

Historic Record

Hydrus Project Site Character Area EX2

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1 - Introduction and Policy Context

- 1.1.1 AWE is undertaking a programme of rationalisation of redundant structures and buildings as part of the much needed redevelopment of their facilities at Aldermaston.
- 1.1.2 AWE Aldermaston was identified by the English Heritage Monuments Protection Programme survey of 2001 which reviewed England's stock of Cold War remains. The programme put forward a statement of significance for AWE Aldermaston:
- 1.1.3 'AWE Aldermaston, a former Second World War airfield, was developed in the early 1950s as the principal centre for Britain's nuclear weapons programme. Within its perimeter are many unique structures associated with Britain's nuclear weapons projects.'
- 1.1.4 The following was recommended in relation to AWE Aldermaston, in the context of any development:

'If in the future the site, or a section of it, is threatened with closure a detailed recording brief should be developed with AWE and used to identify any structures worthy of statutory protection.'
- 1.1.5 AWE have therefore commissioned a review of the whole site at Aldermaston (as well as the sites at Burghfield and Blacknest), in order to determine appropriate levels of management and recording to be pursued in relation to their buildings and other structures in the coming years. Part of the review consists of the development of a consistent Heritage Strategy, currently (November 2006) in draft. The Strategy document divides the sites into their constituent Character Areas. It sets out the need for a programme of recording of the elements that are to be lost or altered.
- 1.1.6 The Historic Record is based on standards developed by English Heritage, as adopted by the United Kingdom Atomic Energy Authority in relation to recording at the Tandem Van der Graaf Generator at Harwell, Oxfordshire (Cocroft 2004). Most of the buildings were recorded to Level 1 with some at Level 2 and others at Level 3 to reflect their relative significance, in accordance with current English Heritage Specifications (English Heritage, Understanding Historic Buildings, a guide to good recording practice, February 2006). Although the current English Heritage guidance was issued after the completion of the actual fieldwork, the Levels of recording remain largely unaltered from the previous Specifications. The English Heritage Specifications were used here as a guide to good recording practice and the surveys were carried out within local Health and Safety guidelines and within the constraints of National Security.
- 1.1.7 In terms of content, AWE is restricted in terms of the level of information publishable regarding many of its buildings and structures. The nature and function of much of the site is highly sensitive, and only accessible to those with the highest levels of security clearance. This has understandably both restricted accessibility to information for production of this Record, and has also dictated the level of detail included, with a view to it eventually being made accessible to those with only basic levels of security clearance. The Record therefore describes the character, structure and function of the Hydrus Project Site in as much detail as possible, within these limitations.
- 1.1.8 The work was undertaken by Paul Francis who is the author of this report.

2 - Scope and Methodology of the Historic Record and the Structure of the Report

- 2.1.1 This Record is not intended to provide an analysis of the events or processes associated with the South East Corner of Aldermaston. It aims to provide the following about the physical fabric of the site, in line with English Heritage recommendations:
- A record for the non-specialist, written by a specialist in military installations in consultation with knowledgeable individuals with personal experience of the facility, explaining why the buildings were built, their historic development, scientific significance in a manner understandable to a lay person.
 - The opportunity to record the knowledge of those whose experience of the facilities might otherwise be lost in coming years
 - A record of the structures themselves and of the remains of the equipment they housed, prior to demolition, where appropriate.
- 2.1.2 A general study of all the buildings in the EX2 Characterisation Zone was carried out.
- 2.1.3 A survey at Level 1 (according to English Heritage Specifications quoted above) was carried on building B3A26.2.
- Level 2 Buildings B3A25, B3C7. B3A26.1, B3A28, B35.1, B9D10, B9E10 & B9N10
 - Level 3 – Buildings B3A27 & B9C10
- 2.1.4 The main survey of the buildings took place between 14th and 18th August 2006, with some additional work in early 2007. It involved a rapid walk-over around the EX2 Area/Hydrus Project Site. Exterior digital photographs were taken by the AWE photographer of all buildings and structures. A few interior photographs were also taken where access was possible. Notes were made of all buildings and the works services drawing archive was also inspected which is available on the local Intranet. A search was made at The National Archives (TNA) of files relating to AWRE but limited to 1950 to 1954. The post-war section of the historic background has been based on the data found in these files but is restricted to the files within the public domain. There are also a significant number of files listed in the TNA database that have been retained by AWE under Section 3.4. It was not possible to examine these files.
- 2.1.5 Primary sources relating to High Explosive Research (HER), Armaments Research Establishment (ARE) and Atomic Weapons Research Establishment (AWRE) exist within the TNA. These form a part of a much larger collection that includes files that have been retained (under Section 3.4) by Corporate Archives at AWE and written permission is required to view these. Corporate Archives have also retained certain sections and pages of many of the files held at the TNA that are open to the public.
- 2.1.6 Files relating to AWRE/AWE Aldermaston can be found at the TNA under the following Classes:
- AB: Records of the UK Atomic Energy Authority and its predecessors 1939-1999
 - ES: Records of the Atomic Weapons Establishment and its Predecessors
 - DEFE: Records of the Ministry of Defence
 - T: Records Created and Inherited by the Treasury

- PREM: Records of the Prime Minister's Office
- POWE: Records Created or Inherited by the Ministry of Power and Related Bodies.

2.1.7 The last chapter Conclusions assesses the relative importance of these surviving buildings against the principles for selection of buildings to be included in the statutory lists. These principles are published in the Government's Planning Policy Guidance Note No. 15 (Planning and the Historic Environment DoE/DNH 1994). None of the buildings recorded is deemed to qualify for statutory listing although some, especially those containing original machinery and plant have archaeological and historic value to the history of the site.

