

VIEWS:

1. View along Crow Drive looking west



VIEWS:

2. View from the Fort towards Q14



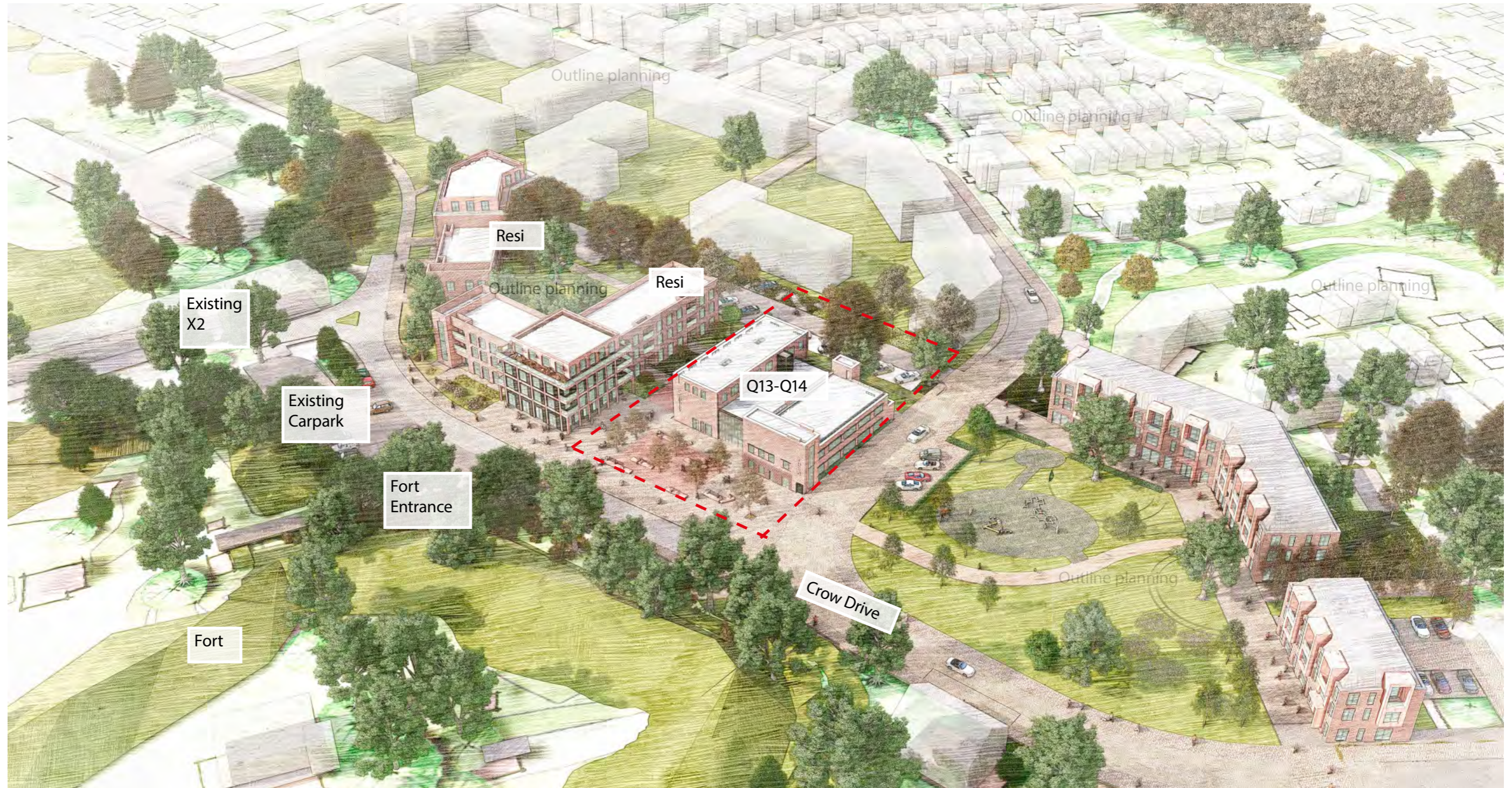
VIEWS:

3. Return view from Q14 towards the Fort



VIEWS:

4. Aerial view of Village Centre looking west



VIEWS:

4. Aerial view of Village Centre looking east



APPENDIX 2a: Heritage Collective 2015 Built Heritage Gazetteer

'A' Area

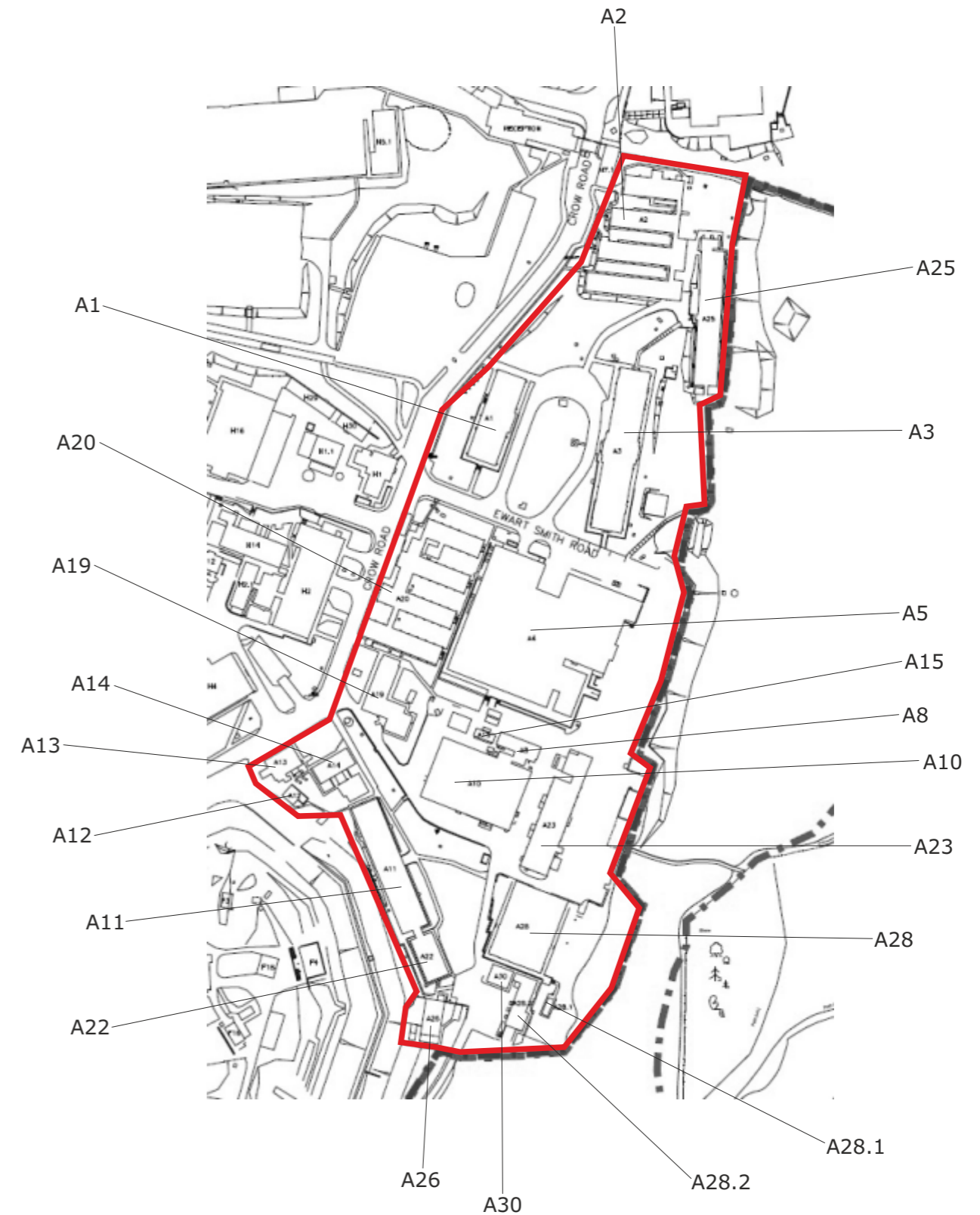
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The 'A' Area is the eastern-most area of the site and comprises buildings mostly dating to just prior to the Second World War, the Second World War itself and the years immediately afterwards, though there are examples of late 19th century buildings associated with the Mobilisation Centre and late 20th century structures.

Elements of the 19th century Mobilisation Centre fall within the 'A' area, these being two cottages that are situated outside of the forts earthen banks and that are contemporary with original structures within the fort itself. The next phase of development within the 'A' area may have occurred in the late 1930s. In order to provide accommodation for the elements of the Rocket Section of the Research Department's ballistic branch, Fort Halstead Mobilisation Centre was repurchased in 1937 by the War Department and turned to use as a facility for research and development into rockets and ballistics. Originally confined to the Mobilisation Centre, the Projectile Development Establishment may have expanded out of the confines of earth banks, which may account for the earliest structures in this area of Fort Halstead.

