ENGLISH HERITAGE

RAF Barnham, Suffolk

Wayne D Cocroft, drawings by Allan T Adams

SURVEY REPORT

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COLD WAR PROJECT

SURVEY REPORT

RAF BARNHAM

Barnham
St Edmundsbury
Suffolk

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SUMMARY

Construction of the Bomb Store on Thetford Heath, known as RAF Barnham, began in 1953 or 1954 and was complete by 1955. It was built specifically to store and maintain atomic weapons, and this is directly reflected in its layout. The principal storage buildings are divided into two main groups, large stores designed to hold the bomb casings and high explosive components and smaller stores to hold fissile cores. By the early 1960s this specialised facility was obsolete, as free-fall nuclear bombs were superseded (as the principal British nuclear deterrent) by the stand-off missile Blue Steel, and the storage and maintenance of nuclear weapons was moved to the V-Bomber airfields. The last nuclear weapons were probably removed from the site by April 1963.

The site was sold to its present owner in 1965, and since that date it has been used as a light industrial estate. The plan form of the Bomb Store remains virtually unmodified, the majority of the buildings survive intact, generally with little alteration; the boundary fences and watch towers also remain.

RAF Barnham was one of two such sites built in England, the other is at Faldingworth in Lincolnshire which has the same types of building and is almost identical in overall plan form.

HISTORY

Second World War

Modern military occupation on Thetford Heath began in the early years of the Second World War. By 1942 the Air Ministry had taken control of the eastern part of Thetford Heath, bounded by Elveden Road to the south, Bury Road to the east and a forest boundary known as the Boundary Belt to the north. The western boundary was delimited by an almost north to south fence to the west of Aughton Spinney, which comprised two separate pieces of woodland, a nearly north to south strip called Aughton Spinney Belt with a detached oval portion to the north, the whole giving the appearance of an inverted exclamation mark. The bottom south-east corner of the area was cut by the (now dismantled) Bury St Edmunds to Thetford railway line (HLA/512, 30-Apr-42, frames 6022-24).

The requisitioned area on the heath was part of Forward Filling Depot No.1 Barnham Heath (TL 862 803) - its function was to store and fill bombs with mustard gas. The filling depot lay at the eastern end of Thetford Heath and was enclosed by a fence with pillboxes at its corners. Most of the depot was destroyed when the present RAF camp (see below) was built in the late 1950s. One traversed high explosive magazine area and some railway cuttings survived into the 1970s, and were mapped by the Ordnance Survey as earthworks. To the west and north of the fenced filling depot an area of land, in a roughly 'L' shaped configuration, was used for open storage. The area was divided by unmade tracks, and the munitions were stored under temporary linear shelters (106G/LA/125, 10-Feb-45, FP, frame 1014; 106G/LA/125, 10-Feb-45, FP, frame 1036). Associated with this depot was another gas storage and filling depot 2km to the south, at Triangle Plantation (TL 853 778). The gas depots were probably maintained until the 1950s, when Britain disposed of her remaining stockpiles of mustard gas (Toler 1993, 24-5).

Post-war

In the early 1950s the programme to deploy an independent British nuclear deterrent was extremely complex, and involved co-ordinating many diverse and innovative technological programmes. These included developing atomic weapon technology from one-off experimental units to a production run which could be issued to the RAF. In parallel with this work went the development of jet bombers capable of carrying these bombs. On the ground new airfield facilities were needed to handle new aircraft types and specialised storage units were established to maintain the new weapons.

It was against this background that the decision was taken to build two specialist storage and maintenance depots for atomic weapons, one at Barnham in Suffolk and the other at Faldingworth in Lincolnshire. Code letters on the site plans for Barnham indicate that planning for the site began in 1952, although the majority of the drawings were prepared in 1953. The site was purchased by the Air Ministry on 28 September 1954 (Stulpha 1994), which suggests part of the heath had been derequisitioned since the war. An air photograph indicates that building work on the site was substantially complete by August 1955 (82/1279, 23 Aug 1955, frame 0144). Nonetheless, minor building work to provide accommodation for the police dog section probably continued until early 1956.

The station became operational on 1 September 1956, commanded by Wing Commander G Steele. But the British nuclear deterrent was probably not fully operational until the end of 1956, or early 1957 (Norris *et al* 1994, 86-7). Administratively Barnham was commanded by No.40 Group, and formed part of No.94 MU (Maintenance Unit) with its headquarters at Honnington. In the late 1950s it was intended that this group would supply the airfields at Honnington, Marham and Watton (Crisp 1989, 19).

Nuclear weapons storage

To understand the form of RAF Barnham it is necessary briefly to describe the types of weapons it was designed to store.

The first nuclear weapon issued to the RAF, and therefore stored at RAF Barnham, was code-named 'Blue Danube'. This was a relatively large weapon, 7.3m (24 ft) in length, 1.52m (5 ft) in diameter, and weighing 4636 kg (10,000 lbs). It had the appearance of a standard free-fall high explosive bomb, with a pointed nose and rear stabilising fins. Also in common with conventional bombs it appeared that the tail unit was a detachable section. It was lifted by means of a lifting beam attached to lugs on top of the central section of the bomb, which were also used to secure it in the bomb-bay of an aircraft.