3 - Site History and Significance

3.1. Ministry of Supply Aldermaston 1950-1953

- 3.1.1 The Armaments Research Establishment (ARE), principally located at Woolwich, Woolwich Common and Fort Halstead, carried out post-war High-Explosive Research (HER) work with small detachments at Chorley, Swynverton and Shoeburyness. In early 1949 the Government were considering bringing together on one site all aspects of Atomic Energy connected with weapons research and for this purpose started looking at a number of disused RAF stations including Bramcote, Fairwood Common, Atcham and South Cerney. In May of that year, the preferred site was RAF South Cerney, but the main disadvantage of this and some of the other sites, was the problem of disposal of mildly radioactive effluent. Meanwhile, plans had been drawn up of the type of buildings and plant required at South Cerney. The problem of effluent disposal led to an inspection of Aldermaston airfield in August 1949. Despite the fact that the site did not have any permanent buildings, it had the unique advantage of being equidistant between three major towns from which it could draw its workforce. Its other geographical advantage over other sites is that it is only ten miles from the River Thames. South Cerney was then rejected and Aldermaston was formally requested by the Ministry of Supply (MoS). This took place soon after 21 September 1949 when discussions had taken place on housing and labour requirements with the Ministry of Housing and the Ministry of Labour.¹
- 3.1.2 At the time of the MoS request of the site at Aldermaston, the perimeter track was being used for motor cycle and light vehicle brake testing by the Fighting Vehicle Development Establishment at Chertsey.
- 3.1.3 On 1 April 1950 the airfield was formally handed over by the Air Ministry to the Ministry of Supply (MoS) and Aldermaston became a MoS self-accounting establishment but it was to be some time before ARE became self-accounting. Reconstruction by contractors working for the Ministry of Works (MoW) began in June 1950 and the main building programme was to be completed by 1 January 1956. The principal contractor was W.E Chivers & Sons Ltd from Devizes. The airfield Technical Site was not initially re-developed, the MoS and MoW using the hangars for storage and adjacent huts as offices. Contractors used many of the existing buildings as workshops, stores and garages. At first most of the new development took place on the north side of the airfield and within the old bomb stores area. The MoS commenced operations during March 1951 after building A3 was formally handed over by the main contractors. The number of personnel employed by ARE on 1 November 1953 included 715 non-industrial staff and 1201 industrial staff.

¹ The first new 'Atomic' establishment was the Atomic Energy Research Establishment, under the direction of Professor Sir John D Cockcroft, was founded at the former RAF Harwell in November 1945. Harwell had been chosen because of its convenient geographical location, combining reasonable access to London and the nearness of a large university (Oxford). Flight 29-07-48, p.132-133.

3.2. EX2 Site

- 3.2.1 The extreme northern part of B Area has a series of redundant structures that will be demolished for the extension of the H area Facility (now known as Hydrus Project). The site has the Atkins Character zone designation of EX2.
- 3.2.2 Original drawings of the laboratory-like buildings within this area are from the first phase of construction of B Area and are dated February and June 1951. Today the site survives in an almost as-built condition with very little in the way of development or demolition.
- 3.2.3 EX2 is located on the eastern side of B Area North with North Way / Viaduct Way to the south and Cwm Road is to the north. Compared with B Area as a whole, this area is relatively small, and occupies part of the of the former NE aircraft dispersal area of RAF Aldermaston. It is shown on Site Plan (S) ALG 31, dated 14 September 1951 which shows the new buildings superimposed onto the airfield perimeter tracks and hardstandings. Prior to WWII, it was part of Aldermaston Court Park, the surviving elements of this outside the AWE boundary are listed by English Heritage as a Registered Park and Garden.
- 3.2.4 It was designed from the beginning for development, processing, testing and storage of non-metallic components. There are planned clusters of process structures inter-linked with paths and service roads. This site is dominated by five main working buildings of standard design from the drawing office of Brian Colquhoun & Partners employed by the Ministry of Works. These are low-rise concrete structures for non-metallic component assembly (or laboratories) with embankments and are similar in character to those located on the characterisation zone South-East Corner (EX7). Other buildings at EX2 are of a service or ancillary nature and these are grouped together at the southern end of the site and include single-storey flat-roofed brick office, an ablutions and a truck house. The site also contains a large sedimentation tank. All paths in this area are purpose-built concrete and lighting is similar to elsewhere in B Area but with some older types of lamp post being present. The site survives as an open space of close-cropped grassland heath, inter dispersed with occasional trees with occasional purpose-built single-storey explosives buildings. On the surface there is very little in the way of survival of the airfield dispersals and tracks, although part of the N-S runway pavement survives to the west.
- 3.2.5 There are open vistas to the north of Aldermaston Court Park where features relating to the medieval park survive, such as the Avenue and this can be viewed from the Hydrus Site as a line of Oak trees.



Plate 1: Aerial view showing the site of EX2 (Hydrus Site)