The Second World War forced research teams stationed at Woolwich Arsenal to seek new premises away from potential aerial attacks. The newly designated Armament Design Department (ADD) and the Armament Research Department (ARD) moved to the site in 1942, prompting the construction of further laboratories and support structures, a number of which were in Zone A. The buildings were involved with research and development into a number of significant developments in explosive and armament technology. After the conclusion of the Second World War a number of the buildings in Zone A were also used by William Penney's atomic High Explosive Research (HER) project and are associated with Britain's first nuclear weapons programme.



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Building A1

Date of construction - 1936 - 1944

Uses - Originally designated as a drawing office, then CSAR (Chief Superintendant Armament Research) Main Headquarters. Continues in a high level administrative function

Construction - A large two storey administrative block of 15 bays by five bays, constructed in red brick with a hipped tiled truss-built roof, similar to the larger A3 to the east. The brickwork is set in a Flemishbond, projecting out slightly for the three central bays on the building's east side, and there is barge boarding running around the building beneath the eaves. There are entrances on the north and south faces featuring panelled wood doors with a row of rectangular lights set above them overlooked by tripartite windows. The building retains original sash windows but detail is limited to moulded stone lintels set into the brickwork above the entrances. Internally, the ground floor retains essentially its original decor with a high bare spinal corridor flanked by doorways with transom lights. On the first floor, which is accessed *via* a central stair well, parts of the corresponding corridor have been refurbished, with the introduction of suspended ceilings.

History - One of the earliest buildings on site, it was originally designed as a drawing office for use by one of the research establishments at Fort Halstead prior to and/or during the Second World War. It was later acquired by Penney's HER team, having been designated the 'CSAR Main Headquarters' on the 1947 site plan. It has continued in its use as a high level administrative centre.

Significance - 'Low: The building is of a generic architectural form comparable to many office and administrative structures in military bases nationwide. Its form does not directly indicate historic function and its generic form allowed easy adaptation for later uses. The building has moderate historic associations with both the ARD and ADD, their significant research and development into explosive and armament technology and Penney's atomic research and development team, though is not directly linked to the research and development of either programmes.

Designations - N/A





Building A3

Date of construction - 1936 - 1944

Uses - Labelled as 'Main Office Block' on 1944 plan and as 'CEAD (Chief Engineer of Armament Development) Main Headquarters' on the 1947. Like A1, it retains a high level administrative function.

Construction - Standing at two storeys in red Flemish bonded brick with a hipped truss-built tiled roof, this administration block is constructed in essentially the same style as A1 to its west but is larger at 27 bays in length, and is slightly more elaborate. The western side projects slightly for three bays at each end, and these projections correspond with single inter-storey windows on the eastern side, betraying the location of internal stairs. The main entrance, in the centre of the building's western side, is recessed in a pronounced brick surround featuring a single tripartite window at first floor level. In common with A1, there are subsidiary entrances on the north and south faces featuring panelled wood doors with a row of rectangular lights set above them. Detail is again limited to moulded stone lintels set into the brickwork above the entrances. Internally, the building retains its original entrance lobby containing a large period stair, although this now approaches the first floor through an inserted stud partition. The wide spinal corridors on both floors have been renovated in place with various building regulations. Previous alterations have apparently included the insertion of stud walls, but these have since been removed.

History - One of the earliest buildings on site, it was originally designed as an office for use by one of the research establishments at Fort Halstead prior to and/or during the Second World War. It was later acquired for use by the CEAD of Fort Halstead. Structure was damaged by V1 flying bomb during the Second World War.

Significance - Moderate: Low: although the building displays a comparatively higher degree of architectural refinement when compared to others at the site, its architectural interest is low when considered in the context of this building type nationally. The building has historical associations with both the ARD and ADD and their significant research and development into explosive and armament technology, though is not directly linked to this work.

Designations - N/A



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Building A5

Date of construction - 1936 - 1944

Uses - General workshop.

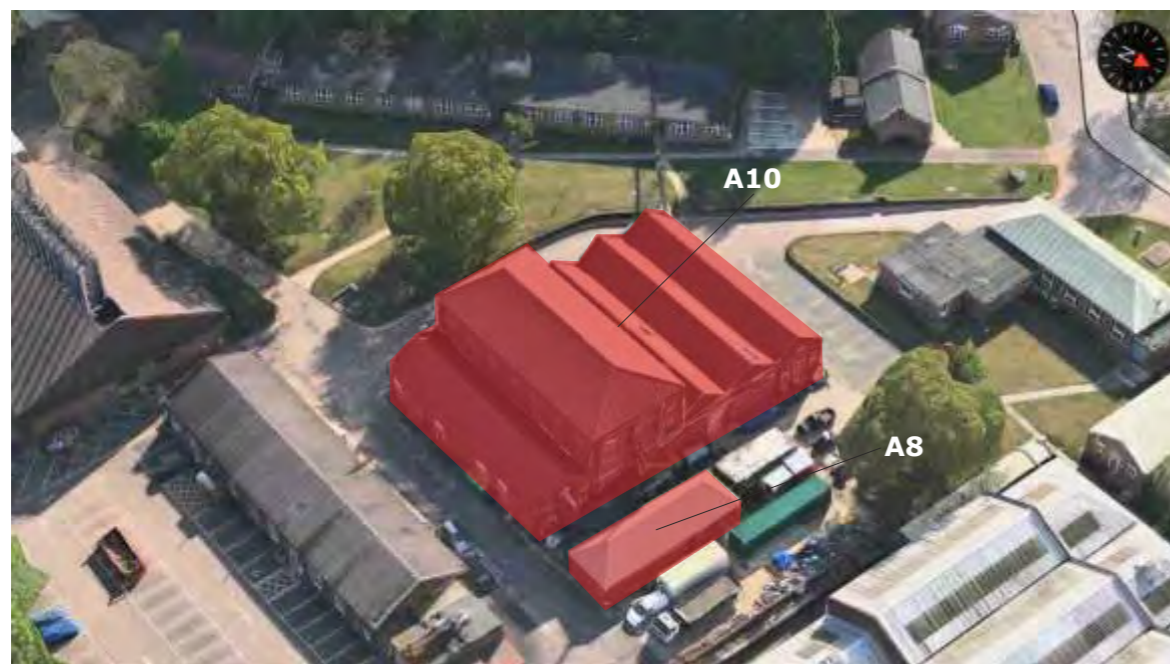
Construction - A large brick structure comprising several phases of construction, or reconstruction, which have resulted in a large main building of five large east to west aligned bays with pitched corrugated metal roofs, supplemented by a flat roofed single storey annexe terraced into the slope at its southern corner. The majority of the structure stands at a tall single storey with hipped roofs, although the central range of four bays is higher with a plain pitched roof featuring blind lunettes at the centre of the gables. At the northern end of this range, the main steel shuttered entrance to the building opens onto a small yard area adjacent to Ewart Smith Road. Most of the windows of the main building have been brick in-filled with the exception of those at the northern edge of the building, probably corresponding with office space. Internal inspection shows its construction to be much the same to the contemporary Q4, with a roof comprising frequent metal trusses over the large main space and various wooden partitions, although these were being removed at the time of survey.

History - The building was constructed to accommodate staff of the AAD and ARD who were moved to Fort Halstead from Woolwich during the Second World War. The building also contained draughtsmen and tracers, having contained a drawing room at one point prior to the construction of a separate drawing office. It also contained blacksmiths throughout much of the 20th century and continues in a workshop capacity. The building has been subsequently added to and expanded as requirements at Fort Halstead have changed.

Significance - Low: architecturally the building is of utilitarian standard design that does not illustrate historic uses and as such its architectural interest is low. Any significance derives from associations from the research and development internationally important experimental and highly secretive projects conducted during the Second World War and after. It is one of the largest buildings in the 'A' area and contained workshops that would have been associated with work carried out by the ARD and ADD. There is no historical machinery or plant is thought to survive'

Designations - N/A





Buildings A8 & A10

Building A8

Date of construction - 1936 - 1944

Uses - Lavatory

Construction - Single storey brick annexe to building A10 featuring original three light awning windows and a southern external doorway, and with a hipped corrugated metal roof.

History - Constructed to serve those working in A10, following the arrival of the newly formed ADD and ARD during the second world war. It has continued in this use today.

Significance - Low: any significance of the building is purely historical, which it derives through its indirect associations with the AAD and ARD and later the CSAR, who would have used the building.

Designations - N/A

Building A10

Date of construction - 1936 - 1944

Uses - Laboratories and workshops.

