

Protect and survive

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Abstract

This paper focuses on the conservation of bunkers that were built for the civilian and volunteer services during the Cold War, and examines where these sites have already been conserved and what alternate uses have been implemented or will in the future. Though limiting to sites within England, it must be emphasised that these bunkers were often part of a much larger network to cover all four provinces of the UK, and in particular case reference will be made to bunkers relating to the Cold War on a global scale. If managed properly, bunkers can be re-imagined as financially sustainable buildings by introducing radical alternative uses. However, there are numerous complications encountered when attempting to conserve and protect these sites due to differing opinions; from choosing to renounce these structures as relics of the past, or to regard them as the personification of the Cold War that can provide an educational tool for informing future generations about a period that is still not entirely understood. Whatever alternative use is favoured, the clear desire to learn more about these underground anomalies recognises that Cold War bunkers should be of national importance. The surviving bunkers provided for civil defence and the continuity of government particularly need protecting otherwise a misunderstood part of Britain's defence heritage will be lost.

Keywords: cold war, bunkers, civil defence, heritage, conservation, alternative uses, protection.

1 Introduction

The term 'Cold War' describes the geopolitical tensions immediately after the Second World War between the Soviet Union (also known as the Union of Soviet Socialist Republics, or USSR) who were aligned with their eastern European satellite states against the USA and its western European allies. These two 'Blocs' were ideologically, militarily, and economically opposed – the



Soviets promoted an ideology of communism and a state run economy, whilst the Americans endorsed principles of liberal democracy and the free market. During this period each superpower would stockpile nuclear weapons and construct military installations over several phases to prevent the other superpower from attacking and gaining an advantage if a Third World War ever erupted. The Cold War was mainly contested in secrecy and espionage but on certain occasions the ideological differences between East and West came close to direct confrontation that could have resulted in the end of civilisation, or Mutually Assured Destruction (MAD). In the UK, a number of Cold War bunkers were built specifically for military control, but other sites from this era can be defined as sites or structures intended to make sure that an emergency system of government, essential infrastructure and civil defence capabilities were in position if a conventional or nuclear strike from the Eastern Bloc became a reality.

2 Historical context

The Cold War was a global phenomenon that lasted almost fifty years, Emmerson and Beard [1] states that much of the activity conducted inside its installations was unacknowledged, intriguing both archivists and the general population on “an underground world that is entirely unknown to the public at large. This of course is no accident, considering the once highly secret nature of many of these projects”. A network of bunkers and shelters were used extensively by Britain during the Second World War that helped play a crucial part in shaping wartime society; these structures instilled a collective spirit where the population had moved underground for survival. During the Cold War, the same basic purpose of bunkers to protect essential government, military and emergency services personnel persisted; however, their representation took an altogether more ominous meaning because the common public perception was that these structures were designed to exclusively shelter the authorities and officials from a nuclear blast.

2.1 Counting the cost

This has left a prevalent physical legacy around the world with derelict civil and military facilities ranging from small volunteer monitoring posts to extensive militarised landmarks. Each represent a series of interrelated factors and reflect the national experiences during the stand-off between the superpowers. Not until the end of the Cold War did awareness for the historic importance of recently redundant sites become apparent and during the 1990s interest in preserving related buildings for designation began.

3 Conservation issues

As bunkers were built for an intended purpose, understanding the best approach for re-use is essential. To avoid a predisposition, arguments both for and against



retaining these structures and where alternative uses have been implemented were examined.

3.1 Initial conservation efforts in the UK

After the Government disposed of Cold War structures at the beginning of the 1990s the major UK heritage organisations have implemented their own conservation practices to inform the risk in losing these sites. English Heritage was one of the first organisations to recognise that the vast sell-off programme could eventually result in the loss of important historical resources around the country. Under the Monument Protection Programme (MPP), English Heritage has already recorded and categorised significant Cold War buildings and sufficient information on their current condition, a number have even been assigned scheduled monument or listed status. Elsewhere in the UK, Historic Scotland and Cadw have also analysed their own sites, and though there might not be a substantial quantity to document, they have still played a part in Cold War history.

3.2 Statutory protection

As part of an extensive assessment on 20th century defence sites in England, the MPP was compiled by English Heritage in 2001 to determine the most significant Cold War sites of national importance. However, decisions about preserving historic sites in other countries are devolved to lower regional levels. This evaluation presented a unique opportunity to advocate conservation work at a national scale on a collection of landmarks that became redundant shortly after their primary role had ended.