Nuclear weapons are technologically complex products, which require specialised storage and continuous maintenance to remain serviceable. 'Blue Danube' appears to describe a series of closely related weapons, which were continuously modified (Norris *et al 1994,* 54-5). The first system worked on the implosion system, using a fissile core of plutonium 239 or uranium 235, where the sub-critical masses were propelled together in a device resembling a gun barrel. In a later modification, probably used in the bombs issued to the RAF, the sub-critical plutonium fissile core was machined to form a hollow sphere at the centre of which was a neutron source. The core was surrounded by a carefully machined sphere of high explosives. When initiated this would produce a spherical pressure wave on the sub-critical core imploding it to form a critical mass (Menaul 1980, 24-5). The Blue Danube bomb may therefore be seen to comprise two principal elements, the precisely shaped pieces of radioactive plutonium and the finely machined high explosive lenses wrapped around the core. In storage the two elements were kept apart. This was partly to avoid the obvious dangers of storing assembled nuclear weapons, but was also done to maintain the effectiveness of the bomb. For, if stored in an assembled form, the highly radioactive plutonium core emitted neutrons and gamma rays which could damage the mechanical and electronic components within the bombs. The early atomic bombs required an initiator made of polonium and (probably) lithium. Polonium is a highly unstable element, with a half-life of only 138 days. Any cores containing this material would therefore need to be reassembled every few months (Campbell 1981, 10-11). The high explosive was a specialised composition which required careful manufacturing and machining to create the lenses around the radioactive core. This too needed to be kept in a carefully monitored environment.

During the operational life of RAF Barnham, second and third generation British nuclear weapons were introduced, Red Beard, and Yellow Sun Marks I and II. It is, however, uncertain whether or not these were stored at Barnham (Norris *et al* 1994, 65). It is also unclear if any American nuclear weapons supplied for use by RAF Valiants at

RAF Marham were held at Barnham (Norris *et al* 1994, 84-5). The Operational Record Book of No.40 Group does not give any details of the weapons stored at Barnham (PRO AIR 25/1592).

Storage of nuclear weapons at RAF Barnham probably ceased in spring 1963. The last date that the lightning conductors were tested on the fissile store buildings was in April 1963 and the security status of the site was withdrawn in July of that year. RAF personnel, nevertheless, remained at the station until November. The closure of the station is probably directly linked to the operational deployment of the stand-off missile Blue Steel from late 1962, which replaced free fall nuclear bombs - the type stored at Barnham (Norris *et al* 1994, 96). The site was retained by the RAF until late 1965 when it was offered for sale (Stulpha 1994). Since then the buildings have been put to a variety of light industrial uses.

DESCRIPTION (Figure 1)

RAF Barnham is located on Thetford Heath, 3½ km (2 miles) south west of Thetford. It is sited on gently sloping land, which falls towards a minor east to west road, Elveden Road, which links the A11 to the A134. The storage site is pentagonal in plan, with an area of 9 hectares (23 acres).

Entrance area

Access to the storage area is along a dog-legged metalled track off Elveden Road, this is enclosed by a wire-mesh fence carried on concrete posts with out-turned tops supporting three strands of barbed wire. Entry into the station was controlled by double gates at the southern end of the track. Pedestrian access was through a steel gate adjacent to the main gates. These were controlled by a Picket Post (65) positioned immediately inside the gate. This is small prefabricated Seco building. Seco hutting was a prefabricated building system first devised by Uni-Seco Structures Limited in 1942. Buildings were formed from pre-fabricated hollow plywood beams, columns, and eaves pieces. Wall and roof units were formed of timber frames covered with flat asbestos sheets, the cavity between the facing sheets filled with a mixture of cement and wood wool. Door and window units, in this case a Crittall type, were also supplied (Francis 1996, 214-5).

Heading northwards, on the eastern side of the track are the three-bay Motor Transport shed (68) and two stand-by set houses (81 and 84). Between them was the fuel compound.

To the north of stand-by set house (81) the compound narrows to a double carriageway width for 80m (87½ yards) before it turns through a right angle eastwards. Beyond the turn the fenced corridor widens. On the southern side of the track a gravelled area was used for a car and pantechnicon park, on the northern side is small lay-by in front of the first electric gate.

Storage area

The main storage area is pentagonal in plan and is surrounded by a double fence. The outer wire mesh fence is 2.4m (8 ft) high, held on reinforced concrete posts with out-turned tops supporting three strands of barbed wire. On the inside of the outer fence is a patrol path. Mid-way on the northern three sides of the enclosure are look-out bastions, which allowed the external face of the fence to be observed. At the five angles of the enclosure are steel framed observation towers. At four of the angles the corners have been extended outwards to create small square enclosures to accommodate the towers. At the shallow fifth angle, the tower is positioned immediately inside the main gate. Each tower is 8.2m (26 ft 10 ins) tall, with a central access staircase, and on top of the towers are glazed steel framed cabins roofed with asbestos sheets, at the apex of which was placed a rotatable searchlight. The Observation Towers were supplemented by an observation post on top of building (58). The inner fence is solid, formed from concrete panels slotted into posts with out-turned heads supporting three strands of barbed wire.

The present configuration of the fence represents a slight modification of the enclosure as erected in 1955. This too was originally pentagonal in plan, the main difference being

that the police accommodation and other buildings adjacent to the main gate were situated between the inner and out fences. In the remodelling of the enclosure its western and eastern sides were extended which created a shallow angle at the main gate. This allowed a clear sterile area to be established between the inner and outer fences. During the alterations the inner electric gate was moved to its present position, closer to the store buildings. Building (64) which lay just outside of the new gate was demolished - its foundations may still be seen. A small building (P), today used as an estate office, was built on the western side of the gate, probably to control the gate. It is uncertain exactly when this modification took place: a plan dated September 1958 shows the present arrangement, but the drawings for the towers are dated March 1959.

Internally the store buildings are set around a sub-rectangular road pattern, with a central internal earthwork bank. A by-pass loop from the road allowed vehicles to pass through building (58).

The buildings in the storage area may conveniently be divided into two main groups - the ancillary buildings at the gate and the store buildings. The store buildings may further be sub-divided into non-nuclear components stores, fissile core stores and maintenance buildings.