Construction - Large structure comprising a three storey main range aligned roughly north/south and flanked by three single storey ranges to its west and a further such range to its east, all of which would appear to be contemporary. The main range has a hipped corrugated sheet roof whilst the single storey structures each feature a gabled roof. The main structure retains rebated multi-light windows stepped into the brickwork, whilst its lower storey, and the three annexes, exhibit modern replacement casement windows. Three large metal vents emerge from the main structure and the easternmost range, and re-configurations of the building's internal equipment are evident in various bricked-up apertures around the structure. The design of the building, with a series of corridors weaving around various workshops and offices, suggests rapid design and construction to meet perceived urgent needs. The roof is exposed internally and can be seen to comprise metal trusses over steel beams, in common with the nearby A5. Some additional equipment and plant has been introduced, although much of the wood and metal working machinery appears to be of mid 20th century vintage, the interior is little altered. A lift shaft has though been introduced into the centre of the building, running through the middle of the main stairwell.

History - The build date suggests the building was constructed to accommodate staff of the ARD who were moved to Fort Halstead from Woolwich during the Second World War. Labelled as the 'Tube Process' building in 1944, it may have been involved with shell development. It is labelled the 'CSAR Main Laboratories' in 1947 (following the arrival of William Penney) and then the 'Met. Phys. Chem. Lab CSAR (Tube process building)', in 1949 Following the arrival of Penney to Fort Halstead in 1947. The building has since contained various facilities, including workshops for carpenters and glassblowers, and appears to remain in a similar capacity.

Significance - Moderate: A10 is a principal building in the 'A' area and derives historical interest from direct associations with the highly secretive and nationally important work carried out by the ARD and the CSAR during the Second World War, and the work carried on at Fort Halstead after its conclusion. A10, although utilitarian, is of some architectural interest as its form suggest prior uses and its form is little altered. There is modest attention to detail such as the concrete banding, recessed window bays and soldier course lintels.

Designations - N/A



Buildings A11 & A22

Building A11

Date of construction - 1936 - 1944

Uses - Offices

Construction - A long rectangular single storey brick building with a flat felt covered roof now featuring double glazed six-light casement windows. An entrance lobby is recessed into the middle of the north-east wall and a small superstructure above the centre of the building probably holds a water tank. The building is bisected by a single internal corridor along its length from which radiate offices divided by breeze block partitions.

History - Thought to have been built by German prisoners of wars, it was constructed to accommodate staff of the ARD arriving from Woolwich Arsenal and was labelled as 'Block A CSAR Office' in 1947. It has continued in office use since and now contains elements of the site archive.

Significance - Low: derives significance from its historical associations with the ARD and CSAR though its use as an office indicates it was not directly linked to the experimental work carried out at Fort Halstead during the Second World War. Significance is also derived from it being the only known building constructed by German prisoners of war. It has a utilitarian standard design and does not derive any significance from its architecture although the building has some group value with the fort, A13, A14 and A10.

Designations - N/A

Building A22

Date of construction - 1944 - 1946

Uses - Administration.

Construction - A rectangular single storey brick building with a flat felt covered roof very similar in design to the larger A11 to its north, to which it is connected by a glass enclosed walkway. It also now features modern double glazed six-light casement windows and although the building was not examined internally, it is assumed that A22 is also bisected by an internal corridor from which offices radiate.

History - An extension to A11 constructed after the arrival of the ADD and ARD and before the arrival of Penny in 1947 and was most likely built to accommodate an expanded function of A11. It continues in an administrative use today.

Significance - Low: most likely derives significance from associations with the ADD or ARD, though its administrative function indicates a low level role within the work carried out at Fort Halstead during the closing periods of the Second World War and shortly after its conclusion. Much like A11, to which it is connected, A22 displays little in the way of architectural merit and derives no significance from this.

Designations - N/A



Building A12

Date of construction - 1936 - 1937

Uses - Boiler House serving the 'fort'.

Construction - Rectangular structure in mottled pink and red brick with a concrete foundation, which is exposed as its internal floor. The building has a corrugated sheet pitched roof, open to reveal steel trusses on the inside, with a lower flat roofed annexe. Two original twelve light casements on its north-east side are the building's only windows, although there are two circular brick lined features in its north-western side and another in the south-east gable, which may represent in-filled apertures providing an indication to the building's function. Original wooden double doors provide access at its north-western side.

History - A 1937 plan of the site shows the building to have contained (or proposes the installation of) two coke fired steam boilers, and it is shown as a boiler house in 1947, having been labelled 'old boiler house' in 1944. The only fixtures surviving within it are an iron frame, supported by a large girder, in its southern corner which probably held a water tank. Documentary sources suggest that this may represent a tool store built in 1920, but map evidence indicates a later origin. Its construction is most likely related to the arrival of elements of the Rocket Section of the Research Department's ballistic branch (soon to become the Projectile Development Establishment) in 1937 and would have provided the main source of power to the early facility. It is now empty having been replaced by S2 as the site's main power source in the late 1940s.

Significance - Low: One of the few buildings at Fort Halstead related to the early research and development into rocketry and ballistics and it derives historical significance through this. Its use as a power source indicates it was not directly involved in the research and development into rockets and ballistics and therefore does not hold a high degree of significance because of this. It is of a utilitarian design and does not hold any significance with regard to its architecture.

Designations - Within the setting of the Scheduled Ancient Monument. Although grouped with the cottage and tool shed (A13 and A14) and the Scheduled Ancient Monument it does not hold as strong an association as it dates from the late 1930s.



Buildings A13 & A14

Building 13

Date of construction - 1896 - 1906

Uses - Store. Site hospital.

Construction - A rectangular brick structure with a pitched slate roof. The building features three single doors equally spaced along its southern side, and window voids on its eastern and northern (front) facades. These are now filled with modern casement windows beneath what are probably earlier stone sills, but they may have originally held metal bars. A third stone lintel can be seen in the gable above the extant east end windows, although the size of the in-filled area suggests that this may actually have been a small doorway or hatch.

History - A13 is shown to have comprised two large chambers and a number of smaller ancillary rooms in 1944 and a brick annexe with a flat roof at the western end of the building apparently housed an extractor dating to the later employment of the structure as a winding workshop. The wide doors on the structure indicate that the building may have been used for wagons or even field guns. The building was renovated following the arrival of the Rocket Section in 1937 and is listed as MOD stores in the same year.

Significance - Moderate: Historical interest due to associations with the Mobilisation Centre and the earliest phases of development at Fort Halstead. The building also displays a good deal of original features, rare when compared to the rest of the site and is one of the few domestic structures at Fort Halstead.

Designations - Within the curtilage and setting of the scheduled monument.

Building 14

Date of construction - 1892

Uses -

Construction - The building has a pitched slate roof which is bisected by a small parapet wall interrupted by the stump of a blocked central chimney, whilst an additional corbel-topped chimney stands at its east end, indicating that this was the superior of the two residences, although it is possible that a corresponding example at the west end has been completely removed. A small flat-roofed brick toilet block lies to the rear, between the two rear entrances, each of which is enclosed by a low brick wall. The cottages retain their original sash windows, with stone sills and brick lintels, and the original wooden doors, the front two having three overhead lights, although the westerly has been blocked up on the inside. The internal arrangement of the cottages has been altered through the introduction of stud walls, the blocking of interior doorways and the cutting of that between the two cottages. The two central fireplaces have also been blocked and blocked corresponding archways observed at each side of the central chimney may represent an earlier doorway between the two cottages.

History - A pair of semi-detached brick cottages recorded as having been combined into a single unit following the sale of the site in 1921, although plans dating to the Second World War suggest that this had yet to occur at that date. It housed the fort's caretaker and labourer who would have tended to the site when it was not in use. It fulfilled a similar role after the fort was purchased by the War Office in the 1930s and was used for this purpose until it was turned into the site's main surgery in 1952.

Significance - Moderate: associated with the Mobilisation Centre and the earliest phases of development at Fort Halstead. The building also displays a good deal of original features, rare when compared to the rest of the site and is some of the few domestic structures at Fort Halstead.

Designations - Within the curtilage and setting of the scheduled monument.

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Buildings A15 & A19

Building 15

Date of construction - 1981 - 1984

Uses - Storage. Solvent store.

Construction - A single storey brick ancillary structure for building A10 to its south. This structure has a flat roof and two sets of double doors overlooked by large two light windows and a later extension, between the original structure and A8 to its east, with another set of double doors.

History - A later in-fill building

Significance - Low: a modern structure with a low level function and utilitarian architecture resulting in low historical and architectural interest.

Designations - N/A

Building 19

Date of construction - 1938 - 1944

Uses - Drawing room or administrative function. Now conference rooms.

Construction - Single storey brick office building comprising a large rectangular brick structure, with a corrugated metal hipped roof, connected to a later brick structure with a flat roof by way of a lobby area, so giving the whole an L-shape plan. It now features replacement windows and suspended ceilings throughout. A small brick ancillary store is adjoined to the north.