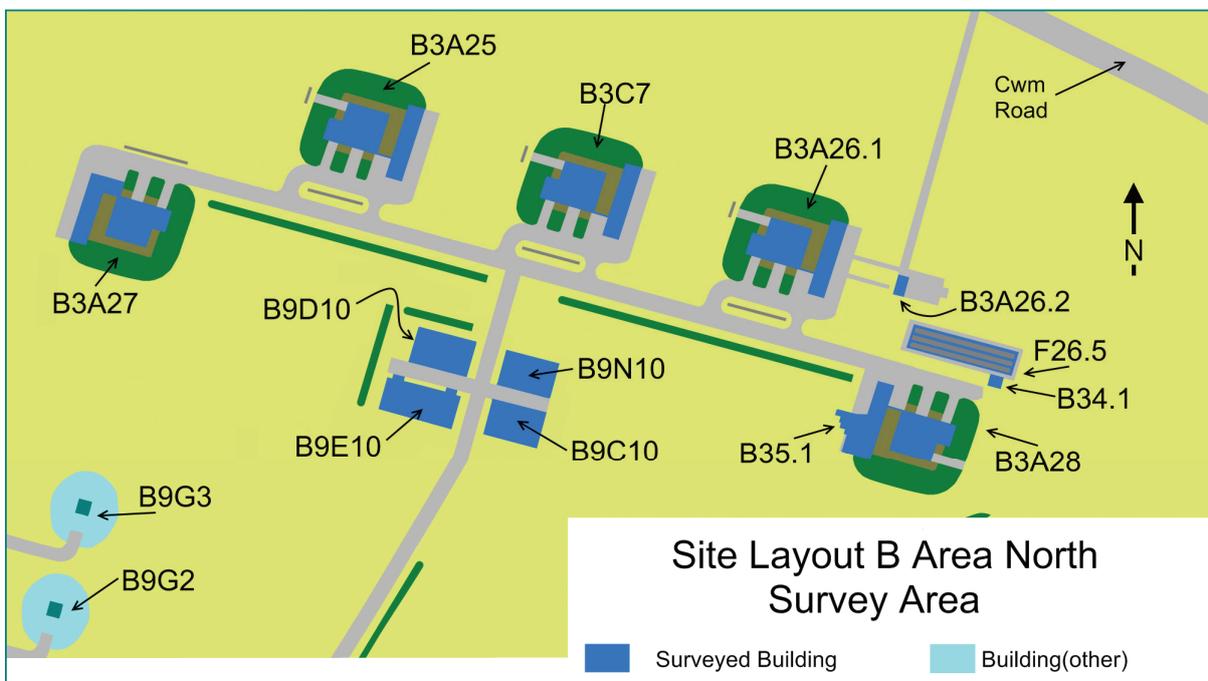


Plate 2: Site Plan showing survey area

4 - Record of the Buildings

Hydrus Project Site Buildings - The Surviving Structures

4.1. B3A25, B3A26.1, B3C7, & B3A28 (Level 2 Survey) and B3A27 (Level 3)

- 4.1.1 Within the Hydrus Project Site there are five Laboratory type buildings of standard type design that are similar to others built elsewhere within B Area at Aldermaston such as in South East Corner (SEC) area. They are conveniently planned as a row of three to the north of a clearway and one at either end (east and west), arranged on the opposite side of the same clearway (see Site Plan).
- 4.1.2 Designed by Brian Colquhoun & Partners² (drawings are dated 13-06-51), all five buildings were handed over by the contractors (presumed to be WE Chivers & Sons Ltd) on 18-06-1954.
- 4.1.3 These structures were part of the original B Area development. Each building is partially concealed within earthwork traverses so that the view from the main roads outside the site is of the earthworks and roof structure only. Their front elevations are therefore completely hidden. Their form and layout represent standard type designs.
- 4.1.4 All buildings share a similar plan-form; they are all structurally similar with only slight variations depending on use. These buildings are normally designed in two types that are mirror images of each other (left and right handed). Within EX2 they are all built the same way the same way and conform to a standard arrangement although as a type design there are also variations in the roof pitch. The working area consists of a square-shaped (30ft by 30ft) main assembly or laboratory room. Four of the buildings are equipped with an emergency exit through the earth bank and adjacent to this is a de-heading room. Plant and control rooms are mainly located within a terrace of five small rooms that are at right-angles to the front elevation. 13.5in brick walls protect all entrances.
- 4.1.5 Construction is of reinforced concrete walls (12ft high)) that are hidden from the outside by the earthwork traverses and above this is a single pitch north-light I section steel beam roof frame that is exposed above the earth work traverses. The roof cladding of the main room is of corrugated steel, plastic corrugated sheeting or asbestos sheeting on the outside with an inner lining of flat asbestos sheeting. The de-heading room has a foam

² Brian Colquhoun was born on 13 November 1902, the younger son of Arthur Hugh Colquhoun, OBE. He was educated at Felsted School and the University of London (King's College) and in 1936 married Beryl Marquis, youngest daughter of Lieutenant-Colonel HG Cowan, MBE; they had two sons.

Colquhoun began his engineering career at Muirhead, Macdonald Wilson and Company Limited, Civil Engineering Contractors. He then joined CH Lobban, also becoming a member of the Institution of Civil Engineers (MInstCE). He then spent four years in Mexico with the Mexican Eagle Oil Company, before returning home, first as Resident Engineer of the Mersey Tunnel in Liverpool, in 1930, and then as Resident Engineer-in-Charge, from 1933 to 1936. His skills were in demand elsewhere, and (between 1935 & 1939) he also advised on the Maas tunnel in Rotterdam [the Netherlands], the Tamar tunnel in Plymouth (Devon) and the Rossall sea wall (Lancashire). On leaving Liverpool (1936-1940), he worked as Engineer-in-Chief for the Royal Ordnance Factories at Chorley, Risley and Kirkby, then during 1940 was responsible for the rehabilitation of war production factories in main industrial centres, before serving from 1941 to 1944 as Director-General of Ministry of Aircraft Production factories.

In 1944 Colquhoun founded Brian Colquhoun and Partners, Consulting Engineers and Chartered Civil Engineers, working throughout the world. He died on 26 September 1977.

slag parabolic arched roof. Although they share a common layout in design, Building B3A27 is the only one of the five that had its main room functioning as a press room. The main working room of the other four functioned as milling rooms.

- 4.1.6 The finish of the main floor is a gritless pitchmaster and the floors in the ancillary rooms are lino except for the THWS pump room which is also a pitchmaster floor.

The following is known about the individual buildings:

- 4.1.7 **B3A25** This structure was part of the Mixing and Milling Sub-group of buildings and was first used as a small chemical plant for the modifying of explosives. It changed use in the 1960s when it was adapted for the processing of High Explosives (HE) using precipitation techniques. The building has a PETN plant manufactured by Burnett & Rolfe Ltd of Rochester (possibly manufactured in July 1980) and Manesty Machines Ltd water heaters.

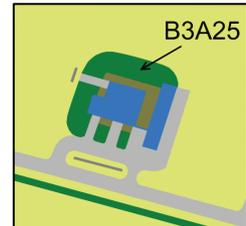


Plate 3: B3A25 view looking NW

4.1.8 **B3A26** This structure was part of the Mixing and Milling Sub-group of buildings and functioned as an active processing facility for HE, before becoming a Stand-by Special Process Building. It contains redundant Plastic Bonded Explosives plant and fluid energy mills. This plant was used for making explosives and for the re-crystallisation of explosives. There is a glass-lined reaction pressure lacquer vessel with a stirrer, also a jet mill which is powered by a compressor housed in B3A26.2. There are vacuum pumps, water heaters hydraulic HP pumps and LP pumps, solvent recovery vessels, control panels and other plant.