Ancillary buildings

The ancillary buildings at the main gate were originally between the outer wire mesh fence and the inner concrete wall. As described above, this arrangement was altered in about 1958 and the fence reconfigured so that the ancillary buildings were sited outside the secure perimeter.

Approaching the store area from the south the metal rails for the original electric gate are visible in the roadway. To the east is a large Seco hut (67), the duty officer's hut, and a dog-legged corridor links it to another Seco hut, which may have been erected after the closure of the RAF station. To the east of this hut is a small brick building (75) which housed the small arms ammunition and pyrotechnic stores. Returning to the entrance, immediately outside the main gate is a single-storey brick building (71), the stand-by set house, and behind it is an open three-sided brick structure (70), which housed a transformer and sub-station.

To the west of the road is another large Seco hut (63) which accommodated the RAF Police dog-section. The dog section was the only section billeted on site, and in addition to sleeping accommodation the building included a small mess. Immediately adjacent to the road was the guardroom; in it was a control panel, which it is believed recorded which doors were open in the store area.

To the south of (63) is a covered 54552 litre (12,000 gallon) water tank and pump (Ta) for fire fighting. This was supplemented by three 90920 litre (20,000 gallon) Static Water Tanks (72-4) arranged around the inner access road. To the north of building (63) is a small single-storey brick building now numbered (76), but which may originally have been (78) the Telephone Exchange. To the north of the RAF Police section (63) is a tall Seco hut (82), which was the Gymnasium. Its northern brick wall, with double doors, is probably a later modification. To its south is a small Seco hut (79), which was the Meat Preparation Store for the RAF police dogs. To the northwest was the 10 run police dog pound, its site is marked by a concrete floor slab on which the positions of

the runs are visible. Returning the main gate, to its west, is the former Fire Station (66) - a tall single bay Seco hut, with a small annexe on its north side.

Store buildings

Non-nuclear component stores (figure 2)

The function of the non-nuclear stores was to hold the high explosive part of the bomb and its outer casing. As noted above the casing could probably be split into two units, the tail and forward part containing the high explosive and electronics. The bombs, minus their fissile components, were housed in three almost identical stores 59-61, known as Storage Building Type 'D-D' (figure 2). These are arranged in an arrowhead pattern, are accessed from the internal loop road, and are all surrounded by 4.42m (14 ft 6 ins) high earth traverses, revetted by a reinforced concrete retaining wall against the roadway. The western store (59) was gutted by a fire during the 1980s and has subsequently been demolished. Its floor plan remains visible on the remaining concrete floor slab.

The two remaining store buildings (60 and 61) are rectangular in plan, and are constructed from reinforced concrete columns and beams. Internally are two rows of columns, 0.33m square (13 ins square), which support roof beams, 0.61m by 0.23m (24 ins by 9 ins), which carry the 0.23m (9 ins) thick reinforced concrete roof slab which is covered with bituminous felt. The rainwater gutters and down pipes are cast asbestos. The walls sections are filled with 0.46m by 0.23m by 0.23m (18 ins by 9 in by 9 ins) precast concrete blocks. Internally the main storage area measures 57.97m (190 ft 2½ ins) by 18.29m (60 ft). It is divided longitudinally into eleven 5.27m (17 ft 3½ ins) bays and cross ways into three bays the outer bays measure 5.33m (17 ft 6 ins) and the central bay is 7.62m (25 ft) wide. The maximum clear internal height was 3.66m (12 ft) from the floor to the underside of the roof beams. The floor is surfaced with a hard grittless asphalt with the patent name 'Ironite'. The walls are painted pale green colour and the ceiling cream. In store (61) the bay letters O, N, M, and L are visible on the rear columns on the eastern side, suggesting the store was divided into 22 bays along the outer walls. Abutting on to the front of the stores, and flanking the entrances, are plant and switch rooms, which originally contained heating and air conditioning plant to maintain a stable environment within the stores. A raised air extract duct is placed asymmetrically on the roofs of the stores. Entry into the stores is through a 3.05m (10 ft) wide door opening with 3.66m (12 ft) high doors. In the rear wall of the stores is a single door width outward opening emergency exit.

As noted above the first nuclear weapon the store was designed to hold was relatively large, a Blue Danube bomb measured 7.3m (24 ft) in length and weighed 4636 kg (10,000lbs). The problems of handling such a large object are reflected in the provision of substantial lifting gantries at the entrance to each store. Two variants are found. The simplest, exemplified by the middle store (60) comprises a straight gantry. Over the roadway the gantry is supported by four 0.61m (24 ins) by 0.46m (18 ins) reinforced concrete columns, which support two 1.30m (51 ins) by 0.61m (24 ins) reinforced concrete beams. The upper beams of the gantry taper towards the entrance to the store where they are supported by two reinforced concrete columns. On the underside of the gantry is attached a 0.51m (20 ins) by 0.15m (6½ ins) rolled steel joist runway beam which runs to the entrance to the building. This was originally fitted with a 10.16 tonnes (10 ton) hoist. The gantry is covered by asbestos sheeting to provide a dry working area.

On the eastern and western stores the gantries were set at 30° to the fronts of the stores. In this variant an extra set of columns was placed at the 30 °dogleg. Internally there is no evidence for a runway beam, so it presumed the bombs were lifted off a road transporter and loaded onto a bomb trolley for storage. It is not known how many bombs were kept in each store, or if the tail units were separated from the front part of the bomb for storage.

Subsequent to the site being relinquished by the RAF a central corridor has been created in the stores by the insertion of breeze block walls. Doors in these walls give access to workshops along either side of the buildings. External windows have also been inserted in some of the bays.