History - Most likely constructed to house draughtsmen operating under the CEAD, as indicated on the 1947 plan of the site which labels the building 'CEAD tracers'. Initially, work carried out in A19 would be related to the developmental work carried out by the ADD during the Second World War and years directly its conclusion. It continued as a drawing or administrative office for various organisation until its recent re-configuration as conference rooms.

Significance - Low: one of the older structures on the site with historical interest derived from associations with the ADD and CEAD and the highly secretive work that was carried out at Fort Halstead during the Second World War. Like many of drawing or administrative offices at Fort Halstead, the building displays little in the way of architectural merit and derives no significance from this.

Designations - N/A



A15



A19



A19



Buildings A20 & A21

Building A20

Date of construction - 1936 - 1944

Uses - Drawing Offices. Offices and computer suites.

Construction - A single storey brick office building comprising a main north-south aligned range with a flat roof, from which four spurs, with pitched corrugated metal roofs, extend to the east. The two southern spurs also protrude slightly to the west, to the north of which the main entrance onto Crow Road is overlooked by a large water tank superstructure. A small flat roofed extension sits between the two northernmost spurs. The building features modern casement windows throughout, beneath the original concrete lintels, and each of the spurs also has a single external entrance comprising a modern PVC door at their eastern end. Inside the building, the main range retains a central corridor flanked by offices behind a single skin brick wall and separated by wooden partition walls, but the spurs are now open plan. In both cases, suspended ceilings have been introduced.

History - Most likely constructed to house draughtsmen operating under the CEAD, as indicated on the 1947 plan of the site which labels the building 'Block B' CEAD D.O.' (Drawing Office). Initially, work carried out in A20 would be related to the developmental work carried out by the ADD during the Second World War and years directly after its conclusion. The building now accommodates offices and computer suites.

Significance - Low: one of the older structures on the site with historical interest derived from associations with the ADD and CEAD and the highly secretive work that was carried out at Fort Halstead during the Second World War. A20 is typical of similar wartime accommodation utilised throughout the country and derives no significance from its architecture.

Designations - N/A

Building A21

Date of construction - 1936 - 1944

Uses - Relates to the weigh bridge immediately to its west.

Construction - A small single storey brick built structure with a flat roof. A small wooden superstructure with louvred sides appears to house one of the site sirens.

History - A21 relates to the weigh bridge to the west and appears to have been purpose built for this function, though this is not indicated on historic plans. It has been suggested that the weighbridge lies on what was the site of a concrete gun emplacement.

Significance - Low: although dating from one of the earliest phases of development at Fort Halstead at the building is not associated with any of the nationally important research and development that was carried out at Fort Halstead. It is however representative of the sites expansion during the Second World War. It has little architectural merit and derives no significance from this.

Designations - N/A





Buildings A23 & A23.1

Building 23

Date of construction - 1946 - 1947

Uses - Originally a canteen. Now open plan offices.

Construction - Long rectangular building with a pitched felt roof in buttressed brick and modern PVC casement windows under concrete lintels. The two western entrances are accessed through square PVC porches whilst the three eastern entrances open directly onto the car park at that side of the building. Lower five light windows have replaced the originals at the southern end of the building, and an aperture in the gable has been in-filled, suggesting a change in function at this end of the building. Suspended ceilings have been inserted and are interspersed with plastic power poles.

History - Constructed as a canteen shortly after the conclusion of the Second World War, presumably to cater for the arrival of large numbers of staff working on various projects at Fort Halstead. It is labelled as 'New Canteen' in 1947 and continued to fulfill this function until at least the early 1960s. It was converted to open plan offices sometime in the late 20th century and now houses the Information Systems (IS) department.

Significance - Low: although dating from an important phase of development at Fort Halstead at the building is not associated with any of the nationally important research and development that was carried out at Fort Halstead. It is however representative of the sites expansion during the Second World War and the period shortly after its conclusion. It has little architectural merit and derives no significance from this.

Designations - N/A

Building 23.1

Date of construction - 1946 - 1947

Uses - Site generator.

Construction - Contemporary boiler house adjoined to the northern end of A23, substantially built in English bond brick with a flat roof supporting a series of large vents. The whole comprises one main structure, accessed through double doors on its eastern side, with two lower annexes attached to the north.

History - The building was constructed as the site's main power generator and has continued in this role. Now supplements the main generator in building S2.

Significance - Low: not directly related to any of the nationally important work that was carried out at Fort Halstead and holds little significance with regards to historical associations or architecture, though it is representative of the sites growing power requirements following the various phases of expansion during the Second World War.

Designations - N/A



Buildings A25

Date of construction - 1947

Uses - Offices and administrative use. Also workshops.

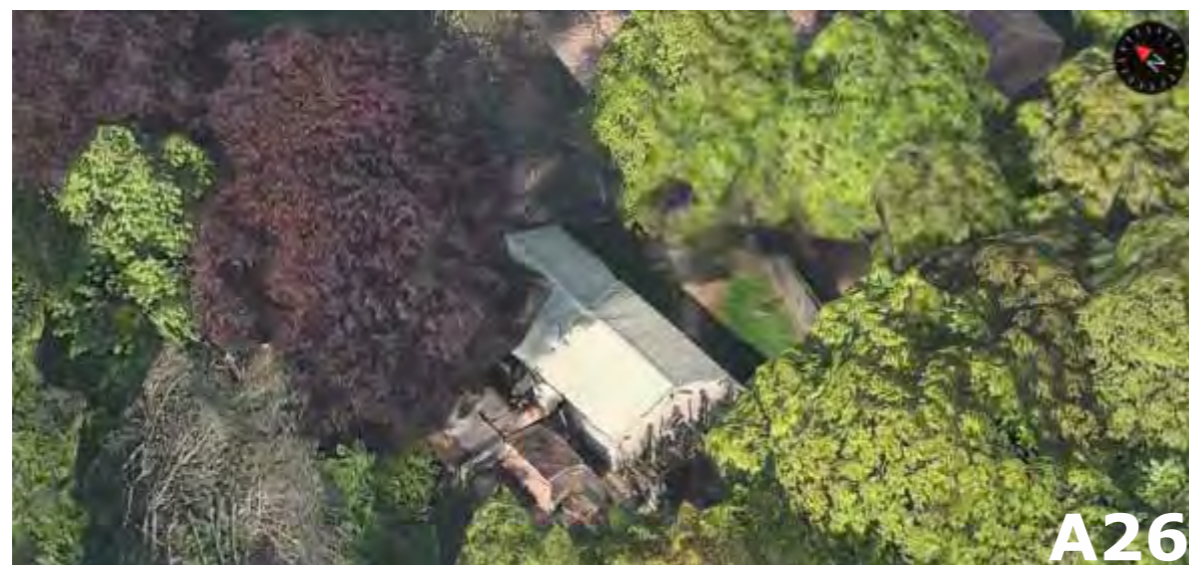
Construction - Single storey, steel framed building aligned roughly north to south on a rectangular plan with brick walls and flat concrete roof with felt covering. There are two small superstructures attached to the central and north areas of the roof, which probably accommodate water tanks or plant. The interior has been altered, with partitioning removed to create large annexes at either end, a suspended ceiling inserted, the windows replaced with uPVC frames or the openings in-filled. The previous arrangement most likely comprised a central corridor running the length of the building with offices or workshops located on the east and west sides. A modern modular structure has been attached to the south end of the building.

History - Plans indicate A25 was constructed for use by the CEAD (Chief Engineer of Armament Design) - on the 1949 site map the building is labelled 'CEAD Block No. 1'. The Armament Design Department (ADD) moved to Fort Halstead from the Royal Arsenal in Woolwich in 1942 and was headed by the CEAD. Along with the Armament Research Department (ARD, headed by the Chief Superintendent of Armament Research), the ADD was responsible for developments in explosive and armament technology during and shortly after the Second World War. Aerial photographs from 1946 show the building's footprint was previously occupied by what appears to be a series of small structures, possibly Nissen-type huts. Although the building's use in the latter part of the 20th century is unknown it is thought to have carried on in an administrative function. The building has also accommodated workshops though its last use was a computer facility, as indicated by the number of in-filled windows along the length of the building.

Significance - Low: Primarily derived from its historic associations with and use by the CEAD who headed the ADD. A25's outward appearance and current arrangement indicates a mostly administrative function, though its construction comprising a steel frame supporting a concrete roof may point to other past uses, though what these may be is not clear.

The building falls outside of the HER (High Explosive Research) enclave and as far as is known, is not directly related to the atomic research that was undertaken at Fort Halstead in the 1940s and 50s. The building has undergone numerous changes in layout, composition and use, which has impacted on its already limited architectural interests. There are no internal features of interest and the building retains no items that indicate its past uses. It is similar in design and form to many other contemporary structures at Fort Halstead and other military research sites. The building forms one of many structures established at Fort Halstead during the post war phase.

