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Wiltshire
Values Study

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GLOSSARY

BAC - Bristol Aeroplane Company

BSA - Birmingham Small Arms Company

Burlington - Code name for 3 Site used between 1961-1963

CAD Corsham - Central Ammunitions Depot Corsham

CGWHQ - Central Government War Headquarters

CPRE - Council for the Protection of Rural England

EH - English Heritage

HMSO - Her Majesty's Stationery Office

HPA - Heritage Partnership Agreement

GIS - Geographical Information Systems

GL - Goods Lift

MAP - Ministry of Aircraft Production

MOD - Ministry of Defence

MOS -Ministry of Supply

MSLP - Main Surface Loading Platform (Tunnel Quarry)

OA - Oxford Archaeology

OS - Ordnance Survey

PL - Public Lift

QF sites - fire decoys to simulate a site which had already been attacked

QL sites - light decoys used to represent military sites

RE - Royal Engineers

RNSD - Royal Navy Storage Depot

SSR - Strategic Steam Reserve

WO - War Office

3 Site - Area used as the Central Government War Headquarters within Spring Quarry referred to under the code names of Subterfuge, Stockwell, Burlington, Turnstile, Chanticleer and Peripheral.

MOD CORSHAM, WILTSHIRE

SUMMARY

This Values Study was commissioned by English Heritage, and follows a Characterisation Study completed by Oxford Archaeology in 2008. This work was aimed at gaining a holistic understanding of the site and the relationship between its different entities. It provided the basis for the identification of significance by describing its historic fabric, how and why it developed over time and identified areas with a high level of preservation. An Artefacts Study (Bennett 2007a and 2007b) undertaken in conjunction with the Characterisation Study enhanced understanding of the surviving artefacts, particularly those relating to its Cold War use. The objective of this Values Study is to build on this work, and to determine the overall significance of the complex and key components within in. It considers how it compares with other sites by identifying those with similar values to enable an appreciation of Corsham's relative importance. To provide sufficient understanding, it is necessary to set the place in the context of the social and cultural circumstances from which it evolved and describe those which it produced. This study therefore also describes how the site has affected the local landscape and inhabitants, as well as the secrecy, myths and legends which have evolved and contributed to the communal and aesthetic value of MOD Corsham.

The Characterisation Study established that the use of the site commenced in the 19th century with the quarrying of a labyrinth of mines including Tunnel, Spring, Clift, Groundstone, Sands, Copenacre and Pickwick quarries. In the 20th century these quarries were converted for defence uses, creating areas of highly preserved quarrying remains within the east and west lungs of Spring Quarry. The Second World War instigated conversion of the Corsham complex, the most extensive areas were in Tunnel Quarry which was converted to an ammunition depot opening in 1938, and Spring Quarry which from 1943 was used as an Ministry of Aircraft Production Factory. The smaller Browns Quarry was also used as a Fighter Command Centre, and part of Tunnel Quarry was converted to a South-West Signals Centre. Following the end of conflict much of the complex continued in use with the exception of the MAP Factory, which closed in 1945. This allowed for the later use of the space during the Cold War when the northern section commenced operation as a Central Government War Headquarters from 1961. From here the Prime Minister, a nucleus of ministers and senior officials and c. 4,000 staff would have conducted the survival and restoration phases of the Cold War following nuclear attack on the UK.

This Values Study builds on and enhances this understanding; it is divided into three parts, the first part is essentially a synopsis of the Characterisation and Values studies; it attributes and describes the overall value of MOD Corsham, its key components and the evidential, historical, aesthetic and communal values that contribute to this. The second part of the report is a comparative study, which defines six key components of the complex and establishes the rarity and survival of these against other sites locally, nationally and where appropriate internationally. The third and final parts describe the impacts of the military complex on the surrounding landscape and its population, as well as the secrecy, myths and legends associated with the historic use of the site. Outreach was also an element of the project including a public presentation, a specialised seminar, web pages, postcards and posters which are described at the beginning of this report. These were aimed at communicating the findings of our research, and also engaging with the local community, academics and professionals to fully appreciate why and how MOD Corsham is valued.

The research establishes that MOD Corsham is a complex site encompassing layers of significant historical development both below and above-ground from the 19th and 20th centuries. Overall these are considered to be of outstanding value. Within this the key components of the 19th and early 20th

century stone quarries, the murals of Olga Lehmann (1912-2001) and Central Government War Headquarters are also of outstanding value. The high level of survival of Tunnel Quarry's ammunition depot is of outstanding/ considerable value, the Second World War above-ground architecture is of considerable value and the surviving evidence of the MAP factory of moderate value. By understanding such values it is possible to inform decisions about MOD Corsham's future, and the type of management which may be appropriate to safeguard its long-term preservation. The historic environment is constantly changing both physically but also in the perceptions and values attributed to it; this is particularly true of modern military archaeology as new information is released and more researched undertaken. It is therefore advised that the understanding and values attributed to MOD Corsham are re-evaluated and if necessary enhanced in the light of new information, particularly relating to its Cold War remains. A programme of recording and assessment of the above and below-ground archaeological remains, and the identification of levels of risk to the historic fabric and artefacts is also recommended. This will mitigate against future deterioration and change and ensure an archive is made of the site for posterity.

1 INTRODUCTION

1.1 BACKGROUND TO THE STUDY

1.1.1 Oxford Archaeology (OA) has been commissioned to complete a Values Study ('the study') of MOD Corsham ('the site') by English Heritage (EH). This work follows a Characterisation Study (OA 2008) which took a holistic approach to understanding the overall historic development of the site. The output to this project included Geographical Information Systems (GIS), and a report providing a clear understanding of its use and development from the 19th Century to the present day.

1.1.2 This Values Study builds on the Characterisation Study, aimed in part at gaining a greater appreciation of the value of the site in the broader international, national and local context. The social, economic and cultural impact of the military developments and the secrecy, myths and legends associated with the complex also form a focus of research. This work has involved outreach elements including a public presentation in Corsham, a specialist seminar, a website and publicity material. The study has also been enhanced by oral history accounts from those that worked below-ground and lived in the locality.

1.2 OUTLINE SITE DESCRIPTION

1.2.1 MOD Corsham in Wiltshire is located on the fringes of the current built-up area of Corsham, c.5 miles to the south- west of Chippenham (Fig.1). It encompasses an underground complex of 286 acres, and an above-ground overlying infrastructure including four MOD operational sites: Basil Hill, Rudloe, Hawthorn and Copenacre. The Characteristion Study considered the historic development of these operational sites and the following quarries: Tunnel, Spring, Clift (including Browns No.4), Groundstone, Copenacre and Pickwick (OA 2008 Fig.2).

1.2.2 This Values Study will also consider this area, particularly Tunnel and Spring quarries, but will place them within a broader context by accessing the impacts of their conversion on the local area. This will focus on Corsham, but will also consider areas such as Bath and Chippenham where workers were billeted and hostel sites constructed.

1.3 PLANNING AND DEVELOPMENT CONTEXT

1.3.1 At present the Study Area below-ground has no statutory protection. Above-ground, there are a number of Listed Buildings within the locality although these are largely domestic dating from the 17th and 18th centuries and their protection is not related to any industrial or military function.

1.4 HISTORICAL OVERVIEW

1.4.1 The industrial development of the site commenced with the construction of Box railway tunnel in 1841, which in exposing Bath stone led to extensive quarrying. The resulting vast labyrinth of interconnecting quarries and tunnels provided the resource and infrastructure for the later military use of the site.

1.4.2 During the 1930s rearmament period, huge areas of the site were requisitioned by the War Office from c.1935 and adapted under the supervision of the Royal Engineers. Much of the conversion work was completed by thousands of labourers from South Wales, Durham, Northumberland and Cumberland who were billeted in Bath. Tunnel Quarry was the first CAD to open in 1938 (Fig. 2) becoming with Ridge and Monkton Farleigh quarries part of the Central Ammunition Depot (CAD). Above-ground, a transport network developed for the movement of ammunition, based on an improved railway infrastructure, and a number of operational buildings including barracks and offices were constructed.

Figure 1: Site location

Figure 1 - Site Location

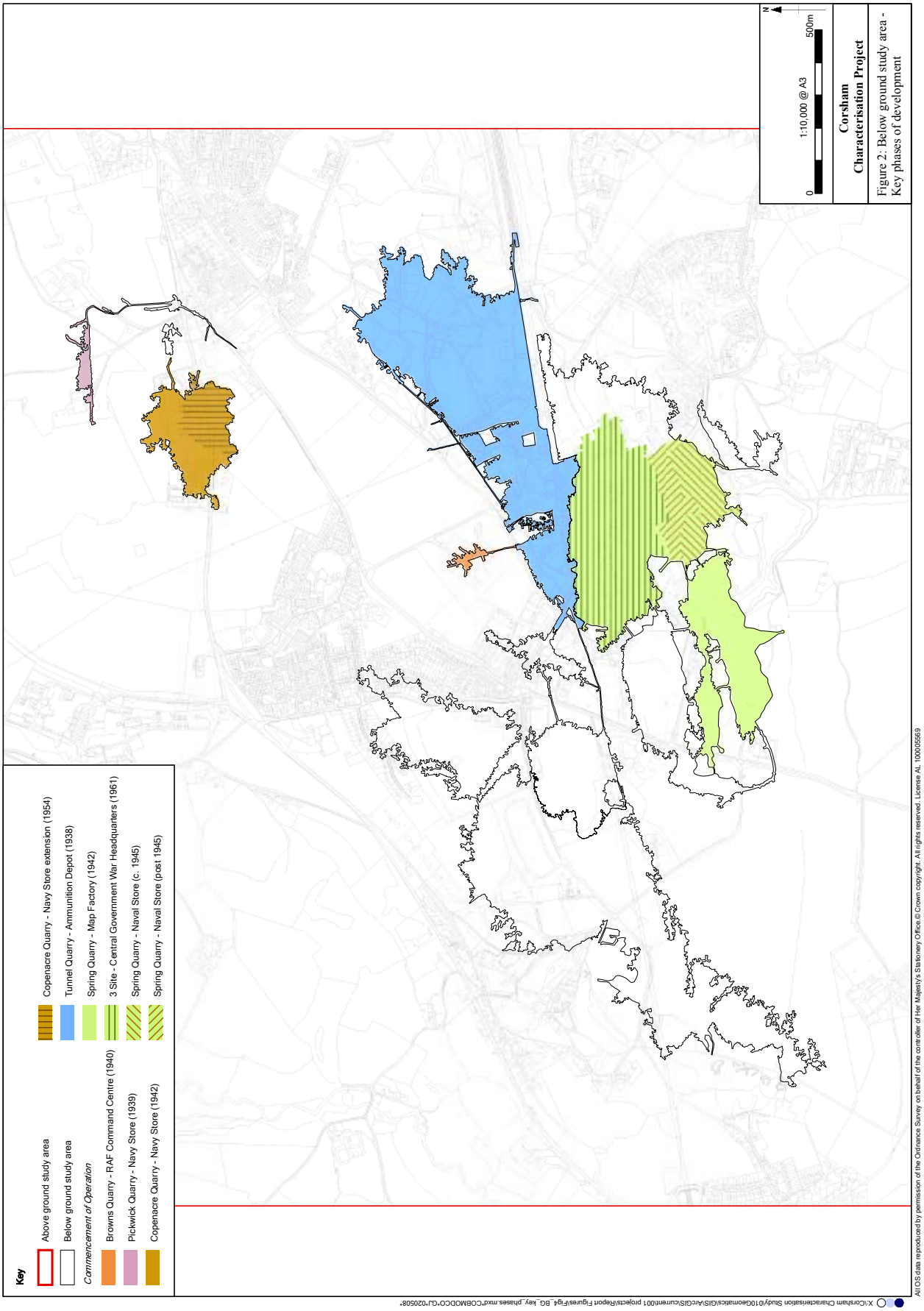


Figure 2 - Below-ground study area - key phases of development

1.4.3 At the west end of Tunnel Quarry, the South-West Signals Centre opened in 1943 as one of three signal centres in England at this time. In 1940 Browns Quarry came into operation as the No.10 Group Fighter Command Centre, and in 1943 industrial operation recommenced in Spring Quarry under the Ministry of Aircraft Production (MAP). The central area of the quarry was used by the Bristol Aeroplane Company (BAC) for manufacturing aircraft engines, whilst that to the west housed the Bristol Small Arms (BSA) Barrel Mill Company and the Parnell Turret Company. Clift and Groundstone quarries as well as the east and west areas of Spring Quarry were used for ventilation.

1.4.4 The below-ground factories necessitated a huge influx of workers to the Corsham area, who were accommodated predominantly in newly constructed married quarters and hostel sites. These were largely located in the Corsham area but were also built as far afield as Chippenham and Westwood (to the north-east and south of Corsham), with workers also travelling daily from Bristol and Bath. This new population also necessitated the construction of welfare facilities, such as schools, and community halls. Immediately above the below-ground factories a number of operational buildings were built including lifts and bus depots.

1.4.5 In 1945, with the end of the war and with it the end of the threat from aerial attack, the relatively inefficient and uneconomic underground factory was closed. This allowed space at the south of Spring Quarry for Royal Navy storage, which since 1939 had already been utilising areas of Pickwick Quarry. It is the central area within Spring Quarry, lying to the north of the Navy storage area which is of particular historical significance. This area, now known as 3 Site, was completed in 1961 to operate as the Central Government War Headquarters (CGWHQ) during the survival and restoration phases of nuclear attack. From 1979 part of this complex (Area 2) was used by the RAF as a Quarry Operations Centre (QOC), and the site was maintained through the 1980s until it was decommissioned in the early 1990s. It was declassified at the end of 2004, as a result of the decision to develop MOD Corsham, thus providing the opportunity for research. The Cold War use of Spring Quarry, because of its highly classified nature, has had a limited impact on the surrounding landscape. The conversion work was undertaken by contractors and only one aerial mast was built above-ground. Locally it was known that the below-ground facility was in operation, and its exact use generated myths in the local community.

2 AIMS AND OBJECTIVES

2.1 AIMS

2.1.1 The overall aim of the project is to contribute to the wider understanding of the complex at Corsham in order to provide a more informed assessment of its significance. There has always been considerable local interest in the military history of Corsham and this project is also aimed at disseminating the findings of our research to increase awareness, knowledge and appreciation of the site.

2.2 OBJECTIVES

2.2.1 More specific objectives of the project are:

to compare and contrast MOD Corsham with other sites of various types in order to understand the local, national and in some instances the international value of its various components;

to broaden more generally our understanding of these types of sites and structures;

to access the physical, social and cultural impacts of the military use of MOD Corsham;

to research the protection, secrecy, myths and legends of the site evolving from its military use;

to disseminate the findings of our research including the Characterisation Study in the local, professional and academic communities;

to appreciate the meaning of MOD Corsham for those people who relate to it, or for whom it figures in their collective experience or memory.

3 Outline Methodology

3.1 Part I: Values Assessment

3.1.1 The methodology for assigning value to MOD Corsham is fully described in Part I of this report. The assessment is derived from the Characterisation Study (OA 2008) and this Values Study (Parts II-IV). It is therefore essentially a synopsis of the research undertaken using professional judgement to attribute value to the overall site, as well as MOD Corsham's key components. EH in *Conservation Principles Policies and Guidance* (2008), categorised values into four areas to provide a clear methodology to determine value. This approach has been used in assigning significance to MOD Corsham and includes the following values:

Evidential;

Historical;

Aesthetic;

Communal.

3.1.2 Measures for assessing the value of MOD Corsham in its various aspects have been based on all the above criteria where they have seemed relevant. The degrees adopted, covering both the overall and individual values of MOD Corsham's components are:

Outstanding Significance;

Considerable Significance;

Moderate Significance;

Low Significance;

Uncertain Significance;

Intrusive.

3.1.3 The determination of values has been allocated using professional judgement and in consultation with English Heritage. The values assessment was also presented at the seminar in order to take account of expertise in the individual components and periods which MOD Corsham incorporates.

3.2 Part II: Comparative Assessment

3.2.1 In determining the value of MOD Corsham key components were identified and assessed against set criteria tabulated below:

CATEGORY	ASSESSMENT CRITERIA
Bath stone quarries	Only below ground quarries were assessed (i.e. - not open-cast) dating from the 19th to 20th Centuries.
Underground military aircraft factories	Only those under-ground aircraft factories converted from extant quarries are considered (i.e. - not purpose built under-ground facilities). These were assessed on a national scale, from the Second World War period.
Underground ammunition stores	Only those under-ground ammunition stores converted from extant quarries were considered (i.e. - not purpose built underground facilities). These were assessed on a national scale, from the Second World War period.
Central Government War Headquarters	The function of the Central Government War Headquarters is unique for its period. Therefore the assessment considered comparable examples from the Second World War, and different phases of the Cold War. International examples from the Cold War period were also identified.
Olga Lehmann murals	This section considered comparable examples of Olga Lehmann's work.
Military architecture of the Second World War period	This took a broad approach in discussing the status and quality of the above-ground buildings at MOD Corsham, in comparison to Second World War military architecture nationally.

3.2.2 An MA dissertation completed by Jane Phimester, formed the basis of the assessment (Phimester 2008), which was enhanced through further research.

3.2.3 In investigating the first four categories listed above, information within secondary sources was found to be limited; the investigation of underground spaces is largely the domain of enthusiasts who publish their findings on websites and forums. Internet research and interviews were therefore the main sources of information. In particular the assessment of international Cold War comparisons to the CGWHQ was problematic because this area is under-researched and information was difficult to identify in different languages. Experts who provided knowledge of sites are listed below; in addition, those experts who attended the seminar further enhanced understanding (listed in 4.1.5).

Nick McCamley (author and local historian (McCamley 2007 & 2007b))

Peter Hennessy (Attlee Professor of Contemporary British History, Queen Mary, University of London (Hennessy 2003))

Steve Fox (Cold War historian, author of Struggle for Survival (Fox 2007 www.subbrit.org.uk/rsg/features/sfs/)

Wayne Cocroft (English Heritage, Senior Investigator and Team Leader)

Mark Bennett (Cold War historian and member of Subterranea Britannica)

Andy Quinn (MOD Corsham)

Martin Burton (local caver)

David Pollard (local quarry expert and owner)

Lynnes Willes (quarry expert)

Mike Barton (Cold War German bunker expert)

Simon Main (below-ground expert and member of Deep, Dark and Dusty)

3.2.4 The assessment of murals is a broad topic; therefore the main focus of this investigation was in determining the survival of other examples of Olga Lehmann's wall paintings. Those buildings at which Olga Lehmann (1912-2001) is known to have painted murals were researched to ascertain if they remained extant, and if so whether the murals survived. This was problematic because buildings change name, and no specific locations were identified. Those structures where murals were known to have existed were located and contacted to ascertain if the murals survive. Additionally, relevant archives and institutions with extensive Lehmann collections were contacted to determine if they had any further information. These include:

The British Postal Museum and Archive (Lehmann produced murals for the Postal and Telegraph Censorship Department);

British Film Institute's Stills Posters and Designs Department, Museum of London and the Fry Gallery in Saffron Walden (who hold extensive Lehmann collections).

3.2.5 In determining the value of Second World War architecture at Corsham the methodological approach was to consider how typical the materials, functions and status of those structures within the Study Area are in the national context.

3.3 Part III:

Physical, social and cultural impact of MOD Corsham

3.3.1 Information relating to the social, economic and cultural impact of MOD Corsham within secondary sources is limited although some texts provided useful information (Hall 1986, Henderson 1995, Williams 2004 & 2006, McCamley 2007). Primary research was undertaken at the: Wiltshire and Swindon Record Office, Bath Library and the National Archives. Useful sources of information include: local papers. (Wiltshire News, Wiltshire Times and the Bath Chronicle), Parish Council minutes, local school records and log books. At the National Archives a report by Corsham Parish Council discussing the impact of development on the local landscape which contributed to Lord Justice Scott's report on the state of the English countryside (1942), provided a useful insight into developments and attitudes (National Archives: HLG 80/123).

3.3.2 Oral history accounts (Appendix II) of those with a special connection to the military use of Corsham formed part of the Values Study. These provided an insight into the impact of the military use of Corsham and the secrecy, myths and legends which evolved from this. These accounts, with the public presentation, also facilitated an appreciation of the meaning of Corsham for those that identify with it.

3.4 Part IV: Secrecy, Myths and Legends

3.4.1 Information regarding secrecy, myths and legends was gained through oral history accounts and feedback from the Corsham presentation (which formed part of this project). Additional sources of information were records within the National Archive, newspaper articles, websites and secondary sources.

3.5 Report Format

3.5.1 This report firstly outlines the outreach aspect of this project including the public presentation, specialist seminar, web pages and promotional information (Section 4). The first part of the report (Section 5) details the values assigned to MOD Corsham firstly with a statement of overall value, followed by short individual values based on Corsham's evidential, historical, aesthetic and communal attributes. This section is essentially a synopsis of the understanding gained through the Characterisation Study (OA 2008) and the Values Study (Parts II-IV), with professional judgement used to determine values.

3.5.2 The second part of this report (Section 6) is a comparative study which, using the criteria established in 3.2.1, determines the survival and rarity of the key components of MOD Corsham in a local, national and in the case of the CGWHQ international context. This should be read in conjunction with Appendix I which tabulates those sites that are considered to be comparable to the key components within MOD Corsham.

3.5.3 The third part of this report (Section 7) discusses the impacts of the military use of MOD Corsham in the local landscape including the growth in population, physical and cultural impacts. The final fourth part considers the secrecy, myths and legends associated with the site (Section 8).

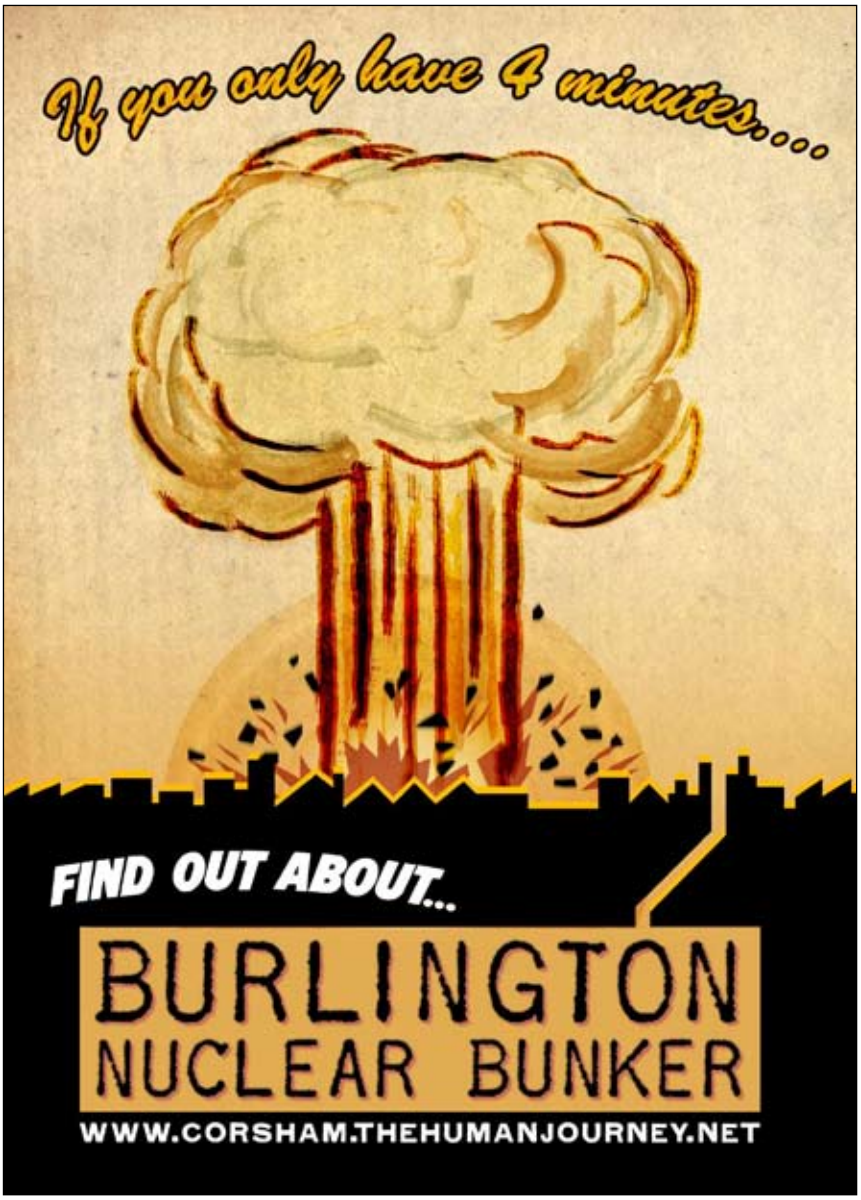
3.5.4 Appendix A tabulates the findings of the comparative study according to the established criteria, and Appendix B transcribes the oral history interviews of those that worked below-ground in the Corsham complex or lived in the local area.

4 Outreach

4.1.1 The purpose of the outreach component of the project was to increase awareness of the project and the significance of MOD Corsham, and gain information from the local community, stakeholders and experts to enhance understanding and appreciation of the site.

4.1.2 Web pages describing the Corsham project (www.corsham.thehumanjourney.net) went live in December 2008 providing an historic overview of the site, a downloadable copy of the Characterisation Study as well as information about the Values Study and local presentation. A questionnaire requested feedback regarding people's memories and relationship to MOD Corsham.

4.1.3 Posters were used to advertise the presentation in local venues in Corsham and Chippenham including libraries, tourist information centres, town public notice boards, history centres, arts centre and museums. Announcements were also made at Corsham and Chippenham local history societies, and two newspaper articles were published in the Wiltshire Times prior to and following the presentation.



4.1.4 The presentation was held at Corsham Town Hall on the 27th January 2009, and proved to be a popular event filling the hall of 160 (an additional c. 40 were turned away due to lack of capacity). Interpretation boards were put up at the event and questions and feedback provided useful information. A number of people also returned questionnaires relating to their memories and experiences of the military use of Corsham, a selection were subsequently interviewed (see Appendix B).