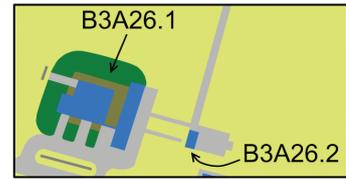


Plate 4: B3A26.1 - view looking north



Plate 5: B3A26.1 Entrance elevation



Plate 6: B3A26.1 Interior View showing control panel

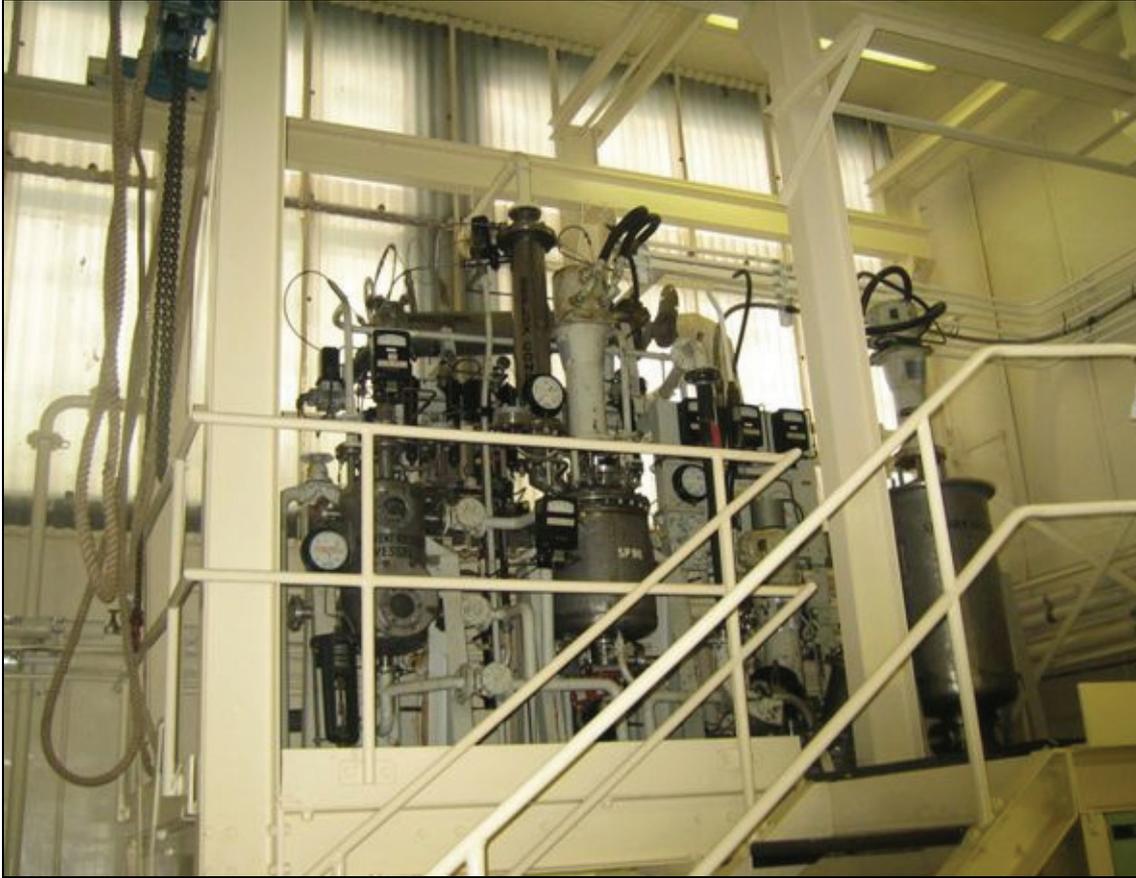
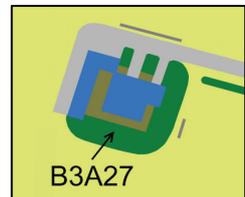


Plate 7: B3A26.1 Interior view of plant

- 4.1.9 **B3A27** This structure is the only one without an emergency exit and from the beginning it was constructed with a cruciform-plan internal dividing wall within the main room. This provided two press rooms of equal size, one having an 18-inch press and the other a 6-inch press. It functioned as part of the Isostatic Pressing Sub-Group of Buildings and has been used for the processing of secondary HE compositions based on RDX, HMX TNT, TATB and PETN. Plug and socket presses were first installed in the 1950s and in 1957 a flat concrete slab roof replaced the original prefabricated pitched roof. In 1958 an 18-inch isostatic press was installed and a mezzanine floor was erected around it to allow easy access. This press was replaced in 1963 and a new 6-inch press was installed c.1970. The 18-inch press in its original form was decommissioned in 1973 and changes were then made to the press body to bring it up to a new specification. It was last used in April 1993 and the 6-inch press was decommissioned in April 1989.



4.1.10 The isostatic presses were used to compress HE and inert materials under hot conditions (up to 100 degrees C) and under cold and ambient conditions at varying pressures up to 20,000psi. The 6-inch press had been used with pressures of up to 30,000psi. Both presses were powered by hydraulic power packs and hydraulic intensifiers. The pressurising oil for the 6-inch press was heated by steam and in order to heat the 18-inch press, hot oil from a steam-heated pump and tank was supplied from an adjacent plant room.