Cocroft [2] states that the MPP report considers scheduling nationally important Cold War structures as the most suitable designation when it is related with other components of a much larger site within a well-preserved comparable setting. The majority of recommendations recognise that an alternative use can often be unwanted so should remain as monuments beyond everyday purpose. Notable scheduled monuments include an atomic bomb store from the 1950s, an early 1960s Royal Observer Corps (ROC) Group Headquarters at York, and RAF Greenham Common which was used to shelter cruise missiles in the 1980s. Sites can also be recommended for Listing where a continuing use or the potential for reuse is seen as the more appropriate strategy for adapting a building or group of buildings. Where no statutory protection exists on a Cold War site, adequate standards of documentation and recording can be an acceptable short-term alternative instead of implementing conservation and preservation practice. Lake [3] mentions how the MPP report also advises developers on the retention of significant buildings in their ownership by ensuring sufficient field survey and recording is carried out on the wider historic significance and educational value before any alteration or demolition takes place.

It can be difficult to justify designating some Cold War structures because it would not be possible to schedule or list every building associated with this



period. As a result, the recommendations in the MPP survey has only designated 32 Cold War sites and currently identified more than one hundred sites of historical importance still being considered for protection. All are highly diverse and vary in scale, from individual ROC posts to sections of missile test sites, which means that no one conservation system can be applicable; bunkers for example may be solitary underground structures but their boundaries can expand to hundreds of hectares. Cocroft [4] states that in the last five years, English Heritage has changed their philosophy on Cold War sites with the basic argument that maintaining the structural integrity should take priority.

3.3 Contentious questions to address

Implementation of statutory protection and evaluations into looking after remnants of the Cold War raises many challenges and questions. The MPP projects can be seen as one of the most contentious assessments in recent years because the general population may perceive the Cold War being too recent to be respected as worthy heritage. Schofield and Cocroft [5] indicates that Cold War landmarks could therefore, be viewed as “stark, ugly, and inhuman reminders of a confrontation that might have wiped out life on earth”, but does a lack of conventional aesthetic alone cause them to be unworthy of protection, or do any other aesthetic values need to be explored further? Nevertheless, this project has had an active participation on behalf of English Heritage who takes profound concern with recent Cold War heritage and a growing curiosity has developed amongst other organisations and enthusiasts in places that were once very secret and are now revealed for the first time. Up until now however, this has not stopped a significant reduction in the number of surviving sites or structures.

Although bunkers lack aesthetic qualities they remain part of Britain’s heritage and dedication for their protection and survival has developed. If a site is designated then this can restrict opportunities for a new purpose because any alteration made can irreversibly diminish its historic value, so the utmost care must be implemented to ensure its importance is not lost during any conservation work. Cocroft [6] states that proposals for scheduling Cold War structures to preserve the character of a site can involve “the controlled removal of vulnerable fittings, sealing of entrances to prevent vandalism, the periodic removal of damaging vegetation or grass cutting to prevent undergrowth taking hold”.

A common assumption concerning the conservation of Cold War bunkers was that if they were built specifically to endure the force of a nuclear blast, then surely the fabric would prolong its long-term survival. To a degree this is correct; the Central Government bunker residing within a deep quarry in Corsham was purposely chosen as the best shelter for central government to continue. However, most sub-underground structures built were vulnerable to such a destructive force. ROC observation posts were designed to record the blast from an atomic weapon rather than protect the volunteers housed inside. Bunkers are effectively large windowless structures constructed from steel and reinforced concrete, which can deteriorate in unpredictable ways.

Bunkers were designed for a particular purpose so finding an alternative use is difficult without undertaking radical modifications during conversion. Without



a continuing function gradual decay and the threat of demolition will persist for many Cold War sites. New uses for a building or site can be limited with the most basic purpose providing protected storage space. The former Rotor bunkers at Ash in Kent and Hack Green offer adequate security to accommodate computer servers for financial institutions, the revenue generated from renting this space can then go back into maintaining the bunker. McCamley [7] indicates other peculiar uses include serving as a police training centre at Regional Government Headquarters (RGHQ) Crowborough in East Sussex which only operated for two years before being deactivated in 1990.