4.1.5 A seminar was held for stakeholders and those with specialist knowledge of the industrial and military use of Corsham and/ or its periods and functions of use, at the National Monuments Record Centre on the 24th February 2009. This included presentations by Jane Phimester and Mark Bennett (author of the Corsham Artefacts Study (Bennett 2007a and 2007b)), followed by discussion. The seminar was attended by the following:

Andy Quinn (Deputy Mines Manager, MOD Corsham);

Major A.E Hastings (DE Ops South, Basil Hill);

Chris Daniell (Defence Estates);

Wayne Cocroft (English Heritage);

Deborah Porter (English Heritage);

Will Holborow (English Heritage);

John Schofield (English Heritage) ;

Keith Falconer (English Heritage);

Rowena Willard Wright (English Heritage);

Robin Page (English Heritage);

Jeremy Lake (English Heritage);

Judy Enticknap (North Wiltshire District Council);

Dr Catherine Haddon (Queen Mary College, University of London);

Mark Bennett (Cold War expert);

Steve Fox (Cold War expert);

Mark Butters (Railway Heritage Committee);

Dr Robin Woolven (Mountbatten Centre for International Studies);

Steve Rover-Parkes (ex-MOD Corsham).

4.1.6 Information arising from the outreach programme has been incorporated within this report. The presentation illustrated the immense public interest in the site, and the broad spectrum of people that relate to it. It also showed the sense of identity and pride the local inhabitants feel towards MOD Corsham. Many had worked within the underground complex during the course of its use, or had grandparents who worked within the quarrying industry. Several people came forward following the seminar who were subsequently interviewed, the transcripts of which are in Appendix B. It is interesting that during its Second World War use records suggest that resentment was felt towards the development, but the local population recall willingness to 'do their bit' and successful integration of the newcomers in the local community. Any feelings of resentment have now evolved to pride in their unique heritage.

4.1.7 The seminar was useful in bringing together those with a specialised knowledge of the period or MOD Corsham. It showed that comparisons can be drawn between Corsham and other modern military sites, for example Bletchley Park.

5 PART I: VALUES ASSESSMENT

5.1 INTRODUCTION

5.1.1 The assessment of values is derived from the Characterisation Study (OA 2008) and further work for this Values Study. They are drawn from the understanding developed in the Characterisation Study, which established the historical development of the complex and areas with a high level of survival of historic remains. They are also based on the research undertaken in Parts II-IV of this study, particularly the comparative analysis within Part II, but also the impacts, secrecy, myths and legends associated with the site described in Sections III and IV. This section therefore is essentially a synopsis of the research undertaken using professional judgement to attribute value to the site overall, as well as MOD Corsham's key components.

5.1.2 The comparative analysis (Part II and Appendix A) is important because the value of a place is in part attributed to its rarity and level of survival, and therefore it is necessary to compare the key components of MOD Corsham against other examples. The value of a place may also however derive from less tangible attributes, such as the value of a place to a pers.on which will vary because places mean different things to different people. In considering value, the impacts of the wartime developments (Part III) and the protection, secrecy, myths and legends (Part IV) associated with the site are also relevant. This includes the experiences of those that worked below-ground, and those that remember the military developments and the effect this had on the local landscape and population.

5.1.3 EH in *Conservation Principles Policies and Guidance* (2008) categorised values into four areas to provide a clear methodology to determine value. This approach has been used in assigning the value of the different components of MOD Corsham and is discussed below.

5.2 BASIS OF ASSESSMENT

5.2.1 The assessment of values is in alignment with English Heritage's *Conservation Principles Policies and Guidance* (2008). This is expressed here as an overall statement of value, followed by individual values that have been determined according to the four areas of heritage value:

Evidential - this derives from the potential of a place to yield evidence about past human activity. This includes physical remains as the primary source of evidence and the people and cultures that made them.

Historical - this originates from the ways in which past people, events and aspects of life can be connected through a place to the present. This may include illustrative value, such as its connection to an important development such as technology, or associative value such as the connection to an important event or pers.on.

Aesthetic - this is derived from the ways in which people draw sensory and intellectual stimulation from a place. These may be related to the design of a place for example wall paintings, or the informal development over time such as the relationship of structures to their setting.

Communal - this derives from the meaning of a place for the people who relate to it, this includes commemorative, symbolic, social and spiritual value. For example, some places may be important for reminding us of uncomfortable events in England's history.

5.2.2 Measures for assessing the values of MOD Corsham in its various aspects have been based on all the above criteria where they have seemed relevant. The degrees adopted, covering both the overall and individual values of MOD Corsham's components are:

Outstanding Significance: elements which are of key national or international significance, as among the best (or the only surviving example) of an important class of monument, or outstanding representatives of important social or cultural phenomena, or are of very major regional or local significance.

Considerable Significance: elements which constitute good and representative examples of an important class of monument (or the only example locally), or have a particular significance through association, although surviving examples may be relatively common on a national scale, or are major contributors to the overall significance of the monument.

Moderate Significance: elements which contribute to the character and understanding of the monument, or which provide an historical or cultural context for features of individually greater significance.

Low Significance: elements which are of individually low value in general terms, or have little or no significance in promoting understanding or appreciation of the monument, without being actually intrusive.

Uncertain Significance: elements that have potential to be significant (e.g. buried archaeological remains) but where it is not possible to be certain on the evidence currently available.

Intrusive: items which are visually intrusive or which obscure understanding of significant elements or values of the monument. Recommendations may be made on removal or other methods of mitigation.

5.3 Statement of Overall Value

5.3.1 MOD Corsham is a complex site encompassing layers of historical development both below and above-ground, which include a number of different functional components. The full extent and use of the site was not previously understood as it remained classified (in part) until 2004. MOD Corsham's components are individually significant in England's industrial and defensive history, but they also have a strong group value. The underground site accommodated a succession of significant functions in the 19th and 20th centuries. The survival of much of the fabric and many of the artefacts further increases the significance of the archaeological resource.

5.3.2 The extensive quarry tunnels were formed during a century of stone extraction, following the construction of the Box Railway Tunnel in the 1840s. Several of these extensive quarries were requisitioned by the War Department in the 1930s. Tunnel Quarry was converted for storage of ammunition and was operational from 1938. During the Second World War, additional military uses were added in other parts of the complex, including a Ministry of Aircraft Production (MAP) factory in Spring Quarry, and an RAF operations centre in Browns Quarry. During the Cold War, the Central Government War Headquarters was created in part of Spring Quarry, for occupation in the event of nuclear attack. The underground complex was decommissioned in the early 1990s and declassified in 2004.

5.3.3 The underground site at MOD Corsham is a unique military and industrial complex which played an important part in national defence during the Second World War and the Cold War. It contains a complete group of quarry cranes and artefacts in their original setting, thus making it the most evocative example of the many underground stone quarries which flourished in the Bath area in the late 19th and early 20th century. Tunnel Quarry is the most complete example nationally of the underground ammunition storage depots which were developed before and during the Second World War. In Spring Quarry, much of the evidence of its use as an underground factory in the Second World War has gone; however the surviving murals by Olga Lehmann are of outstanding importance. Spring Quarry

also retains most of the infrastructure relating to its function as a central government war headquarters in the Cold War and is thus comparable to other international examples. The significance of all these phases is enhanced through the survival of many of the related artefacts, ranging from quarry tools to telecommunications equipment, many having their own intrinsic value.

5.3.4 Above ground, there is little to suggest the existence of the underground site other than airshafts, lift housings and the main surface loading platform. On the Basil Hill site, which remains in military use, there is a group of carefully-designed stone buildings dating from c.1940, including a large barrack block. The surrounding area once contained numerous hostel sites built to house thousands of workers employed underground. These have almost entirely disappeared. However, their existence has influenced the subsequent post-war urban development, and the migration of workers, and later refugees, to Corsham has had a major impact on the social history of the area.

5.4 Value of Key Components

5.4.1 ***19th and early 20th Century***

5.4.2 *Stone Quarries:* The West Lung of Spring Quarry is considered to be the best surviving Bath stone quarry and therefore of ***outstanding*** value.

5.4.3 **S*econd World War***

5.4.4 *Underground Ammunition Depots*: The Central Ammunition Depot in Tunnel Quarry has the highest level of survival of Second World War underground storage depots nationally and therefore is of ***outstanding/considerable*** value.

5.4.5 *Underground military aircraft factories*: The MAP factory within Spring Quarry survives in comparable condition to other MAP factories nationally, but other sites may contain a greater number of artefacts. The MAP factory is therefore considered to be of ***moderate*** significance.

5.4.6 *Murals in military/ industrial workplaces*: Nationally and internationally war art is a common feature of military sites, however the murals within the MAP factory by Olga Lehmann (1912-2001) are the only example of such wall paintings by the artist known to survive. Overall these are considered to be of ***outstanding*** significance.

5.4.7 *Military architecture of the Second World War period*: The most striking buildings of the above-ground infrastructure are constructed from Bath stone above Tunnel Quarry. These are of high quality and locally are of ***considerable*** significance. Those structures built to facilitate the below-ground MAP factory such as lifts and shafts are not individually significant, but have a ***moderate*** group value creating a unique landscape standing as symbols to the below-ground domain.

5.4.8 ***Cold War***

5.4.9 *Central Government War Headquarters*: The CGWHQ in Spring Quarry during its period of operation had a unique national function and therefore it is of ***outstanding*** value. Functionally, there are comparable national examples from the Second World War, such as PADDOCK at Dollis Hill and the Cabinet War Rooms in Whitehall. Due to its unique function the main comparisons to this site are international, encompassing the emergency headquarters built by foreign governments to the east and west of the Cold War divide. A number of these are preserved and open as museums.

5.5 Evidential, Historical, Aesthetic and Communal Values

5.5.1 ***Evidential Value***

5.5.2 The layout and structural fabric of the below-ground complex survives well, with evidence of each phase of development from the 19th and 20th centuries. Areas which survive particularly well are the quarrying remains within the West Lung of Spring Quarry, the Central Ammunition Depot in Tunnel Quarry and the CGWHQ.

5.5.3 There is a vast array of surviving artefacts relating to the quarrying and defence functions of the below-ground complex, particularly within the West Lung of Spring Quarry and the Central Government War Headquarters**.**

5.5.4 The documented history of the site including historic photos, maps and official papers., provides a body of evidence illustrating how the site has evolved.

5.5.5 The infrastructure of the complex survives well and is essential in understanding its operation. This includes the conveyors, lifts, ventilation system and escalators which are evidence of 20th century technology.

5.5.6 ***Historical Value***

5.5.7 *19th and early 20th Century*

5.5.8 *Stone Quarries*: The quarrying remains illustrate the industrialisation of the quarrying industry in the late 19th and early 20th centuries.

5.5.9 *Great Western Railway*: Box Tunnel which traverses the site is an important feature of Brunel's Great Western Railway.

5.5.10 *Second World War*

5.5.11 Tunnel Quarry was one of three national central ammunition depots and played an important role in the administration of ammunition during the Second World War.

5.5.12 The MAP factory in Spring Quarry is inseparably linked to the Second World War aircraft production effort, and the organisation of new ministries to supervise production.

5.5.13 Browns Quarry under No.10 RAF Fighter Group was responsible for the air defence of the western region from 1940. From 1950 it became the new southern Sector Operations Centre, and from 1953 the UK Warning and Monitoring Organisation. In 1977 the Headquarters of the Controllerate of Defence Communications Network was transferred to Browns Quarry as part of the rationalisation of Army, Navy and Air Force communications. The quarry's history therefore relates to the evolution of key episodes of defence in the 20th century.

5.5.14 *The Cold War*

5.5.15 The scale and survival of telecommunications equipment within the Corsham complex represents the zenith of a large government electromechanical communications system in a pre-digital age.

5.5.16 The survival and restoration phases of the Cold War in the event of nuclear attack on the UK would have been conducted from the CGWHQ. This complex is therefore directly connected with a key period of the 20th century.

5.5.17 The Cold War was fought without battlefields and frontiers; installations such as the CGWHQ are therefore important in reflecting national defence policy in response to the **development** of the conflict and the change in threat.

5.5.18 The CGWHQ illustrates the structure of government, in accommodating the echelons of power in both civil and military spheres.

5.5.19 ***Aesthetic Values***

5.5.20 *General aesthetic values*

5.5.21 The size and scale of the below-ground complex is striking, demonstrating the scale of underground quarrying and subsequent military operations.

5.5.22 The numerous examples of wall paintings, graffiti and carvings in the stone are evidence of those who worked below-ground aimed in part at improving their aesthetic environment. They also illustrate workers' daily life and popular culture.

5.5.23 The architecture of the underground complex is basic and functional, illustrating the urgency with which the complex was required, and the financial constraints which prevailed during construction.

5.5.24 The extant artefacts are visually striking. This is particularly true of the *in situ* quarrying cranes and Cold War artefacts such as the telephone exchange.

5.5.25 *Second World War*

5.5.26 Purpose-built military buildings on the Basil Hill site, including the old Barrack Block (completed in 1940), were carefully designed to relate to the local style of building and were constructed in local Bath stone.

5.5.27 The Olga Lehmann wall paintings are extremely rare, both in context and scale. Lehmann had a long and illustrious career and was a highly versatile artist; mural painting was a major facet of her oeuvre. She executed numerous mural commissions throughout the 1930s and 1940s but it is not thought that any of these survive. It is also unusual for a named artist to be associated with wartime murals.

5.5.28 *Cold War*

5.5.29 The architecture of the CGWHQ reflects the post-war policy of 'make do and mend'. It is simple and functional retaining much of the appearance of the quarry and the infrastructure of the aircraft engine factory.

5.5.30 The architecture of nuclear defence reflects the scale of preparations and is impressive, reflecting the sinister and grave reality of the threat.

5.5.31 ***Communal Values***

5.5.32 *General communal values*

5.5.33 The complex has social value for those that worked there, who identify with the place or those that lived in the local community. MOD Corsham is of value to the local inhabitants who take pride in the site, particularly its significant defence use.

5.5.34 The secrecy associated with the site, especially during the Cold War, has generated interest as well as myths and legends, which have increased the social value of the complex.

5.5.35 MOD Corsham contained different operational units and uses throughout its history. It is therefore of interest to a broad spectrum of professional and amateur groups.

5.5.36 *19th and early 20th Century*

5.5.37 *Stone Quarries*: Quarrying was a major industry within Corsham and the locality, which continues today at a smaller scale. The communal value of this heritage is evident in the stone architecture, museums, landscape and memories of those whose relatives worked in the industry.

5.5.38 *Second World War*

5.5.39 The urban growth of Corsham has been influenced by the military use of the site, leading up to the Second World War and after, resulting in the construction of services, housing and communal facilities for those that worked below-ground.

5.5.40 The military use of the site has given rise to the migration of workers to the area and has been an important influence on the lives of those employed underground or whose families moved to the area.

5.5.41 *Cold War*

5.5.42 The CGWHQ is symbolic of the mutual distrust between east and west, the intensity of the threat and its consequences.

6 PART II: COMPARATIVE STUDY

6.1.1 The value of MOD Corsham is in part attributed to its rarity and survival; therefore it is necessary when establishing its significance to compare it to other examples with similar values. In achieving this it is important to apply a systematic and consistent evaluation process to ensure consistency in judgement. Six key components of the site were agreed with EH that are considered against set criteria (as detailed in 3.1). The results of the research are tabulated in Appendix I. which should be read in conjunction with this section; each site is given a reference number, a brief description and an assessment of the level of survival. The results are analysed below, and the rarity of each key component within the broader historic context determined.

6.2 19TH TO EARLY 20TH CENTURY QUARRYING

6.2.1 Underground quarries for building stone were once widespread in England including Kent, Surrey, Dorset and Yorkshire, but Bath Stone quarries were and still are, on a greater scale than other stone quarries nationally (Pollard 1994). Bath Stone is a Great Oolite stone which is one of Britain's most prolific formations for building stones, and as a result many of the hills around Bath have underground workings (Perkins et al.. 1979). As explained in the methodology (3.2), this study will consider below-ground Bath Stone quarries only (i.e.-excluding open cast). These are located in an area measuring c.10 miles east to west, and c.7.5 miles north to south as illustrated in Figure 3.

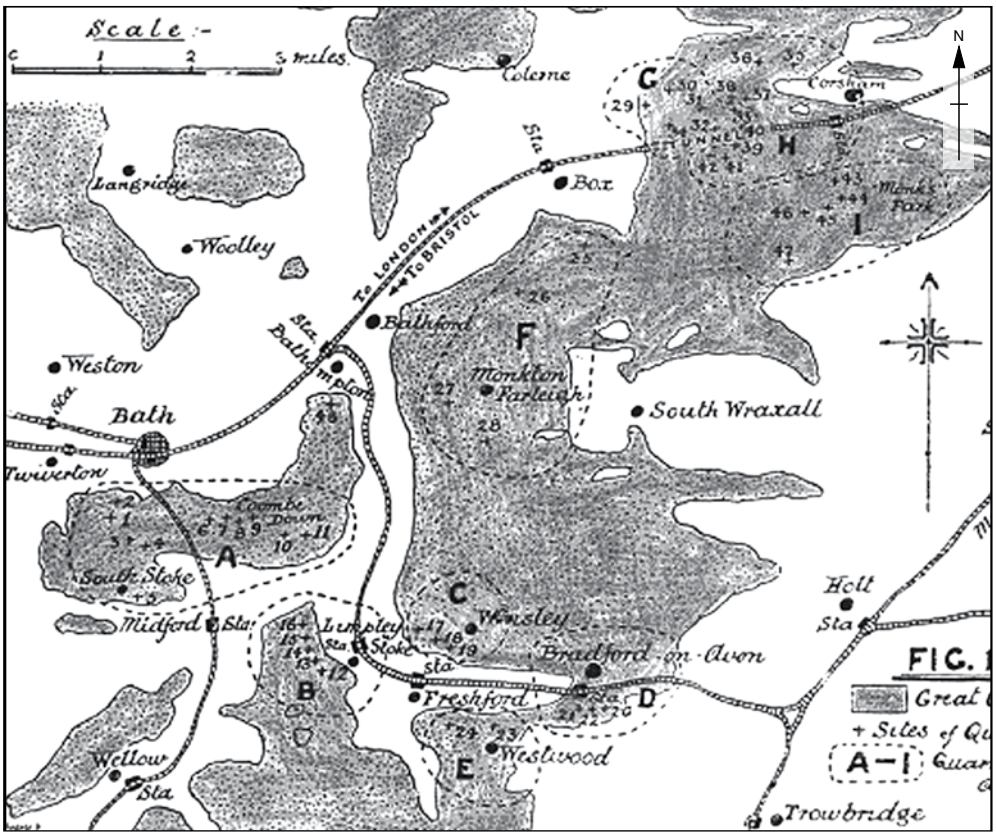


Figure 3 - Location of Bath Stone quarries (1895)

6.2.2 This figure is based on an 1895 article identifying all the Bath Stone quarries active at that time through site visits (Harris 1895). Those areas marked by letters correspond with the table in Appendix A (section 10.1) which lists quarries by area. It considered quarries from what is commonly regarded as the golden age of industrial quarrying only (c.1840-1910).

The Characterisation Study established that within the study area the highest preservation of industrial quarrying remains is in West Lung; this area is therefore the benchmark against which other Bath Stone quarries are assessed.

6.2.3 The evaluation of Bath Stone quarries is complex, because they are not easy to locate or identify. Information on the level of preservation has been obtained from local cavers and historians, both through interviews and websites as it was only possible to gain entry to Box Quarry. Although there are general books on Bath Stone (Devon et al... undated, Perkins et al... 1979) and publications on specific quarries (Irving 2005), these do not attempt to comprehensively list or locate quarries. The gazetteer of Bath Stone quarries and their preservation in Appendix A has therefore been compiled based on local knowledge, particularly that of David Pollard. Therefore whilst the gazetteer is comprehensive and accurate, further information (for example from caving clubs), would enhance information regarding the level of preservation.

6.2.4 The comparative study identified a total of 41 quarries, 12 or which have been in use within the last 5 years: 6 for quarrying, 4 for data storage and 2 for mushroom farming. Of these uses quarrying has the most impact on the archaeology (David Pollard pers. comm.), because old workings are used to stow waste rock. Those quarries used for data storage are largely those previously converted for ammunition storage, as features such as lifts and ventilation are already extant. Mushroom farming has a fairly low impact, and therefore it is possible that quarrying archaeology survives within these.

6.2.5 *Box Quarry (ref - Q29)* is a large quarry with a varied level of survival. A site visit to the cathedral area showed that although dramatic it contains few artefacts or operational features. It is understood however that the northern and southern areas of Box Quarry are less well explored, and the level of preservation is higher. Caving maps produced by the Shepton Mallet Caving Club show that the north-east section of the northern region has the highest level of survival. Here, cranes and tramways survive in situ, together with tools, muck boxes and partly dismantled trolleys (Martin Burton pers. comm.).

Plate 1 - The Cathedral, Box Quarry

6.2.6 *Firs Quarry complex in Combe Down (ref - Q4)* is extensive, but suffers from lack of stabilisation, resulting in its gradual infill with concrete. To mitigate against this impact Oxford Archaeology have been recording this quarry since 2000.The author visited this quarry and it is certainly of archaeological interest, but lacks the concentration of archaeological features and artefacts of West Lung. Nevertheless, its infill means that the archaeological evidence will be lost and it therefore cannot be considered as a comparable example.

6.2.7 *The Farleigh Down complex (ref. - Q27)* is another very large quarry much of which was converted for use as the CAD. Some of this area is now used for secure data storage. The extensive unconverted western fringe is of archaeological interest. Features include early haul roads, a loading hole, the gear work of an early crane and a complex tramway junction in situ.

6.2.8 *Kingsdown Quarry (ref - Q25)* although small retains a high level of survival as illustrated by the Shepton Mallet Caving Club maps. These show that cranes, tools and haul roads survive throughout the quarry; of particular significance are the imprints of hoof marks in the ground.

6.2.9 *Park Lane Quarry (ref - Q36)* also survives in remarkably good condition; there are a few remnants of cranes in the quarry along

with wooden barrels and stacked stone ready for transportation. A highlight is the stables, considered to be the best example in the area (Martin Burton per comm.).

6.2.10 The research suggests that whilst certain aspects of the quarries can be compared to West Lung, overall they are not as well preserved. The unique quality of West Lung is that, being in MOD ownership, impact to the archaeological resource has been minimal. The requisitioning of the mines by the War Office led to a dramatic cessation of work, creating a time capsule of functional operation. It is for this reason, given current information, that the West Lung of Spring Quarry is considered to be the best preserved of the Bath Stone quarries and of outstanding value.

6.3 Central Ammunition Depot (CAD)

6.3.1 Tunnel Quarry is not unique in its use as an underground ammunition storage depot, as in anticipation of the Second World War many quarries were requisitioned by the War Office. As early as 1929, records in the National Archives show that the War Office was looking for facilities; these documents include a survey of quarries nationally to ascertain the most suitable (National Archives: WO 32/ 3343). In considering the value of the CAD at Tunnel Quarry, below-ground ammunition depots dating from the Second World War period are therefore considered on a national scale. Only those converted from extant quarries are considered, not those which were specifically excavated from virgin soil, such as Rhydymwyn

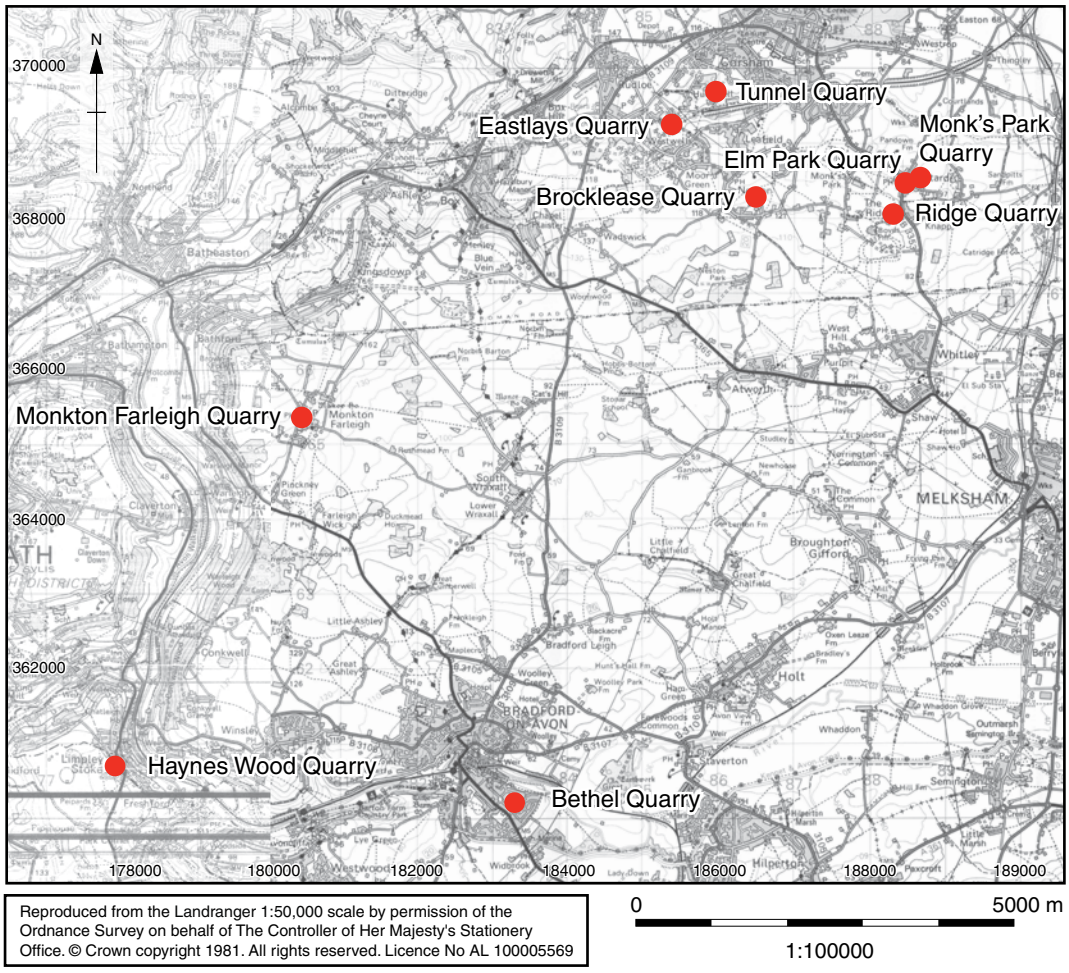


Figure 4 - Location of ammunition depots in Wiltshire

in Wales.