Designations - N/A



Buildings A26 & A28

Buildings A26

Date of construction - 1949 - 1953

Uses - Dog kennel. Previously offices and laboratory.

Construction - Single storey building in white washed brick with a pitched corrugated metal roof. There is a small square window in the north gable end. However, the other features are screened by a 6' garden fence, a requisite of its current use as kennels for the site's guard dogs. Access is now via a small flat roofed brick lean-to annexe at the building's northern end.

History - The building was constructed as in-fill structure in the post Second World War phase at Fort Halstead and represents the increasing research and developments requirements placed on Great Britain as it entered the Cold War.

Significance - Low: The building derives little significance from its past use as an office, though its use as an electronics laboratory and build date may indicate some associations with work relating to research and development during the post Second World War period at Fort Halstead. The various types of use that the building has fulfilled are representative of many of the site's building constantly changing roles and is indicative of Fort Halstead's nature as a research and development facility. It has little architectural merit and derives no significance from this.

Designations - N/A

Buildings A28

Date of construction - 1991

Uses - Laboratory.

Construction - Large modern laboratory building in brick with a pitched standing seam metal roof, of very similar construction to the contemporary X48. It is apparently constructed on what was the site of the Fort's gardening club. The roof projects out from the walls on the structure's east and west sides where it is supported on brick stanchions. Two rows of tall fume ventilation rods follow the ridge of the roof, betraying its intended purpose - the manufacture of hazardous chemicals. Internally, the building comprises a series of laboratories and offices radiating from a central corridor.

History - A relatively modern structure that was constructed to house additional personnel following the closure of the Royal Armament Research and Development Establishment (RARDE) at Waltham Abbey in 1991. Contemporary with buildings X48, it provides facilities for the manufacture of chemicals.

Significance - Low: limited associations with known nationally important research and development due to late build date and is of little architectural interest.

Designations - N/A





Buildings A28.1, A28.2 & A30

Building A28.1

Date of construction - 1991

Uses - Storage of chemicals or hazardous materials.

Construction - Small brick ancillary building to the south-east of the contemporary A28, similarly constructed in brick with a standing seam metal roof and upper walls.

History - A relatively modern structure that was constructed to house additional personnel following the closure of the Royal Armament Research and Development Establishment (RARDE) at Waltham Abbey in 1991. Contemporary with buildings X48, it provides facilities for the manufacture of chemicals.

Significance - Low: no historical associations and is of no architectural interest.

Designations - N/A

Building A28.2

Date of construction - 1991

Uses - Storage of chemicals or hazardous materials.

Construction - A large annexe to the south of A28, of similar brick and sheet metal construction. A small flat roofed brick extension at its northern end features a tall chimney probably related to an incinerator.

History - A relatively modern structure that was constructed to house additional personnel following the closure of the Royal Armament Research and Development Establishment (RARDE) at Waltham Abbey in 1991. Contemporary with buildings X48, it provides facilities for the manufacture of chemicals.

Significance - Low: no historical associations and is of no architectural interest.

Designations - N/A

Building A30

Date of construction - 1985 - 1988

Uses - Boiler or furnace.

Construction - A large shed constructed of sheet metal cladding with a low pitched roof. Sliding metal double doors provide access from the west and a row of three two light windows run along its southern side. There is a chimney on this side of the structure.

History - A relatively modern structure not associated with any major phases of development at Fort Halstead.

Significance - Low: no historical associations and is of no architectural interest.

Designations - N/A

Zone F (The Fort)



The fort is the oldest area of the site and comprises a late 19th century Mobilisation Centre with several later structures. The Mobilisation Centre at Fort Halstead was formed as part of the London Defence Positions - a series of 19th century earthworks that were to be thrown up in time of war and were designed to defend the capital in the event of an invasion. In March 1889 the London Defence Scheme was announced and 13 sites for forts were chosen along a 70 mile stretch of the North Downs. The London Defence Positions consisted of temporary forts which were backed up with permanent sites that housed stores and magazines that were to supply a volunteer force. Fort Halstead was the largest and most expensive of the London Defence Positions and was one of only four designed to for artillery deployment.

Designed in 1894 and probably constructed between 1895-7, the forts were soon viewed as obsolete and a number were sold off in 1907. Fort Halstead may have served as a military store during WWI before being sold by the War Department to former artillery commander, Colonel Bradshaw, in 1921. During this period the site was occupied by Bradshaw, who lived in a laboratory (F14) constructed within the fort during WWI. The remainder of the site was used as a campsite for the territorial army, boy scouts and girl guides as well as accommodation for Russian refugees.

The re-occupation of the site by the War Office began when two departments, the Research Department and the Design Department (established at Woolwich Arsenal in 1922) were moved from London to Fort Halstead in the late 30s. Woolwich's position on the River Thames and its role within military research would have made it a priority target for Luftwaffe bombers during WWII. Safety concerns for the site and personnel led to the move to the more remote Fort Halstead.

In 1936 the first team of researchers and technicians moved into the fort. This team, headed by Alywn Crow of the ARD, were tasked with developing rockets for anti-aircraft defence, long range attack, air combat and assisted take-off units. In 1938 Fort Halstead became known as the Projective Development Establishment. During WWII and immediately after its conclusion the site was expanded beyond the boundaries of the fort into what is now Zone A and Zone X. Within the old fort itself several buildings were constructed, one of the earliest being an experimental filling shed erected in 1938.

After WWII armaments research continued at Fort Halstead though at a reduced level. In 1947 the British cabinet decided to pursue development of atomic weaponry and tasked William Penney to lead the project, codenamed High Explosive Research (HER). To accommodate the new team tasked with research in atomic work a fenced enclave was created within the fort and a group of buildings to its immediate north (Zone Q). The enclave included all structures within the fort and involved the construction of several new buildings, namely F12 to F18. Older structures dating to the original construction of the Mobilisation Centre were also adapted for use as workshops and stores.

To ensure the secrecy of the work being undertaken by HER and to protect the surrounding buildings, the most sensitive work - the testing of the atomic bomb's electronic detonators, was carried out within the earthen banks of the fort in F16, F17 and F18.

The nature of the site has resulted in many buildings seeing a number of different uses as various organisations come and go. This being said, the specialist aspects of the buildings within the fort has meant that a number of them have retained their original use. As of today the fort contains three listed building - two Grade II* and one Grade II. The fort itself is a Scheduled Ancient Monument.



Buildings F1 & F10

Building F1

Date of construction - 1946 - 1947

Uses - Entrance lodge to the fort. Remains in this capacity.

Construction - Small brick structure with a low pitched felt roof. Has a three light casement window overlooking the fort entrance to its west and another smaller window facing south into the fort.

History - Its date of construction suggests it was erected to provide more security for the secretive that was beginning to take place within the old Mobilisation Centre when the site was taken over the HER team.

Significance - Moderate: its construction is indicative of the type of work that would be taking place within the old Mobilisation Centre. Although not directly linked to Britain's early research and development into atomic weaponry, it is representative of the highly secretive work involved at Fort Halstead and can be associated with one of Britain's major scientific breakthroughs in the field of military armament.

Designations - Excluded from but within the Scheduled Monument and contributes to the setting and significance of the listed buildings.

Building F10

Date of construction - 1946 - 1947

Uses - Similar to F1, entrance lodge within the fort. Remains in this capacity.

Construction - Small brick structure within the fort with a sloping corrugated metal roof. Has a four light casement window overlooking the fort entrance to its east and a single southern door.

History - Its date of construction suggests it was erected to provide more security for the secretive uses that was beginning to take place within the old Mobilisation Centre when the site was taken over the HER team.

Significance - Moderate: much like F1, its construction is indicative of the type of work that would be taking place within the old Mobilisation Centre. Although not directly linked to Britain's early research and development into atomic weaponry, it is representative of the highly secretive work involved at Fort Halstead and can be associated with one of Britain's major scientific breakthroughs in the field of military armament.

Designations - Excluded from but within the Scheduled Monument and contributes to the setting and significance of the listed buildings.



Buildings F2 & F4

Building F2

Date of construction - 1895-7

Uses - Built as a casemate and explosive storage, remains in this capacity. Possibly for testing as well.

Construction - A large articulated reinforced concrete block aligned roughly north to south beneath the northern end of the central earthwork bisecting the fort. It contains nine casemates, opening onto a communal corridor. All feature single doors and over-lights between the stub walls, except the southern two whose full width and height door indicate their use as wagon shed. Two ventilation stacks are visible on top of the earthwork. A small unnamed expense magazine, similar to F7 and F9 also opens onto the corridor from beneath the forts main northern rampart. Two brick partition walls with double doors segregate the block and a corrugated plastic canopy of relatively recent date now covers the corridor

History - Built as part of the Fort Halstead Mobilisation Centre, one of 14 late 19th century London Defence Positions. Later used for explosive storage and testing relating to rocketry research and development and later, for accommodating elements of the HER team's research and development into atomic weaponry.