Plate 8: B3A27- view looking NE



Plate 9: B3A27 - view looking SE



Plate 10: B3A27 6-inch Press



Plate 11: B3A27 Isostatic Press



Plate 12: B3A27 - Entrance

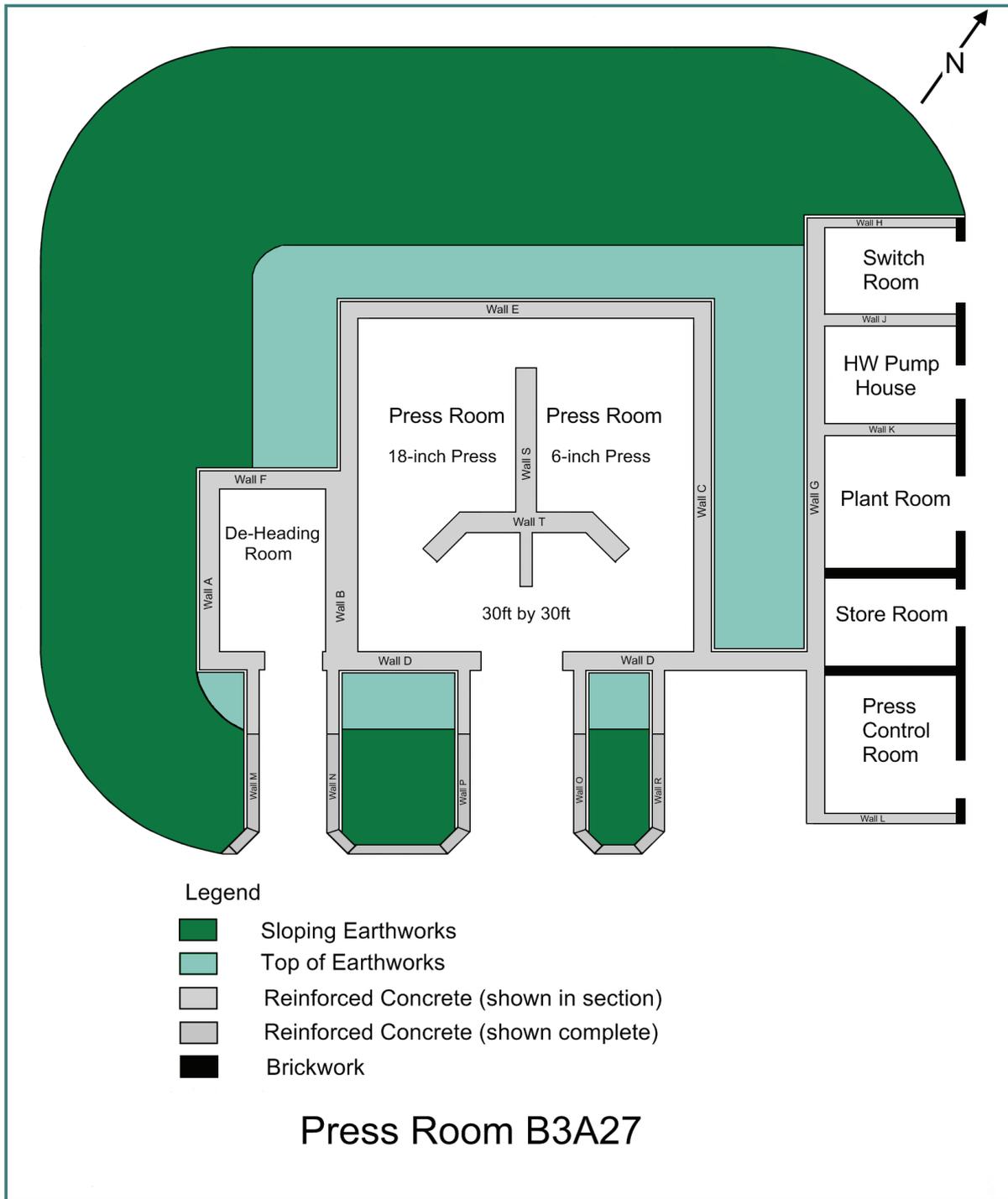
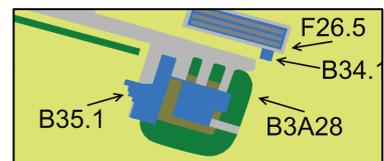


Plate 13: Press Room B3A27

4.1.11 **B3A28** This structure was a member of the Mixing and Milling Sub-group of buildings and has always been used for the processing of HE. The building contains fluid energy and colloid mills (dating from the 1950s) and a compressor to supply compressed air to the original fluid mill which was installed in the adjacent building B35. A second fluid mill was installed in 1975.



4.1.12 This is the only building within the five that was in recent times classed as active, although its use has been rare.



Plate 14: B3A28 - view looking SE



Plate 15: B3A28 & B35.1



Plate 16: B3A28 - view looking east

4.1.13 **B3C7** This structure functioned as a general-purpose explosives processing building. It was converted and internally refurbished in the 1990s to accommodate Sapphire computer-controlled (CNC lathe) and operated processes which were completed c.1999 when the equipment became redundant. During the early 1990s refurbishment, the pitched roof was replaced with a concrete slab. As originally built, the main assembly room is divided into two equal halves by a 16in wide 'T'-shaped concrete wall with a small return into each half.

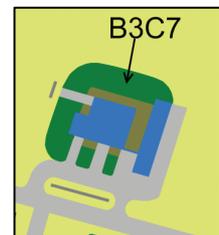




Plate 17: B3C7 Sapphire Computer



Plate 18: B3C7 Annexe Elevation

Drawings:

BHC/XB/B3A27/1 (OSC-A71165)

BHC/XB/B3A25/1 (OSC-A71165)

BHC/XB/B3A26/1 (OSC-A71171)

BHC/XB/B3A28/1 (OSC-A71181)

BHC/XB/B3C7/1 (OSC-A71201)

4.2. Compressor House B3A26.2 (Level 1 Survey)

4.2.1 This is a small window-less single-storey brick building with a glazed door, that once housed a Broom & Wade compressor and air receivers (dated 04-05-66) that served B3A26.1 and B3A28. In more recent times a demineralised water tank has been installed at the rear of the building.

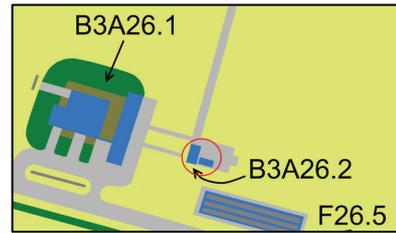


Plate 19: B3A26.2



Plate 20: B3A26.2 Demineralised Water Tank

4.3. B9C10 Scientists & Foreman's Offices (Level 3 Survey)

4.3.1 Designed by the Ministry of Works, the working drawing RG/AB/B9C10/1 is dated 15 February 1951. The building was handed over by the contractor on 4 November 1952.