6.3.2 Those sites which were found to be comparable to the CAD within Tunnel Quarry are listed in Appendix I. As explained in 3.2, this information is predominantly gained from specialist websites and secondary sources. The research shows that a high number of ammunition depots were based in the Corsham area. Of the total of 13 quarries requisitioned nationally for ammunition storage depots the vast majority (10) are in Wiltshire (ref - AS1-8, AS11 and AS13).

6.3.3 These are all in, or in close proximity to Corsham, with the exception of Chilmark, which is further to the south towards Salisbury. The research shows that of these 14 quarries, 8 continue in use, and the current status of 4 quarries is unknown. The re-use of decommissioned military sites is common and the depots at Corsham are ideally suited to conversion, because they are able to continue in the same function as secure storage albeit with different contents. These secondary uses have implications for the preservation of the military archaeology.

6.3.4 The Characterisation Study established that Tunnel Quarry has a remarkably high level of survival. The closest comparative examples to the ammunition depot at Tunnel Quarry are the other three quarries which encompass the CAD. These are Ridge, Eastlays and Monkton Farleigh quarries (ref - AS 1-3), which are located in the Corsham area. Eastlays Quarry has been used for wine storage since the 1970s, and Wansdyke have occupied Monkton Farleigh for secure data storage since 1954. Ridge Quarry has remained empty since its closure, but it does not contain a high level of historic remains because it was never fully converted. There is little information about the area of Monkton Farleigh Quarry occupied by Wansdyke Security, although use of the storage facility must have impacted the historic fabric. Wansdyke Security did not occupy an area of CAD because it was damp; previously this retained well-preserved remains of the depot but was unfortunately stripped by thieves for copper (Martin Burton pers. comm.). As Tunnel Quarry was not extensively converted and continued to be ventilated it survives in better condition than the remaining CADs. Eastlays Quarry is valued as the CAD with the highest preservation of military archaeology following Tunnel Quarry, because Octavian Wine had little money for conversion, and therefore made use of the extant infrastructure (Nick McCamley per comm.).

6.3.5 The remaining quarries in Wiltshire used for ammunition storage include Monks Park Quarry (ref - AS4), Elm Park Quarry (ref - AS7), Brocklease Quarry (ref - AS8), Chilmark Quarry (ref - AS11) and Bethel Quarry (ref.. - AS13). Available information suggests that the historic fabric of these quarries has been impacted by later use including quarrying, engineering, data storage and mushroom farming. The latter use of Bethel Quarry will have had less impact on the historic fabric, but this quarry was used for Royal Navy storage only, which is of lesser historic interest (Wayne Cocroft pers. comm.). Of the remaining quarries outside the Corsham locality, Harpur Hill Quarry (Staffordshire) is now used as a test site and for field experiments and the condition and use of the remaining quarries in unknown. The fact that the use of a quarry is unknown may be cause for optimism but ventilation is vital to the survival of historic remains as otherwise damp, mould and spores take hold. In summary, the comparison of the surviving military archaeology within Tunnel Quarry to comparable examples nationally shows that Tunnel Quarry has a considerably higher level of preservation. It is considered to be of ***outstanding/ considerable*** value.

6.4 Ministry of Aircraft Production (MAP) Factory

6.4.1 The location of MAP factories below-ground was also driven by the threat of aerial attack, but evolved from as late as 1940. It was the devastating bombing campaign of September that year on a plant at Southampton and the Vickers Weybridge factory, followed by attacks at the BAC works at Filton, which highlighted the need for factory dispers.al (McCamley 2007). These Second World War MAP factories were identified on a national scale, and considered

Figure 5 - Location of MAP Factories

only those converted from extant quarries. As established in the Characterisation Study, the MAP Factory within Spring Quarry, although retaining its structural fabric, has been stripped of anything relating to its mechanical operation, including fixed artefacts. The MAP Factory remains to the south of the CGWHQ are impressive because of the large volume of space they occupied, but their operational use is not immediately apparent. Much of the infrastructure of the MAP Factory does however survive within the CGWHQ, such as lifts and unique features like the Olga Lehmann murals.

6.4.2 Only four below-ground MAP factories were identified (tabulated in Appendix A) , all of which have been converted for secondary functions.

6.4.3 Warren Row Quarry (ref - MF2) and Wargrave Place Quarry (ref - MP3) in Henley, and Westwoods quarries (ref - MF4) are used for data storage, although half of Westwoods is again being quarried. Drakelow Quarry in Kidderminster (ref - MF1) is of particular interest as an example of how readily a site can be dismantled. A site visit by the author in June 2008 showed that the owners have been ripping the site apart for the valuable metal. They have banned photography, however comparisons of earlier pictures to the present day (Stokes 2004) highlights the severe impact. Large areas have been ripped out with JCBs, and RSJs have been removed for their scrap metal value, thus compromising the structural integrity of the facility. The rapid deterioration of Drakelow is an example of the fate that awaits Cold War sites without statutory protection.

6.4.4 It is understood that the site at Henley has also been stripped of primary features (W Cocroft pers. comm.) although access to this has not been possible in the current project. It is reported to have been refitted during the Cold War and subsequently refitted again since then. It is possible that the MAP factory at Bradford-upon-Avon survives in better condition and that artefacts remain, but it was not possible to gain access to this facility.

Plate 2 - Drakelow MAP Factory, entrance

6.4.5 Overall, a comparison of Spring Quarry with other below-ground MAP factories shows that structurally Spring Quarry may survive in better condition than comparable examples, but other sites may contain a greater number of artefacts, enhancing their historic significance. In summary, the remains of the MAP Factory within Spring Quarry are considered to be of ***moderate*** significance.

6.5 The murals of Olga Lehmann

6.5.1 Wall art and graffiti are commonly found in historic and contemporary sites, largely to brighten up spaces or to while away time, ranging from prehistoric cave decoration to modern political protests. Below-ground at Corsham graffiti provides an added social dimension to the space; strings of numbers indicate the calculations of stone and profit, and dates and times transport the reader back to a particular time. Pockets of graffiti also survive throughout Spring Quarry highlighting popular culture of the day including Disney characters, references to the working environment (*'Wanted a clock to check operators time'*) or those who once worked below-ground. It is the *c.* 50 surviving Olga Lehmann murals however, which are of greatest value in terms of wall art.

6.5.2 Olga Lehmann (1912-2001) had a long and industrious career spanning six decades from the 1930s to the 1980s, and was a highly versatile artist. During the 1930s and 1940s she gained a reputation for mural painting and portraiture. After the war she became associated with graphic design for numerous books and publications including the Radio Times. Lehmann also designed for the film and television industries. It is thought that her first mural painting was at the Palace Hotel in Buxton. At this time, secular murals by professional artists, such as Rex Whistler and Eric Ravilious, became a fashionable accessory for wealthy private patrons, hotels, shops, restaurants and public institutions (Cocroft et al. 2006). This tradition continued into the Second World War.

6.5.3 It was in 1943, the year the Spring Quarry BAC factory opened, that Olga Lehmann designed and painted the murals in the workers canteens. The murals were commission by BAC's owner Sir Reginald Verdon Smith, who was concerned with the welfare of the workers and wanted to brighten up the surroundings. It is thought that the murals were produced only in the canteen areas, of which there were three in Spring Quarry (identified in the Characterisation Study Fig. 18 (OA 2008)).

Plate 3 - Olga Lehmann, painting murals (©Paul Huson)

6.5.4 Today murals survive within two canteens located to the north-west and east of the BAC area (identified in the Characterisation Study Fig. 14 (OA 2008)). A further canteen to the south 'Central Kitchen and Operatives Canteen No.1' (identified in the Characterisation Study Fig. 18 (OA 2008)), may also have once had murals although no evidence of these has been found on initial investigations. The Royal Navy took over the southern area of Spring Quarry following the closure of the BAC factory in 1945, and during its use the walls and pillars were painted white (OA 2008, Section 10 and Fig. 3)). It is probable that the murals were painted over at this time; historic photos illustrate murals which no

Plate 4 - Olga Lehmann mural (no longer extant) (©Rolls Royce Heritage)

longer survive and it is probable that these were located in this large southern canteen. The themes of these murals include the circus, cards and fairytale castles (illustrated at www.monkton-farleigh.co.uk).

6.5.5 Those murals which survive in the eastern operatives' canteen largely consist of prehistoric monsters. Those in the north-west operatives' canteen have a variety of themes including sports, quintessentially English scenes and more obscure images of Eskimos and a missionary being boiled alive by cannibals. The style of these murals is evidentially influenced by Lehmann's experience in film and television industries.

6.5.6 Research has shown that Lehmann produced several murals between 1934 and 1953, some were on canvas but the following were wall paintings:

The Palace Hotel, Buxton (1934) - commissioned by a French company, Stic-B Paints Ltd.;

St. Helier House Hotel, Jersey (1935);

Commissioned in various hotels, private buildings, shops and nurseries (1936-8) - commissioned by architect Clive Entwistle and Stic-B Paints;

Fuller's Restaurant, Sloane Street (1939);

Air Raid Precautions Headquarters, London (1940);

Censorship Department, Holborn (1942);

Pavilion Hotel, Scarborough (1943);

Grand Hotel, Brighton (1943).

6.5.7 Initial investigations suggest that none of these murals survive due to building renovations or demolition, although further investigations (such as site visits) may reveal evidence. Those at Corsham were in a unique position in being protected from development by the installation of the CGWHQ. The c. 50 surviving examples are visually impressive, particularly those within the north-west canteen. Currently (2009) the condition of some of the murals

is deteriorating due to high humidity and lack of ventilation. Investigations suggest that the surviving murals are very rare, and it is possible that they are the only such surviving example of Olga Lehmann's wall art. They are also of artistic merit and illustrative of the fashion of the period for secular murals. The murals are considered to be of ***outstanding*** value.

6.6 Military Architecture of the Second World War Period

6.6.1 *Structures associated with the conversion of Tunnel Quarry (1936-1940)*

6.6.2 The conversion of Tunnel Quarry began in 1936. At this time a large part of Pockeridge Estate was purchased to allow for the construction of service buildings to facilitate the below-ground ammunition depot. This included the purchase of the Georgian Pockeridge House, which was converted to an Officers' Mess. This is of stone construction with associated outbuildings and stables from the period. An initial inspection suggests that it has a 17th century core, with 18th and 19th century additions. Internally, some of the fixtures and fittings are thought to date from the Edwardian period. Today, it is understood to be in use as a mess and for conferences and as a location set for films (http://www.films.mod.uk/south_west/corsham.htm). This building is of value because of its period of construction, its architectural merit, its internal fixtures and fittings and the survival of its associated outbuildings. It is also the only structure within the current Corsham MOD sites which pre-dates the wartime development.

6.6.3 There are several structures on the Basil Hill site which were constructed in the same general period as the conversion of Tunnel Quarry. The largest of these is the Barrack Block which

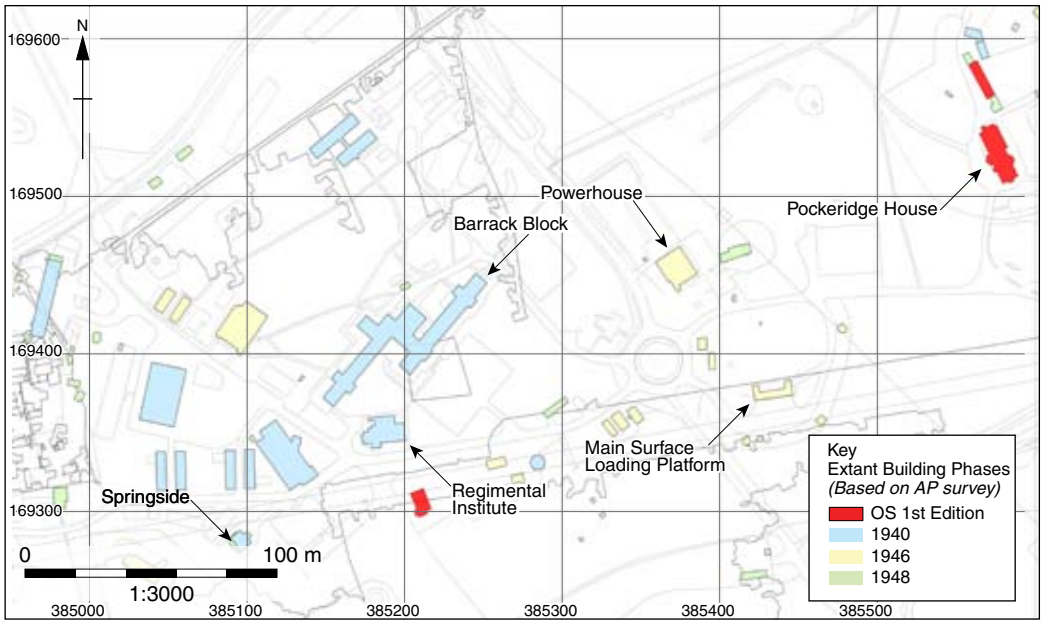


Figure 6 - Basil Hill site, key surviving WWII structures (extracted from OA 2008, Fig. 15)

was constructed in 1940 and therefore slightly post-dates the completion of the Tunnel Quarry CAD in 1938. It is possible that this was built to resemble a school to disguise its true function from enemy detection but in the late 1930s it is unlikely that Germany had aircraft that could reach Bath (and return to Germany) and this was probably not a principal concern behind its design. It is more likely that its design was influenced by the contemporary concern of the Royal Fine Arts Commission and the Council for the Protection of Rural England regarding the proliferation of military bases in the countryside.

Plate 5 - Pockeridge House

Plate 6 - Barracks Block

6.6.4 The Regimental Institute (now Building 113) situated just to the south, and the Powerhouse further to the east on Spring Lane, are both of a similar style built in roughly coursed local stone. In close proximity to the Barrack Block is Springside, which is faced in stone with Crittal type windows. It is not as aesthetically pleasing as the Barrack Block, Institute and Powerhouse, with more of a military uniformity but evidently the style and building material were chosen to blend with the local landscape.

6.6.5 The Main Surface Loading Platform (MSLP) is also of interest; it is a functional building constructed from concrete with an emblem over the platforms, onto which ammunition would be loaded. Slope shafts 2-5 connect the below-ground storage facility with this structure (OA 2008, Fig. 10) and the fixtures and fittings associated with this survive internally including lifts and conveyor belts clearly illustrating the functional operation of the building. Historic photos of the MSLP and the movement of ammunition down the slope shafts further add to its value. The exact date of the construction of the MSLP is not known but the first aerial photograph on which it is identified is that of 1946.

6.6.6 Other surviving structures dating from this period, although of less value, include the Tunnel Offices and Store and huts directly to the west, the RAOC Gym and Social and the Nissen Huts towards the north of the Basil Hill site. To the south of the Basil Hill site further huts on Old Shaft Road are extant although deteriorating. Overall, those structures dating from the

Plate 7 - Aerial view of Barracks Block during construction in 1940

Plate 8 - The Regimental Institute

Second World War and associated with Tunnel Quarry are of considerable value, although individual assessments of the buildings are required. Pockeridge House, the group of stone-built structures and the MSLP are considered to be of higher value than the other surviving World War II structures relating to the military use of Tunnel Quarry.

6.6.7 ***Structures associated with the conversion of Spring Quarry (1942/3 - 1945)***

6.6.8 In general the above-ground structures built to facilitate the below-ground MAP factories are of less value than those associated with Tunnel Quarry. Those of interest located within

Figure 7 - Surviving hostel site no.2 structures within MOD Rudloe site (based on historic map, undated)

the Rudloe and Basil Hill sites include the transport infrastructure such as the goods and passenger lift. These are unusual features in the landscape surrounded by protective earth mounds. The individual significance of these structures is not high, but with other features such as the shafts have group value in communicating the functional operation of the landscape and providing a visual link to the underground complex. They stand as symbols to the below-ground domain, adding a unique character to the above-ground landscape. The Cold War use of Spring Quarry made it necessary to add nuclear protection to some of these features, which further adds to this intriguing character.

6.6.9 The other surviving buildings within the Rudloe site are evidence of Hostel Site No.2 Gorse, built for the MAP factory workers.

Plate 9 - Canteen and welfare building, MOD Rudloe

6.6.10 Those that survive include accommodation blocks, a laundry block and stores. These are single-storey prefab structures painted white. The 'canteen and welfare' building also survives which is a substantial rendered structure, the main body of which has a pitched roof with single-storey ranges to each side, also of MAP Factory construction. The building is of little architectural merit but is of historical interest in being a rare surviving example of a hostel welfare building which remains in use and in good condition. Overall, the group value of these structures is considered to be of ***moderate*** value.

6.6.11 Further examples of MAP Factory buildings survive outside the MOD sites located to the southwest of Westwells Road close to its southern extent. The function of one substantial building is not known; it is now used as a plastics factory and access was not possible. A goods lift building also survives here as well as stores and electricity offices, which are associated with the Engine Test Plant Area to the south which is no longer extant. These are also of lesser significance.

6.7 Government War Headquarters

6.7.1 The unique function of the CGWHQ means that it is necessary when assessing its value to take a different approach to that applied to the key components discussed above. As explained in the Characterisation Study the primary purpose of the facility was to direct the survival and restoration phases following nuclear attack on the UK. The bunker is massive in scale with the capacity to accommodate 4,000 staff living in isolation from the outside world for 30 days. The CGWHQ is therefore of obvious significance, and when first completed (1961) was positioned at the top of a hierarchy of command and therefore of unparalleled importance. Because of its unique role, there are no comparable contemporary sites in the United Kingdom. The research therefore places the CGWHQ in its broader historical and geographical context by considering domestic and international sites that are thought to be comparable examples.

6.7.2 ***Domestic Government War Headquarters***

6.7.3 The approach adopted was to determine the value of the CGWHQ domestically, through an examination of its historical context from the Second World War to the resolution of the Cold War. The function of the bunker at Corsham evolved from the Second World War and was subsequently modified as global tensions increased during the Cold War. Such developments will be explained so far as current information allows. However, little research has been undertaken in this area and many of the records relating to the continuity of Government during the Cold War have not been released. Much of the information contained within this analysis has been obtained from the research of Steve Fox.

6.7.4 Those sites which are identified as being of comparable functional significance are tabulated in Appendix A, and discussed below. Whilst the tabulating of sites is useful, it is difficult to make direct correlations between facilities because they evolved and changed during their use, and the threats of the Second World and Cold Wars were very different. Also, the facilities sometimes worked in conjunction together, and it can be misleading to single out these different functions and compare them to the CGWHQ at Corsham. Consequently, those sites identified nationally are described in chronological order below, in order to explain the development of command throughout the conflicts of the 20th century. In summary, this

analysis shows that the concept from which Corsham grew was not new or a radical break from past policy but part of a developing process. The basic principle of protecting a nucleus of central government evolved from the 1930s, and as the threat changed the facilities grew in size. The CGWHQ brought all the previously scattered nucleus personnel together and also provided domestic accommodation.

6.7.5 This section contains considerable historical context, because the system established to ensure the continuity of government during global conflicts is less easily understood than the other key components. A common theme here is the re-use of sites, as the global conflicts of the 20th century left an impoverished government which in the spirit of the day made use of existing resources (Marr 2007).

6.7.6 During the Second World War, PADDOCK at Dollis Hill (ref - CHQ1) and the Cabinet War Rooms in Whitehall (ref - CHQ2) were the pivotal bases for the nucleus of government including the War Cabinet and Chiefs of Staff. These facilities are of comparable value to the CGWHQ at Corsham because during their period of operation both housed a nucleus of government to ensure the continuity of government and to command the country in the event of attack. PADDOCK was intended to accommodate some 2-300 people including the Cabinet War Rooms, Chiefs of Staff and their immediate advisors but it did not have any domestic facilities (McCamley, 2007b). PADDOCK was in operation from 1940 but was effectively abandoned 6 months later; it survives largely intact, and is protected by local authority listing, but photographic evidence suggests that it has been subject to flooding

Figure 8 - Location of Government War Headquarters (London)

which has led to deterioration of the historic fabric and artefacts (www.subbrit.co.uk).

6.7.7 PADDOCK was not built on the scale of the CGWHQ, and consists of two storeys, the lower floor with 18 rooms and the slightly larger upper floor containing 19 departmental offices (McCamley 2007b). The threat was, of course, very different; whilst PADDOCK was aimed at protection from aerial bombardment, the CGWHQ was built to accommodate staff following a nuclear attack. The following quote by Churchill illustrates PADDOCK's size and function:

> *"We must make sure the Government functions harmoniously and vigorously. This would not be possible under conditions of almost continuous air raids. A movement to PADDOCK by echelons of the War Cabinet, War Cabinet Secretariat, Chiefs of Staff Committee and Home Forces GHQ must now be planned...Pray concert all the necessary measures for moving out not more that two or three hundred principal pers.ons and their immediate assistants."* (McCamley 2007b, 250).

6.7.8 At the same time as the construction of PADDOCK plans were made to protect the Cabinet War Rooms in Whitehall. This facility was not subordinate to PADDOCK or vice versa, but both these were in effect alternative homes for the War Cabinet and Chiefs of Staff, plans for which began in c. 1938. This facility contained operational rooms and accommodation within a basement facing St. James's Park, London. It contained all the key components of a war room such as a Map Room and Telephone Exchange, as did PADDOCK. Those at Whitehall are now open as a public museum, and it survives in remarkable condition with original fixtures and fittings (a site visit was undertaken in June 2008). The CGWHQ at Corsham however is much more extensive in size with massive communications areas (Areas 8 and 21). It was also built to accommodate a greater number of people for a longer period of time. Both PADDOCK and the Cabinet War Rooms therefore are functionally, but not structurally comparable to the CGWHQ at Corsham.

6.7.9 In addition to the Cabinet War Rooms and the facilities at Dollis Hill, in c. 1940 plans were made to build more heavily protected accommodation. The North and South Rotundas (ref - CHQ 3 and 4) were built within converted gas holders located at Westminster. In addition to the rotundas, citadels were constructed beneath central London (ref - CHQ5), and both these and the rotundas were connected by communications networks to each other and the outside world. Taken as a whole these are comparable to Corsham, and perhaps specifically Area 14, although they had minimal domestic arrangements and were not intended to be occupied continuously (Steve Fox pers. comm.). A change in military strategy with the V1 and V2 attacks led to further developments, because the Cabinet War Rooms were not considered to be sufficiently bomb proof. As a result, sleeping accommodation and minimal working accommodation was prepared in the South Rotunda for the Prime Minister, War Cabinet ministers and the Chiefs of Staff. This facility (ANSON) did not replace the Cabinet War Rooms, serving only as domestic accommodation for the VIPs with the business of government remaining centred on the Cabinet War Rooms (Steve Fox pers. comm.). Therefore whilst this facility is comparable, it did not have the functional significance with a command role to the CGWHQ at Corsham.

Plate 10 - The South Rotunda in 2001 (© Subterranea Britannica)

6.7.10 At the end of the Second World War relations rapidly deteriorated between the wartime allies, and growing political tensions rapidly developed in the stand-off of the Cold War. Soon, contingency planning for a future war followed the wartime model with the use of citadels and protected buildings to shelter the nucleus of central government. The reinforced basement accommodation of the Cabinet War Rooms was known to be vulnerable to heavy bombing and the War Cabinet was provided with accommodation in the South Rotunda (SCOUT) with a War Room in the North Rotunda. Its use was only intended to be temporary and as a consequence it had minimal domestic facilities. Its main role was to direct the post-attack recovery.

6.7.11 By 1957 Corsham had become operational on an emergency basis, and by this stage it is possible that the North Rotunda (CHAPLIN) was used as a communications centre only. The regional system of command was based on 12 subordinate regions, which were established in the late 1930s, each headed by a Regional Commissioner. Above-ground War Rooms were provided from the late 1950s in each of the 12 regions but from the 1950s/ early 1960s the detonation of the Soviet H-bomb changed the home defence policy to that of the RSGs. This made it necessary to extend the post-attack recovery period but also for each region to be autonomous for longer. The RSGs from the 1960s/ 70s were replaced by Sub-Regional Headquarters (SRHQ), of which 25 were planned, each to accommodate 200 people. The latter, however, were never constructed because of uncertainties about civil defence in the 1960s (Cocroft and Thomas 2003). These regional command centres are not comparable to Corsham because they are considerably smaller, and worked as part of a network rather than being autonomous. The CGWHQ when first constructed would have directed these regional bunkers, but as policy evolved the role of Corsham changed and its autonomy decreased, increasing the functional significance of the regional network. As explained by Steve Fox:

> *"The control chain until 1965 was a rigid top-down command structure from TURNSTILE through the RSGs and SRHQs to the local authority controls. Now that the RSGs would not be set up until the recovery period, the chain was broken and TURNSTILE would have no effective way of giving orders to the more parochial SRCs or of receiving information about the state of the country"* (2006 File 6.11)

6.7.12 From 1965 the PYTHON concept replaced the original idea of a single nucleus with that of smaller teams, which would be scattered around the country. This envisaged a core of c.600 ministers and military chiefs assembling in more manageable and widely-dispersed groups. Current information on this is vague, but indicates that the CGWHQ at Corsham would accommodate 1,000 staff with at least 2 Python groups, including 8 ministers. Some information has been released to the National Archives about PYTHON but much has not, and this is an area for future research.