Significance - High: Significance derived largely from its associations with the following - an original element of the 19th century Mobilisation Centre that survives largely as originally built, and later representative of the sites role as a military research establishment. Altered during the mid 20th century for use as workshops and stores by the Projectile Development Establishment and HER team. The structure retains some architectural interest in the form of surviving 19th century details, such as cast iron wall vents, brass light boxes, roof vents and original metal doors.

Designations - As a structure set within the Mobilisation Centre and constructed before 1900, it is included in the scheduling for the Fort, as are any post-1900 modifications to these structures.



Building F4

Date of construction - 1895-7

Uses - Explosive storage, possibly still in this capacity.

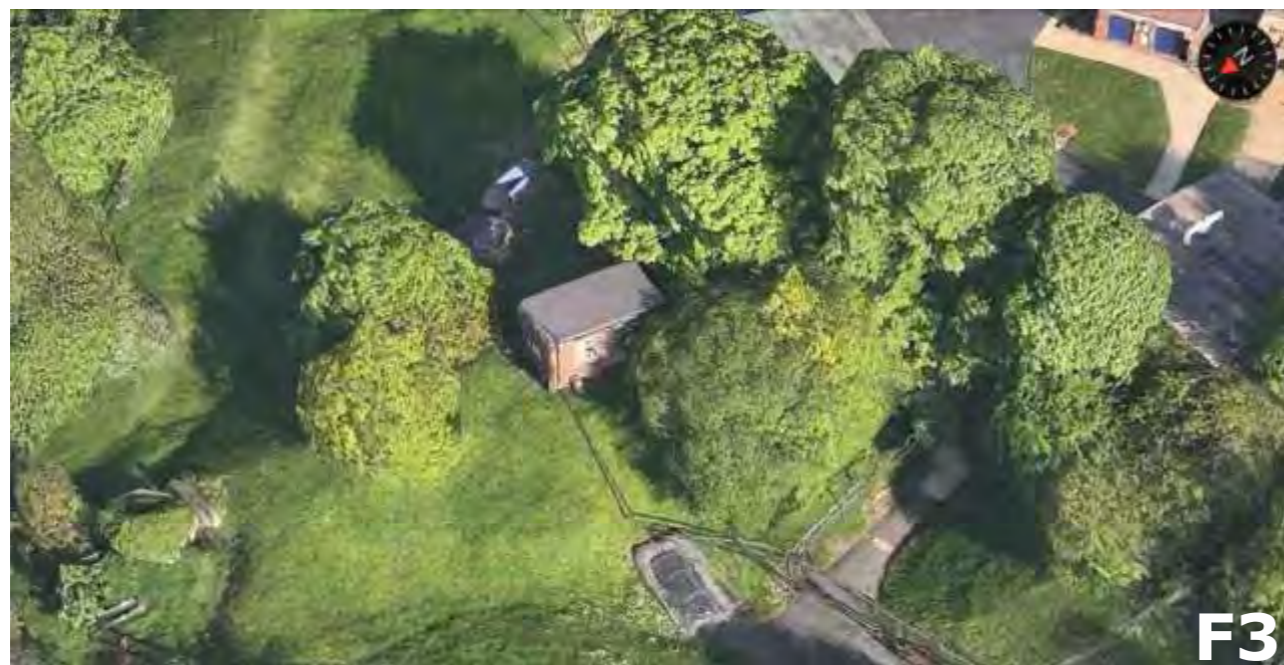
Construction - A reinforced concrete block beneath an earthwork at the north-eastern corner end of the fort, containing four casemates, all of which feature single doors and over-lights between the stub walls. The casemates all open below surface level where they face a brick revetment wall to their south-east. An asbestos tile canopy roof, supported by brick columns, covers the entrance to the structure. Vents and lagged pipes run into the casemats from a small brick superstructure on the roof.

History - Built as part of the Fort Halstead Mobilisation Centre, one of 14 late 19th century London Defence Positions. Later used for explosive storage and testing relating to rocketry research and development and later, for accommodating elements of the HER team's research and development into atomic weaponry.

Significance - High: Significance derived largely from its associations with the following - an original element of the 19th century Mobilisation Centre that survives largely as originally built, and later representative of the sites role as a military research establishment. Altered during the mid 20th century for use as workshops and stores by the Projectile Development Establishment and HER team. Possibly one of the original test buildings during the initial reuse of the fort in the 1930s.

Designations - As a structure set within the Mobilisation Centre and constructed before 1900, it is included in the scheduling for the Fort, as are any post-1900 modifications to these structures.





F3



F3



F5



F5

Building F3, F5 & F6

Building F3

Date of construction - 1895-7

Uses - Magazine. Possibly testing.

Construction - Magazine block inside the northern edge of the fort, in reinforced concrete mounded over with earth apparently supplemented with a flint detonating layer to afford greater protection from artillery bombardment. It comprises a subterranean corridor, accessible from both ends, onto which open what were originally two shell stores, to the south, and a shifting lobby providing access to two cartridge stores. This original plan is identical to that of F6. Atop the earthwork, a more recent brick structure is probably a control room, either relating to the current explosive storage function of the magazine or to some testing capacity. The main (western) entrance to the magazine is through a metal grill next to which stands a small flat roofed brick structure. Similar to that next to F6, this is of relatively recent date but unclear purpose.

History - Built as part of the Fort Halstead Mobilisation Centre, one of 14 late 19th century London Defence Positions. Later used for explosive storage and testing relating to rocketry research and development and for accommodating elements of the HER team's research and development into atomic weaponry.

Significance - High: Significance derived largely from its associations with the following - an original element of the 19th century Mobilisation Centre that survives largely as originally built, and later representative of the sites role as a military research establishment. Altered during the mid 20th century for use as workshops and stores by the Projectile Development Establishment and HER team.

Designations - As a structure set within the Mobilisation Centre and constructed before 1900, it is included in the scheduling for the Fort.

Building F5

Date of construction - 1895-7

Uses - Magazine. Subsequent use as a firing range. Now decommissioned.

Construction - Reinforced concrete magazine block inside the south-eastern edge of the fort, mounded over with earth apparently supplemented with a flint detonating layer to afford greater protection from artillery bombardment. It comprises a short subterranean corridor, the entrance to which lies to the southwest and is covered by a long buttressed brick shed with a corrugated metal roof. Under the original arrangement, the corridor provided access to a shell store and, via a shifting lobby, to a cartridge store.

History - Built as part of the Fort Halstead Mobilisation Centre, one of 14 late 19th century London Defence Positions.

Significance - High: Significance derived largely from its associations with the following - an original element of the 19th century Mobilisation Centre that survives largely as originally built, and later representative of the sites role as a military research establishment. Altered during the mid 20th century for use as workshops and stores by the Projectile Development Establishment and HER team.

Designations - As a structure set within the Mobilisation Centre and constructed before 1900, it is included in the scheduling for the Fort, as are any post-1900 modifications to these structures.



Building F6

Date of construction - 1895-7

Uses - Magazine. Firing tunnel. Now decommissioned.

Construction - Reinforced concrete magazine block inside the southern edge of the fort, mounded over with earth apparently supplemented with a flint detonating layer to afford greater protection from artillery bombardment. It comprises a subterranean corridor, accessible from both ends, onto which open what were originally two shell stores, to the north, and a shifting lobby providing access to two cartridge stores, an identical arrangement to F3. It is described as being in use as a 'firing tunnel' in 1949. The eastern entrance to the magazine is via a brick revetted stairwell, whilst the more open western entrance is concrete revetted and probably represents a later alteration. This latter entrance is accompanied by a small brick structure, with a sloped metal roof, similar to that next to magazine F3 and of similarly unclear purpose.

History - Built as part of the Fort Halstead Mobilisation Centre, one of 14 late 19th century London Defence Positions. Later used for explosive storage and testing relating to rocketry research and development and later, for accommodating elements of the HER team's research and development into atomic weaponry.

Significance - High: Significance derived largely from its associations with the following - an original element of the 19th century Mobilisation Centre that survives largely as originally built, and later representative of the site's role as a military research establishment. Altered during the mid 20th century for use as workshops and stores by the Projectile Development Establishment and HER team.

Designations - As a structure set within the Mobilisation Centre and constructed before 1900, it is included in the scheduling for the Fort.



F8

Buildings F7, F8 & F9

Building F8

Date of construction - 1895-7

Uses - Explosive storage, possibly a temporary barracks.