4.3.2 This building type is a rectangular brick built, detached single-storey structure. There are four main rooms and a large lobby. Their former uses are as follows:

- Scientists' offices (14ft 5in by 10ft 7in)
- Laboratory (23ft by 11ft)
- Foremen's office (11ft 5in by 11ft 1in)
- Clerks' Office and First Aid post (11ft 5in by 11ft 1in)

4.3.3 Construction is of 11in thick brick cavity external walls with 9in thick interior walls. The roof is constructed of a series of Smith's hollow concrete tiles, screeded to fall and covered with bitumen felt. There are eight windows which are standard steel framed casements. The floor is of lino covered concrete.

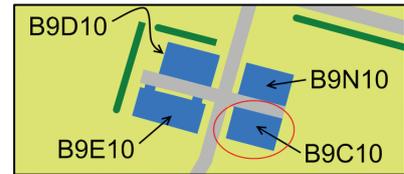


Plate 21: B9D10 - view looking SE4



Plate 22: B9C10 - view looking east

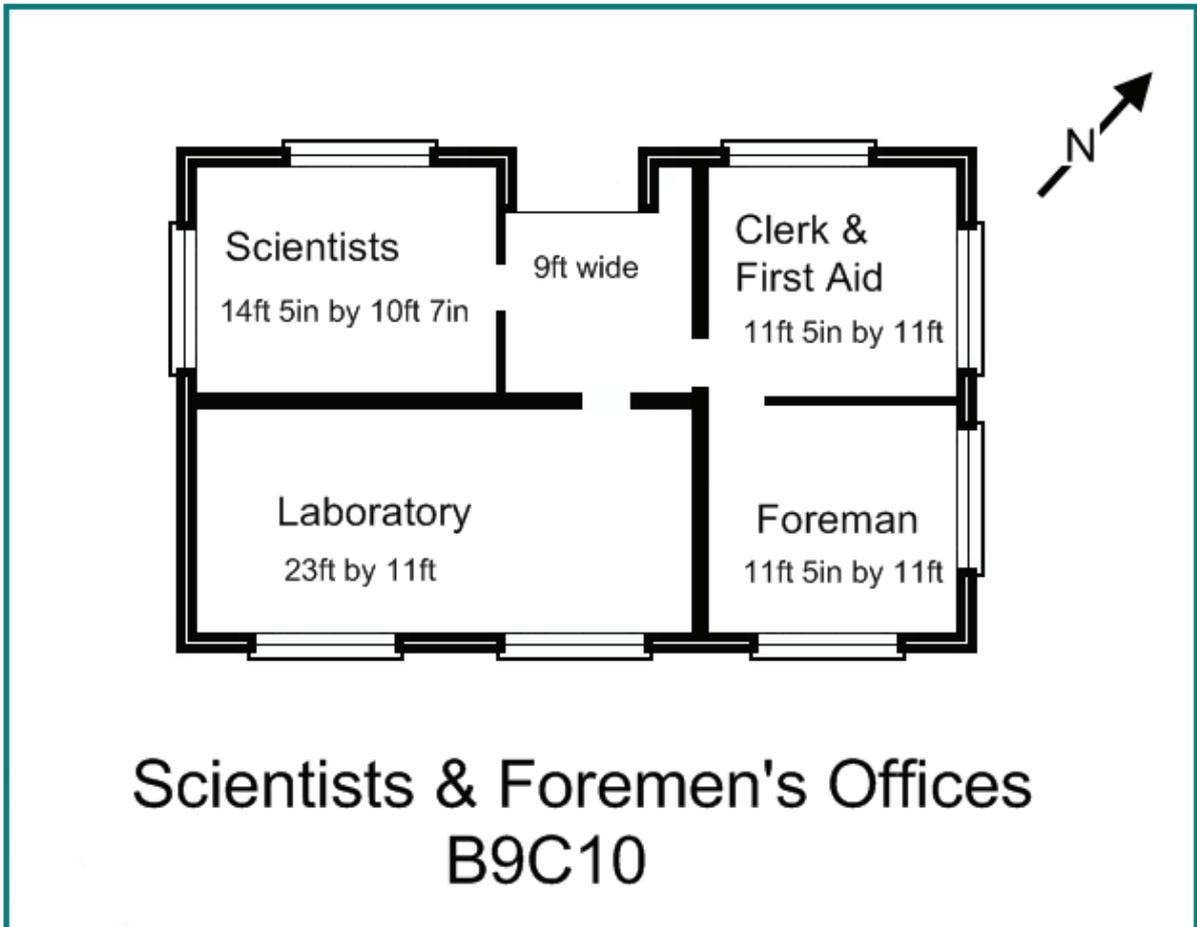


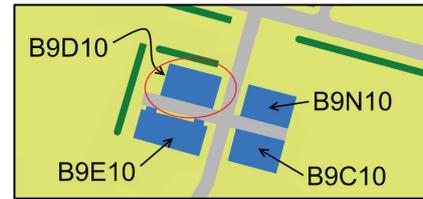
Plate 23: B9C10 Ground Floor Plan

4.4. Offices for Foremen B9D10 (Level 2 Survey)

4.4.1 Designed by the Ministry of Works, the working drawing RG/AB/B9D10/1 is dated 15 February 1951.

4.4.2 This is a brick built, detached rectangular single-storey building. There are three rooms:

- Industrial Rest Room (23ft 7in by 22ft 4in)
- Tool Stores (11ft 7in by 14ft 3in)
- Fire Fighting Appliance Store (11ft 7in by 7ft 10in)



4.4.3 The external walls are of 11in thick cavity brickwork external walls with 9in and 4.5in thick internal brick walls. The roof is a series of Smith's hollow concrete tiles, screeded to fall and covered with bitumen felt. There are six standard steel casements. Floors are lino covered concrete. Ceiling height is 8ft 6in.

Drawing:

RG/AB/B9D10/1



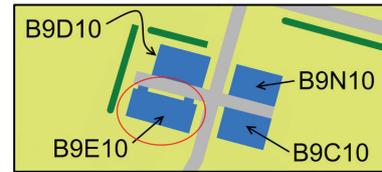
Plate 24: B9D10 - view looking SW



Plate 25: B9D10 - view looking west

4.5. Ablutions B9E10 (Level 2 Survey)

4.5.1 The original drawing of the Ablution Block B9E10 is dated 5 February 1952. It is of a standard Ministry of Works design and is similar to others built at Aldermaston. It was designed to accommodate both male and female personnel in segregated areas.