6.7.13 In summary, it is evident that there are facilities with functions that can be compared to the CGWHQ at Corsham, including the Cabinet War Rooms, PADDOCK, the London citadels and Rotundas and the regional facilities. They would have had, for example, aspects of central control and autonomy, but in general operated as part of a network with no facility having central control. They were also built on a smaller scale and scope to the bunker at Corsham, often working in conjunction with domestic and administration/ command facilities separated.

6.7.14 It is thought however that the closest comparable sites to the CGWHQ are PADDOCK at Dollis Hill, and the Cabinet War Rooms in Whitehall. These served a similar function to Corsham in ensuring the continuity of Government during attack and acted as a central focus for national command. Both of these facilities remain extant, and the Cabinet War Rooms are now a museum, with original artefacts in situ. PADDOCK at Dollis Hill also survives, and evidently contains some artefacts, although deteriorating. Taken in conjunction, the Rotundas (now demolished) and citadels also had a comparable role to the CGWHQ in

Corsham but did not have a large domestic capacity. The survival of some of these sites increases the significance of the CGWHQ, because it can be physically understood within its historic context. They illustrate the evolution of a system to ensure the continuity of government in the event of attack. It was necessary to build the CGWHQ on a much greater scale to accommodate more people for a greater period of time. The fixtures and fittings, particularly communications, within the facilities are also very different due to advances in technology between the 1940s and 1960s.

6.7.15 ***International Government War Headquarters***

6.7.16 The assessment of comparable international war headquarters is problematic because there has been little research in this area. Some information is available relating to individual bunkers but this does not take a broad international perspective and language barriers also makes research problematic. Information on the internet is not always reliable, and where possible Cold War specialists were consulted, for example Mike Barton who conducts tours of the German bunkers. Those sites identified are tabulated in Appendix A, in general it is evident that these were considerably better constructed and equipped than the CGWHQ at Corsham which was converted in the British spirit of 'make do and mend'.

6.7.17 However comparison between Corsham and international sites can be misleading due to the different periods in which they were sometimes constructed. For example the bunkers constructed in East Germany (DDR: Deutsche Demokratische Republik) were considerably later in date than Corsham, having largely been constructed in the 1970s and 1980s. In contrast in the 1970s there was virtually no construction undertaken of Government bunkers in the UK. There were also a number of 1930s/wartime German bunkers of far larger size and better specification than contemporary UK facilities that were reused, before there was the need for new build.

6.7.18 In East Germany four bunkers are considered to be of comparable significance to the CGWHQ at Corsham: Honecker's bunker located in Prenden (ref - CHQ6), Harnekop bunker located northeast of Berlin (ref - CHQ7), and bunkers at Marienwerder and Storkow located north and southeast of Berlin respectively. These are part of the 'Der Komplex 5000' series of bunkers which were constructed between 1971 and 1990 (Bergner 2000) as high-level communist party (Sozialistiche Enheits Partei; SED) and government hideaways (Mike Barton pers. comm.).

6.7.19 Erich Honecker's bunker at Prenden (5001) (ref - CHQ6), constructed between 1975 and 1979, served as the command centre for the National Defence Council (NDC). When built it was considered to be the Warsaw Pact's best-equipped and constructed bunker outside the Soviet Union and today survives in excellent condition. Honecker's bunker is comparable to the CGWHQ in Corsham, in being at the top of a hierarchy of command and accommodating high-level government/ party officials. The function of Honecker's bunker however was to exercise control over elements of the East German Army (Nationale Volksarmee; NVA) not under Soviet command in the Warsaw Pact's joint forces (and to protect senior party officials) (Mike Barton pers. comm.). It therefore had a war fighting role in contrast to the CGWHQ at Corsham, which was designed to ensure the survival and restoration of civil society following nuclear attack.

Plate 11 - Honecker's bunker, internal image showing a 'bunker within a bunker' the inner structure is suspended from springs within an outer underground shell

6.7.20 The bunker at Harnekop (ref - CHQ7), built between 1971 and 1976, was tasked with implementing mobilisation of the NVA reserves and to ensure that the second echelon of Warsaw

Pact/ Soviet forces would be able to move unhindered through the GDR via Poland from the western military districts in the Soviet Union. It had the capacity to accommodate 500 personnel only, and therefore was built on a much smaller scale than the CGWHQ at Corsham, but was better protected from nuclear conflict (Mike Barton pers. comm.). As with Honecker's bunker it had a war fighting role rather than functioning as a facility to ensure the restoration of civil society following nuclear attack. A bunker located between Klandorf and Marienwerder (5002) built between 1976 and 1979, and a bunker in Storkow built between 1977 and 1981 may also be of comparable function to the bunker at Corsham although little information was located regarding their construction and function.

6.7.21 In West Germany a bunker was constructed in Arhweiler-Bonn (ref - CHQ8), south of Bonn with the capacity to accommodate 3000 high-level officials for 30 days. It was constructed in an old railway tunnel which was built in preparation for World War I and used during World War II for manufacturing. It is therefore comparable to the CGWHQ at Corsham in having a large capacity and is of the same period of construction (early 1960s). Both were previously used during World War II for manufacturing. An important difference however was the use of slave labour in the construction of the German site. The extent of survival of the complex in its entirety is unclear although a few hundred metres are open to the public. This museum is understood to be an excellent representation of the complex, with many surviving artefacts (information supplied by Mike Barton).

6.7.22 In America and Canada, impressive purpose-built bunkers were built on a grand scale. In Canada, seven Emergency Government Headquarters referred to as Diefenbunkers were constructed; the bunker at Ontario was the largest (ref - CHQ9), and like the CGWHQ at Corsham it was constructed to shelter the higher echelons of power including federal government bureaucrats, senior military officials and federal politicians. It was also constructed to survive independently from the external environment although for how long and its capacity is uncertain. In America, the Raven Rock bunker (ref - CHQ10) was built in 1951-53 to provide shelter for 2000 senior executive support staff, in total about 10% of the Pentagon complement. It is officially known as the 'Alternate Joint Communications Centre' but it is also referred to as the 'backup Pentagon'. However, research suggests that it would not have housed the innermost senior officials such as the President. Today, the bunker remains in operation, which is likely to have had an impact on the Cold War artefacts. Functionally, it can be compared to Corsham although it had the capacity to accommodate only half the number intended for the CGWHQ, perhaps though in more comfortable surroundings given the luxury of the Greenbriers bunker. Located in West Virginia, this bunker was built between 1959 and 1962 beneath the Greenbriers hotel to accommodate the highest levels of authority. These include the House of Representatives and Senate, in addition to a nucleus of support staff and 1,200 pers.onnel. Like the CGWHQ at Corsham, it had the capacity to operate independently from the outside environment with the necessary welfare facilities, although photographic evidence shows it is considerably more luxurious.

6.7.23 In the Czech Republic, the 'Fortress Hanieka' (ref - CHQ12) was designed to accommodate the highest levels of the Communist party. Designed in 1981 it is considerably later in date than the CGWHQ, by which time it is unlikely that Corsham would still have operated under its primary designed function. The bunker survives in good condition with much of its infrastructure including air-filtration equipment and a hospital.

6.7.24 In Russia, three bunkers are comparable to the CGWHQ, located in Samara (ref - CHQ13), and Moscow (ref. - CHQ14 & 15). The Samara bunker is thought to be considerably smaller than Corsham, with living and working conditions for 600 people only. It is to here that Stalin and the top military officials would have fled, had Moscow been subject to nuclear attack, and in this respect it can be compared to Corsham. It was in use between 1942 and 1990, but little more is known about its function. In the centre of Moscow a bunker (ref. - CHQ 14) connected to the Kremlin was built during the Second World War but continued in use during the Cold War. Like Corsham it was adapted for nuclear protection and would have

held the highest level of officials and support staff with similar functional areas such as war rooms, as well as the infrastructure to operate independently from the external environment. Today, it is a museum and survives in excellent condition. The Tagansky bunker in Moscow (ref - CHQ15) was constructed between 1952 and 1956 as a communications centre for the country's political and military leadership. It has a large capacity of 3,000 and was capable of surviving 90 days from the external environment following nuclear attack. It now survives in poor condition with few historic artefacts surviving.

6.7.25 Clearly, this research shows that Corsham was one of a number of emergency government bunkers built on either side of the east/ west divide to counter the perceived threats of the Cold War. More research is required to present a more thorough and conclusive analysis. For example bunkers were not identified in all countries of the east and west divide, such as France and Poland, although these must have existed. The research shows that there are similarities between the bunkers but there are also many differences; these reflect the individual national approaches to the continuity of government, and the different political systems under which they were operating. There are also differences in the amount of expenditure on the bunkers, particularly those in East Germany and America compared to Corsham

6.7.26 The fact that the bunkers were operating under very different political systems makes comparative analysis difficult. Also, this research has considered those bunkers constructed during the whole of the Cold War period rather than specifically the 1960s when the CGWHQ at Corsham was at the centre of the UK Cold War policy for the survival and restoration of the United Kingdom. The UK defence strategy evolved throughout the course of the Cold War. For example the concept of a single nucleus of Government later changed to the Python concept; this envisaged smaller teams scattered throughout the country (OA 2008, section 13.1.4). This change occurred in c.1965, yet the 5000 series of bunkers in East Germany were not constructed until the 1970s and 1980s. As more documents are released and further research undertaken a fuller analysis will be possible. It is reassuring to note that many of the bunkers survive, with some protected as national monuments and many open as public museums, although it is suspected that many have been stripped of primary features.

6.7.27 In summary, the CGWHQ at Corsham is considered to be of outstanding value derived from its unique national function, and the high level of survival of the bunker and its artefacts. Functionally, there are comparable 20th century examples in London, but none were as large as the bunker at Corsham. In the broader international context, the CGWHQ is comparable to other significant bunkers built on either side of the east-west divide.

7 Part III: Physical, Social and Cultural Impacts

7.1 Introduction

7.1.1 The value of MOD Corsham is not only in its unique rarity and level of survival, but also in the effect of its development to the landscape and the people who have inhabited it. To determine these communal values, the impact of the military development at Corsham has been researched, including oral history accounts of those that lived or worked there. This showed that the military presence at Corsham and surrounding area during the Second World War dramatically altered the landscape, which had social and cultural implications that resounded long after the end of the conflict.

7.2 Pre-war Corsham (pre-1936)

7.2.1 The military development of Corsham began in 1936 with the conversion of Tunnel Quarry by the War Office. Prior to this Corsham was predominantly a rural landscape; cartographic sources show that stone mining, although well developed, had not extensively affected the landscape. The OS First Edition of 1873-1885 depicts quarries, tramways, shafts and the Great Western Railway (GWR), but the landscape is characteristically rural with enclosed fields, small settlements and woods (see Figs. 7 & 8, OA 2008). A proliferation of footpaths were created by workers taking direct routes to the quarries, and piles of cut stone awaiting transportation would have been a typical feature of the landscape. The landscape does not however have those features often associated with industrial quarrying landscapes, such as the rows of workers' cottages evident in Combe Down, Bath.

7.2.2 Corsham had a pre-war population of under 4,000 (National Archives: HLG 80/123, stated at 3,747 in Kelly's Directory of 1889). The OS third edition map of 1924 (Fig. 10), which is the latest cartographic source prior to military development, depicts it as a small town situated to the south of Corsham Court with houses off the High Street and Pickwick Road. The setting to the north is characterised by parkland with enclosed fields to the south. To the south-west a cluster of slope shafts, quarries and air shafts are visible within the area of the current MOD sites which are surrounded by enclosed fields and woods.

7.3 *Wartime Corsham (1936 - 1945)*

7.3.1 *Overview*

7.3.2 The military development of Corsham during the Second World War dramatically altered the local landscape with developments as far north as Chippenham and as far south as Bradford-upon-Avon. Within Corsham the growth is most evident; those buildings constructed between 1940-8 are illustrated on Figure 12 of the Characterisation Study (OA 2008). These are predominantly welfare buildings (Fig. 13, OA 2008) which also required services such as gas and water. Transport also had a significant impact on the landscape, which was necessary for the movement of people, goods and ammunition. The OS Map of 1955 is the earliest edition post-dating the Second World War developments, which clearly shows the changes in landscape from the 1924 edition (Figs. 9 & 10).

7.3.3 These changes also had social implications both for those working within the MAP factories and ammunition depot and the local inhabitants. These, instigated by the initial growth in population with the conversion of the quarries are described below. It is evident that the development of Corsham was the result of a domino effect; the War Office presence necessitated the installation of services such as gas and water and utilised available accommodation. It was therefore necessary to build accommodation sites for the MAP workers, which was facilitated by the services installed by the War Office. These were constructed on green field sites, which with the rapid closure of the MAP factory left brown-

Figure 9 - Pre-war Ordnance Survey map (1924)

Figure 10 - Post-war Ordnance Survey map (1955)

field areas ripe for post-war construction.

7.3.4 ***Population Growth***

7.3.5 The conversion of Tunnel Quarry from 1936 necessitated a huge work force, and in January 1938 it is calculated that 3,000 men were part of the War Office construction programme (Bath and Wiltshire Chronicle and Herald 20th January 1938). Initially these comprised civilian labourers from the Bath and Portland Stone Company, supplemented by agricultural workers and colliers from the Somerset coalfields. The immensity of the task required a larger workforce and the War Office was able to use the experienced labour of the distressed mining areas of South Wales, Durham, Northumberland and Cumberland (McCamley 2007). This increased population was added to by evacuees arriving predominantly from London, mainly consisting of mothers and small children. The strain on Corsham's resources is evident in the Corsham Metheun School log book of 1939 which states that '*…a further increase is likely owing to the extensive building activities in the area during the year, 105 have been admitted, the normal entry is about 40*' (April 6th 1939).

7.3.6 Conversion work started in Spring Quarry in April 1941. As with Tunnel Quarry, the initial task was to clear tons of waste (500,000 in Spring Quarry) which was sub-contracted by McAlpine to the Bath and Portland Stone Company. Much of the local labour was already employed by the War Office in Tunnel Quarry and this, coupled with a labour shortage resulting from the war effort and resurgent economy, made it necessary to recruit labour from Ireland. A recruiting office opened in Ireland and over 10,000 men enlisted. The War Office was opposed to temporary labour camps and accommodation was eventually found for 7,000 workers in the Bath area. The MAP Factories commenced operation in 1943; the immense operations including the BAC and BSA Barrel Mill works required a large workforce. The proposed number of workers for the MAP Factory included 12,000 from the BAC works in Filton, 3,000 in BSA and 3,000 from the MOS (Ministry of Supply) (McCamley 2007).

7.3.7 These added to the number already employed at Tunnel Quarry, requiring the construction of accommodation for the single and married workers. Workers also came from the BAC Filton works and therefore it was also necessary to consider an improved transport system. The problems associated with the growth in population were recognised from an early stage by the War Office prior to the introduction of the MAP Factory (National Archives: AVIA 15.856, 1942). The rapid growth in population accelerated development, with physical impacts to the landscape and social and cultural implications for the Corsham residents and newcomers.

7.3.8 ***Physical Impact***

Plate 12 - Surviving hostel site buildings at HMS Royal Arthur (previously Hostel Site 10, Kingsmoor)

7.3.9 *Above-ground construction*

7.3.10 Those structures built to facilitate the ammunition depot in Tunnel Quarry were less extensive than those associated with Spring Quarry, and more sympathetic to the local landscape. As described in 6.6, a number of aesthetically pleasing buildings were constructed in a spacious setting from Bath stone which were looked upon favourably by the local population. The Parish Council in their evidence for the Lord Justice Scott report (Minister of Works and Planning 1942) state: *'The surface areas were laid out with full regard to the neighbourhood and much credit is due to*

the officers of the department for their successful efforts'. The report goes on to say that they built roads, installed services and erected hutments into Box, Colerne and the Melksham area with '*a minimum of friction to the local inhabitants generally*' (National Archives: HLG 80/123).

7.3.11 In contrast, the construction resulting from the MAP Factory works was regarded less favourably. As described in 6.6 the service buildings used to facilitate the below-ground factories, such as lift and shafts, were not extensive. However, the large workforce required for the factories made it necessary to build temporary accommodation for the workers. Housing was provided in the form of hostel sites for single pers.ons and married quarters, which met considerable protest from the local Parish Council rightly claiming that: '*…the whole character of this old fashioned township is being rapidly changed*' (National Archives: HLG 80/123). Whilst this research has not included an assessment of other such hostel and married quarters sites the extent of the construction programme at Corsham is considered to be unusual. The location of the works was driven by the below-ground facilities; therefore in contrast to many factory sites which were located in urban locations which had a ready pool of labour, Corsham was geographically isolated. This point is alluded to in War Office document: '*…I am certain that owing to its isolated location, Corsham is likely to be the only scheme where hostel and married quarters accommodation will be fully utilised*' (National Archives: AVIA 15/ 856)

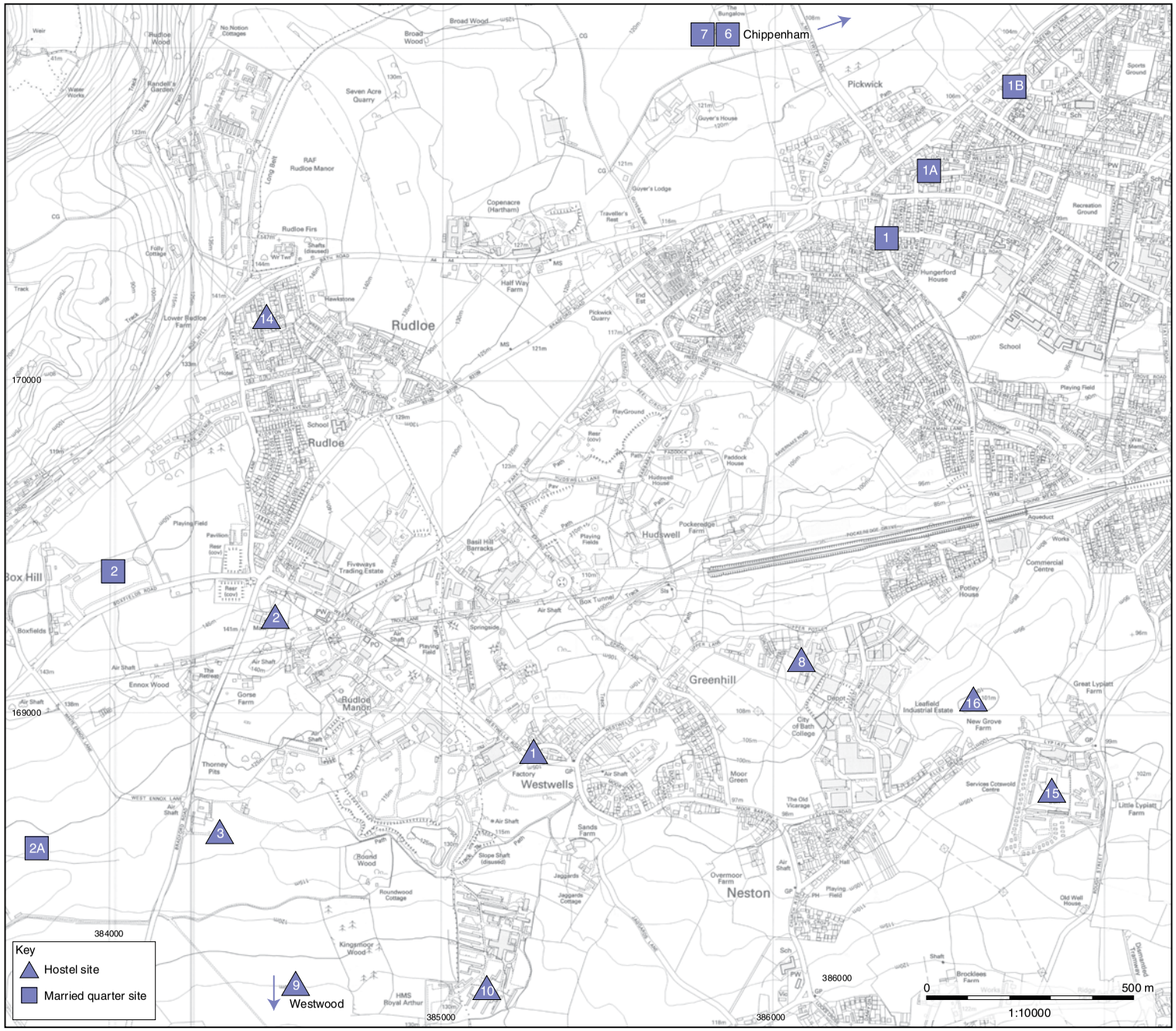
7.3.12 The hostel sites were run by the National Service Hostels Corporation Ltd... (an agency of the Ministry of Labour) and planned by Alexander Gibb and Partners. Construction of the hostels began in 1941 at Westwells, with construction of the married quarters commencing in 1942 (see below). By the end of March 1942 c.3,000 hostel places were completed. Table 1 indicates the scale of the hostel complexes both in size and the number they were proposed to accommodate, (locations are identified on Fig. 11). Those plans of hostel sites identified (Westwells (HS1), Gorse Farm (HS1) and Kingsmoor (HS10)) show that in addition to the accommodation blocks the sites comprised hospitals, stores, recreation halls, welfare centres, launderettes, offices and hairdressers. The accommodation blocks were simple single-sex, one-storey structures; the welfare buildings included canteens where food was provided and each had its own cinema. Some also had dance halls (Dennis Williams pers. comm.) such as that at Lypiatt which survives, with the dance floor remaining unchanged and the bar to the left of the entrance (Williams 2006). The 'Welfare and Canteen' building at Gorse Farm also survives in good condition and continues in use by the MOD (within the current MOD Rudloe site) (see 6.6.10)

7.3.13 The married quarters were located in Corsham and the surrounding area (see Fig 11) as far north as Chippenham and extending north towards Box. The quarters were bungalows, with those on Medland Avenue described as having three bedrooms, kitchen, living room, bathroom, separate W.C as well as front and back gardens (John Payne pers. comm./ www.bbc.co.uk). Although many were impressed with their newly constructed homes, uptake was slow because many of the married workers were skilled labour from Filton who preferred to commute from their homes in Bristol. Consequently, the full construction programme was not finished (MQ4 and MQ5 identified on table).

7.3.14 Table 2 below illustrates the impact of the hostel sites and married quarters on the landscape. It shows that in the long term, the married quarters had the greatest impact, the vast majority of which were sold to the Local Authority and were redeveloped. Those estates located in Corsham, Rudloe and Chippenham were constructed on previously green field sites. Many of the hostel sites remain undeveloped or have been absorbed into the MOD sites and immediate surrounding area. Only Potley (HS8) was redeveloped as Leafield Industrial Estate and Rudloe (HS14), for housing, although the latter had been rebuilt as Married Quarters during the war.

7.3.15 *Services*

7.3.16 The development of the hostel sites necessitated the installation of services including water, gas and electricity. Records show that the War Office works had already created problems



Site	Location
Hostel Sites	
HS1	Westwells
HS2	Gorse Farm
HS3	Thorney Pits
HS8	Potley
HS9	Westwood
HS10	Kingsmoor
HS14	Rudloe
HS15	Lypiatt
HS16	Leafield
Married Quarters	
MQ1	Corsham
MQ1A	Corsham
MQ1B	Corsham
MQ2	Boxfield
MQ2a	Boxfield
MQ3	Westwood
MQ4	Quarry Hill
MQ5	Chippenham
MQ6	Chippenham
MQ7	Chippenham

Figure 11 - Locations of MAP factory hostel and married quarter sites

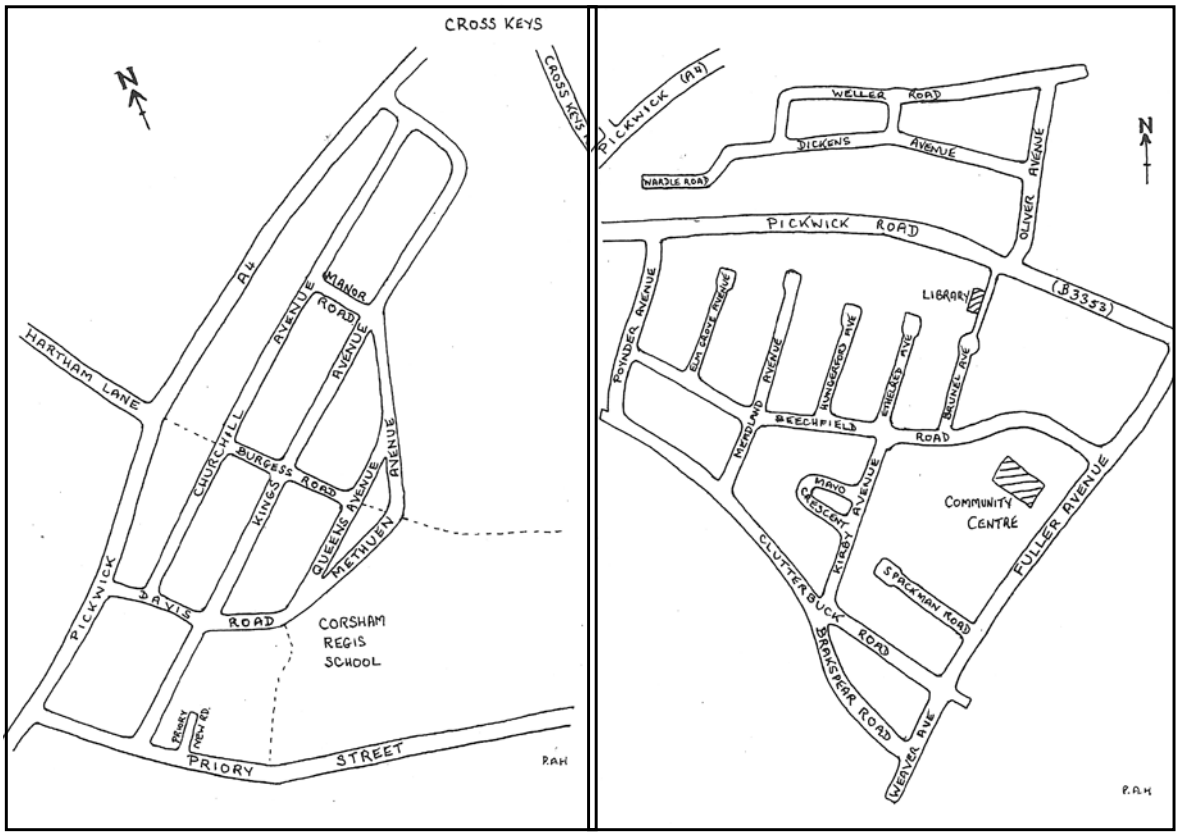


Figure 12 - Corsham Street Plan (1945), showing newly constructed prefabs off Priory Street and Pickwick Road (Henderson 1995)

so that the locality was '*seriously short of water*' (National Archives: AVIA 15.856). Water was brought in from Chippenham and a large reservoir constructed, gas pipes were laid from Bath, concrete roads constructed and sewage outfalls built (National Archives: HLG 80/123). It is possible to see therefore that the development of Corsham had a domino effect; with each development leading to further development. The installation of services by the War Office facilitated the construction of MAP housing, which ultimately opened the door to development in the 1960s.