Fissile core storage (Figures 4 and 5)

The fissile cores were stored in small buildings arranged around the large non-nuclear component stores. In total there are 57 of these buildings, which are divided into 48 Type 'A' (figure 4) and 9 Type 'B' stores (figure 5). The fissile core stores are organised in four uneven groups around the non-nuclear stores. The two southerly groups of stores are arranged symmetrically to the south of the large non-nuclear stores, each group having sixteen small store buildings. The north-eastern group contains eleven stores and the north-west group fourteen. All but the south-east group contained a mixture of Type 'A' and Type 'B' stores.

The store buildings are linked together by pedestrian width walkways, fenced by tubular steel pipes 0.94m (37 ins) tall with strands of wire between the horizontal members. The area was lit by pre-cast concrete lamp-posts, each of which had a red panic button at chest height.

The Type 'A' storage buildings (1-48) are small kiosk-like structures. In plan they measure 2.54m (8 ft 4 ins) by 2.39m (7 ft 10 ins) and stand 2.74m (9 ft) above ground level. The foundations of the building are constructed of 0.91m (3 ft) thick mass concrete. The walls are of cavity wall construction and are formed of solid concrete blocks, while the roof is a flat over-hanging reinforced concrete slab with a drip mould, and is covered with bituminous felt. The design drawing (Drg.no.3563B/52) shows a variety of irregular roof plans designed to disguise the structures from the air. These were never built, all the roofs being rectangular in plan. Fittings on the walls indicate that they were all originally protected by copper earthing straps. On the front of many of the stores a stencilled notice records 'Date of last lightning conductor test April 63'.

Internally the walls are finished in unpainted, smooth grittless plaster. The side and rear walls are ventilated by four small controllable ventilators, two at the base of the wall and two at the top. In the floor of each of the Type 'A' stores is a single keyhole shaped cavity. Each hole is 0.44m (1 ft 5 ins) in diameter and 0.54m (1 ft 9 ins) deep. The shaft of the hole measures 0.27m wide (10 ins) and is 0.21m (8 ins) long and is shallower than the main hole at 0.09m (3½ ins). A scar around the hole suggests it originally contained a vessel with the asphalt brought up around its lip. This is confirmed by the survival of the surrounding lip in similar stores at RAF Faldingworth, Lincolnshire, and by the rare survival of a number of stainless steel vessels at the bomb store at RAF Gaydon, Warwickshire.

The electrical system of each store was contained within small bore metal pipes; circular junction boxes led to other electrical fittings, which have in most cases been removed. In a number of the stores 'Walsall' Type 1174X flameproof switch boxes remained. On their covers is cast '5 Amp 250 Volt Flameproof switchbox type Walsall 1174BX Group 2 FLP 302 Group 3 Test P60 Isolate supply elsewhere before removing this cover'. A small formica sign confirmed that 'The electrical installation in this building is standard 'A' in accordance with AP 2608A'. All the stores originally had external fuse boxes to the left of their doors.

The doors are wooden and open outwards, their outer faces being protected by a steel sheet. They are secured by a combination lock and internal vertical locking bar operated by an external handle. A metal fitting in the path allowed the door to be secured half ajar. Above the door, and attached to its frame, is a spring-loaded electrical contact, which probably recorded on the control board in building (63) whether or not the door was open or closed. Externally and internally the doors are painted light blue. On the door of building No.1 is a 0.30m (1 ft) diameter radiation symbol in yellow and out-lined in black, below it is a 0.29 (11½ ins) yellow square with a black star at its centre.

The Type 'B' (figure 4) store buildings (49-57) are slightly larger than the Type 'A' measuring 2.92m (9 ft 7 ins) by 2.39m (7 ft 10 ins). Otherwise the details of the stores are identical to the smaller stores. The principle difference between the two types of structures is that the Type 'B ' had two storage holes in their floors. Each of these buildings was also equipped with a small wooden counter adjacent to the doors; the counters measure 0.78m (2 ft 6 ins) by 0.48m (1 ft 6 ins) and standing 1.22m (4 ft) tall. They have been removed from stores (53) and (55).

At some point during the operational life of the station the holes in the floors of all the Type 'B' stores were filled and covered by grittless asphalt. The asphalt surfaces in the stores are continuous, often with a slight depression marking the position of the holes, which implies that the original floor was lifted and new floors laid. The holes in store (52) have been reopened, as indicated by fragments of the asphalt surface thrown back into the holes. This is in contrast to RAF Faldingworth where the holes have been left open.

In total there were enough holes to store 66 fissile cores. One source (Halpenny 1994, 266) states that the single hole stores contained plutonium cores, while the double-hole stores were used for cobolt cores. Currently available documentation does not reveal if one fissile core may be equated with one bomb, or if a bomb contained more than one fissile core. Recent research has shown that Britain probably produced no more than twenty Blue Danube warheads (Norris *et al* 1994, 65), with this number on the active stockpile between 1957 and 1961. It is therefore likely that no more than a handful of weapons were stored at Barnham at anyone time. The significance of the filling of the holes in the Type 'B' stores is also unclear. It may coincide with the withdrawal of the first generation nuclear weapon, Blue Danube, and the deployment second generation atomic bomb, Red Beard (from 1961), or it may be related to the introduction of first British hydrogen bomb, Yellow Sun (from 1958) (Norris *et al* 1994, 55-6, 65). Given the number of available nuclear warheads in the late 1950s and early 1960s, it is unlikely that the Barnham store was ever full. Part of Barnham's function, along with other bomb stores, was to convince the Soviet Union that Britain had more nuclear weapons at her disposal than was in fact the case.