4.5.2 It is a small single-storey building, rectangular on plan. It is built of brick with a flat roof. It has a tall central tank house at one end. The entrance elevation has two external porches (male and female access points).

4.5.3 Exterior walls are of 11in thick cavity brickwork with vented end-walls and interior walls are 9in thick brick. The roof is presumed to be of screeded Smiths hollow tiles covered with bitumen. Windows are high-level steel casements and the floor is concrete.

4.5.4 The male and female halves are of un-equal sizes. The male part is larger in floor area and also accommodates a calorifier room which is directly below the water tank house. The female part includes a foremen's toilet. Washing facilities used to be in the form of three large diameter washing fountains, with one in the female half and two in the male half.

Drawing Number: AB/B9E10/1 (OSC-A70332)



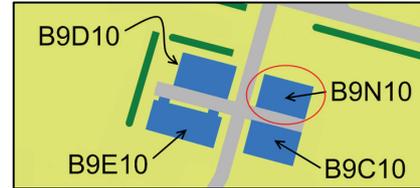
Plate 26: B9E10 - view looking SW



Plate 27: D9E10 - view looking east

4.6. Truck House B9N10 (Level 2 Survey)

4.6.1 The original drawing of the Truck House is dated 15 February 1951. It is built to a standard Ministry of Works design and is similar to others within the Aldermaston Site.



4.6.2 It is a small single-storey rectangular building, constructed of brick with a flat roof. The main exterior walls are of 11in thick cavity brickwork and there is a 15in thick cavity pier arrangement at either end. A 9in thick brick internal wall divides the building into two un-equal garage bays. The larger bay has two main doors (with Coburn folding & sliding doors) for garaging two electric or petrol dillies and has a central solid 13.5in pier and two 15in end piers supporting a reinforced concrete beam that supports the roof. The other bay, which accommodated a number of stillages, also has two sets of main doors, set at right-angles to the other garage. The roof is constructed of Smith's lightweight hollow roof tiles which is screeded and covered with bitumen felt band. The slightly sloping floor is constructed of concrete with a central gully. The main doors are timber sliding and folding types. Windows are mainly high-level mild steel casements with two large casements, each one set either side of the stillage garage. The building has a Leg (Industries) Ltd charger and a Philani vacuum gauge with an Edwards High Vacuum Ltd plant.

Drawing: RG/AB/B9N10/1 (ISC-A70517))

Dimensions:

(footprint): 24ft 4in by 38ft. Dilly garage (internal) 23ft 7in by 22ft. Stillage garage (internal) 11ft 4in by 22ft. Ceiling height is 8ft 6in



Plate 28: DN910 - view looking east



Plate 29: D9N10 - view looking SE



Plate 30: D9N10 - view looking NW

4.7. Compressor House B35.1 (Level 2 Survey)

This link-detached brick building is adjacent to and is an annexe of B3A28. It houses a Broom & Wade compressor with an English Electric motor and an air receiver plus an Allen West Starter. It is connected to B3A28 by a corrugated plastic-sheeting covered walkway. The building has 9in thick brick walls (part of which is half-brick stacking bond, where the building may originally have been designed to have an additional opening) and a flat felted timber roof.

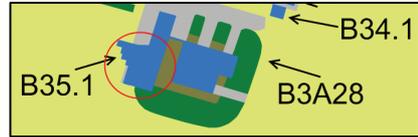


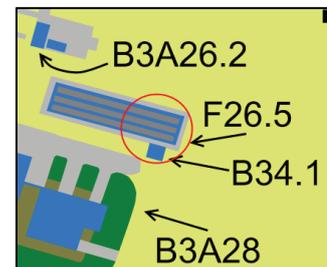
Plate 31: B35.1 Entrance elevation



Plate 32: B35.14 Broom & Wade Compressor with a caged flywheel

4.8. Settlement Tank F26.5 and Pump House B34.1 (Level 2 Survey)

4.8.1 The settlement tank (or Effluent Delay Lagoon) is a sunken open tanked facility (its top is level with the surrounding ground). It is surrounded by a narrow walkway, the inner edge of which has a tubular steel handrail, and around which is a 2ft high parapet or bund brick wall. The tank was used to collect explosive contaminated water or slurry waste from B3A26.1 and B3A28 via the drain network. The tank is divided longitudinally into three equal but separate, brick and tile-lined compartments. The tank has been disused for a long time, now acting as a rainwater collection point and apparently hosts a colony of newts.



4.8.2 There is an adjacent single-storey brick-built pump house (footprint 9ft 10in by 8ft 4in), containing pumps which pumped waste water from F26.5 to the trade waste drains. It is constructed with 11in thick brick walls (part in stacking bond) with a flat concrete slab roof with a felt covering.



Plate 33: F26.5 - view looking east



Plate 34: B34.1 (note the golden buff bricks in stacking bond)



Plate 35: F26.5 - view looking west

5 - The Location and Nature of the Documentary Archive

- 5.1.1 Plans are held at the AWE Archive Office, and are also available on the AWE Intranet site. Plans and diagrams referred to in this report can be found in the archive. The AWE photographic unit also maintains a photographic archive of buildings and structures, which includes historic photographs.
- 5.1.2 AWE are currently assessing, reorganising, updating and referencing their growing collection of documentation on the development and operation of facilities on the site. As facilities are decommissioned, the Archives team collect surviving documents, plans and photographs, traditionally held by individual facilities managers. Not all collections of documents necessarily represent the entire documentary archive of each facility, as for many years shortage of storage space, and lack of appreciation of the future value of redundant and cancelled documents led to many being destroyed. This situation has now changed, with facilities managers submitting copies or original documents to the Archives for referencing and storage. The documents will be searchable through an extensive site database. Documentation will include:
- Reports on experiments
 - Safety files
 - Building plans
 - Photographs
- 5.1.3 This document will be deposited in the central archive.

