While the card-index catalogue on-site can be very useful, is arranged by an eclectic selection of subjects, and experience in its use (and plenty of time) is needed for a thorough search. Appointment necessary.

National Army Museum, Chelsea, London

<http://www.national-army-museum.ac.uk/>

Medium priority for further picture research. The NAM has an online search facility at <http://www.nam.ac.uk/inventory/objects/>. The search 'Scotland' and 'First World War' produces 18 results, of which some seem likely to be of interest, including:

2000-10-675 Royal Garrison Artillery, 'Inch[keith/garvie?] Garrison'.

1995-11-342 Photographs relating to Eden hall Convalescent Hospital, Coldstream

1984-03-64 Three photograph of PoW camps, Hawick (presumably Stobs?) and Wakefield.

It is not known how well-catalogued NAM material is, and it would be unwise to rely to any degree on the online database.

Fleet Air Arm Museum

<http://www.fleetairarm.com/naval-aviation-research.aspx>

High priority for further picture research. Many images credited to the RNAS Museums have been used in books and articles about military aviation. The collection seems likely, therefore, to be a good source for further images on this subject. Accessing it is, however, problematic. There appears to be no on-line catalogue. There is a £30 a day charge for access to the archive. The museum is at RNAS Yeovilton, in Somerset, and is not easy of access.

Royal Artillery Museum, Woolwich,

<http://www.firepower.org.uk/index.php/research/our-research-policy/>

Medium priority for further picture research. There is no online catalogue and it is not clear what Scottish home front material may be available. It is likely, at least, that there will be material on Royal Garrison Artillery coast defence units. £10 per day access charge.

Royal Engineers Museum

<http://www.re-museum.co.uk/>

Medium priority for further picture research. An online catalogue is under construction but is not available as of 31 August 2013. It is not clear what Scottish home front material may be available. Access to the library is difficult. It is open only on Tuesdays and Wednesdays, between 9.30 and 4.30 and two weeks' notice is required.

Royal Navy Museum, Portsmouth

<http://www.royalnavalmuseum.org/research.htm>

Low priority for further picture research. There is no online catalogue and it is not clear what material may exist on the Navy's shore-based installations. It is more likely that material relating to the construction and operation of installations will be found in the National Archives.

Local Libraries, Museums and Archives

From reproductions in publications, it is clear at least that Orkney libraries and archives has a good collection of wartime material. No contact has been made with any local repository and further investigation will be required to establish the likely value of each museum, library or archive collection to the project.

Regimental Museums

There are ten museums related to Army units raised in Scotland. It is likely that the photographic collections held by the museums are largely made up of photographs and albums donated by former soldiers or their families. The relevance of the holdings of the regimental museums to the historic environment will be determined by chance – whether appropriate material has been donated. Not surprisingly, most of the photographic material was of service abroad or, where photographs had been taken in the UK, they were most often posed photographs of individuals or groups of people, rather than of places in use. It is suggested that the museums of the Scottish regiments are a relatively low priority for photographic searches. The contact details are as follows:

Argyll & Sutherland Highlanders, Stirling Castle

<http://www.argylls.co.uk/>

Contact: Rod Mackenzie [rhq@argylls.co.uk]

Ayrshire Yeomanry, Ayr

<http://www.armymuseums.org.uk/museums/0000000014-Ayrshire-Yeomanry-Museum.htm>

Contact: Major Christopher Roads
[ayryeomuseum@googlemail.com]

Black Watch, Balhousie Castle, Perth

<http://www.theblackwatch.co.uk/>

Contact: Richard McKenzie, archivist

The Cameronians (Scottish Rifles), Hamilton

<http://www.cameronians.org/museum/index.html>

Contact: Aileen Anderson
[Aileen.Anderson@southlanarkshireleisure.co.uk]

Fife & Forfar Yeomanry, Cupar

<http://www.armymuseums.org.uk/museums/0000000033-Fife-and-Forfar-Yeomanry-Collection.htm>

Small collection only.