Cocroft [8] stated that a more recent alternative use that may become more popular in the future is selling the land to energy companies for the provision of solar farms. The power cables that lead into the bunker are already set into the ground, allowing any new construction to directly connect with the national grid. With ways to combat the effects of climate change and sustainability being a prominent current topic, bunker sites could one day prove vital for installing sustainable devices in order to meet Britain's energy needs.

The Cold War had overwhelmed the participating nation's seemingly limitless budgets and with no future defensive role, abandoned surplus property was auctioned off in a series of stringent Defence Reviews. Since 1990 this led to the largest sale of defence land by Whitehall since the end of the Second World War. As many structures today have either been demolished or sold, is their cost in repair and maintenance justifiable and is their value on the market valid? In economic terms, listing or scheduling Cold War structures and land seriously affects market value because the limitations on work to designated property can be particularly undesirable for any potential developer. The financial implications and complex logistics to demolish these structures also assist in their preservation. Another concern is the removal of contaminated material such as asbestos left at some sites can be a very expensive process; areas of the vast tunnels of the Corsham Central Government War Headquarters (CGWHQ) remain sealed off because of the dangers to health. However, where certain landmarks and structures are situated in areas of much desired green belt land; a sustainable outcome is capable if statutes like PPS5 are properly used, and designation rightly ensures protection for any significant and vulnerable components during the development control process. Any damage already sustained on sites is generally caused more for monetary reasons than any real hatred for what the structure represents, which is unlike the emotions felt against the Berlin Wall, where citizens were personally motivated to tear it down in 1989.

After the Cold War conclusion, many installations rapidly moved from active use to sites of cultural and educational value to help to reflect the experience witnessed at these sites. Schofield and Cocroft [9] points out how a few have already opened as visitor attractions and museums with a "potential to develop wider national networks of Cold War trails to explain the nature of this late twentieth-century confrontation".

But do the public understand what Cold War sites represent and the justification for their preservation? In the UK, their preservation and display



have largely been embarked upon through private initiative; Clayton [10] summarises how a number of decommissioned bunkers have now opened up to the public by enthusiastic entrepreneurs and can give a good impression to visitors of their general purpose and design. For instance, bunkers that have been obtained and preserved include Anstruther in Fife, Scotland; Hack Green, Cheshire; Kelvedon Hatch and Mistley, Essex and several ROC underground monitoring posts around the country. Since most of the authentic material was removed from sites in the 1990s, the collections that the museums display either aim to give a general overview of the Cold War, or where equivalent kit has been used, specifically focuses its educational role on the bunker itself. The Cold War operations room at RAF Neatishead, Norfolk for instance is preserved as it was on closure in 1993 to form a focal point for an air defence museum. English Heritage has been at the vanguard in responsibly preserving Cold War structures and incorporating a small selection of buildings into museums; certain sections of the former Regional Seat of Government (RSG) beneath Dover Castle can now be visited and the organisation also restored the former ROC Group Headquarters at York, which is a scheduled monument and open for public display. Both sites were acquired by default, the York property included with the Shelley House site when the organisation merged with the Royal Commission on the Historical Monuments of England (RCHME) in 1999. The Dover Castle RSG exists within a wider historical collection of a period of several hundred years. This indicates that extensive awareness of the period and sites associated with the Cold War has yet to develop. So does the general public have enough interest in the Cold War for more bunkers to be opened as visitor attractions? If Cold War structures were to open as a tourist attraction, then its role should reflect the archaeological and historical memory of the site. If listed bunkers such as the Cambridge and Nottingham RSGs were opened as museums it would undoubtedly give them a valid purpose and potentially an enduring legacy. Cocroft and Thomas [11] explain that “although all these projects are prompted by the desire to preserve a particular building, many have also been active in saving important collections of artefacts”.

Other countries have taken similar steps to preserve Cold War bunkers as visitor attractions. Some underground missile silos in the United States survive either as abandoned structures or have been adapted to new uses. The website (Diefenbunker [12]) enlightens the bunker built for the Canadian government near Ottawa, Canada between 1959 and 1961. It was purchased after the Cold War by a volunteer group in 1998 finally becoming a museum and a National Historic Site of Canada.