Maintenance buildings

In addition to the storage of nuclear weapons RAF Barnham was also responsible with the deep maintenance and refurbishment of weapons rotated from airfield stores. Amongst the buildings a number may be identified where components, or whole bombs, could be brought for stripping and testing. The precise activities carried out in these buildings will not be known until, if and when, the servicing manuals for Blue Danube are declassified.

At the southern edge of north-western group of fissile core stores is small building (69), which is surrounded on three sides by a 70 cm (2 ft 3½ ins) thick brick traverse laid in English bond. The building is rectangular in plan, with cut-away corners on its northern-eastern side. It appears to be constructed from brick, rendered with cement, and is roofed by a flat concrete slab. Entry into the building is through double steel doors 1.26m (4 ft) wide on north-west elevation, which give access into an entrance lobby and then a middle room lit by a Crittall metal window in the north-west elevation; on the northern side of the central room is small annexe. During the service life of this building there was a hole in the floor of this building, similar to those in the fissile core stores. It is thought that this building was used for the periodic inspection of fissile cores.

Opposite the inner gate is building (62), designated Storage Building 'E.D.'. It is of solid concrete block construction with a flat reinforced concrete roof. It was originally 'T' shaped in plan, and the main room at the rear measures 11.43m (37 ft 6 ins) by 6.55m (21 ft 6 ins), with a porch and a self-contained battery charging room to the front. In the original design specifications it was noted that it should 'be provided in accordance with the explosives regulations and all constructional metal work and windows, etc: to be bonded and earthed' (Drg.no.1246/53). The building has subsequently been extended. On the opposite side of the track to this building is a toilet block (T).

To the rear of (62), and separated from it by an earthwork traverse, is building (58), it is designated Storage Building 'C-D' (figure 5). It is approached along paths which lead back towards the bomb stores and the main gate, the entrances to the store are shielded by freestanding breeze block walls. The construction of the building is similar to the non-nuclear component stores (59-61), being formed from reinforced concrete columns and beams infilled with block work. It is, however, taller than the stores (59-61) and stands 7.29m (23 ft 11 ins) from floor to ceiling. The main central section measures 21.34m (70 ft) by 9.14m (30 ft), at each end of which are air lock porches 6.10m (20 ft) by 4.57m (15 ft), while to the rear is plant and dark room 10.49m (34 ft 5ins) by 6.10m (20 ft). The roof is a 0.13m (5½ ins) thick reinforced concrete slab, with a coating of bituminous felt.

The building could be entered from either end through air lock porches, their outer doors originally secured by combination locks. The air lock was maintained by an interlocking mechanism which prevented the inner doors being opened until the outer doors were secured. On the internal (northern) side of the eastern porch there are two doors, one giving access into a small store room. The other leads into a washroom and toilet; this room has an external door, also secured by a combination lock. The central section of the building was largely featureless except for a runway beam which ran its full length and supported four hoists, two 1 ton (1.016 tonne), one 2½ (2.54 tonnes) and one 5 ton (5.08 tonnes). Along the southern wall were three benches 0.91m (3 ft) by

1.52m (5 ft) standing 0.91m (3 ft) tall.

On the north side of the building is the plant room, and to its west small rooms housing the compressor and dark rooms. There are no doors or access hatches between main central area and these compartments.

The precise function of this building is unknown. It is centrally located, so that warheads could be brought from any of the stores, and was probably used for either the maintenance or assembly of warheads. In operation a warhead was brought on a trailer into the air locks. The air locks at 6.10m (20 ft) in length are too short to accommodate a fully assembled Blue Danube bomb, which measured 7.34m (24 ft) in length. The overhead runway would allow a warhead to be lifted off its trolley and moved into central area. Beyond this we may only speculate about the activities conducted in this building, though the presence of a dark room may betray the use of x-ray test equipment.

In 1959 another maintenance building was added immediately inside the inner gate, building (85). The design drawing described it as an 'Inspection and Repair Workshop' (Drg.no.2015/59). It is brick built and glazed with tall Crittall windows in its eastern elevation, with a flat concrete roof drained by asbestos gutters and down-pipes. It is six bays in length with double sliding doors at either end, along its rear is a single-storey range, formerly housing offices and workshops. The original function of this building is unknown, and it is unclear whether or not its construction relates to the storage of a new type of weapon at RAF Barnham.

Barnham Camp, RAF Honnington

During 1959 an RAF camp was built over part of the wartime Forward Filling Depot 1 km east of RAF Barnham centred at TL 863 803 on Bury Road (58/RAF/2688, F22, 25-Jan-59, frames, 82-83). It was constructed as the domestic and technical site to service RAF Barnham. It is currently occupied as a satellite station to RAF Honnington, where the RAF Regiment is based.

SOURCES

Primary

Air photographs consulted - held by NMRC Swindon

HLA/512, 30-Apr-42, frames 6022-24

106G/LA/125, 10-Feb-45, frame 1014

106G/LA/125, 10-Feb-45, frame 1036

82/1279, 23-Aug-55, frame 0144

58/RAF/2688, 25-Jan-59, F22, frames 82-83

Site plans consulted - held on site unless described otherwise

Air Ministry 3001/53 reproduced by Halpenny 1993, 266

BAR/E/62 Barnham Special Storage Area scale 1.1250

14024/59/L Barnham Depot Storage 1.500 last revised 12-9-61

Drg.no.3563B/52 Bldg.no.49-57 Building Types 'A' & 'B'

Drg.no.1244/53 Bldg.no.58 Building 'CD'

Drg.no.1245/53 Bldg.no.59-61 Building 'DD'

Drg.no.1246/53 Bldg.no.62 Building 'ED'