7.3.17 The increased population also brought with it the need for community facilities including playing fields, allotments and a Community Centre (the latter is still extant). Schools were also required, with the increased population creating a heavy burden. From 1942 the increase of children arriving as a result of the MAP works is recorded in school records, with comments such as '*the classes are now very overcrowded, it is impossible to work well under such conditions*' (Corsham Methuen School Log Book, September 21st 1942). As a result, in May 1943 Corsham Regis School opened to alleviate the burden on the existing schools, and by September 1944 there were 433 pupils on the register. These were mostly children from the MAP Factory as shown by their addresses in the newly constructed prefabs off the A4, Priory Street and Pickwick Road. Their origins are recorded from a wide geographical spectrum, predominantly Bristol but also amongst others Plymouth, South Wales and Cornwall (Corsham Regis School Log Book, 1943-1969).

SITE	LOCATION	AREA OF BUILDINGS	TYPE OR CAPACITY	OWNERSHIP AND DEVELOPMENT
Hostel Sites				
HS1	Westwells	114,452 sq ft	1,000 men	Transferred to National Hostel Corp by 1947 (McCamley 2007). The hostel site has largely been lost although one substantial structure survives, remaining in use as a Plastics Factory. Close inspection of this structure was not possible.
HS2	Gorse Farm	112,650	1,000 men	Transferred to RAF by 1943 (McCamley 2007). This lies within the current MOD Rudloe site, surviving buildings include accommodation blocks, a laundry block, stores and the 'canteen and welfare' building.
HS3	Thorney Pits	130,690	1,000 men	Transferred to National Hostel Corp by 1947 (McCamley 2007). This site remains undeveloped; the location of former structures is indicated by disturbances and mounds in the landscape.
HS8	Potley	119,344	1,000 men	Transferred to War Office 1943 (McCamley 2007). This site has been redeveloped as Leafield Industrial Estate, access was not possible to ascertain if any MAP buildings survive but it is considered to be unlikely.
HS9	Westwood	107,424 sq ft	Unknown	Transferred to National Hostel Corp by 1947, community centre left for light industry until 1972 (McCamley 2007). Cartographic sources suggest this site has not been developed, although some housing is extant immediately to the south.
HS10	Kingsmoor	160,000	1,000 men	Transferred to Admiralty 1943 (McCamley 2007). This site remained in use as HMS Royal Arthur but is now derelict. Hostel buildings remain extant.
HS14	Rudloe	Unknown	Unknown	Transferred to MOWB in 1943 for experimental work (McCamley 2007). Rebuilt as married quarters but not used. Transferred to Local Authority for redevelopment in 1963/4. A large estate is now situated in the location of the hostel/ married quarters.
HS15	Lypiatt	122,837	1,000 men	Transferred to War Office in 1943 (McCamley 2007). The site is now in use as the 'Cotswold Centre' by the MOD and many hostel buildings survive including the community centre and residential buildings.
HS16	Leafield	141,742	1,000 men	Transferred to Admiralty by 1947 (McCamley 2007). This site is undeveloped.

SITE	LOCATION	NO OF BUNGALOWS	TYPE OF CAPACITY			OWNERSHIP AND DEVELOPMENT
Married Quarters						
			2 bed	**3 bed**	**4 bed**	
MQ1	Corsham	300	52	158	2	Transferred to Local Authority in April 1954 and redeveloped in 1963/4 (McCamley 2007)
MQ1A	Corsham	106	52	54		Transferred to Local Authority in April 1954 and redeveloped in 1963/4 (McCamley 2007)
MQ1B	Corsham	188	84	92	6	Transferred to Local Authority in April 1954 and redeveloped in 1963/4 (McCamley 2007)
MQ2	Boxfield	116	48	56	6	Bungalows and shops cleared in 1964, school demolished in 1984 (McCamley 2007). The modern OS map shows this as largely undeveloped.
MQ2a	Boxfield	144	60	70	7	Bungalows and shops cleared in 1964, school demolished in 1984 (McCamley 2007). The modern OS map shows this as largely undeveloped.
MQ3	Westwood	96	7	89		Transferred to Local Authority in 1958 and subsequently redeveloped
MQ4	Quarry Hill	64		64		Abandoned before construction
MQ5	Chippenham	11	70	40		Abandoned before construction
MQ6	Chippenham	266	138	128		Transferred to Local Authority by April 1955 for redevelopment (McCamley 2007)
MQ7	Chippenham	174	90	84		Transferred to Local Authority by April 1955 for redevelopment (McCamley 2007)

7.3.18 *Transport*

7.3.19 The ammunition depot necessitated an improved transport system with which to move the influx and outflow of ammunition, and to transport the workers from Bath to Corsham. There was already a good rail network in place provided by the GWR line with an old quarry entrance at the entrance of Box Tunnel providing entrance to the ammunition depot. Sidings were built at Thingley Junction (3 miles to the east of the depot) which controlled rail from Tunnel Quarry, Farleigh Down sidings and Beanacre sidings (facilitating the other ammunition depots). From here ammunition would be transported to the ports, with inbound ammunition sent to the appropriate depot. Temporary buildings were erected at Thingley Junction; it is understood the location of these is still identifiable, remaining in use as a works yard.

7.3.20 The construction of the MAP works brought with it further rail development despite fears over the increased likelihood of enemy detection. Inward freight was estimated at a maximum of 60 wagons per day, requiring the construction in 1943 of two groups of sidings at Lacock and Thingley and a new west-south chord line (the 'Air Ministry Loop') which joined the main line to the branch at Thingley Junction. This allowed through-running trains from Bristol to Westbury and beyond, via Melksham. In the long term, the MAP factory rarely used the rail network and from 1944 all freight to and from the factory went by road. The Air Ministry loop and associated sidings at Thingley were taken officially taken out of use in 1955, and those at Lacock in 1964. This coincided with the decommissioning of the sidings at Thingley Junction, following the closure of the ammunition depot (McCamley 2007).

Plate 13 - MOD Rudloe, Goods Lift 1

7.3.21 Road was also used for the transportation of ammunition via the MSLP (see Section 6.6.5), which connected with four slope shafts in Tunnel Quarry. In the MAP factories the goods lifts would have been used to transport finished engines, goods and raw materials to trucks. The greatest impact to the road system however was the transportation of workers, both from Bath to the ammunition depot and MAP factories, and those workers who travelled from Bristol to the MAP factories. This impact is evident in Parish Council minutes, which estimate that 4-5,000 men travelled daily by bus to the underground ammunition depots, working three shifts round the clock (Henderson 1995). Within the existing landscape, features such as the 'Bus Park' within the MOD Rudloe site are evidence of the transport system created for the MAP workers.

7.3.22 ***Cultural Impact***

7.3.23 *Local attitudes*

7.3.24 Local opposition towards the War Office development was directed towards those men drafted in from the north to convert Tunnel Quarry for ammunition storage. The conduct of the men was clearly of concern to the War Office who advised each new batch of labourers:

> *"You have come to live in beautiful surroundings, and we wish you to conduct yourselves properly....Don't go painting the town red...You will be living in new environments and if any of you have had bad habits, now is the time to discard*

them and set for yourselves new higher standards" (McCamley 2007, 128).

7.3.25 Much of the resentment was from the citizens of Bath who, it was recognised by the War Office '*do not take kindly to compulsory billeting*'. In less conservative areas, such as the industrial city of Bristol where compulsory billeting was also in place, it was recognised that there were far fewer objections (National Archives: AVIA 9/20). Bath's inhabitants particularly disliked the men drinking on a Friday night; on sentencing two men for brawling in September 1938 the chairman of the magistrates told the prisoners:

> *"The magistrates have the reputation of the City to look after. When they come to a place like Bath they should behave as Bath people behave. Bath people do not get drunk"* (McCamley, 2007 128).

7.3.26 Local prejudices regarding the new residents of Corsham are evident in the school log books. At Chapel Knapp School, the Headmaster's Annual Report makes numerous references to the War Office children being 'backward' (Chapel Knapp Headmasters Annual Report, 1937-63). The transportation of the War Office workers also caused resentment in Corsham; they worked in three shifts round the clock and the hooting signifying breaks day and night caused annoyance, as did the worsening state of the roads. This was enhanced by petty annoyance such as the breaking by the War Office bus of a street light which led to a prolonged battle for 6s 3d! Parish Council minutes report that the Irish labourers were causing two problems: bad behaviour including damage and trespass and pre-existing bad health creating an added burden on at the already over-stretched health service. Noise and strife in the enlarged community led to requests for more police, which was eventually agreed (Henderson 1995).

Plate 14 - Corsham Community Centre

7.3.27 The conversion of Spring Quarry for use as a MAP factory by Irish labour, further fuelled ill feeling towards the military developments. The Irish were considered by some to be '*aliens and that their country is neutral if not actually antagonistic (to the war)*' (National Archives: AVIA 9/20). There was also resentment from BAC workers who were asked to relocate to Corsham; many were skilled workers who were unwilling to move and commuted daily from Bristol. They were concerned about safety as rural areas were only provided with Anderson or Morrison shelters, in contrast to better-protected facilities in cities.

7.3.28 Despite this, interviews with those that remember the wartime developments do not recall such ill-feeling, and it is likely that the sentiments of a few were exaggerated in reports and newspapers. Many felt they were 'doing their bit' for the war effort in accommodating the newcomers, and that they integrated well in the local community (G.L Davies and Charlie Ralph pers. comm.). A concern for welfare is a prominent theme of articles, letters and reports from the period which show a philanthropic approach to the workers. Accident benefit, paid holidays, sickness and injury benefit were all given, and a welfare scheme was also put in place, including a canteen providing wholesome, inexpensive food and entertainment. The influx of workers was seen by some as a 'social experiment' and an opportunity to show good neighbourliness, and help those in distressed areas.

> *"Is sympathy for the plight of those in the distressed areas to be confined to comfortable armchair criticism of the sins of the Government?…Is it to be wondered that in the sterile misery of prolonged unemployment their outlooks become bitter, their views extreme…such*

material only too easily forms the breeding ground for agitators…(but) it is butter not guns which cures Communism" (Bath and Wiltshire Chronicle and Herald 20th January 1938).

7.3.29 In order to solve the social problems of the workers, such as drunkenness, and to fill spare time, a Y.M.C.A hut was erected and sport was promoted with the creation of a football pitch and equipment. Trips to the seaside were also provided and 'The Tunnel Orchestra' created. A Works Welfare Committee and Officer were installed who established canteens, the profits from which were used for the men's benefits including a sick and injury fund. Newspaper reports show that there was felt to be a social obligation to help those less fortunate:

> *"All centres and places must be ready and willing to bear their proper share in the great effort of the present Government to secure the safety of the nation"* (Bath and Wiltshire Chronicle and Herald 20th January 1938).

7.3.30 Social responsibility is also a theme of the Parish Council's comments on the wartime developments. Despite their overall objection to the 'industrialisation' of the area there remained concerns for the welfare of the newcomers:

> *"As well as the physical and material well-being of the increasing population, there will be their spiritual and social needs to be cared for, and we consider that early immediate steps should be taken to get co-operation of all the groups of people who are able to help in this aspiration"* (National Archives: HLG 80/123).

7.3.31 Concern for welfare is also evident in the MAP factories, both within the accommodation and below-ground. The hostel sites were provided with good-quality food and entertainment, and the working environment was brightened by the Olga Lehmann murals and sun lamps. War Office papers. also show that considerable effort was put into providing for the new population including air raid shelters, shopping facilities, postal facilities etc. (National Archives: AVIA 15/ 856). Inspections were made to hostel sites to ascertain the level of welfare provided and show that they included reading and writing rooms, indoor children's playrooms and nurseries (National Archives: MH 55/ 1576). Further reports provide detail on the level of care in the nurseries and hygiene conditions.

7.3.32 The above-ground developments at Corsham also generated mixed feelings; in general, with the exception of the Bath-stone buildings built by the War Office above Tunnel Quarry, the wartime buildings were utilitarian and temporary in design. It was hoped that the countryside would be '*restored to its former state by the removal of wartime buildings once the war is won*'. There appears to have been little consultation with local officials about developments, with no official approach made to the Parish Council until October 1942 in spite of the '*intolerable conditions created for the cottagers, farmers and other residents*'. The Council comments that if further construction of housing continued on vacant land '*slum like conditions must inevitably be created with all their accompanying evils*'. The objections were levelled at the number and style of the buildings as well as their visual impact. A report to Lord Justice Scott by the Parish Council on wartime development in England identifies significant historic buildings and the visual impact on these structures as a result of the '*industrialisation*' of Corsham (National Archives: HLG 80/123).The buildings identified in the report are: Corsham Court, The Grove, Mansion House, Ivy House, Hungerford Almhouses and Wardens House, Flemish buildings and sundry small houses.

7.3.33 Resentment was also generated by the closure of public rights of way and the enclosing of space by the military. Public footpaths were closed and not re-opened; the Parish Council was particularly keen to get back the footpath from Greenhill to the Box Tunnel entrance and along Pockeridge Drive to Pound Mead. Although this was a pre-war right of way, the War Office refused to return it as it ran too close to the ammunition depot, which continued

in operation. Eventually in c.1952 a path from Pockeridge Lodge to Park Lane was opened (Henderson 1995).

7.3.34 The Parish Council minutes however also suggest a realisation of the positive impact of development. It was hoped that in the long term, improved transport facilities and wartime buildings, including the canteens, recreation rooms, hostels, bungalows and community centre, would be converted for light industry and that Corsham would obtain urban status. The increase in population also boosted the economy, and in 1938 it was estimated that £7,000 in wages were circulating in Bath and the local area as a result of the War Office workers. A large number of local unemployed were also able to find work in the below-ground works (Bath and Wiltshire Chronicle and Herald 20th January 1938).

7.3.35 Following closure of the MAP Factory (1945), the Married Quarters were utilised by the Ministry of Labour due to the shortage of labour resulting from the growth of local industry. The Hostel sites were used until 1958 to house Polish and East European refugees. A proposal was put forward to convert the hostels at Thorney Pits to a Borstal institution but this was met with strong local objections, as one landowner stated:

> *"....for the past fifteen years this area has had most unsatisfactory people in it who have given much trouble and caused the local people much annoyance and disquiet. It would not be fair to them to turn this area into a permanent site for undesirable families".* (McCamley 2007 201).

7.3.36 In the late 1950s conversion work within Spring Quarry prepared it for use as the CGWHQ which commenced operation in 1961. Above-ground developments associated with the Cold War were very limited (Oxford Archaeology 2008, section 13.2.31) and the below-ground work was undertaken by contractors. Although myths circulated relating to the quarries use at this time (see Section 8.3), there were no objections to its use because it was unknown. Later, particularly following the release of Duncan Campbell's book (1982), the location and function of the CGWHQ at Corsham was more commonly known. It was about this time that political activity became common at Corsham; graffiti was painted on the roads and groups picketed around fences. An anti-nuclear campaign group called 'Snowball' chose Corsham as a regular protesting site. An account from one protester describes the type of activities which took place in the 1980s:

> *"People thought of all sorts of ways to put Corsham on the map…I passed two Snowballers with ropes, helmets and potholing equipment! The Capenhurst people worked in two groups. The North Wales based one - stencilling being the 'in' action at the moment - succeeded in leaving the message YOUR WAR GAMES WILL BE THE DEATH OF US ALL by two gates before being arrested. The group that had come down from Liverpool concentrated on getting inside the base, climbing on buildings, and spreading leaflets around in useful places. They were escorted off the premises several times but not arrested. We were able to join in a poster parade and Christian CND service before going underground".* (Capenhurst Snowball Newsletter No.10).

7.3.37 *Attitudes of War Office and MAP workers*

7.3.38 It was recognised that much of the conversion work undertaken by the Irish and workers from the north was extremely hard (Ralph, C pers. comm. 2009). Tanky Elms in his account of his life as a quarryman in Corsham recalls how following his army training he was called back to work as a safetyman in the conversion of Spring Quarry, at which he was delighted. There he worked 12-hour days, 7 days a week; he recalls the terrible conditions under which they worked, unable to see more than a few feet due to diesel smoke. The work was dangerous but lucrative, involving thousands of tons of cement with almost every pillar corsetted with concrete (Elms 1984).

Plate 15 - Image from Snowball Campaign Newsletter No.9

7.3.39 There are mixed reports of the experiences of those who worked below-ground; many loved the experience including Dennis Williams who recounts his first memories of entering Spring Quarry:

> *"I looked with astonishment at the scenery which lay majestically with all its charm in front of me. The awe inspiring magnolia coloured rock face, the pure air and the temperature gave one a sense of contentment and an atmosphere of well-being"* (Williams 2006, 20).

7.3.40 The tunnels were lit with hundreds of twin-fluorescent tubes, which made the tunnels seems as though they were flooded with daylight. To combat the lack of sunlight, workers were offered a weekly dose of sunlamp treatment. The Pers.onal Address System (still extant) 'played music while you work' and informed people what the weather was like above-ground at the end of each shift. Concern for welfare is also evident in the Olga Lehmann murals, which were painted to brighten up the working environment (see Section 6.5). Lilian Smith recalls recalls how Copenacre was a pleasant place to work being '*clean, light and airy, a constant temperature of 60 degrees*' (pers. comm.). There was a feeling of pride working below ground; following the successful completion of an engine it would be transferred to a large open space for all to view the finished product (Margaret Lawson pers. comm.). Pay for a 47-hour week ranged from 16/- (80p) a week (in the first year) to £1 10/- 2d (£1.52) a week (in the fifth year) (Des Iles/ www.thisisbristol.co.uk).

7.3.41 Many also enjoyed living in the hostel sites which accommodated single persons only. For some, it was their first experience away from home and parents and they relished it. The hostel sites included cinemas and ballrooms, at which American swing bands would play and variety shows gave performances. Food was excellent, with items available that were rationed in the 'outside world' (Williams 2006, 31). In one account, Audrey Lewis recalls

her Aunt Joyce's experiences at the MAP Factory, remembering that: "*It was an experience of freedom she had never had before, and she revelled in it*". She recalls from her visit that:

> *"…All around the factories were military camps with men from many countries waiting to be drafted to military posts abroad. Some came to dance to the military band and exciting American music. It was the most thrilling experience of my life at the age of fourteen"* (Audrey Lewis/ www.bbc.co.uk)

7.3.42 In contrast, others hated the work and environment; shifts were long and some were too tired to enjoy a social life, and found working below-ground frightening:

> *"I do not have the romantic image some people have of war time. I was really scared a lot of the time at Corsham, and it was very tiring work"* (Linda Rutter/ www.bbc.co.uk).

7.3.43 Although today the surviving archaeology of the MAP Factory is characterised by large open spaces, during its operation the factory would have been crowded with machinery between the pillars (www.thisisbristol.co.uk). While some remember the underground works as being clean and bright, others recall them being dusty, noisy and draughty. Machines were crammed in to maximise available space.

8 Part IV: Secrecy, Myths and Legends

8.1.1 The communal value of MOD Corsham is enhanced by less tangible effects of the military presence, including the secrecy, myths and legends which have evolved during the course of its military use. The lack of evidence supporting these does not necessarily decrease their importance, because they increase the meaning of the place for individuals and groups. To understand these it is important to establish the level of secrecy surrounding the site, in order to determine how much was known by those working within it and those externally. This research has been based on documentary sources, and the accounts of those with an association or memories of the site, even if they never visited it.

8.2 Secrecy

8.2.1 ***Second World War***

8.2.2 *Tunnel Quarry Ammunition Depot*

8.2.3 The four quarries which encompassed the Central Ammunition Depot at Corsham comprised a vast site with 125 acres of subterranean chambers, containing 300,000 tons of explosives and costing in excess of £4,500,500 (McCamley 2007). This vast site could not have gone unnoticed by the local Corsham population. Efforts were made to maintain secrecy about the use of the quarries as an ammunition depot and the rumour was spread by the War Office that the Ministry of Food was building an emergency food dump. Whether this was accepted by the local occupants is considered unlikely, as indicated by the entry of a Trowbridge school teacher who recounts in her diary '*Wed. August 27th - Went to Corsham and saw the men at work on the munitions dump which stretches underground for a great distance*' (McCamley 2007, 27).

8.2.4 The increase in road and rail traffic and the extension of the existing services must have generated interest from the local civilian inhabitants. When travelling by rail to Chippenham it was possible to see Thingley Junction with the piles of ammunition ready for transportation (G.L Davies pers. comm.). The construction of a series of temporary buildings at Monkton Farleigh to avoid the transportation of suspect ammunition to the laboratories above Tunnel Quarry, shows that there was a need to maintain the secrecy of the complex (McCamley 2007).

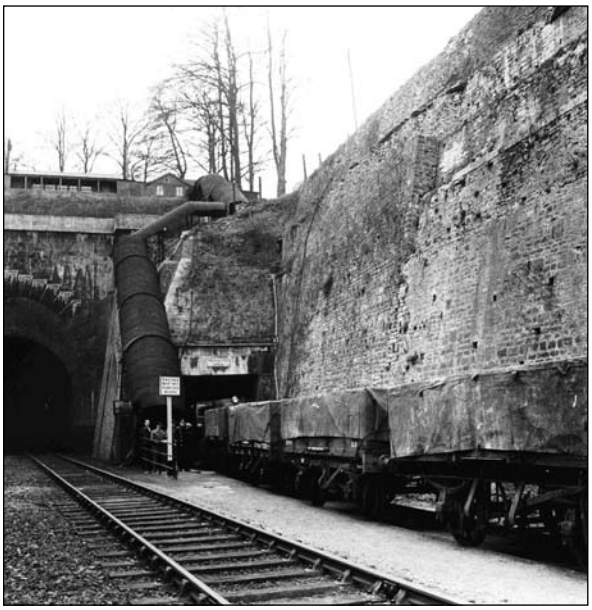


Plate 16 - Historic image showing ammunition entering Tunnel Quarry and Box Tunnel entrance (© Nick McCamley)

8.2.5 This need to maintain secrecy was of course necessary to ensure that the CAD was not identified by the enemy. Located 100 feet below-ground the ammunition was secure from aerial bombardment but the above-ground surface infrastructure was vulnerable, and there was a fear that the complex would be identified by spies. The construction of structures above Tunnel Quarry in Bath Stone and the possible disguise of the Barrack Block as a school may be evidence of this concern. As referred to above there is no evidence to prove that the design of the Barrack Block was a result of concern over being identified and it is probably more likely to have been the influence that the Royal Fine Arts Commission (and CPRE) had over the design of military bases in the countryside. The destruction of the railway had the potential

to paralyse the receipt and distribution of ammunition, and measures were put in place to prevent detection. There were only two aerial attacks on Corsham, both were against Monkton Farleigh ammunition storage sub-depot, but were probably intended for Colerne airfield as the depot did not appear on German target maps until November 1941 (McCamley 2007).

8.2.6 Measures were put in place to protect Corsham from 1939, when it was protected as a 'Q' site whereby decoy sites were created to attract bombers from real targets. These were originally intended for airfields but later extended to armament factories, supply dumps and railway infrastructure. 'QF' (fire decoys to simulate a site which had already been attacked) and 'QL' sites (lighting decoys used to represent military sites) were constructed at Farleigh Down sidings and Thingley Junction. Following Dunkirk, preparations were put in place for imminent invasion with defences enclosing Corsham, ensuring it was well protected. Between Bradford-on-Avon and Reading the GHQ defences consisted of two parallel lines about 20 miles apart. The lower line followed the Kennet and Avon Canal south of Corsham, and a Bristol Outer Defence line (not completed) ran a few miles west of Corsham. A further 'Corsham Defence Scheme' was also put into place, at the beginning of the war when Light Infantry moved to Corsham garrison and Guard Patrols were put into place to protect against enemy landing. Pillboxes were also constructed, some of which remain extant within the current MOD site today (for example around the Main Surface Loading Platform), and 'railway blocks' were put into place to protect the entrances to Box Tunnel and the ammunition depot. As attack was believed to be imminent in 1940, force numbers were increased (McCamley 2007).

8.2.7 War Office records show that there was considerable concern over the secrecy of the works at Corsham. They were primarily concerned about rumours relating to the works and detail exaggerated stories (National Archives: AVIA 9/20). One report by an officer who visited the site to ascertain security issues, describes how he found entry easy and was even given a guided tour by workers who did not question his presence and described different points of access (National Archives: WO 199/ 1659). Another report states: 'It was hopeless to imagine that general information as to the importance of Corsham could be kept secret' (McCamley 2007, 186). It is likely that following that report and the construction of the MAP factories that security increased.