6 - Conclusion

6.1. Introduction

- 6.1.1 Cold War sites have made a considerable impact on the development of the 20th century landscape. As with Aldermaston, they have often developed piecemeal in response to changing defence and research needs. The design of Cold War architecture has been essentially been driven by the needs of technology. The rate of technological change has resulted in the rapid redundancy of buildings and the equipment that they were built to house. Some structures have been abandoned, while many have been adapted for new roles. The robustness of the buildings at Aldermaston is evident in the changes that they have been able to sustain over their lives.
- 6.1.2 In the context of any proposed redevelopment and the demolition of buildings, it is useful to identify which of the surviving structures are of particular importance. This has been done using the criteria alongside other relevant factors used to select Listed Buildings as published in PPG15. The more recent Military Buildings Selection Guide (English Heritage March 2007) puts forward similar criteria to PPG15.

6.2. General Assessment Against PPG15, & Other Criteria

- 6.2.1 Most defence structures, including those at Aldermaston, were built to standard type designs issued as registered drawings, or were adaptations of them. The architecture was deliberately simple and cheap to build, to serve their scientific and defensive uses. This has given the site a scientific and defensive character, although the architecture itself is generally pedestrian.
- 6.2.2 The site has been assessed in accordance with PPG15 and English Heritage's Military Buildings Selection Guide, 2007.

6.3. Architectural Interest

- 6.3.1 The buildings within the Hydrus Site have very little architectural value in terms of their architectural treatment externally and internally, although the layout of the groups of buildings and the spaces between them has been designed with aesthetics in mind as well as functionality.
- 6.3.2 The buildings within the Hydrus Site are of two main types, they are either mounded process buildings or small ancillary type buildings. The main consideration in their design is functionality. The process buildings with earthwork traverses are designed with de-heading rooms so that only the exact quantity of explosive type substance required for the experiment is taken into the working area.
- 6.3.3 All building types are similar to others within B Area.
- 6.3.4 The most interesting buildings are those that contain original plant and machinery. Some of this equipment has makers name plates with dates of manufacture, many of which are original equipment. These features are of archaeological interest, although the buildings do not merit retention

6.4. Historic Interest

- 6.4.1 The Hydrus Site in its former role within B Area has significant historic interest but it is acknowledged that more research is required before an accurate assessment can be made. Its significance within B Area is unlikely to be sufficient to qualify the buildings for protection.

6.5. Historical Association

- 6.5.1 The former process buildings within the Hydrus Site are associated with the development of certain AWRE components and processes but it is unknown exactly how this fits into the overall context of the development of atomic weapons. The Hydrus site is not known to be particularly associated with a particular event or major technological development.

6.6. Group Value

- 6.6.1 The buildings within the Hydrus Site are a small part of a much larger collection of similar B Area structures dating from c.1952. The complex has group value, but is similar to other complexes of standard building types elsewhere.

6.7. Age and Period

- 6.7.1 Although this is a comparatively recent period in terms of British history, the former process buildings located on the proposed Hydrus Site within AWE Aldermaston have played an important role during the Cold War and they are representative of a phase of the site's development. They do not, however, contribute strongly to an understanding of a particular policy or technological development.

6.8. Rarity

- 6.8.1 The buildings are purpose-built structures that are unique to AWE Aldermaston (as far as known). Within this group are standard building designs that are found within other Characterisation Zones. The individual buildings are not rare. It is acknowledged that buildings and structures associated with the development in techniques of manufacture and design of atomic weapon components, may be considered as rare, although the buildings are essentially standard multi-purpose buildings and many have been stripped of the evidence of their significant uses.

6.9. Selectivity

- 6.9.1 None of the buildings represent the best or most complete examples of their mass produced types.

6.10. Survival

- 6.10.1 The structural integrity of the buildings survives, as does some machinery and fixtures. The fact that these buildings are similar to others, means that they do not qualify for listing, although they are of archaeological significance.

Building and Site Plans (AWE Intranet)

B3C7	BHC/XB/B3C7/1 (OSC-A71201)	12-06-51
B3C7	HR/1/744577 (SB/DB/B3C7/1)	Unknown
B3A25	? (SB/AL/B3A25/3)	30-07-97
B3A25/1	BHC/XB/B3A25/1 (OSC-A/1165)	13-06-51
B3A26/1	BHC/XB/B3A26/1 (OSC-A/1171)	13-06-51
B3A26.1	HR/1/744574 (SB/DB/B3A26.1/2)	00-03-95
B3A27	HR/O/A47778 (SB/AB/B3A27/1)	16-11-97
B3A27	BHC/XB/B3A27/1 (OSC-A71175)	13-06-51
B3A27	HR/O/A47784	16-11-97
B3A 27	HR/1/744/575 (SB/DB/B3A27/1)	00-04-95
B3A28	BHC/XB/B3A28/1 (OSC-A71181)	13-06-51
B3A28	HR/1/744576 (SB/DB/B3A28/1)	00-03-95
B9N10	1SC-A70517 (SB/AD/B9N10/5000)	15-02-51
B9E10	HR/1/758140 (SB/DB/B9E10/1)	Unknown
B34.1	HR/1/C08819 (SB/AL/B34.1/3)	12-11-97
F10.11	HR/1/A59869 metric drawing of SB/AB/F10.11/3	12-11-97
SB23.3	HR/O/A61914 GA metric version of SB/AB/SB23.3/1	16-12-59

The National Archives Files

AB 16/927	Organisation of Atomic Energy Establishment Aldermaston	1953
AB 16/928	Organisation of Atomic Energy Establishment Aldermaston	1950–53
AB 16/942	Communications of setting up and future of Aldermaston	1953
AB 16/943	Communications of setting up and future of Aldermaston	1953
AB16/1163	AWRE	
ES 1/228	Build up of Aldermaston Site Preliminary Planning	1949
ES 1/229	Build up of Aldermaston Site Preliminary Planning	1950
ES 1/237	Administration Committee - Minutes of meetings	1950–51
ES 1/273	Housing	1949
ES 1/274	Housing	1950
ES 1/322	AWRE	
DEFE 51/114	AWRE	