Drg.no.W.A. Dwg Meat preparation store

Drg.no.2015/59 Proposed inspection & repair workshop

Drg.no.WA7/40/59 RAF Station Barnham Observation Towers

Correspondence

Stulpha, A. 1994. letter to Mr Eldred 05 Sep 1994

Public Record Office Kew

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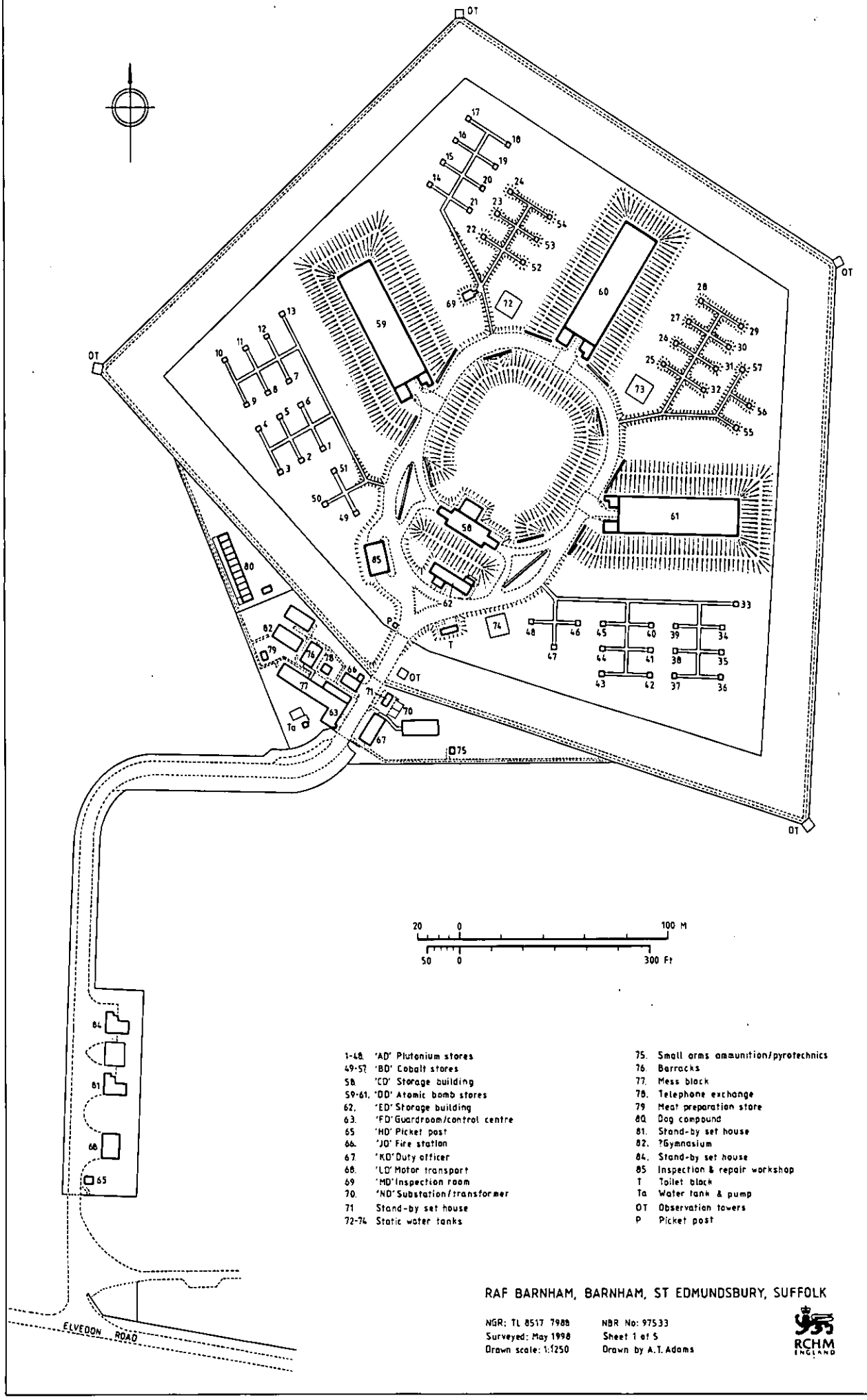
APPENDIX

Schedule of buildings

The information in this schedule is derived from a number of sources; Air Ministry plan 3001-53, Halpenny 1993, 266, plans held on site, and air photographs supplemented by field observations.

Bldg.no.	Drg no.	Building type	Function	Constn	Notes
1-48	3563B/52	'AD'	Plutonium cores	Brick	
49-57	3563B/52	'BD'	Cobolt cores	Brick	
58	1244/53	'CD'	Storage building	Conc	
59-61	1245/53	'DD'	Atomic bomb stores	Conc	59 Demolished
62	1246/53	'ED'	Storage building	Conc	
63	1247/53	'FD'	Guard room/control centre	Seco	
64	1247/53	'GD'	-	Conc	Demolished
65	1248/53	'HD'	Picket post	Seco	
66	1248/53	'JD'	Fire station	Conc	
67	1248/53	'KD'	Duty officer	Seco	
68	1248/53	'LD'	Motor transport	Conc	post 1955
69	1249/53	'MD'	Inspection room	Seco	?Rebuilt in Brick
70	1248/53	'ND'	Substation/transformer	Conc	
71	713/53	Stand-by set house		Conc	
72-74	400/53	Static water tanks each 20,000 gallons		Brick	
75	4231A/54	Small arms ammunition & pyrotechnics		Brick	Added 12-55
76	4231A/54	Barrack accommodation		Seco	Added 12-55
77	4231A/54	Mess block		Seco	Added 12-55
78	W.A.Drg	Telephone exchange		Brick	Added 12-55
79	3770/56	Meat preparation store		Brick	Built c.1956
80	9118A/53	Dogs compound 10 runs		Conc base	Added 12-55
81	713C/53	1000kw Stand-by set house		Brick	resited April 1956
82	-	?Gymnasium		Seco	
83		not found			
84	-	Stand-by set house		Brick	