8.2.8 *Spring Quarry MAP factories*

8.2.9 The extent of the construction programme, the number of workers employed at Corsham and the integration of the employees into the local community particularly schooling, meant that the role of Spring Quarry, at least locally, was known. Aerial photos clearly show the extent of the construction programme (OA 2008, see 7.2.7), this conversion work resulted in a vast above-ground dump in the south-west corner of the factory site, eventually covering a quarter of a mile long and over 50ft high (McCamley 2007). The regimental accommodation buildings also drew attention and 'Schedules of Measures of Camouflage' describe the methods of disguise that were put in place to absorb the MAP buildings into the local landscape. Black lines were applied to the roads to reflect countryside roads from the air, and the flat roofs of the married quarters were divided longitudinally with a 'shadow' side being lightly textured. Windows, doors and frames were painted in similar colours to neighbouring houses (National Archives: AVIA 15/ 858). The factories were protected by a private police force that patrolled the 3 miles of security fence surrounding the factory. This was supplemented from January 1943 by the 12th Battalion Wiltshire Home Guard following an undercover investigation by an MI5 officer, sent to Corsham following complaints (McCamley 2007).

8.2.10 Those that worked below-ground did not talk of the nature of their work even to family members. Workers who relocated from other parts of the country were not told of the nature of their employment until they arrived, and were asked only to report at an office in a given location (Williams 2004). Accounts of those that worked there describe security officers

located at key points such as the Public Lifts, with access forbidden without an official pass. Employees were not allowed to wander around below or above ground. Access to an area was only allowed with a valid pass. Employees' knowledge of Corsham and the military works was therefore specific to the area in which they lived and worked. Social life was confined to your hostel or the immediate surrounding ones; everything was provided for, so that trips to Corsham or Bath were unnecessary (Dennis Williams pers. comm.).

8.2.11 ***The Cold War***

8.2.12 Work converting the MAP Factory to the CGWHQ was completed largely by contractors. Local Corsham people did however work below-ground, some of whom were interviewed as part of this study (Appendix B). Their level of knowledge of the bunker's purpose differed according to the type of work undertaken. In general, they were not briefed as to its function, but its purpose soon became apparent. In conducting the oral history interviews a common theme is that questions were not asked, authorities were respected and it 'did not pay to open your mouth' (Charlie Ralph pers. comm.). All employees were asked to sign the Official Secrets Act, and as a result many have been reluctant to speak of their memories, even to this day. The local community were also aware of continued below-ground activity, most believing it was where the Queen and royal family would have been located. By the 1980s, the use of Spring Quarry was more widely known, as explained in section 7.3.36. According to local sources prior to this there were protestors outside with 'Ban the Bomb' signs and CND signs painted on the roads (Charlie Ralph pers. Comm.). These protests are believed to have been in the 1960s but they are thought to have been fairly regular (although this not known for uncertain).

8.2.13 The vast majority of officials that would have been expected to enter the CGWHQ in an emergency, potentially leaving behind their families, were not aware of its existence. Senior members of the cabinet office did know, but were not aware of its location; according to Sir Frank Cooper '*the very few people who were in on (the TURNSTILE secret) always referred to it as 'the quarry*'. Those in the inner circle knew it as 'Corsham' (Hennessy 2003). John Clare who in 1971-2 was the assistant private secretary to Sir James Dunnett, then the Permanent Under Secretary of State at the Ministry of Defence, was at the very heart of policy making in the MOD. He explained that generally those who were proposed to enter the CGWHQ or RSGs consisted of a few very senior officials with knowledge and experience, and younger support staff who were generally unmarried and certainly childless. It was recognised that asking people to leave their families in such circumstances might have led to many last minute refusals. It was very much the era of 'need to know' and that '*the existence and nature of Burlington was kept from many people who might have been expected to know about it and therefore, presumably, from most people - probably all - who might not have been expected to know*' (John Clare pers. comm.).

8.2.14 As far as is known, no Prime Minister ever visited the site, but it is known that some from the inner circle did inspect the facility. Exercises were practiced in Whitehall in the event of emergency evacuation from London (David Young and Peter Hudson pers. comm.). The need to maintain the secrecy of the CGWHQ's location was paramount, had Russian intelligence located it, its very purpose and function would have been lost. It is thought that form the late 1970s (if not earlier), Russian intelligence had located the bunker as a Soviet surveillance satellite was programmed to pass over it on each orbit of the earth (Hennessy 2003).

8.3 Myths and Legends

12.3.1 The myths and legends surrounding Corsham add an interesting social dimension to the site, which demonstrate a history of curiosity of the 'unknown' particularly of the subterranean world. These include the belief that a tunnel was constructed from Corsham to London, in which to transport the government. The most commonly held belief however is that the

Royal Family would have been located here in the event of nuclear attack (in reality it is now generally thought that they would have been relocated to Canada). Others believe that national treasures including the crown jewels and works of art would be stored here. Even today, following its decommission it is believed that Corsham retains a secret hidden element.

8.3.2 One legend is that Brunel deliberately aligned Box Tunnel so that the rising sun is visible through it on 9 April each year, his birthday. Opinions vary widely as to whether this is true. Angus Buchanan writes:

> *"I have found no documentary evidence for the often-repeated story that Brunel aligned the Box Tunnel so that the rising sun shone through it on his birthday, even though careful examination shows that it could indeed do so, and it is certainly a good story"* (http://en.wikipedia.org/wiki/Box_Tunnel).

8.3.3 It is tempting to think that with a suitable vantage point, the effect (if not Brunel's intentions) can easily be checked on 9 April. However, the appropriate point is in the middle of a high-speed railway line and is thus potentially very dangerous (http://en.wikipedia.org/wiki/Box_Tunnel).

8.3.4 The existence of a Strategic Steam Reserve (SSR) is one of the most favoured stories associated with Corsham. It was believed that the main SSR was stored at Corsham with sub-depots located around the country, where British Standard Class and ex-GWR steam locomotives were withdrawn and kept in storage. This is thought to have taken place in the 1960s when British Railways moved from steam to diesel and electric traction. This was to ensure that, in the event of nuclear attack, transport could still be provided (steam locomotives would not be affected by electro-magnetic pulses created by a nuclear explosion, unlike the diesel and electric counterparts).

8.3.5 Evidence for the SSR derives from accounts from maintenance workers, stories of trains disappearing overnight or of Royal Engineers staff receiving training on steam locomotives. Photographic evidence is also provided of locomotives outside tunnels, or pictures with blacked-out areas hiding the presence of a locomotive (www.willys-mb.co.uk). Corsham is the obvious location for such a reserve with its secret past, railway connections and easy access from the GWR at Box Tunnel.

8.3.6 The existence of a reserve is now widely believed to be an urban myth. There are many arguments against its existence, the strongest one being that if there was a steam reserve, its secrecy was not necessary. Other countries had SSRs (e.g. - Sweden and the Soviet Union), which were not kept secret and other UK reserves such as the strategic food reserves and Green Goddess fire engines were not kept secret.

9 Conclusions and Recommendations

9.1.1 The Characterisation and Values studies have provided a holistic understanding of the historic development and significance of MOD Corsham. This work has increased appreciation of the site's complexity and the relationship between its operational uses. This is particularly true of the CGWHQ, which was not previously fully understood (in part) due to the recent declassification of the site in 2004. The work has illustrated the outstanding overall significance of the complex, and the high value of many of the areas which it encompasses. It has also shown the importance of those less tangible values, such as the sense of identity many have with the site and the pride of Corsham's local inhabitants in their unique heritage.

9.1.2 MOD Corsham has considerable potential to increase our understanding of our recent history. The identification of sites with a comparable function to the different operational entities within the complex, has resulted in new and interesting information. In particular, it has shown that domestically the CGWHQ was part of a system that evolved from the 1930s to ensure the continuity of government. Defence policy during the early Cold War period required that, in a national emergency, all essential government command functions could be accommodated within one facility. Internationally, those facilities identified on either side of the east/west divide place the CGWHQ within a broader context, highlighting both similarities and contrasts. These demonstrate the individual national approaches to the perceived threats of the Cold War, and the different political systems and financial constraints under which they were operating.

9.1.3 Clearly there is the need for further research and investigation of MOD Corsham. This study was aimed at gaining a holistic appreciation of the site, and more detailed investigation of individual operational uses would further enhance our understanding. This is particularly applicable to the Cold War use of the site, the history and significance of which will be further appreciated with the release of classified documents nationally and internationally.

9.1.4 One particular area which would warrant further archival research would be the construction of the barrack block and the other stone buildings at the Basil Hill site.

9.1.5 The historic environment is a constantly changing resource not only physically, but also in people's perceptions and the values they attribute to it. This has been demonstrated through research on MOD Corsham; contemporary records suggest that the military presence at Corsham was initially resented in some quarters, but such sentiments later evolved to feelings of pride. Attitudes towards twentieth-century military heritage have been changing since the end of the Cold War in 1989. This is partly due to considerable research and dissemination of information and standards by English Heritage and the Council for British Archaeology. Attitudes of distain for 'concrete monstrosities' have evolved to sentiments of pride in a distinct and diverse heritage. The outreach element of this project has shown the immense interest in MOD Corsham, which will increase as this research is disseminated and more is understood about the site.

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Oxford Archaeology
January 2010

APPENDIX A. COMPARATIVE SITES

SITE NAME & REFERENCE (REF)	BRIEF DESCRIPTION	CURRENT STATUS AND PRESERVATION	REFERENCE
BATHAMPTON DOWN AREA (AREA A)[1]			
Q1 Stone's/ Hampton Down Quarry	This quarry has below-ground workings only. Nothing further is known of the quarry.	Unknown.	• David Pollard pers. comm.
Q2 Seven Sister's Quarry	Reputed to be quite large and linked to the canal by an incline.	It is not currently possible to gain access to this quarry, as the entrances were blown up in the 1960s and are now blocked. The quarry is thought however to survive well as it was not worked after 1835.	• http://bathstonequarries.mysite.wanadoo-members.co.uk/LOCATIONS.htm2 • http://www.darkplaces.co.uk/phpBB2/album_cat.php?cat_id=606. • David Pollard pers. comm.
CLAVERTON DOWN TO ODD DOWN AREA (Area A)			
Combe Down Area			
Q3 Mt. Pleasant Quarry	This quarry consists of 2 small quarries (one now infilled), which are linked by underground workings.	There are no cranes or artefacts surviving within the quarry.	• http://bathstonequarries.mysite.wanadoo-members.co.uk/LOCATIONS.htm
Q4 Firs Quarry (including Byfield and Allotment quarries)	A large quarry complex which began excavation under several small freemasons in c.1723. Ralph Allen took ownership of the quarry in 1729, and it is from this date that industrial quarrying commenced. Allen also opened a stone-yard and wooden gravity railway to facilitate transportation. The last known quarrying was in Allotment Quarry in the early-20th century.	The condition of the mine is unstable resulting in its gradual infill with concrete. Oxford Archaeology has been recording the quarries since 2000. This has revealed numerous artefacts and graffiti relating to its operation. This quarry is in part filled with concrete and will ultimately be entirely infilled.	• http://bathstonequarries.mysite.wanadoo-members.co.uk/LOCATIONS.htmCombe Down Stone Mines: Stabilisation Project (Oxford Archaeology 2004, 2006 & 2008).
Q5 Shaft Quarry	This quarry has below-ground workings only. Nothing further is known of the quarry.	Unknown.	• David Pollard pers. comm.

[1] *Areas given correspond to Figure 3*
[2] *Full website references are provided in Appendix II*
[3] *Full website references are provided in Appendix II*

SITE NAME & REFERENCE (REF)	BRIEF DESCRIPTION	CURRENT STATUS AND PRESERVATION	REFERENCE
Q6 Turnpike/ Tank Field Quarry	This quarry has below-ground workings only. Nothing further is known of the quarry.	Unknown.	• David Pollard pers. comm.
Q7 St Winifred Quarry	This is an open quarry, which also has below-ground workings. Nothing further is known of the quarry.	Unknown.	• David Pollard pers. comm.
Q8 Entry Hill Quarry	This is an open quarry, which also has below-ground workings. Nothing further is known of the quarry.	Unknown.	• David Pollard pers. comm.
Q9 Kingham Field Quarry	Small underground quarry, which is situated next to an open quarry.	This is an insignificant quarry, in terms of size and remains.	• http://bathstonequarries.mysite.wanadoo-members.co.uk/LOCATIONS.htm
Q10 Vinegar Down Quarry	This quarry was last worked in 1913. Nothing further is known of the quarry.	This quarry has not been accessed since 1913, and therefore it is probable that it contains quarrying remains.	• David Pollard pers. comm.
Odd Down			
Q11 Glass House/ Bools Quarry	This quarry has below-ground workings only. Nothing further is known of the quarry.	Unknown.	• David Pollard pers. comm.
BYBROOK AND BEYOND (NORTH OF BATH)			
Q12 Sodbury/ Cross Hands Quarry	This quarry has below-ground workings only. Nothing further is known of the quarry.	Unknown.	• David Pollard pers. comm.
Q13 Tormarton/ Brookmans Quarry	This quarry has below-ground workings only. Nothing further is known of the quarry.	A fallen loading crane is extant, otherwise the level of preservation is unknown.	• David Pollard pers. comm.

SITE NAME & REFERENCE (REF)	BRIEF DESCRIPTION	CURRENT STATUS AND PRESERVATION	REFERENCE
Q14 Yatton Keynell Quarry	This is an open quarry, which also has below-ground workings. Nothing further is known of the quarry.	Unknown.	• David Pollard pers. comm.
Q15 Lucknam Quarry	This is an open quarry, which also has below-ground workings. Nothing further is known of the quarry.	This quarry has a dangerous roof making access problematic. Otherwise the level of preservation is unknown.	• David Pollard pers. comm.
LIMPLEY STOKE AREA (AREA B)			
Q16 Hayes Wood Quarry, Freshford Quarry and Limpley Stoke Quarry	These are separate but adjoining quarries. Hayes Wood was quarried by the Bath Stone Co. Stoke Quarry joins Hayes Wood Quarry and was operated by the Bath Stone Firms Ltd... and W Soanne and Co. employing 13 quarrymen in 1894. The quarry was later used for storing TNT (ref..... - AS5)	The quarry has been reworked in the last few years, which is likely to have resulted in the loss of the quarry remains. The trolley roads are likely to have gone, but the cranes may survive. Stoke Hill Quarry was reworked from c. 1842 which is likely to have significantly impacted the quarrying remains.	• http://bathstonequarries.mysite.wanadoo-members.co.uk/LOCATIONS.htm • David Pollard pers. comm.
Q17 Wallington's Quarry	Unknown	Unknown.	• David Pollard pers. comm.
BRADFORD AND WESTWOOD AREA (AREA D & E)			
Q18 Westwood Quarry West (also know as Tump Quarry)	A substantial quarry operated by Bath Stone Firms Ltd., which is linked to the railway and canal by an incline. It was later used by the British Museum during the war, and also by Royal Enfield until the late 1960s as a factory (ref -M4)	Today, the quarry is used for secure storage. This is an interesting quarry with surviving remains including a loading platform and crane. The later use of this site however will have negatively impacted the quarrying remains.	• http://bathstonequarries.mysite.wanadoo-members.co.uk/LOCATIONS.htm • David Pollard pers. comm.
Q19 Westwood Quarry East (Goodwin's Quarry)	This quarry adjoins the Tump (west) section and operated by W Goodwin in 1894 employing 13 men. The Westwoods East Quarry and Westwoods West Quarry adjoin Poulton and Jones quarries.	An interesting quarry with surviving remains including loading platforms. It was quarried until 2004, which is likely to have had a significant negative impact on the historic remains.	• http://bathstonequarries.mysite.wanadoo-members.co.uk/LOCATIONS.htm • David Pollard pers. comm.

SITE NAME & REFERENCE (REF)	BRIEF DESCRIPTION	CURRENT STATUS AND PRESERVATION	REFERENCE
Q20 Jones Quarry (also known as Grip Quarry)	This quarry adjoins East and West Westwood quarries and Poulton Quarry.	It is known that some cranes survive within the quarry.	• David Pollard pers. comm.
Q21 Poulton, Murhill and Conkwell quarries	These are separate but adjoining quarries. Poulton Quarry is a small quarry with beds running at nearly 23 degrees which was operated by J Taylor, employing 2 quarrymen in 1894. Conkwell Quarry was operated in 1830 by James Byfield and linked by incline to the canal. This quarry adjoins East and West Westwood quarries and Jones Quarry. It was used as an air-raid shelter during the Second World War.	Poulton Quarry was later used for mushroom growing, which is likely to have had some, although not an extensive impact on the historic remains. Conkwell Quarry contains a well-preserved cart run.	• http://bathstonequarries.mysite.wanadoo-members.co.uk/LOCATIONS.htm • David Pollard pers. comm.
Q22 Combe Quarry	This is an open quarry, which also has below-ground workings	Unknown.	• David Pollard pers. comm.
Q23 Kingsfield Quarry	This is an open quarry, which also has below-ground workings	Unknown.	• David Pollard pers. comm.
Q24 Bethel Quarry	This is a large quarry, which was later used as a store by the Royal Navy (ref - AS13).	Now a mushroom farm, which is likely to have had some, but not an extensive impact on the industrial remains. The condition is unknown.	• http://bathstonequarries.mysite.wanadoo-members.co.uk/LOCATIONS.htm.
KINGSDOWN AND FARLEIGH, WILTSHIRE (AREA F)			
Q25 Kingsdown Quarry	This is a small quarry operated by Marsh & Son and the Bath Stone Firms Ltd employing, 3 and 4 quarry men respectively in 1894. Horse and cart only were used in the quarry.	Cranes are extant; one is standing and one has collapsed. Hoof marks from the horses and trolley roads are extant.	• http://bathstonequarries.mysite.wanadoo-members.co.uk/LOCATIONS.htm • http://www.darkplaces.co.uk/phpBB2/album_cat.php?cat_id=447 • David Pollard pers. comm.

SITE NAME & REFERENCE (REF)	BRIEF DESCRIPTION	CURRENT STATUS AND PRESERVATION	REFERENCE
Q26 Norbin Barton Quarry (also know as South Wraxall Quarry)	This once had a very wide vertical shaft operated by Sheppards.	The condition is good, as the entrance is now infilled. Tramways are in situ, there is also one crane although its gears are missing.	• http://bathstonequarries.mysite.wanadoo-members.co.uk/LOCATIONS.htm • David Pollard pers. comm.
Q27 Farleigh Down Quarries (including Drum, Long and Sheep Drove quarries)	The first mention of these quarries is in 1439. Today it is one of the largest quarries, made up from independent quarries that joined together. These have operated under various owners, those in the 19th-century include Pictor and Sons, Randell and Saunders, S.R. Noble and H. Stone and Sons. In 1881, 20 quarrymen lived in Monkton Farleigh and 10 quarries were being worked. Parts of the workings were taken over during the Second World War for the CAD (ref-AS3). In 1894 it was run by the Bath Stone Firms Ltd. and employed 89 men. Long Quarry was operated by William Long, and Drum Quarry was operated by the Bath Stone Firms Ltd. The latter employed 29 men and joined the Monkton Farleigh complex of quarries.	The quarry was run as a museum between 1984 and 1990 and it is now a secure storage facility. In the southern section is an area known as Brown's Folly, here stables amongst other interesting features survive. There is also an intersection of rails termed locally 'Clapham Junction'. To the north of Area 12 in the CAD complex, quarry remains survive, as this was not converted due to damp. Artefacts such as a wheelbarrow and tracks survive. Overall, the Monkton Farleigh quarries survive in good condition.	• http://bathstonequarries.mysite.wanadoo-members.co.uk/LOCATIONS.htm • http://www.hamfist.co.uk/Stone/Browns.htm • • http://www.darkplaces.co.uk/phpBB2/album_cat.php?cat_id= • Martin Burton pers. comm • David Pollard pers. comm.
Q28 Dapstone Quarry (also know as South Farleigh Quarry)	This quarry was operated by the Bath Stone Firms Ltd., employing 15 men in 1894.	Unknown. This quarry is sealed and no access is possible.	• http://bathstonequarries.mysite.wanadoo-members.co.uk/LOCATIONS.htm • http://www.darkplaces.co.uk/phpBB2/album_cat.php?cat_id=459.

SITE NAME & REFERENCE (REF)	BRIEF DESCRIPTION	CURRENT STATUS AND PRESERVATION	REFERENCE
BOX HILL AREA (AREA G)			
Q29 Box Quarry (Clift Quarry including Box Field, Tynings, Browns No.4 and Lower Hill Quarries)	Box Quarry is the largest stone mine in the country, with many miles of interconnecting passages. The principal entrances in Box Hill were Eastgate, Northgate, Westgate, Bridgegate, Backdoor, Clift and what is now called Jack's Workings (named after a quarry worker). All these entrances were levels and entered into the side of the hill or cliff face. The Box quarry complex also includes the Cathedral, Lower Hill quarries and Tyning Quarry. Lower Hill quarries are a series of workings connected by various entrances. Tynings Quarry was operated by the Bath Stone Firms Ltd., employing 4 men in 1894. Lower Hill Quarries were operated by the Bath Stone Firms Ltd., employing 17 miners in 1894. Part of the Box Quarry is named The Cathedral, which is an unusual area worked by hand from a vertical shaft, as the surrounding quarry owners would not allow access to the stone via their workings. Most of the stone beneath the shaft and area was removed leaving a massive chamber (approx. 25 feet wide, 200 feet long and 60 feet high).	Photographic evidence shows that Box Quarry survives in good condition, with cranes and other artefacts remaining in situ. Areas to the north and south are less well explored, and the level of preservation is higher. There are cranes in the northern section of Box Quarry, but only one in the middle, and another in the southern section. Railway tracks also survive to the north. The Cathedral survives in good condition with working marks evident on the stone face; however no artefacts such as cranes and tracks survive.	• http://www.hamfist.co.uk/Stone/Box.htm • http://bathstonequarries.mysite.wanadoo-members.co.uk/LOCATIONS.htm • http://www.darkplaces.co.uk/phpBB2/album_cat.php?cat_id=11 • David Pollard pers. comm. • Martin Burton pers. comm.
Q30 Groundstone Quarry (including Brewers Drift)	This quarry is owned by the MOD and is the main airflow to the CAD in Tunnel Quarry. Brewers Drift connects Tunnel and Groundstone quarries and is now disused as an air-intake. This area is technically still under the ownership of the MOD.	Brewers Drift has been reengineered for air intake with the insertion of RSJs. There are not significant quarrying remains in Brewers Drift but the level of preservation in Groundstone Quarry is uncertain.	• http://www.darkplaces.co.uk/Wikka/BrewersDrift.

SITE NAME & REFERENCE (REF)	BRIEF DESCRIPTION	CURRENT STATUS AND PRESERVATION	REFERENCE
Q31 Hartham Park quarries (includes Copenacre, Travellers Rest and Pickwick quarries)	In 1895 the quarry was called Hartham No.2. Pickwick Quarry opened in 1899, this with Copenacre operated as a Royal Navy Storage Depot.	Hartham Park is now a working quarry operated by Hansons.	• http://www.darkplaces.co.uk/phpBB2/album_cat.php?cat_id=317 • David Pollard pers. comm.
Q32 Brewer's Yard Quarry (also known as Hartham No.1)	This quarry was known as Hartham No. 1 in 1895. It was worked on 2 levels.	The quarry has been subject to roof falls making access problematic, and little is known of its current condition.	• http://bathstonequarries.mysite.wanadoo-members.co.uk/LOCATIONS.htm • David Pollard pers. comm.
CORSHAM AND AREA (AREA I)			
Neston			
Q33 Hollybush Quarry	Hollybush Quarry consists of one slope shaft, an airshaft and about 200 yards of passage. It was closed on December 11th 1902.	The vertical air-shaft has been capped leaving no trace on the surface. At present, it is just possible to squeeze down the slope shaft through the loose waste to gain access. No further information is known.	• http://bathstonequarries.mysite.wanadoo-members.co.uk/LOCATIONS.htm • http://www.hamfist.co.uk/Stone/Holly.htm • http://www.darkplaces.co.uk/phpBB2/album_cat.php?cat_id=511v • David Pollard pers. comm.
Q34 Clubhouse Quarry	This quarry was in operation for a short period of time only. During the war it was used to store foreign bank notes.	Unknown.	• http://bathstonequarries.mysite.wanadoo-members.co.uk/LOCATIONS.htm • David Pollard pers. comm.

SITE NAME & REFERENCE (REF)	BRIEF DESCRIPTION	CURRENT STATUS AND PRESERVATION	REFERENCE
Q35 Brocklease Quarry	This quarry was used as Royal Navy Armament Depot during the war as part of RNAD Pickwick (ref-AS8).	Now owned by Wansdyke Security, for the storage of secure data. The level of preservation is not known.	• http://bathstonequarries.mysite.wanadoo-members.co.uk/LOCATIONS.htm • David Pollard pers. comm.
Q36 Park Lane Quarry	This is a large quarry that was operated by Randell and Saunders and later Bath Stone Firms Ltd., employing 56 men below-ground in 1894.	The quarry is in remarkably good condition, partly due to very few people gaining access and its closure as late as 1948. There are a few remnants of cranes in the quarry, along with wooden barrels and cut stone stacked up on squats to facilitate air circulation around them. One of the highlights of this mine is the stable, considered to be the best example of underground stables in the area.	• http://bathstonequarries.mysite.wanadoo-members.co.uk/LOCATIONS.htm • http://www.hamfist.co.uk/Stone/Parklane.htm • http://www.darkplaces.co.uk/phpBB2/album_cat.php?cat_id=123 • David Pollard pers. comm • Martin Burton pers. comm.
Ridge and Gastard			
Q37 Ridge Quarry (including Old Ridge, New Ridge, Monks Park West quarries)	This quarry was owned by Lucas and Allard, and the Corsham Quarrying Company. It employed 23 men in 1894, and was also used during the war for ammunition storage (ref -AS1)	This quarry is accessible; although its interest predominately lies in its military history. This resulted in the loss of much of the quarrying history, and there are no surviving cranes. The area between the 2 quarries is particularly well preserved being largely untouched, although it contains no cranes.	• http://bathstonequarries.mysite.wanadoo-members.co.uk/LOCATIONS.htm • http://www.hamfist.co.uk/Stone/Monks.htm • Martin Burton pers. comm. • David Pollard pers. comm.
Q38 Monks Park Quarry (also known as Sumsion's Monks Quarry)	A large quarry operated by the Bath Stone Firms Ltd., employing 101 men in 1894. It was later used as a naval storage depot during World War II (ref - Q38).	Half of Monk's Park Quarry was converted in the 1950s to a Royal Navy Storage Depot. This was later converted to a commercial storage facility. The remaining half was quarried until 2004 and 2005, which is likely to have had a significant negative impact on the surviving remains.	• http://www.hamfist.co.uk/stindex.htm • Martin Burton pers. comm. • David Pollard pers. comm.