Contact: Capt. J Preece
[QOY-CSQN-PSAO@mod.uk]

Gordon Highlanders, Aberdeen

<http://www.gordonhighlanders.com/>

Contact: Jasper Ericsson
[jesper.ericsson@gordonhighlanders.com]

The Highlanders (Queen's Own Cameron Highlanders; Seaforth Highlanders), Fort George

<http://www.thehighlandersmuseum.com/>

Contact: Amanda Galleitch
[Amanda@thehighlandersmuseum.com]
£15 per day charge for access. This collection was visited and there were no photographs of use to the project.

King's own Scottish Borderers, Berwick upon Tweed

<http://www.kosb.co.uk/museum.htm>

Royal Highland Fusiliers (Royal Scots Fusiliers & Highland Light Infantry), Glasgow

<http://rhf.org.uk/rhf/index.php>

Royal Scots Dragoon Guards, Edinburgh

<http://www.scotsdgmuseum.com/>

Annex A: the Defences of Inchkeith

Summary Chronology

Inchkeith was the key fortress in the defence of the Forth and was fortified from the 16th century. Modern fortification was commenced in 1879 (Fig. 62), when four 10-inch Rifled Muzzle Loading guns were mounted in three forts, at the west (No. 1), the north (No. 2) and the south (2 guns – No. 3 Fort) WO 192/251). A letter code was introduced in 1900 for the batteries on the island: the codes were changed twice by 1918 and then replaced by another system prior to the Second World War, making description confusing. Below, the 1916 codes are used, with annotation where different codes were used earlier, or had been changed by 1918.

In 1891 the two guns at No. 1 and No. 2 Forts were replaced by two 6-inch Breech Loading guns (WO 192/251). In 1892 the first 9.2-inch gun (a Mk I) was mounted in the southern part of the island (to become “B” Group). In 1893 two 4.7-inch Quick Fire guns were emplaced, to become Groups “H” and “F” respectively by 1916 (Group “H” became “L” by 1918).

In 1899–1900 the two remaining 10-inch guns, at the south end of the island, in Fort No. 3, were replaced by two 6-inch Mk VII BL guns (“A” Group).

In 1901 two 6-pdr QF Nordenfeldt guns were supplied to the island, but it is not known where these were mounted, or when they were removed, and four 5-inch BL guns were supplied for training, probably emplaced in an existing training battery on the SE side of the island.

In 1902–3 the southern 4.7-inch gun (“F” Group) was replaced by a 9.2-inch Mk X gun and in 1903–4 the same was done for the northern 4.7-inch gun (“H” Group, called “L” Group by 1918).

A summary of the armaments of the Forth batteries in June 1903 listed both approved number of guns, and the actual number in place on the 15th. The *approved* armament of the whole of Inchkeith was three 9.2-inch guns (the old Mk I and two Mk X) and five 6-inch (one Mk VI and four Mk VII). Of these, only the old Mk I 9.2-inch, the Mk VI 6-inch and two of the four Mk VIIs were actually in place. The old 9.2-inch that had been put in place in 1892 was replaced with a Mk X gun over the period 1905–7. In 1903–4 the remaining single 6-inch gun at Fort No. 2 was removed to make way for two 6-

inch guns in new emplacements (“M” Group; this had been called “L” Group from 1900 until some point before 1916).

In 1906 the four 6-inch guns in the two batteries at north and south ends of the island (“M” and “A” Groups) were struck off the approved armament of the island, but retained until 1909 for training. In 1914 the approved armament of the island comprised only the three 9.2-inch guns and the four defensive machine-guns.