Construction - Large articulated reinforced concrete block aligned roughly north to south within the western side of the fort. Unlike F2, which remains under the central traverse, the roofs of F8 have been exposed and can be seen to exhibit various vents and ducts relating to their current storage function. It contains seventeen casemates opening onto a communal corridor, onto which also open the small magazines F7 and F9. A stair at its southern end provides access to the rampart above. All of the casemates are identical, save that at the articulation which is wedged shaped, and all feature single doors and overlights between stub walls. A series of heavy duty ducts, probably relating to extraction and air conditioning, are arranged along the corridor, and the network of overhead metal piping stretching from these casemates to F11 and F2 suggests that extraction plant for these buildings is located in F8, or vice versa. Unlike F2, the F8 corridor is not segregated by brick partitions, but it is similarly covered by a corrugated plastic canopy roof of relatively recent date. A enclosed space at the southern end of the structure possibly houses a water tank.

History - Built as part of the Fort Halstead Mobilisation Centre, one of 14 late 19th century London Defence Positions. Later used for explosive storage and testing relating to rocketry research and development and later, for accommodating elements of the HER team's research and development into atomic weaponry.

Significance - High: Significance derived largely from its associations with the following - an original element of the 19th century Mobilisation Centre that survives largely as originally built, and later representative of the sites role as a military research establishment. Altered during the mid 20th century for use as workshops and stores by the Projectile Development Establishment and HER team.

Designations - As a structure set within the Mobilisation Centre and constructed before 1900, it is included in the scheduling for the Fort.

Buildings F7 & F9

Date of construction - 1895-7

Uses - Magazines and explosive storage. Both continue in this capacity.

Construction - Both are small reinforced concrete magazines, with F9 to the north and F7 to the south and both opening onto the corridor of the F8 casement block.

History - Labelled as 'Q F Magazine' on the design plan, these were two of three expense magazines (together with an unnamed example branching from F2) originally intended to supply small calibre quick firing (QF) guns above.

Significance - High: Significance derived largely from its associations with the following - an original element of the 19th century Mobilisation Centre that survives largely as originally built, and later representative of the sites role as a military research establishment. Altered during the mid 20th century for use as workshops and stores by the Projectile Development Establishment and HER team.

Designations - As a structure set within the Mobilisation Centre and constructed before 1900, it is included in the scheduling for the Fort, as are any post-1900 modifications to these structures.



F8



F7



F9



Building F11

Date of construction - 1938

Uses - Experimental Filling Shed. Administrative capacity. Now decommissioned.

Construction - The building is brick built with two storeys, the upper of which is accessed by an external iron stair, and a pitched felt roof featuring one large chimney/vent and three smaller examples. Design plans show, each floor was designed to incorporate four small vented chambers and a larger room, probably for observation or preparation of materials, a function which is confirmed by the 1949 description of the building as a 'filling house'. The south side of the building, within which are the chambers, only features windows onto the communal access corridor, these having been replaced on the ground floor with modern PVC casements and blocked up at first floor level. In contrast, the original casement windows for the northern part of the building, containing the larger rooms, are crowded on its eastern side, indicating a requirement for maximum possible light. Furthermore, each of these four main areas within the building possesses its own external door, suggesting perhaps a need for emergency access, or for constant rapid interaction with activities outside the building. Externally, the building remains in its original state.

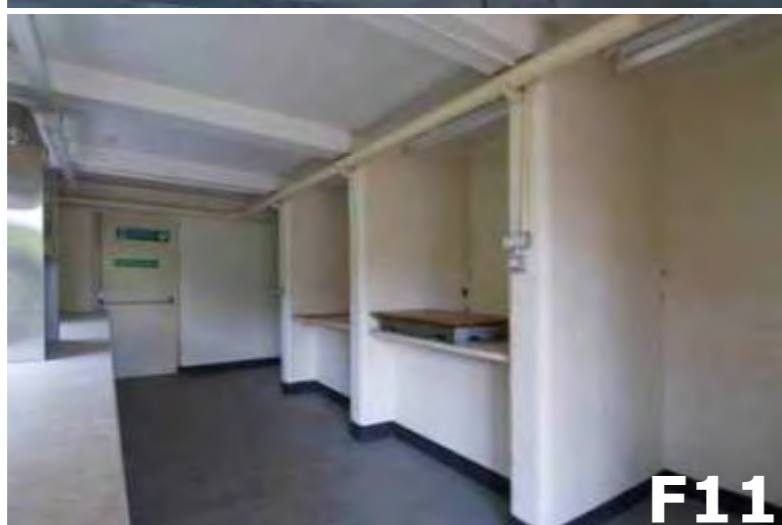
History - F11 was one of the first buildings to be constructed within the old Mobilisation Centre after the War Office repurchased the site in the late 30s. F11 was involved in the research and development of rockets and was used as an experimental filling shed. Originally known as the 'New Building' and then later as 'Poole's Folly' due to its association with Dr H J Poole (deputy director of Ministry of Supply Armaments research and development establishment) and the questionable suitability of the building to carry out its designated function.

Significance - See below

Designations - Grade II Listed

List entry Number: 1412292

Reasons for Designation: Building F11 at Fort Halstead, an experimental filling shed of 1938, is listed at Grade II for the following principal reasons: * **Rarity and early date:** this is the earliest surviving purpose-designed building associated with rocketry research and development nationally. Most buildings associated with this area of research are of post-war date rather than pre-war as here; ***Design and form:** the building's function is legible through its form, the internal vertical bays to accommodate the filling of 9 foot rocket casings survive particularly well; * **Historic interest:** F11 is significant as part of the early research programmes at Fort Halstead under the Projectile Development Establishment and, given the specialist nature of this work, is of national interest.





F12



F12



F13



F13

Buildings F12 & F13

Building F12

Date of construction - 1938 - 1939

Uses - Charge Store. Has remained in this capacity

Construction - Brick built rectangular structure with a flat roof and single doors at each end, cut into the internal end of radial earthwork at the south-eastern side of the fort. The building, which is further ensconced behind a brick revetted earth mound towards the interior of the fort, is labelled as a charge store in 1949. It would appear to have continued to fulfil a similar storage role, although the replacement of large portions of its fabric with brickwork containing single vent tiles and the building's connection to an external extraction system suggest a relatively recent change in function, perhaps as a firing shed.

History - The date of construction suggests it was built to accommodate the Projectile Development Establishment and the research and development into rocketry. It may have also been altered for use by the HER team.

Significance - Moderate: historic interest. Significance derived from the associations with and use by the Projectile Development Establishment, Penney's HER team and the nationally important work they carried out into rocketry and atomic weaponry.

Designations - Curtilage to listed building.

Building F13

Date of Construction - 1938 - 1939

Uses - Magazine.

Construction - A small brick magazine with a sloped corrugated metal roof, three sides of which, including the eastern entrance are screened by a surrounding brick blast wall.

History - The date of construction suggests it was built to accommodate the Projectile Development Establishment and the research and development into rocketry. It may have also been altered for use by the HER team.

Significance - Moderate: historic interest. Significance derived from the associations with and use by the Projectile Development Establishment, Penney's HER team and the nationally important work they carried out into rocketry and atomic weaponry.

Designations - Curtilage to listed building.



Building F14

Date of construction - 1915

Uses - Ammunition Laboratory. Residence. Offices. Administrative function. Now empty.

Construction - This is a single storey brick building with a pitched roof which is now formed by a modern corrugated metal replacement. There are single windows at each end, with two around the central of three doors on its western side, and a further four on the eastern side, all of which are the original sash examples with stone lintels and sills. Another stone lintel sits at sill level on the western wall over a patch of brick in-fill and wooden panelling lining the inside of the building features an aperture at this location, indicating a small external hatch, perhaps designed to facilitate the movement of shells or explosives. The aperture in the panelling with which the building is lined does not correspond with the brick in-fill, being larger and resembling a squat door, and it could be concluded that the panelling, or at least this section, was imported from another structure, perhaps by Colonel Bradshaw who occupied the building during his ownership of the fort. Internal inspection reveals the roof to have been truss built, whilst the floor is of exposed wooden boards. A small brick booth at the south-west corner of F14 (F14.1) would appear to have been constructed to house a telephone and probably therefore represents an addition following the re-adoption of the fort for testing.

History - Thought to be the only building at Fort Halstead that was constructed during the First World War period. It was built as a laboratory, perhaps for ammunition inspection and an ammunition store during the First World War. When the site was purchased in 1920, was lived in by Colonel Bradshaw who may have altered the building to better accommodate him. When the site was repurchased in the 1930s it was reverted back to a laboratory and then to offices. It was likely converted to an administrative function soon after the conclusion of the Second World War.

Significance - High: largely historic. As well as being associated with the important military research that took place within the fort during the mid 20th century, F14 is the solitary reminder that the fort was still used by the military during the First World War after the other Mobilisation Centres were sold and is one of the only buildings within the fort to have domestic features. The building is also one of the few to have direct associations with Colonel Bradshaw, who owned the site during the 1920s and much of the 30s.

Designations - Curtilage to listed building.



Buildings F15 & F18

Building F15

Date of construction - 1936 - 1946

Uses - Toilet Block

Construction - Single storey brick toilet block with casement windows and a flat roof, on which stands a water tank. Interior alterations include the introduction of a suspended ceiling.