SITE NAME & REFERENCE (REF)	BRIEF DESCRIPTION	CURRENT STATUS AND PRESERVATION	REFERENCE
Q39 Eastleys Quarry (also known as Eastern Monks Park and Monks Park quarries)	This is a large quarry that later became part of the CAD (ref-AS2)	This quarry now operates as a commercial store, and access is not possible. This and its conversion to the CAD are likely to have had a significant negative impact on any surviving quarrying remains.	• http://bathstonequarries.mysite.wanadoo-members.co.uk/LOCATIONS.htm • http://www.darkplaces.co.uk/Wikka/Eastleys.
Q40 Gastard Quarry (known locally as Goodes Hill Quarry)	This small quarry contains only one slope shaft. The quarry consists of one large chamber, with no passages or pillars.	The slope shaft is one of the best preserved in the area, it is stone lined most of the way down the 141 steps. The winding house has been converted into a residential property.	• http://www.hamfist.co.uk/Stone/Goodelm.htm • http://bathstonequarries.mysite.wanadoo-members.co.uk/LOCATIONS.htm
Q41 Elm Park Quarry	These small workings date from 1912 and were operated by Sheppards. It came under the ownership of the Bath Stone Company and closed in 1939, although it is not believed to have been extensively worked. The quarry was used during the Second World War by the R.A.F (ref-AS7).	Quarrying recommenced at Elms Park c. 10 years ago. This is likely to have impacted earlier quarrying remains, but 2 slope shafts are believed to remain extant.	• http://bathstonequarries.mysite.wanadoo-members.co.uk/LOCATIONS.htm • http://www.hamfist.co.uk/Stone/Goodelm.htm • David Pollard pers. comm.

Site Name & Reference	Brief Description	Current Status and Preservation	Reference
AS1 Ridge Quarry (Corsham, Wiltshire)	Ridge Quarry was used from 1915 for TNT and Cordite Storage, but abandoned shortly after the war. During the build up to the Second World War the War Department decided to convert 4 quarries to the Central Ammunitions Depot (CAD) (including, Eastlays and Monkton Farleigh quarries). Ridge Quarry was acquired and put to use as one of these sub-depots. It was never converted to the same extent as the other CADs, and it became surplus soon after the war had finished.	Following closure after the war Ridge Quarry was re-purchased by Neston Estate, which exercised its right of pre-emption. Surface buildings were demolished and debris was bulldozed into the lift and slope shafts completely blocking them. A second slope shaft is still accessible, although little evidence remains today of the true extent of the storage area.	• http://www.subbrit.org.uk/sb-sites/sites/r/ridge_quarry/index2.shtml • http://www.subbrit.org.uk/sb-sites/sites/r/ridge_quarry/index.shtml • http://www.chocolatechipdesign.co.uk/nettleden/ridgequarry/site.shtml.
AS2 Eastlays Quarry (Corsham, Wiltshire)	This quarry was requisitioned by the War Department in 1937 to form part of the CAD. The War Department sank 2 new shafts to improve access to the quarry. The site was white washed, a level floor was laid and lighting was fitted throughout. The whole quarry was air conditioned to make the atmosphere dry and suitable to store ammunition.	Since 1970 Octavian Wine have used the facility for wine storage. Very little modification was needed to the surface buildings to accept modern day loads. Octavian still uses the original military shafts today to access the quarry. Some of the Second World War features also remain in use, for example the old ammunition storage district offices are now offices used to control the movement of wine around the quarry.	• http://www.chocolatechipdesign.co.uk/nettleden/eastlays/index.shtml • http://www.octavianvaults.co.uk/corshamcellars.html • http://www.chocolatechipdesign.co.uk/nettleden/cadcorsham/index.shtml • http://www.subbrit.org.uk/rsg/sites/c/corsham/ • Nick McCamley pers. comm.
AS3 Monkton Farleigh Quarry (Corsham, Wiltshire)	Monkton Farleigh was the biggest of the 4 quarries which made up the CAD; it has a total of 2.5 million square feet of converted space. Each storage district was divided up into numbered storage bays; main haulage ways were fitted with conveyor belts to transport crates of ammunition around the mine. The storage districts were all fully lit and air-conditioned.	Since 1954, Wansdyke Security has occupied Monkton Farleigh Quarry, who specialise in secure data storage. No access is possible to the site, and its current condition is not known. It is known however that districts 19 and 20 were converted, but never used by the War Office or Wansdyke due to damp. These are believed to have survived in good condition, although thieves gained access and stripped the area for scrap metal.	• http://www.subbrit.org.uk/rsg/sites/c/corsham/index.html • http://www.wansdyke.co.uk/ • http://www.subbrit.org.uk/sb-sites/sites/m/monkton_farleigh/index.shtml • http://www.chocolatechipdesign.co.uk/nettleden/monktonfarleigh/index.shtml • http://www.monkton-farleigh.co.uk/sc_monktonfarleigh2.htm • Martin Burton pers. comm.

AS4 Monks Park Quarry (Gastard, Wiltshire)	In 1937 this quarry was taken over by the War Department and used as an Ammunition and Explosives Store, although the whole area was not converted. The site became surplus to requirements in 1941, and sat empty until 1954 when a 10-acre area of the quarry was converted as a Royal Navy Storage Depot. This was as an extension to the stores at Spring quarries. The rest of the quarry was never converted, however half of it became a quarry museum for a short time.	Monks Park is today divided into 2 sections; one part is a working stone quarry. The other half is occupied by Leafield Engineering who make components for the defence industry and commercial users. Access to the site is not possible, and the condition of the engineering works is unknown. It is probable that the current quarrying of stone has significantly impacted the historic remains.	• http://www.subbrit.org.uk/rsg/sites/m/monks_park/index.html • http://www.chocolatechipdesign.co.uk/nettleden/monkspark/index.shtml.
AS5 Haynes Wood (Limley Stoke Wiltshire)	This quarry opened in 1944 and was used for storing TNT as it was suitable for serving the filling factories at Bridgend, Glascoed and Hereford.	Unknown	• McCamley 2007a 113.
AS6 Harpur Hill Quarry (Buxton, Derbyshire)	Harpur Hill was a RAF Bomb and Weapons Store, acting as the central depot from 1938. The Llanberis bomb (ref - AS12) store is almost identical in construction to Harpur Hill. Harpur Hill Quarry, amongst other ordnance, stored gas weapons and V bombs. The site was also used for practising by RAF Bomb Disposal Teams, and in the years just before closure the place became home to the first RAF mountain rescue units. In the late 1980s one of the underground storage bunkers was converted, and used as a mushroom farm.	The site is currently home to the Health & Safety Executive, and is the biggest test site of its type in the country. The site is also used by Sheffield University for hazardous field experiments. Access is not possible, although it is unlikely that its current use has negatively impacted the historic remains.	• • http://en.wikipedia.org/wiki/RAF_munitions_storage_during_WWII good on general ammo storage • • http://www.urbanassault.t83.net/#/rafharpurhill/4525167568 • • http://www.blastechltd.co.uk/.
AS7 Elm Park Quarry (Gastard, Wiltshire)	The RAF No. 40 Group used the quarry during World War II for oil storage under the command of RAF Quedgely. However little conversion work was carried out, and it was transferred in 1941 to No. 42 group who used it for ammunition storage. As it was not fully converted it was deemed unsuitable for further military use and closed in 1943.	Elm Park Quarry is again operating as a stone quarry. It was never fully converted, so it is probable that limited evidence of its military use now survives.	• • http://www.chocolatechipdesign.co.uk/nettleden/elmpark/index.shtml • • http://www.hamfist.co.uk/Stone/Goodelm.htm.

AS8 Brocklease Quarry (Corsham, Wiltshire)	In 1939 the War Department acquired the quarry (along with Pickwick Quarry) as temporary navy ammunition storage. In 1941 the site was closed.	In 1957 Wansdyke Security converted the mine into a complex of underground secure data vaults. They also use the site as a vehicle depot. The impact of this secondary use to the historic fabric is not known.	• http://www.chocolatechipdesign.co.uk/nettleden/brocklease/index.shtml.
AS9 Linley Quarry (Staffordshire)	The caverns were used for the storage of obsolete munitions from 1943. Despite spending over 1 million pounds, Linley Quarry was never upgraded to a more significant function	Unknown.	• http://en.wikipedia.org/wiki/RAF_munitions_storage_during_WWII.
AS10 Fauld Quarry (Staffordshire)	Fauld Quarry was converted by the Air Ministry to a Weapons Store from 1937. It occupied 450,000 square feet of the disused alabaster workings. The depot at Fauld became the site of the largest explosion in the UK, when 3,670 tons of bombs stored underground exploded en masse.	Nothing remains of the storage facility, and the remaining crater has been sealed off.	• http://www.aditnow.co.uk/mines/Fauld-Gypsum-Mine/ • http://www.carolyn.topmum.net/tutbury/fauld/fauldcrater.htm.
AS11 Chilmark Quarry (Hams Cross, Wiltshire)	Chilmark was the site of ammunition store from before World War II. By 1941 it seems to have evolved into a RAF Bomb Store, with Fauld acting as the northern depot (AS10). It was largely staffed by civilians until 1995, when the depot was closed down. The Home Office bunker known as Regional Government Headquarters 7.1 was built on an adjoining site in the mid-1980s.	Unknown.	• http://en.wikipedia.org/wiki/RAF_munitions_storage_during_WWII • http://www.fovanthistory.org/military.html • http://www.28dayslater.co.uk/forums/showthread.php?t=11267 • http://www.subbrit.org.uk/rsg/sites/c/chilmark/index.html.
AS12 Llanberis Quarry (Caernarvonshire, North Wales)	At the outbreak of World War II the slate quarry was procured by the Air Ministry as an RAF Reserve Depot (Bomb Store). The quarry was ideal as it already had deep pits in place, all linked by connecting tunnels. A second use of the quarry began in 1943, when the Royal Air Force School of Explosives moved to the site. The school curriculum included the destruction of explosives, which continued until July 1956 when the site was closed.	Unknown.	• http://www.subbrit.org.uk/sb-sites/sites/l/llanberis/index.shtml • http://www.bunkertours.co.uk/llanberis.htm • http://www.undergroundkent.co.uk/. • http://www.subbrit.org.uk/sb-sites/sites/l/llanberis/index2.shtml

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AS13 Bethel Quarry (Bradford Upon Avon, Wiltshire)	Prior to the war, Bethel Quarry was used by the Agaric Mushroom Company as a mushroom farm. In 1939 the War Department requisitioned the quarry, and used it as Royal Navy Storage for parts and equipment. After the war the quarry was handed back to the mushroom company.	Today, mushrooms are still produced here on a large scale under the new name of Oakfield Farm Products Ltd... Mushroom farming is likely to have minimal impact on the historic fabric and therefore it is possible that military archaeology remains extant.	• http://www.chocolatechipdesign.co.uk/nettleden/bethelquarry/index.shtml.

SITE NAME & REFERENCE	BRIEF DESCRIPTION	CURRENT STATUS AND PRESERVATION	REFERENCE
MF1 Drakelow (Kinver, Kidderminster)	This quarry was a MAP Shadow Factory constructed between 1943 and 1945, for use by the Ministry of Supply for storage. From c.1958 part of the site was developed by the Home Office as a Regional Seat of Government (RSG9). Under later Home Defence schemes the bunker was designated a Sub-Regional Control (SRC), Sub-Regional Headquarters (SRHQ) and Regional Government Headquarters (RGHQ). The site was greatly modernised in the early 1980s, and decommissioned in 1993.	The site is now in private ownership, which has entailed vast stripping of internal fixtures and fittings for scrap metal. The small amount of remaining fabric is being destroyed. This stripping includes the removal of RSJs, which is compromising the structural integrity of the site. Walls are also being dismantled with digger trucks in order to improve access for further stripping. Public guided tours permitted.	• http://www.subbrit.org.uk/rsg/sites/d/drakelow/index.html • http://www.subbrit.org.uk/rsg/sites/d/drakelow/rw.html • http://www.monkton-farleigh.co.uk/sc_drakelow1.htm • http://en.wikipedia.org/wiki/Drakelow_Tunnels • Paul Stokes pers. comm.
MF2 Warren Row (Henley-on-Thames, Berkshire)	This quarry was used as a World War II MAP Factory manufacturing aircraft components. It was later a Regional Seat of Government (RSG6).	The quarry is currently used for archive storage resulting in its refurbishment. Public access is not possible. It was stripped of primary features in the Cold War and was then subsequently re-fitted.	• http://www.subbrit.org.uk/rsg/sites/w/warren_row/index.html • http://www.subbrit.org.uk/rsg/sites/h/henley/index.html.
MF3 Wargrave Road (Henley-on-Thames, Berkshire)	This quarry was used as a World War II MAP Factory, manufacturing aircraft components. At one time it was also the Air Force Headquarters for London replacing Warren Row.	This quarry is currently used for archive storage resulting in its refurbishment. Internet photographs show extant features such as switchboards, but it is not known whether these now survive. There is no public access.	• http://www.subbrit.org.uk/rsg/sites/h/henley/index.html.

MF4 Westwood Quarry (Bradford Upon Avon, Wiltshire)	This quarry was a MAP Factory from 1941 operated by the Royal Enfield Company, who manufactured components for Bofors Guns. The manufacturing use of the quarry continued after the War, as Royal Enfield remained at the site and used it as a workshop for their bikes up until 1970. The workshop was then taken over as a repair workshop for another 20 years. One large heading deep inside the quarry was not incorporated in the factory project. This was transferred to the museum authorities, and used from the 1960s as a Museum Repository for the National Gallery. During the Cold War the site continued to be used for storage but was decommissioned in the 1980s. Little work appears to have been undertaken to convert the quarry to the requirements of such storage.	Part of the site is used today by Wansdyke Security for secure archive storage space; other parts of the quarry are being quarried by Hanson. Quarrying of the site is likely to have had a significant impact on the historic fabric. The condition of the area used for storage space is unknown.	• http://www.subbrit.org.uk/rsg/features/sfs/file_7.htm • http://mysite.wanadoo-members.co.uk/art_treasures/westext.html • http://mysite.wanadoo-members.co.uk/art_treasures/aberext.html • http://www.subbrit.org.uk/rsg/features/sfs/file_7.htm • http://www.aditnow.co.uk/documents/Manod-Slate-Mine/Manod1.pdf.

SITE NAME & REFERENCE	BRIEF DESCRIPTION	CURRENT STATUS AND PRESERVATION	FUNCTIONAL COMPARISON
Domestic			
CHQ1 PADDOCK, Dollis Hill	PADDOCK was a World War II Emergency War Headquarters, and was a standby to the War Cabinet War Rooms at Whitehall. It was intended to be the centre of a nucleus of central government and the armed forces totalling some 12,000 people. It would house the War Cabinet, Chiefs of Staff and their immediate advisers but did not have any domestic facilities. The remaining nucleus staff would be housed in other bunkers and local schools. It was a 2 level citadel that became operational in 1940, built below the Post Office Research Station. Churchill did not like the new bunker and it was effectively abandoned 6 months later, by the autumn of 1943 the standby cabinet war rooms were relocated to the North Rotunda in Marsham Street, close to Whitehall.	Following closure of the Post Office Research Station, in the mid-1990s the site was sold to a property developer who converted the Research Station into luxury flats with a new housing estate on the rest of the site. The single storey surface building above PADDOCK was demolished, but the citadel which has local authority listing was untouched and 2 access points were retained. The site has now been handed over to a housing association, although it is still believed to survive largely intact.	• http://www.subbrit.org.uk/rsg/sites/d/dollis_hill/index.html • http://www.subbrit.org.uk/sb-sites/sites/p/paddock/index.shtml • http://en.wikipedia.org/wiki/Paddock_%28war_rooms%29 • Steve Fox pers. comm.
CHQ2 Cabinet War Rooms, Whitehall	The Cabinet War Rooms accommodated Churchill and the War Cabinet predominantly when London was under attack. Completed in 1939 it provided operational rooms and accommodation. The site chosen was the basement chambers of the Office of Works' building, which faced St. James's Park and Horseguards Road on one side and Great George Street on the other. This building offered the strongest structure of any in Whitehall, and was conveniently situated between Parliament and the Prime Minister's office/ residence at Number 10 Downing Street.	Now open as a museum. It was sealed following the end of the Second World War and is well preserved with in situ artefacts.	• http://cwr.iwm.org.uk/server/show/ConWebDoc.923 • Steve Fox pers. comm.

CHQ3 South Rotunda (Westminster, London)	The 'Rotundas' consisted of three buildings; the North and South Rotundas were built in holes left by gasholders, and a five storey steel frame building. During World War II they were occupied by many different departments at different times. In c. 1943 plans were being made for the V1 and V2 attacks; the South Rotunda was equipped with functional accommodation under the code name ANSON. This was never meant to take over from the Cabinet War Rooms (see ref-CHQ3), but was purely domestic accommodation for VIPs. By this time the Ministry of Home Security, responsible for air raid precautions had moved its war room into the North Rotunda. Post-war the immediate plan was for the War Cabinet to have a facility in the South Rotunda (SCOUT). By 1951 the South Rotunda had been refurbished and equipped to take a central government nucleus of around 300. SCOUT was completely separate from the Central Government War Room (or CGWR), which was located in the North Rotunda.	Demolished.	• http://www.subbrit.org.uk/sb-sites/sites/r/rotundas/index.shtml • Steve Fox pers. comm.

CHQ4 North Rotunda (Westminster, London)	The 'Rotundas' consisted of three buildings; the North and South Rotundas were built in holes left by gasholders, and a five storey steel frame building. During World War II they were occupied by many different departments at various times. The Ministry of Home Security had its war room in the North Rotunda; this was responsible for all civil defence matters throughout the country through its network of 12 Regional War Rooms. During the Second World under the threat of V1 and V2 attack further citadels were prepared. As the Cabinet War Rooms were not considered safe, Churchill and the War Cabinet were allocated domestic and minimal working accommodation in the Rotundas (codename: ANSON). However the business of government would have remained centered on the Cabinet War Rooms. Post-war the Central Government War Room (CGWR) was installed in the North Rotunda. This facility (CHAPLIN) is likely to have been used for communications only	Demolished.	• http://www.subbrit.org.uk/sb-sites/sites/r/rotundas/index.shtml • Steve Fox pers. comm.
CHQ5 London Citadels	During WWII in the event of attack it was planned that Government would remain in London as long as possible, where they would be accommodated in various citadels and steel framed buildings. These could house around 10,000 key pers.onnel in central London under what were called 'Crossbow conditions'. Other citadels were developed, notably the Admiralty Citadel (now a Grade II listed building), which was in fact built illegally on part of St James's Park. As well as these citadels a series of reinforced steel framed buildings were constructed in central London. The citadels were linked to Montague House, the Admiralty Citadel and other Government buildings in Whitehall and beyond by a deep level tunnel. Supporting the various citadels was a series of communications tunnels dug under Whitehall to carry the vital telephone and telegraph cables linking them to each other and the outside world.	Unknown.	• http://www.subbrit.org.uk/rsg/features/government/ • Steve Fox pers. comm.
International			

East Germany			
CHQ6 Erich Honecker's bunker (17/5001) (Prenden, North of Berlin)	The bunker was built between 1978 and 1983 in the former German Democratic Republic to serve as the command centre for the 'National Defence Council (NDC)'. In times of crisis, the NDC members would have sought refuge here to exercise control over the remains of the GDR under the war-time conditions to be expected. When built, it was considered to be the Warsaw Pact's best equipped and constructed bunker outside of the Soviet Union. The three-storey bunker took five years to build and consumed 85,000 tonnes of concrete for its ground area of approx. 65 x 50 m.	It survives in excellent condition. The main bunker, 5001, has now been declared a historical site, primarily due to the unusual use of the platforms inside the bunker. These are suspended from the ceiling on cables with nitrogen containers to suppress excessive movement from the shock wave in the event of a nuclear explosion in the vicinity. Allegedly, there is no other site like this in the world: even though the equipment came from the Soviet Union, it was only used in the GDR.	• http://www.subbrit.org.uk/rsg/sites/h/honecker5001/index.html • http://www.bunker5001.com/index.php?lang=en nuclear attack. • Mike Barton pers. comm. • Bergner 2000

CHQ7 Harneknop	The bunker was built between 1971 and 1976, and was designed to provide facilities for c.450 people for some 28 days under nuclear warfare conditions. It replaced the bunker in Hennickendorf and was intended to quarter the 'Main Staff' (NVA term for the 'General Staff') of the NVA. In the event of a military conflict, Harnekop was tasked with implementing mobilisation of the NVA reserves and to ensure that the second echelon of Warsaw Pact / Soviet forces would be able to move unhindered through the GDR via Poland from the western military districts in the Soviet Union (in the event of war breaking out command of its land forces would pass completely from the NVA to the Soviet forces in the GDR and thus to the Warsaw Pact). Numerous communications facilities were in place, including a cable link to Kunersdorf, Harnekop's remote transmitter site (with its own special transmitting facilities) and to Wollenberg (one of the three East German tropospheric sites in the Warsaw Pact "BARS" network. In addition to its comprehensive communications facilities, Harnekop had state-of-the art computer systems (used in peace-time for the state economy) and conference rooms, including CCTV for video-conferencing.	The bunker is almost complete, and is in a good physical state of repair with some of the original equipment in situ. It is declared a State Monument and on the Landesdenkmalliste.	• Mike Barton pers. comm. • Bergner 2000 • http://www.bunkerpictures.nl/datasheets/germany/datasheet-arhweiler-bonn.html
West Germany			
CHQ8 Arhweiler-Bonn - Regierungsbunker	This was the state of emergency bunker for the West Germany government during the Cold War. Constructed in an old train tunnel in the Ahrweiler area south of Bonn, it was used during World War II for manufacturing. The bunker was equipped to house 3000 men and women for 30 days in the event of a nuclear attack or threat. Construction began in 1960 taking 12 years to complete; it consisted of several sub-complexes with different uses and purposes. The total length of the entire complex is 17.5 km. It was decommissioned in 1997.	The bunker survives intact with public access to a few hundred metres. However this is believed to be an excellent representation of the whole complex, with many surviving artefacts. Today it is in use as a museum.	• http://www.bunkerpictures.nl/datasheets/germany/datasheet-arhweiler-bonn.html • Mike Barton pers. comm.
Canada			

CHQ9 Diefenbunker Bunker (Ontario)	Seven Emergency Government Headquarters (commonly referred to as Diefenbunkers) were built across Canada at the height of the Cold War. The bunker at Ontario was the largest and was expected to shelter many of the most important federal government bureaucrats, senior military officials, and federal politicians. It had four floors capable of withstanding a near-miss from a nuclear explosion. Underground storage was built for food, fuel, fresh water, and other supplies for the facility which was capable of supporting several dozen people for weeks.	It is now a museum and national historic site in Canada and is believed to survive in good condition.	• http://www.diefenbunker.ca/index.shtml; • http://en.wikipedia.org/wiki/Diefenbunker
America			
CHQ10 Raven Rock Mountain (Virginia) - The Alternative Joint Communications Centre	Constructed between 1951 and 1953, the facility was conceived at the start of the Cold War as an alternate command centre in the event of nuclear war or an attack on Washington. After the Soviet Union detonated its first nuclear weapon in 1949, a high priority was established for the Joint Command Post to be placed in a protected location near Washington, D.C., for swift relocation of the National Command Authorities and the Joint Communications Service. It was decided that it should house 2,000 senior executive and support staff, or about 10% of the peacetime Pentagon complement. It was officially known as the 'Alternate Joint Communications Centre' but other names include the 'Backup Pentagon', today it is referred to as Site R.	It is still in use today, particularly following the September 11th attacks in 2001 when it was coined the 'underground Pentagon'. The condition of its Cold War remains is not known.	• http://en.wikipedia.org/wiki/Site_R • http://blog.wired.com/defense/2008/06/how-to-visit-a.html • McCamley 2007b

CHQ11 Greenbriers (West Virginia)	This bunker would house Congress in the event of nuclear fallout. It is differentiated from others by its air of comfort and luxury. It was built beneath one of America's prestigious hotels between 1959 and 1962 and was designed to accommodate the House of Representatives and Senate, along with a nucleus support staff of 1,200 pers.onnel. It can operate in a shut down mode for a minimum of 40 days, and includes an intensive care unit, dental surgery and television briefing room. Its location was disclosed in 1992.	The Greenbrier is a National Historic Landmark although it is not know whether this designation also covers the below-ground structure. It is possible to undertake tours of the bunker and it is believed from photographic evidence to survive in good condition with many artefacts.	• http://en.wikipedia.org/wiki/The_Greenbrier • http://www.greenbrier.com/site/bunker.aspx • McCamley 2007b
Czech Republic			
CHQ12 The Fortress "Hanièka" (near Rokytnice)	The largest museum in the Czech Republic consists of six forts. Between 1969-1975 it was an official museum, but in 1975 the Department of Interior became the owner of the fortress and it was closed to visitors. Hanicka was rebuilt as a nuclear protected site which would accommodate the most important people from the Communist Party. Rebuilding started in 1981 but was stopped a few years after the fall of the Communist party, and never fully completed.	It survives in good condition with most of the equipment in situ, including water and air filtration equipment, hospital.	• http://www.geocities.com/Athens/Forum/8414/Museum.html
Russia			
CHQ13 Stalin's Bunker (Samara)	The bunker was built in 1942 and would have accommodated Stalin as soon as Moscow was threatened. Six hundred people would have lived and worked here and it remained a secret until 1990. Little information is readily available about the bunker, and its exact role during the Cold War is not known. However it is described as continuing as a 'top secret military object' until 1990.	It is now a museum and believed to survive in good condition.	• http://www.travbuddy.com/travel-blogs/19237/Stalins-bunker-Samara-1 • http://www.americanchronicle.com/articles/6284

APPENDIX A: COMPARATIVE SITES

CHQ14 The Central Museum of Armed Guards - Reserve Command Post of the Supreme Commander in Chief of the Red Army (Moscow)	This bunker is connected to the Kremlin by 17 km of underground roads. It was built during the Second World War in conjunction with a massive underground sports complex, which ultimately served as a cover for the communication and command centres. Stalin would have been accommodated. War Rooms were constructed, and it was fitted with its own air, water and food supplies for 2,500 people. It was nuclear protected should the city have come under nuclear attack. It continued in use during the Cold War, but its function is not clear.	It became a museum in the 1990s and photographic evidence suggests it survives in excellent condition although much appears to be reconstruction.	• http://www.cmaf.ru/eng/pages/bunker_eng.htm • http://news.bbc.co.uk/1/hi/programmes/from_our_own_correspondent/7588088.stm
CHQ15 Tagansky Bunker (Moscow)	The bunker was built from 1952 to 1956 as a communications headquarters for the country's political and military leadership. A maximum of 3,000 people could live and work there for 90 days without assistance from the outside world, thanks to stores of food and medicine, an air recycling system and diesel generators. The bunker was under the aegis of the State Central Telegraph agency, although both civilians and military pers.onnel worked there. The agency began modernising the bunker in the 1980s, but when money ran out in the 1990s it was stripped bare and given only basic maintenance.	The bunker was sold off in an auction in 2008, and now belongs to a private company that plans to turn it into an entertainment complex with a Cold War museum, restaurant and spa. There are believed to be few historic assets surviving, being in very poor condition when it was taken over.	• http://en.wikipedia.org/wiki/Taganskky_Protected_Command_Point • http://context.themoscowtimes.com/stories/2007/04/20/106.html • http://www.showcaves.com/english/ru/subterranea/Taganskky.html

APPENDIX B: ORAL HISTORY INTERVIEWS

APPENDIX B. ORAL HISTORY INTERVIEWS

B.1 INTERVIEWS COMPLETED BY OXFORD ARCHAEOLOGY

B.1.1 The following interviews were undertaken by Jane Phimester between January and May 2009. The following transcripts are a record of these interviews, and are a synopsis of the key points discussed. An audio archive was not made.