So are sites able to interpret their own events during the Cold War effectively for the public to understand what occurred and would this explanation be similar with other conflicts? For many people that lived through the Cold War, they can vividly remember events like the Cuban Missile Crisis and in Britain for instance, reaction to the deployment of Cruise Missiles in the 1980s. The memories from the recent past should be appropriately interpreted and presented in an accurate way and therefore it is imperative for the museum curator and interpreter to get their facts right.



Apart from the actual record of events, there is also the public and their own past experiences of what the Cold War meant to them. Research can therefore lead to conflicting findings between what is written in official papers against the personal testimonies from site personnel or those that lived in the immediate vicinity. Staff members who served in these secret locations may not release any information in correspondence if they had signed the Official Secrets Act. The Act may impose restrictions on certain records detailing the operational life of some sites, and, in any case, personnel did not always know about every activity that presided inside. What little is known by the general public about Cold War sites frequently confuses fact and fiction as evidence. What is taken as fact could be easily exaggerated or proved incorrect. Bunkers that now operate as museums stress that some of the information they portray is likely to be inaccurate due to research still being in its infancy.

David Uzzell [13] explains how the interpretation and presentation of Cold War museums should emotionally engage the visitor and not just show the consequences of nuclear destruction, but connect them with the underlying experiences and personal accounts from those involved either at that specific museum or in the overall context. To get a better understanding of the events that occurred, visitors should be persuaded to evaluate the past and question the future repercussions these decisions will create. Actively explaining the Cold War in such a way raises notable issues but presents an opportunity “to demonstrate other areas of heritage interpretation how the reconstruction of the past can play a positive role in constructing the future”.

3.4 Conserving the past for the future

An informative conservation strategy for Cold War relics is achievable given the background outlined above. However, what their historical and social value come to symbolise remains unacknowledged by the overall population given that their functions were kept unknown for such a long time. Many sites away from large conurbations have lapsed into a state of abandonment and a number of cases have already been demolished before the chance to survey or conserve them. Studies into the significance and uniqueness of Cold War sites in the UK are part of a wider assessment of similar heritage around the world. From the progress already made in this recent field over the last two decades, Cooft and Schofield [14] mention that “English Heritage is proposing to work with other agencies in Europe to ensure that adequate recognition is given to these remains of our recent past”. If Cold War bunkers were left unexplained, these important 20th century structures would linger in the realm of fiction.

4 Conclusion

The Cold War was marked by a very real threat to humanity, but thankfully, potential scenarios where nuclear annihilation was inevitable never came to fruition. This meant that none of the bunkers constructed were ever used for their intended purpose, so in just two decades since the abrupt end of the superpower



stand-off the bunkers have lost their relevance due to their inherent ephemeral nature which introduces a number of challenges when considering their possible conservation.

The heritage value of structures built during any conflict only gains importance once the conflict has ended, so is there a hopeful future for the Cold War bunker? McCamley [15] believes that if we leave them as lifeless, empty shells to stimulate the fear and secrecy that they once held, the bunker can become “a potent weapon in its own right; its manipulation is fundamental to international diplomacy and has always been a key element in nuclear strategy”. Despite having little aesthetic value, it cannot be denied that the impact bunkers have on the landscape creates an intimidating appearance. Because Cold War bunkers were built for a very specific purpose, those deemed historically important should not be demolished or left neglected without due consideration, and any negative connotations or potential costs must not hinder conservation efforts.

For Cold War sites to have relevance in the heritage sector, it is essential to convince the public of their importance. A number of people already have an abiding fascination with underground retreats, whether for administrative, military or civilian usage, but such sites are becoming increasingly inaccessible as time and climatic conditions take their toll. Future generations will have no recollection of the experience their predecessors had from living in constant trepidation of a nuclear attack. Emmerson and Beard [16] point out that while many memories of the Cold War experience are rapidly fading, the populace remains unaware of how terrifying this period was in an age of secrecy and the untold power weapons of mass destruction.

There is no reason why the social and political aspects should not be regarded as significant but because comprehension of the Cold War was largely absent from the public consciousness, this prevents related structures from ever being accepted as an integral part of Britain's heritage, which subsequently hinders their conservation. Only when the secrecy surrounding these installations is lifted will the population acknowledge the value of their significance. The difficulty will be convincing the general public that associated landmarks from this period deserve equivalent levels of protection provided for much older sites. The fact that the York ROC bunker has been given the same statutory protection as Stonehenge may, at this point in time, prove hard to justify to many people.