In April 1915 the approved armament of the island was increased by four 6-inch guns, which were mounted in the existing emplacements at the north and south ends of the island (known as “M” and “A” Groups respectively at that date). One from Group “M” was moved in 1916 to the existing 6-inch emplacement in Fort No. 1, at the west (called “H” Group in 1916 but later renamed “L”). This emplacement was reconstructed to take

the new gun, and a second emplacement was built adjacent to it, to the north, and yet a further emplacement was built a few metres to the north. These last two emplacements accommodated the further strengthening of the island’s defences by the addition of two more 6-inch guns. This battery of three guns was called “H” in 1916 (with the northern gun known as “H” Group Advanced Position; by 1918 the advanced gun was known as “O” Group, and the other two guns as “L”).

Evidence

The Fort Record Book notes the application of the first letter codes to the batteries built or planned in 1900 as A, B, F, H, I and L but does not state which is which. The armament list of 1903 (WO 78/5179) lists the levels of the eight guns then on the island. A map of the island on file WO 78/5162 also provides bench mark heights for each battery (in square brackets below) which allows the letters to be allocated.

A1 A2 70ft [Fort No 3 - height not legible on map]
I1 I2 91ft [Fort No 2, “M” Group in 1916 - 90.3ft on map]
L1 127ft [Fort No 1, “H” Group in 1916 - 126.7ft]
H1 138ft [Northern 9.2-inch gun - “L” Group in 1916 - 136.7ft]
F1 170ft [Middle 9.2-inch gun - “F” Group in 1916 - 170ft]
B1 107ft [Southern 9.2-inch gun - “B” Group in 1916 - 108ft]