B.1.2 INTERVIEW WITH: DENNIS WILLIAMS

B.1.3 Mr Williams worked maintaining and fitting the telephones within the Bristol Small Arms (BSA) section of Spring Quarry between 1942/3 and 1944. He lived at Thorney Pits Hostel and is the author of two publications: Gwendolin and Gwendolin II (2004 and 2006). In these he recounts his experiences of working underground and living above-ground where he met his wife, Gwendolin. Mrs Williams worked at the South-West Switching Centre in Browns Quarry between c. 1942-1945/6.

B.1.4 Mr Williams lived in Thorney Pits hostel, one of the largest constructed, within a single sex block. Food was provided within the hostels and was an excellent standard with foodstuffs that were no longer generally available due to rationing. He has very fond memories of his time socialising above-ground with the other single people accommodated at the hostels, the living conditions were excellent with entertainment provided within his hostel and those surrounding. Mr Williams socialised in Thorney Pits and Hostel Sites 15 and 16, although each of the 16 sites had a cinema and many had community halls and ballrooms, where American bands would play including Jimmy Darcy and Glenn Miller. Adjacent to PL1 was a cinema and ballroom which he visited once or twice a week, and he also recalls Leafield Hostel which had a community building and bar, and a purpose built ballroom.

B.1.5 The hostels were camouflaged with green paint used on the walls and roofs, and there were no road signs indicating your location. Males and females were segregated within the hostel sites, with dismissal if you were caught in the opposite sex's block. Security guards prevented employees from wondering around, and in general most people socialised within their hostel or the immediate ones. Therefore most did not have a broad knowledge of the surrounding area, Mr Williams for example was not aware of any married quarters. Entry was only permitted below-ground with a pass. Those living in the hostels did not mix with the locals and it was not possible to wander, although on Sundays Mr Williams and his future wife would often walk to Box and drink in the local Quarrymans Arms. People did not speak of the nature or location of their work, particularly to the 'outside world'.

B.1.6 The quarries were very clean with good hygiene, and the food provided in the purpose built catering areas was excellent, Mr Williams particularly enjoyed eating lunch amongst the Olga Lehmann murals. The quarries were well-lit with strip lighting and a very pleasant working environment with many female employees! They worked long-hours, often 12-hours shifts, and would often be asked to work extra at short notice to help the war effort. In general however working hours were 8am - 6pm Monday to Friday and 8am-12pm on Saturday. Sun-lamps were used to simulate day-light but Mr Williams did not use these. There was a map to guide employees around the quarries but no road names, as pillar numbers were used.

B.1.7 Mr Williams' knowledge is largely of the BSA area where he worked, as it was not possible to access of areas without a reason. He remembers the continuous clicking noises of the telephone exchanges, especially the first automatic one and the noise from the typing pool. He did however hear the engines being tested within the BAC area, and remembers Goods Lift 3, which had a large open shaft through which the finished engines would be hoisted

up by a gantry. From here the engines would be transported to Filton. Various shops were under-ground including a hairdressers, newsagents and sweet shop. A hospital had a full nursing staff and here all would go if sick. Mr Williams was aware of Tunnel Quarry but never visited there; people were concerned only with their immediate environment.

B.1.8 Mr Williams was called up to service and left Corsham in 1945. Both he and Mrs Williams continued not to speak of their time working in Corsham respecting the secret nature of their work. It was only with the death of his wife that Mr Williams decided to record his memories of Spring Quarry in Gwendolin and Gwendolin II (2004 and 2006).

B.1.9 Interview with: Mr G.L Davies

B.1.10 Mr Davies was born in Corsham in 1932, working in the HQ offices of the CAD (above-ground) from October 1948 - January 1963. He also spent part of his national service between 1950 and 1952 in the RAOC at the CAD. His father worked below-ground in Tunnel Quarry, at the marshalling yard at Thingley Station and after the CAD closed within RNSD Copenacre. Mr Davies's grand-father was a stone labourer and was killed in c.1913 when a truck carrying stone became loose in Ridge Quarry.

B.1.11 Mr Davies started work in the HQ offices at Corsham as a 'Temporary Mail Clerk Stage 3'. Working above-ground he recalls it being fairly active, but rarely went below-ground. Living in Corsham at Pound Pill, he did not socialise that much with his colleagues.

B.1.12 During the war years, he recalls spending many nights under the protection of his stairs listening to the planes above. His parents took in lodgers who worked on the MOD sites, and they also accommodated a private soldier in the RAOC and his wife living with them. Everyone knew about the MAP Factory and 'the dump', (CAD) particularly as when you went to Chippenham by train it was possible to see trains at Thingley Junction loaded with ammunition. He recalls the growth of Corsham during the war years, especially the construction of the married quarters and hostel sites. In general, people were very happy to be in Corsham and have somewhere to live. The Y.M.C.A was built for the quarry workers, and as a child he stood outside receiving sweets from the adults particularly Americans who were stationed at Corsham. The building was later taken over by an engineering company and was subsequently demolished for housing.

B.1.13 During the later part of the war Mr Davies was at Chippenham Grammar School, and therefore spent little time in the local Corsham schools where the war worker's children were schooled. He recalls displaced persons arriving after the war, particularly Eastern Europeans, and after the Hungarian uprising of 1956 there was a further big influx. He does not remember any resentment to the influx, as they integrated well making local football teams. Between 1950 and 1952 on national service Mr Davies was relocated back to Corsham, and remembers sleeping in the (still extant) barracks above Tunnel Quarry. Security was controlled by the MOD police, who lived in the married quarters.

B.1.14 Mr Davies's father (born in 1906) worked in Tunnel Quarry building stacks of ammunition on wood platforms. He didn't talk about it but then it was fairly monotonous work. Mr Davies left in 1963, and recalls contractors working below-ground at Spring Quarry (building the CGWHQ) but he did not know the purpose of their work

B.1.15 Interview with: Mr Peter Easton

B.1.16 Mr Easton, originally from Plymouth, has lived in Corsham for 41 years working in many

of the below-ground quarries between 1968-c.1985. He was employed as a maintenance foreman by PSA, working for some time in the 'Specials Area' (CGWHQ). Following this he went to work above-ground until he was made redundant in 1989.

B.1.17 Mr Easton spent much of his working life below ground during the operation of the CGWHQ, and recalls an area where shops and offices were still operational. The MAP Factory machines were still there when he arrived, although these were gradually removed by him and others. In general the facility was poorly maintained, with old equipment which was only later brought up to date. He knew the purpose of the CGWHQ as Parliamentary Committees would arrive via the public lifts and escalators. Having signed the Official Secrets Act Mr Easton did not talk about his work. There were rumours about the use of Spring Quarry amongst the general public who called it 'Maggie's Den'.

B.1.18 In the 1980s they put a huge aerial underground so its use was still viable at this time, and they continued to do lots of work below-ground. Three years worth of rations were stock-piled, which would arrive via truck and transported down via Goods Lift 3. Old rations were sent to Salisbury Plain for exercises.

B.1.19 Mr Easton believes that the government officials who would have been relocated from London to the CGWHQ would have arrived by train at Thingley Junction, from where they would be bussed to Spring Quarry. He recalls trains coming in here where goods would be loaded and unloaded in practice of the arrival. He also believes that HMS Royal Arthur and the Army School would have protected the CGWHQ, as when it closed down so did these establishments.

B.1.20 Interview with: Charlie Ralph

(this interview was conducted in addition to that undertaken by Peter Tapscott (below)).

B.1.21 Charlie Ralph worked for PSA between 1946 and 1995 in many of the Corsham quarries as detailed below.

B.1.22 Mr Ralph recalls the numerous buses going to Monkton Farleigh, Eastlays and Tunnels Quarry transporting the CAD workers. He also recalls the rail sub-stations at Westbury, Lacott and Thingley Junction. During the conversion work for the CAD quarries the workers who were mainly Irish were accommodated at Thorney Pits (numbering some 2,000 in total). The hostels were last used during the Hungarian uprising but have now largely been demolished with the exception of Lypiatt Camp (the current Cotswold Centre).

B.1.23 There was little resentment about the construction of the hostels and married quarters or the influx of people, as it was accepted that it was for the war effort. Workers did not get that drunk, and generally the workers behaved well. Work was very hard, and the Irish in particular did arduous jobs such as stoking the boilers below-ground. There were also local people working down in the quarries, but the Irish were brought in to supplement the labour during the conversion works. Mr Ralph remembers two schools being built, Corsham Primary and Corsham Regis (1943) schools. These were built as a result of the influx of MAP workers, who generally went back to their areas of expertise in Bristol following the closure of the factories.

B.1.24 Mr Ralph worked within the CGWHQ, which had the code name of 56198, and recalls vast amounts of money being spent especially when they put in the air flows. He knew it was some kind of bunker but did not ask any further questions ('it did not pay to open your mouth'). There were contractors building the bunker, and afterwards running it. Protestors were frequently present outside with 'Ban the Bomb' signs and CND signs were painted

on the road outside the complex. In general people liked working underground as it was a nice working environment, a good feeling of comradeship and the welfare provisions were excellent (sick pay etc.).

B.2 Interviews completed by 'Corsham Area Development Trust' (CADT)

B.2.1 The following interviews were undertaken by the CADT, the transcripts are entirely those of Peter Tapscott.

B.2.2 Interview with: Charlie Ralph

(these notes were written-up by Peter Tapscott following a one-hour long meeting with Charlie at his home in Corsham on 18 July 2008).

B.2.3 Working Underground at Corsham: Charlie Ralph, now 77 and an extremely active member of the Corsham community – 'sprightly' would convey an inappropriately elderly impression – worked underground from 1946 until he retired in 1995, at the age of 65. He started as a tea-boy, working for Longs, part of the Copenacre set-up. His initial place-of-work was at the old Hawthorn Primary School in Westwells Road. He finished as the officer in overall charge of Quarry Safety Staff for Monks, Spring, Tunnel and Hartham Quarries, working for the Property Services Agency.

B. .4 Charlie has many tales to tell. He remembers everything. Names, events, procedures, developments, everything. His career of almost 50 years underground was interrupted only by a short spell in the Army, between 1949 and March 1951' after which he returned to Longs. At that time, Longs was part of the Ministry of Works. Charlie climbed the hierarchy, progressing through the ranks of chargehand and leading hand. Quarry safety was always his speciality. He still has a 'Tapping Iron', the tool which was used to judge whether a tunnel roof was sound or otherwise. If, when struck, the rock gave a certain sound, it was good. If not, roof supports would be needed. A good roof didn't necessarily stay that way. The constant drip-drip of calcium-filled water could result in "scaling". This had to be removed periodically and the soundness of the roof-structure re-assessed accordingly.

B.2.5 Where necessary, RSJs and false roofs were incorporated. Stores needed to be protected from the dripping water. This was achieved through the use of sheets of corrugated asbestos, set at an angle which allowed the water to run into gutters and drains. If the job was not done properly, a heavy rain storm 100 foot above would result in the drainage system being completely overrun – and Charlie being called from his bed in the small hours to sort things out.

B.2.6 The corrugated sheets were carried on hooks which were fixed to Rawlbolts drilled into the roof of the tunnel. There must have been a considerable quantity of these. Charlie estimates that 20,000 corrugated sheets were used throughout 'his' four quarries! Once installed, everything was kept up to scratch by means of a 'Planned Maintenance System'. Life became pretty routine, after a while. Even the regular evacuation drills were conducted to a strictly quarterly cycle. For these, the emphasis was on getting the entire complement of underground staff to the surface without the use of electricity – all 18,000 of them. Various converging walkways were used, all leading to a limited number of inclines. Charlie particularly remembers Thorny Pits.

B.2.7 Perhaps the most significant thing that sticks in Charlie's memory now is the sheer extent and size of the underground tunnel network. Some tunnels were big enough to drive a bus through – and they were only used for ventilation purposes. One thing that did change was the organisation – not dramatically, but steadily and from time to time. Some of his earliest memories are of the days, in 1946, when the Superintendent used to arrive at Copenacre at five minutes to nine in the morning, in formal dress and in his chauffeur-driven motor car,

to commence a normal day's work. Another memory is of the actual formation of the PSA under Michael Heseltine in 1972, into which his own department was transferred at the outset. Charlie remembers the introduction of forklift trucks to the underground workings. Each forklift replaced 6 'gangers', work-wise. Charlie followed in the footsteps of some well-known occupants of his eventual position in the Quality Safety Department. There was Frank ('Tanky') Elms. He was followed by Bill ('Dixie') Cooper and George Aust. Charlie came next – reporting to a Site Technical Officer in the PSA.

B.2.8 The underground quarry situated beneath Corsham for which Charlie never had responsibility was the one locally known as the 'Bunker' – Burlington. Extra special security clearance was needed for this one. He does not give the impression of having 'missed out' on this unique feature of Corsham's life underground. Charlie has an extensive collection of photographs and other documentation relating to his career – and still cherishes the Copenacre Pass which was issued to him in 1946, signed by the Superintendent of the day.

B.2.9 Peter confesses that his own lack of familiarity with Corsham's underground tunnel network has severely limited his ability to do justice to the recording of recollections which are so evidently crystal-clear to Charlie. We, the Corsham Civic Society, really should make a special effort to do a better job of this with the finished product.

B.2.10 Interview with: Chris Kelly

(these notes were written-up by Peter Tapscott following a one-hour long meeting with Chris Kelly on 31 July 2008).

B.2.11 Working underground at Corsham: Chris Kelly, now a mere 47, began working underground at the age of 16 – straight from school. He is a Corsham lad, educated at St Patrick's Primary School and at Corsham School, as it is now known. His career underground lasted 18 years, from 1977 to 1995, when he took voluntary redundancy at the age of 34. This was, of course, when the government's axe fell on Copenacre. Some were made compulsorily redundant. Chris chose to take voluntary redundancy. He had not yet entered his 'prime time' at which the redundancy package would have been somewhat more advantageous.

B.2.12 Chris well remembers his first day in Corsham's 'underground service'. He was one of about 20 school-leavers who were taken around the various quarry sites in a minibus. They were dropped off in twos and threes as they came to each quarry. Chris was assigned to Spring Quarry. There was no gentle introduction to life underground. He and every other member of the new intake were taken underground on day one. Chris soon got used to his new surroundings. He had to. He spent almost the entire first 3 months of his employment underground at Spring Quarry. His first boss was the infamous Tommy Grogan, under whose direction he worked in the Central Packing Room. His starting wage was £19 a week, of which £5 went straight to his mother.

B.2.13 Chris was to remain at Spring Quarry for the next 11 years. He was subsequently moved to Monks Park for 7 years, but throughout his 18 years he was employed by "Superintendent RNSD Copenacre", Copenacre being the name given to the stores facility that had been established on top of Hartham Quarry. He eventually achieved the grade of "Senior Storekeeper, Band 14", which meant that he was qualified to drive most vehicles and undertake most tasks.

B.2.14 The normal means of transporting items around the stores was battery-operated electric trucks, driven by women who stood at the front of the vehicle and were armed with an accelerator and a brake. The bosses drove around on 3-wheelers which were similarly battery-operated. The batteries were re-charged overnight.

B.2.15 The stocked items comprised everything imaginable to keep the three services fully operational. Many required periodic testing. Goods came in and goods went out. The wonder of it was that the means of stock management was totally manual. The workload in the stores was extremely variable. Chris was always in full-time employment in the stores and frequently was "on call" through the night. Occasionally materials needed to be couriered to such places as the navy base at Rosyth in Scotland. Chris would undertake some of these duties, too. Emergencies like the Falklands War brought special pressures. Things became truly frantic, recalls Chris. He and his colleagues worked 24 hours at a stretch. Some of them actually went down to the Falklands on the RFAs – the Royal Fleet Auxiliaries, and spent time in Bluff Cove. Chris was not one of them, and is pleased to report that none of those that did was a casualty of the encounter.

B.2.16 Chris was the union rep. for the Transport & General Workers Union at Copenacre for 15 of his 18 years there. Chris is full of anecdotes, mostly based upon some of the characters who worked underground. He particularly remembers Percy. Percy was a single chap who lived in lodgings in Bath. It was Percy's job to look after a group of Gentlemen's Toilets, located underground. He was not the brightest of chaps and, as he grew older, he took to communicating by whistling. Asked a question he would intersperse his answering words with an increasing number of whistles. Eventually, Percy died and one of his pals was dispatched to sort his lodgings out. A large collection of un-opened wage packets was found in Percy's wardrobe.

B.2.17 Chris also remembers a character who generally went by the name of "Ronnie Oh! Dear". This was because he included the words "Oh! Dear" at the end of every sentence he uttered. Ronnie was frighteningly large, says Chris, but a lovely man. Eventually, he too died. Chris recalls that, at this time, it was the norm for the organisation to put on a coach to take as many of those who knew the departed employee to that person's funeral. This was the case with Ronnie. There was good turnout and everyone was assembled in the church for Ronnie's send-off. The coffin came in - accompanied by "Ronnie", walking reverently behind it! Everybody was aghast! Well, it looked like Ronnie. What nobody realised, however, was that Ronnie had a twin brother, an identical twin brother.

B.2.18 Chris could occupy a whole evening with such stories, all hugely entertaining. However, more on another occasion, perhaps. This account has to be drawn to a close. During his time at Monks Park, Chris also saw brief service at Colerne. With the decision to close Copenacre came the need to prepare the departing staff for the world outside, post redundancy. Chris spent his last few months at Hartham Quarry doing just that. Clearly Chris looks back on his 18 years at Copenacre with fond memories.

B.2.19 After taking voluntary redundancy in 1995, Chris was not out of work for long. The following Monday saw him starting a new career with a new employer, Motorlink. As a man with a young family, there was no time to lose. Later he moved to Linpac. Since 1998 he has been the Site Manager at Heywood School. Chris doesn't let the grass grow underneath his feet. As some of you may have noticed, he stood as an Independent candidate for the Corsham Ward of the Corsham Town Council in the July 2008 election. As the saying goes, you just can't keep a good man down.

B.2.20 Interview with: Mrs Lilian South

(these notes were written up by Peter Tapscott following an interview)

B.2.21 RNSD Copenace: Mrs Lilian South, who retired from RNSD Copenacre in 1996, had worked there for 34 years. Approx 20 of them in the Telephone Exchange underground at the Copenacre Site. She said that she thoroughly enjoyed her time there, and soon adapted to

being underground all day. "After a while you hardly noticed it, the area was clean, light and airy, a constant 60 degree temperature, there was just no windows! In the wintertime you went down in the dark and came up in the dark. In the summer you came to the surface at lunchtime and were surprised how warm it was.

B.2.22 There were 3 of us in the Telephone exchange, which served the three sites, Copenacre, Monks Park and Spring Quarry, and we were kept busy all day. I suppose that the biggest danger down there was from fire. But we never ever had a fire on either site. We had an excellent group of fire patrol officers, who regularly put us through fire evacuation exercises, these were the only times we ever went into the old workings - that was our escape route. Well lit, but a long, long walk, then up 90 steps to the surface. It seemed very much like a family concern. I was on the Sports and Social Committee, which organised dances in the canteen, helped with Open Days, and Coach tours abroad. In general I think most people enjoyed working underground.

B.2.23 Interview with: Mrs Margaret Lawson

(these notes were written up by Peter Tapscott following an interview)

B.2.24 RNSD Copenacre and the BAC Spring Quarry: Mrs Margaret Lawton, now aged 85, had, before retirement, worked as secretary to the Superintendent, RNSD Copenacre. As she had been the person who had typed out the original proof of The History of RNSD Copenacre, her career at Copenacre was well known, so it was her work at BAC Spring Quarry during the war that was of particular interest.

B.2.25 Margaret's father had come to the area from London, as Clerk of Works for the setting up of BAC at Spring Quarry. It was 1943, and he encouraged his daughter bring her child to the relative safety of Wiltshire, to work at Spring Quarry. She was given a job as secretary to one of the section heads. She cannot remember the name of her boss, but recalls he was very precise, and on occasions he would state that he was very busy and was not to be disturbed, close his office door, and have the local barber in to cut his hair. The removing of the evidence of hairs on the floor afterwards was not too thorough!

B.2.26 Margaret's office was built against the quarry walls, which had a tendency to be very damp at times. Nevertheless she carried out her expected duties, and prepared the wages for the men in the section. A young girl, working part time, came in to distribute the pay packets. Lunchtimes were taken in the canteen to the strains of 'Music While You Work', and dancing on a highly polished floor. In the summer they would go to the surface, and sun themselves on the grass. BAC provided a six-bed hospital underground, anyone who became ill was taken there, and a local doctor called in. A dentist visited once a week. Whilst Margaret was not in close proximity to the work of building of the aircraft engines, she clearly remembers that when an engine was completed, it would be transferred to a large open space underground, and roped off, so that all the staff could see the successfully completed engine. Everyone was very proud to have had some association.

B.2.27 Interview with: Eric Mahy

(these notes were written up by Peter Tapscott following an interview)

B.2.28 Monks Park: Eric Mahy worked underground at Monks Park 1967 – 1978, for 'Director General Weapons – Naval ' (DGW(N), in a division known as Directorate of Weapons Production (DW Prod), responsible for the quality assurance of weapons equipment, and approx 100 staff. The underground conditions were very suitable for the work. Good lighting, a steady temperature, a clean area, and an electronically low noise environment were essential for the task.

B.2.29 Eric recalls that it was a pleasant place in which to work, although the staff were not above some harmless fun. One day several people visited his office, and all of them shouted at him. When he asked why they were shouting, they said "Ted Mooney told us you were deaf !" On another occasion a telephone caller asked if he could speak to DW Prod. This time is wasn't a joke, and Eric had to explain that there was no such person, but that it was a designation!

B.2.30 At Monks Park the fire escape took you out into the old workings where stone mining was still being actively pursued by Bath & Portland Stone Co, later to become Hansons - then up the inevitable 125 steps to the surface. Perhaps one of the most memorable events was when a fossilised tree was found in a large piece of stone, out in the mine workings. It was estimated to be millions of years old, and no less a personage than Sir Mortimer Wheeler came down to view it. The fossil is believed to have eventually been removed to the British Museum.

B.2.31 Interview with: Les Davis

(these notes were written up by Peter Tapscott following an interview)

B.2.32 Spring Quarry after BAC: Les Davis, Chairman of Corsham Civic Society, recalls working underground at Spring Quarry between 1947 and 1954, after the BAC had gone. He had left the RAF, and worked for the Ministry of Works as an electrical engineer, they had been charged with going underground to remove all the machinery that had been left behind. He then worked in the same area for the Ministry of Supply, setting up the storage facility for the Admiralty who would use it for many more years. The canteen had been closed, but Les remembers well seeing the Olga Lehmann paintings on the wall.

B.2.33 The job required working shifts, and Les recalls spending time with his colleague(s) exploring the old workings, they had torches, (but no string), - they just followed the pillar numbers! One particular night two of them followed a stream and walked as far as the Box railway tunnel. They could hear the trains thundering by. Quite an eventful time!"

APPENDIX C. BIBLIOGRAPHY AND SOURCES

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Comparative Study - referenced in Appendix I

Full references are given in Appendix I for ease because of the quantity used, and homepage addresses are given below.

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