By limiting the various Cold War site types into 31 Groups outlined in the MPP Report means that the appropriate measures to identify and designate important sites has allowed a manageable number to be given the necessary protection needed to conserve them. However, listing or scheduling a site does not make it immune from severe alteration or ultimately demolition. The Glasshouse at Chislehurst is an example where scheduling has been ineffective in retaining the historic fabric; the work undertaken has nonetheless provided new commercially successful residences. It would be theoretically impossible and undesirable to preserve every Cold War site, so a fine balance can be attained between putting an emphasis on one specific site and conserving a broad selection. On the whole, English Heritage's assessment appears to be a comprehensive response to the allocation of important Cold War sites without

the need to protect so many of a similar rationale. There is a danger however that where important sites are either threatened or allowed to be demolished; deliberating where to draw the line on their retention can be unclear. Already the MPP Report is facilitating advice on any development proposals relating to any particular specified site. Nevertheless, further work on historical research of the more undisclosed sites, such as the utility bunkers and civil defence structures, needs to be addressed.

Despite official awareness of numerous sites across the UK by English Heritage, enthusiasts and other organisations like Subterranea Britannica, bunkers are rapidly and intentionally being demolished amid urban and rural development or else by gradual decay from acts of vandalism or the steady reclamation by nature. After the doors were closed for the last time, the most inherent problem for a large number of abandoned underground sites is where water was able to permeate inside due to the structural fabric wearing away. McCamley [17] notes that where Cold War relics are at risk do we show this apocalyptic architecture exactly as they were in their former glory, merely turning them into tourist attractions and littering the country “with road signs bearing the curiously contradictory and often multi-lingual message: ‘This way to the secret nuclear bunker’”, or is the designation of bunkers an altogether more approachable method to save them? It could be argued that the more sites given scheduled or listed status, this process will help save more sites from dereliction, but regardless of whether they are designated or not those bunkers that have been denied an alternative use will continue to deteriorate and are likely to remain empty for the foreseeable future.

The best approach to secure the future of a Cold War bunker is to ensure that a practical new use is implemented by sympathetic individuals or an organisation that recognises its importance and which are prepared to take accountability for the property’s upkeep. For instance, volunteers from the Thames Defence Heritage organisation have adequately demonstrated this with their dedication to keeping the Gravesend Civil Defence bunker in good condition. Hopefully the guidelines provided by English Heritage will in time protect exemplar sites of our built Cold War heritage from demolition before the effects of decay leave them beyond repair.

It is not only the UK that has to question whether the bunkers from this period should be regarded as historically important architecture; this needs to be addressed by every nation that contributed to the global conflict by implementing adequate conservation management to protect the surviving remnants of the Cold War.

Bunkers were never designed to have an alternative use, which raises the question of the survival for the majority of sites in the near future; perhaps by adapting the remnants of a paranoid past towards a different use in the present will reveal new possibilities. Changing the negative aspect of 20th century architecture into an altogether new function for a site which is caused by the alterations made to the interior spaces will affect the manner in how it is occupied while inherently retaining the Cold War paranoia in their form. It is encouraging to note that a number of bunkers in the UK have fortunately found

new and often commercially receptive uses, such as museums or high security facilities to store computer data. In repurposing the bunker to a more approachable use of space, the fears of the past are reconciled by reimagining the spaces to an alternative purpose.

There is hope that new functions and practices at the forefront of green architecture to help alleviate the climatic changes occurring to the Earth could well ensure the survival and protection of the bunker in modern times. Sites that are on green belt land can prolong the life of a bunker if developers choose to conserve the existing structure rather than an entirely new build consuming greater resources in terms of materials and the surplus energy in their production.

Since they were built into the landscape with reinforced concrete and certain examples designed to withstand the impact of a nuclear bomb, this has created a long lasting template on which sustainable redesign can be implemented. Where bunkers have been covered over with grassy slopes, these can not only provide elements of natural insulation to minimise energy consumption, but can also absorb rainwater to be used for water services inside if adequate drainage is installed, reducing the overall impact on the built environment while increasing the roof's lifespan. Today, the overall form of an underground bunker is starting to be emulated in new designs for sustainable homes; footballer Gary Neville has plans to build an underground residence that is eco-friendly and seamlessly merges with the surrounding landscape.