85	2015/59	Inspection & repair workshop	Brick	Built c.1959
T, no number	-	Toilet block	Brick	
Ta, no number	-	12000 gallon water tank and pump	Concrete	
OT, no number	WA7/40/59	5 Observation towers	Steel	erected ?1959
P, no number	-	Picket Post	Brick	



1-48. 'AD' Plutonium stores
49-57. 'BD' Cobalt stores
58. 'CD' Storage building
59-61. 'DD' Atomic bomb stores
62. 'ED' Storage building
63. 'FD' Guardroom/control centre
65. 'HD' Picket post
66. 'JD' Fire station
67. 'KD' Duty officer
68. 'LD' Motor transport
69. 'MD' Inspection room
70. 'ND' Substation/transformer
71. Stand-by set house
72-74. Static water tanks
75. Small arms ammunition/pyrotechnics
76. Barracks
77. Mess block
78. Telephone exchange
79. Meat preparation store
80. Dog compound
81. Stand-by set house
82. ?Gymnasium
84. Stand-by set house
85. Inspection & repair workshop
T. Toilet block
Ta. Water tank & pump
OT. Observation towers
P. Picket post

RAF BARNHAM, BARNHAM, ST EDMUNDSBURY, SUFFOLK

NGR: TL 8517 7988
Surveyed: May 1998
Drawn scale: 1:1250

NBR No: 97533
Sheet 1 of 5
Drawn by A.T. Adams

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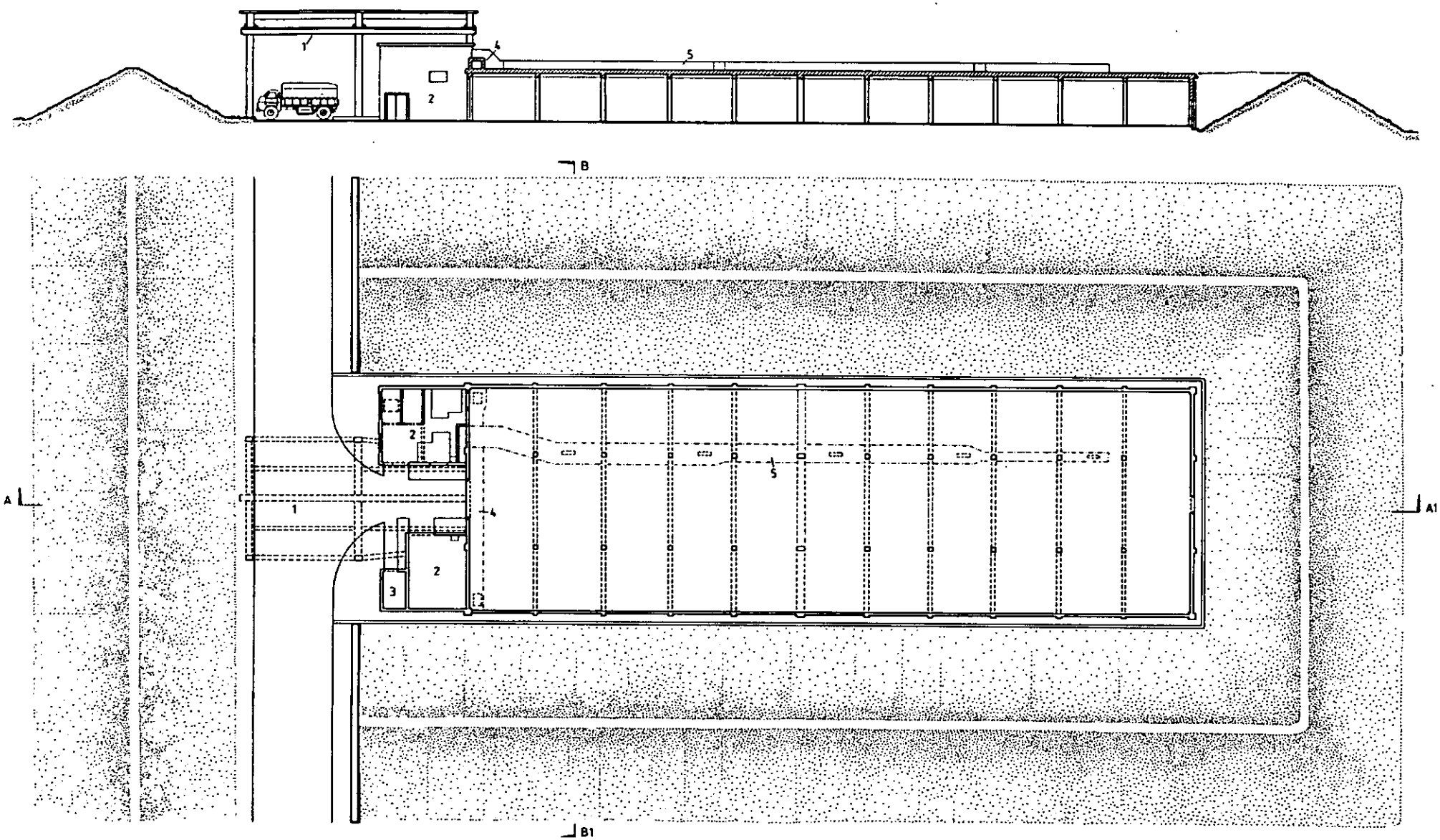

1. Runway beam
2. Plant rooms
3. Switch room
4. Supply duct (on roof)
5. Extract duct (on roof)

2 0 20 M
10 0 60 Ft

STORAGE BUILDING TYPE 'DD' (BUILDING NO. 60)