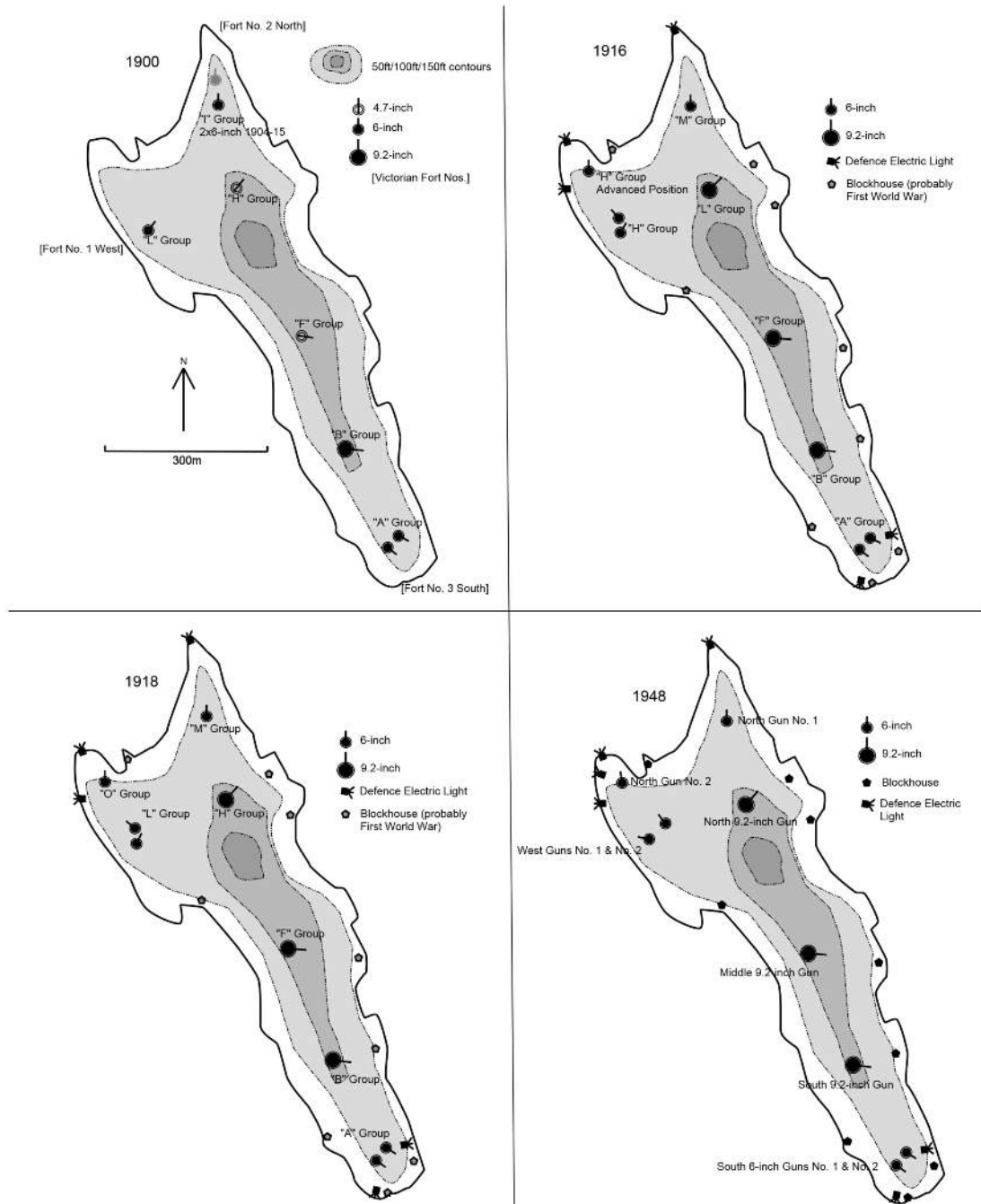


Fig. 62 Maps of Inchkeith showing the armament in 1900, 1916, 1918 and 1948, and the location and numbering of the Victorian forts.

“A”, “B” and “F” groups seem to have been known by the same letter throughout and were marked as such on a number of plans. The name “H” Group was applied first to the northern 9.2-inch gun (in the 1903 table); and then to the single gun battery occupying Fort No. 1 and was applied to it at the time of the reconstruction of the emplacement, the addition of a second emplacement and the construction of the ‘Advanced Position’ in 1915-16. The battery at the north end of the island, in the old Fort No. 2, was “I” Group in 1903. The October 1916 labels are attested by a table attached to a definitive survey of the defences of the Forth (WO 78/5179) and by an OS map with 1915 and 1916 pencilled dates in WO 78/5162: the table lists the armament of each group and lists the “H” Advanced Position battery separately.

Further confusion is caused by an undated and untitled drawing on WO 78/5162. This shows four of the batteries - that occupying the Victorian Fort No. 1, that at Fort No. 2 and the northern and middle 9.2-inch emplacements. On this drawing the letters are redistributed - the battery on Fort No. 2 North is “L”; that on Fort No. 1 West is “H” and the northern 9.2-inch gun is “I”. These letters are written lightly in pencil and the number allocation may be an error, rather than yet another redistribution.

References

Files at the National Archives, Kew

WO 78/5158
WO 78/5159
WO 78/5161
WO 78/5162
WO 78/5168
WO 78/5180
WO 192/251 [Fort Record Book]

Annex B: Preliminary List of Historical Assets below High Water Mark

One of the preliminary products of the project was a provisional list of designated marine assets with a First World War connection. This is that list.

Protection of Wrecks Act 1973

HMS Campania. Aircraft carrier sunk in River Forth.

Protection of Military Remains Act 1986

These wrecks are not primarily designated for their heritage value, but as war graves. Those vessels in Scottish waters designated by the Act are as follows:

Controlled sites

HMS Hampshire, off Marwick Head, Orkney, 1916

HMS Natal, Cromarty 1915 [wreck has been salvaged and dynamited]

HMS Vanguard, Scapa Flow, 1915

Designated vessels

HMS K4, Isle of May, 1918

HMS K17, Isle of May, 1918

HMS Duke of Albany, off Orkney, 1916

Ancient Monuments and Archaeological Areas Act 1979

The seven remaining wrecks (four cruisers and three battleships) of the German High Seas Fleet, scuttled in Scapa Flow, 1919.