Bunkers that still have equipment left *in situ* – power generators, air and water filtration systems – are regarded as additional luxuries when conserving the bunker for a new use if they can be fully functional once again. Due to the hazardous nature of the materials however, many will need to go through rigorous health and safety assessments before the existing plant can be reused. Luckily installations like the Brede Waterworks already have a safe working plant, offering a sustainable and an economically effective way to run the bunker.

As well as making use of the existing bunker qualities, modern energy efficient technologies placed on the surrounding terrain, such as a network of solar panels and wind turbines, could provide a beneficial energy source that is directly connected to the national grid. By contributing to the movement against climate change, the adaptation of Cold War sites for environmental purposes will address current concerns on sustainable living and offer a creative and cheaper alternative to creating new spaces.

Over the passage of time records on bunkers continue to be lost and are seen as too recent for their true historical importance to be perceived as heritage. As more declassified records expose the secrecy that surround its structures, particular declassifications may force us to reconsider the Cold War perception that could initiate a greater awareness of the historical event. Cocroft and Thomas [18] appropriately evaluate that “controversy will continue to surround the preservation and interpretation of the artefacts and monuments of the nuclear age”. Whatever path our bunker heritage follows in the future, it is their physical remains and the intangible memories from the people that served in them that should be revealed for the public to interpret what occurred in that secret sense of space.

Cold War bunkers represent the remnants of a terrifying period of history where impending nuclear destruction came very close to reality, so it is worth remembering that this substantial heritage, along with the their intangible nature, connects us to the mistakes of the past. It is therefore of paramount importance to protect the bunkers and find an alternative use where appropriate before their own existence is lost forever.

References

- [1] Emmerson A. and Beard T., *London's Secret Tubes*, Capital Transport Publishing: London, p.7, 2007.
- [2] Cocroft W., *Cold War Monuments: an assessment by the Monument Protection Programme*, English Heritage: London, p.14, 2001.
- [3] Lake J. and English Heritage, *Twentieth-Century Military Sites: Current approaches to their recording and conservation*, English Heritage: Swindon, p.14, 2003.
- [4] Cocroft W., Cambridge, pers. comm. June 2011.
- [5] Schofield J. and Cocroft W., *A Fearsome Heritage: Diverse Legacies of the Cold War*, Left Coast Press: California p.108, 2003.
- [6] Cocroft W., *Cold War Monuments: an assessment by the Monument Protection Programme*, English Heritage: London p.14, 2001.
- [7] McCamley N. J., *Cold War Secret Nuclear Bunkers*, Pen & Sword Military Classics: Barnsley, p187, 2009.
- [8] Cocroft W., Cambridge, pers. comm. June 2011.
- [9] Schofield J. and Cocroft W., *A Fearsome Heritage: Diverse Legacies of the Cold War*, Left Coast Press: California p.126, 2007.
- [10] Clayton A., *Subterranean City: Beneath the Streets of London*, Historical Publications: London, p.137, 2000.
- [11] Cocroft W. and Thomas R. J., *Cold War: Building for Nuclear Confrontation 1946-1989* Barnwell P. S. (ed.) English Heritage: Swindon p.267, 2004.
- [12] Diefenbunker, *About the Diefenbunker*, www.diefenbunker.ca/pages/about_the_diefenbunker/index.shtml
- [13] Uzzell D., *The hot interpretation of the Cold War* in English Heritage Monuments of War: The evaluation, recording and management of twentieth-century military sites, English Heritage: London, p.21, 1998.
- [14] Cocroft W. and Schofield J., Images of the Cold War, *Conservation Bulletin* (44) English Heritage: London p.43, 2003.
- [15] McCamley N. J., *Cold War Secret Nuclear Bunkers*, Pen & Sword Military Classics: Barnsley, p.279, 2009.
- [16] Emmerson A. and Beard T., *London's Secret Tubes*, Capital Transport Publishing: London, p.9, 2007.
- [17] McCamley N. J., *Cold War Secret Nuclear Bunkers*, Pen & Sword Military Classics: Barnsley, p.279, 2009.
- [18] Cocroft W. and Thomas R. J., *Cold War: Building for Nuclear Confrontation 1946-1989*, Barnwell P. S. (ed.), English Heritage: Swindon, p.268, 2004.