RAF BARNHAM, BARNHAM, ST EDMUNDSBURY, SUFFOLK
NGR: TL 8517 7988 NBR No: 97533
Surveyed: May 1998 Sheet 2 of 5
Drawn scale: 1:200 Drawn by A.T. Adams

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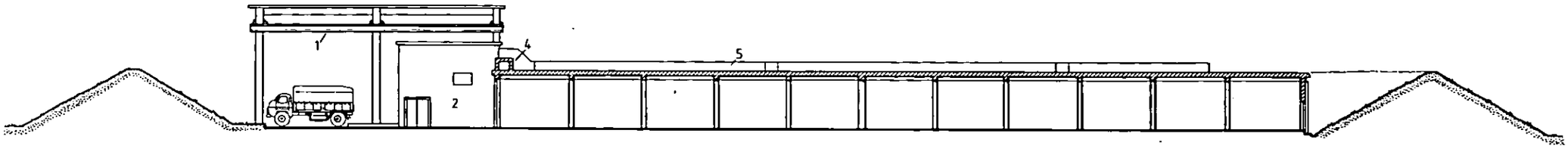

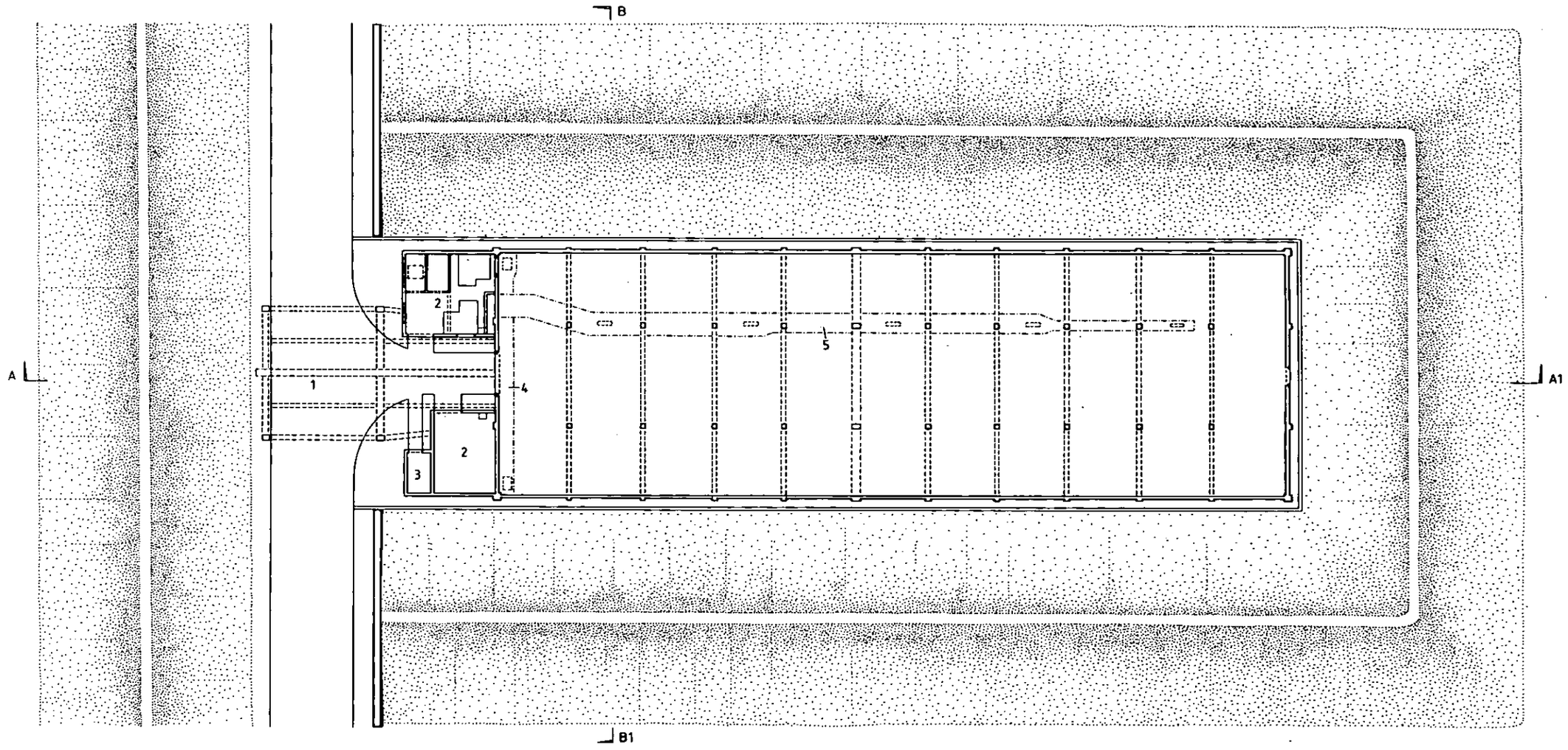

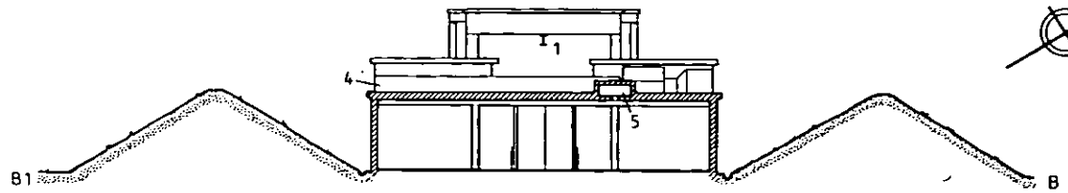

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