History - Built to provide WC facilities to the Projectile Development Establishment researchers and the HER team.

Significance - Moderate: historic interest. Indicative of the change of use within the fort, from a Mobilisation Centre to a military research establishment and has associations with both the Projectile Development Establishment and Penney's HER team.

Designations - Curtilage to listed building.



Building F18

Date of construction - 1949 - 1953

Uses - Recording Laboratory. Now fulfils an administrative and workshop function.

Construction - Single storey flat roofed brick structure with a single multi-light casement window and door on its eastern side. Internally it comprises two rooms of equal size.

History - Constructed as a recording laboratory. Appears to have replaced a slightly earlier smaller example shown in 1949.

Significance - High: historic interest. One of the principal buildings within the old Mobilisation Centre, along with F16 and F17, and was built to support the work of William Penney's atomic bomb team. The building is representative of the site's use as a military research establishment and played an important role in the creation of Britain's first atomic bomb.

Designations - Curtilage to listed building.



Building F16

Date of construction - 1938

Uses - Explosives testing chamber (Bomb Chamber). Continues in this capacity

Construction - The single storey structure is constructed from poured concrete blocks lined internally with steel plates, the bolts for which are left exposed on the exterior of the structure to allow tightening. An external metal stair and railings around the roof facilitate the tightening of further such rods and the arrangement of recording and measuring apparatus. Two entrances on the structure's western side provide access to the bomb chamber within which a series of angled metal plates are positioned to hold the charges. A previous adaptation allowed x-rays to be introduced through a void perpendicular to the side of the structure, the 90 degree path of the rays being recorded from a corresponding position within the chamber. The structure has since been modified again to accommodate cameras and to enable both sets of equipment to be introduced at 45 degrees in mirrored positions in the external wall and therefore at the requisite 90 degrees to one another.

History - Constructed soon after the HER team took over Fort Halstead and purpose built to support the work of William Penney's atomic bomb team. The urgency and importance of the work at Fort Halstead is reflected in the preparation of a design drawing for the Bomb Chamber (F16) in July 1947, only two months after the formation of the HER team. Together with F17 and F18, the HER team developed both high explosive and electronic detonators for the atomic bomb.

Significance - See Below

Designations - Grade II* Listed with F17

List entry Number: 1412293

Reasons for Designation: Buildings F16 and F17 at Fort Halstead, the Bomb Chamber and Detonation Chamber respectively both constructed in 1947, are listed at Grade II* for the following principal reasons: * **Rarity:** these are unique buildings, specifically designed for the development of Britain's first atomic bomb; * **Historic interest:** both are vital buildings in our understanding of the nation's atomic bomb research and development, a top-secret programme under the aegis of the High Explosives Research Establishment which through its work at Fort Halstead, and sister sites, was to prove one of Britain's major scientific breakthroughs in the field of military armament; * **Design and form:** the original function of both buildings is legible through their specialised form and both remain little altered from their original design.





Building F17

Date of construction - 1947 - 1949

Uses - Explosive testing chamber (Detonation Chamber). Continues in this capacity

Construction - A large brick built building housing an explosive testing chamber and monitoring facilities. The chamber would appear to be of brick construction, lined internally with steel plates, the bolts of which are exposed on the outside of the structure. The chamber itself is accessed via an external entrance on the western side of the building. This is encompassed within a large room forming the southern part of the building which is accessed through a set of double doors and a single door flanking an original 15 light casement window in its eastern side, and a further double door to the south. From here, a series of armoured glass windows into the testing chamber allow high speed photographic recording. Within this large room, a stair provides access to a control room at first floor level, which looks out over the interior of the fort through casement windows to its north, east and south. A small office lies beneath the control room and a brick lean-to gas cylinder store is positioned against the southern side of the building.

History - Constructed soon after the HER team took over Fort Halstead and purpose built to support the work of William Penney's atomic bomb team. Designed a month after F16 and built specifically to record explosions using an angled mirror and Cordin high speed camera. Together with F16 and F18 (added in 1948), the HER team developed both high explosive and electronic detonators for the atomic bomb.

Significance - See Below.

Designations - Grade II* Listed with F16

List entry Number: 1412293

Reasons for Designation: Buildings F16 and F17 at Fort Halstead, the Bomb Chamber and Detonation Chamber respectively both constructed in 1947, are listed at Grade II* for the following principal reasons: * *Rarity:* these are unique buildings, specifically designed for the development of Britain's first atomic bomb; * *Historic interest:* both are vital buildings in our understanding of the nation's atomic bomb research and development, a top-secret programme under the aegis of the High Explosives Research Establishment which through its work at Fort Halstead, and sister sites, was to prove one of Britain's major scientific breakthroughs in the field of military armament; * *Design and form:* the original function of both buildings is legible through their specialised form and both remain little altered from their original design.



HeritageCollective



Buildings F2-1 & F19

Building F2-1

Date of construction - 1988 - 1995

Uses - Magazine

Construction - A portable steel magazine retained within the fort.

History - Newest structure within the fort.

Significance - Low: holds little to no significance.

Designations - N/A

Building F19

Date of construction - 1974 - 1978

Uses - Contains testing or support facilities for F16.

Construction - Brick building with a flat roof comprising two separate units. Purpose built to accommodate flash x-ray equipment.

History - The two halves of the building date to different periods - the western half dates to the 1970s, with the eastern having been added in the mid 1980s. Purpose built to accommodate flash x-ray equipment.

Significance - Low: holds little to no significance.

Designations - N/A



'H' Area

Heritage Collective



Zone H is located to the north of the site and comprises of buildings with a range of construction dates and uses relating to the various phases of development at Fort Halstead, though the majority date to the Second World War and post-war period. The earliest structures within the area date to the late 1930s or early 40s and would have been primarily erected to accommodate the newly formed ADD and ARD arriving from Woolwich Arsenal in 1942.

Throughout the course of the Second World War the 'H' Area, along with the 'A' Area were extended to the north of the fort as the influx of new personnel continued. By the end of the Second World War the area was in use by a variety of organisations, serving both low level administrative and service functions and high level research and development roles. The Ministry of Works occupied a number of buildings in the 'H' area after the Second World War and were responsible for a number of post-war constructions in the area. The Ministry of Works were responsible for government building projects and would have been involved in overseeing the numerous construction programmes implemented at Fort Halstead.

As a result of war time construction, which led to a large number of buildings in areas 'A', 'H', 'Q' and 'X', the majority of existing structures within the area date from the periods mentioned above though there are several examples of later 20th century in-fill buildings. These have presumably been constructed to supplement the gradual expansion of the site throughout the 20th century.





Buildings H1 & H1.1

Building H1

Date of construction - 1938 - 1944

Uses - Security, office and bank.

Construction - Red brick single storey 'bungalow' building, comprising a central rectangular component and southern and western arms, all of which have tiled hipped roofs, the former also having a brick chimney. The building has casement windows on all sides, although one has been in-filled on its frontal facade, facing onto Crow Road.

History - Constructed as a gate lodge and would have stood at what was the former northern boundary and main entrance to Fort Halstead before it was moved in the late 20th century (as a result of the gradual expansion of the site). It served as the police pay and clocking office in 1944 and also guarded the main gate to the site. It fulfilled this role until 1982 since which time the building has been used as a bank and security and communication facilities. It now serves as the site fire station.

Significance - Low: significance can be derived from its historical associations with the one of the first phases of nationally important development at Fort Halstead and it is representative of the ever-changing size and nature of Fort Halstead. Contextually, H1 is of limited architectural interest. It displays little evidence of former use and it no longer relates to its context and the gatehouse.

Designations - N/A

Building H1.1

Date of construction - Post 1999

Uses - Accommodates fire engines.

Construction - A large modern garage structure, in brick and metal panel, with two sets of double roller doors and a low pitch roof.

History - Modern structure built to accommodate the sites fire safety needs.

Significance - Low: no historical or architectural interest.

Designations - N/A



H2



H2.1

Buildings H2 & H2.1

Building H2

Date of construction - 1936 - 1946

Uses - Chemical stores. Laboratory. Police lodge. Medical centre.

Construction - Large brick building comprising two north-south aligned ranges, both of which now have hipped corrugated metal roofs. The eastern range which stands at two storeys exhibits recently replacement modern PVC casement windows to the north-east and south and original shallow four light casements overlooking the single storey range to its west. The two main entrances, on the buildings east side towards Crow Road, are recessed in brick surrounds beneath projecting concrete lintels.

History - Built during the influx of staff attached to the ARD, it is contemporary with a number of other structures associated with the war time construction programme. The building is labelled as chemical stores in 1944, but had become the main CSAR library block by 1947 and remained in this capacity until at least in 1974. It also housed a photography section in c.1952. Since that time it has been used for low level administrative and service functions. It has recently been re-configured as conference facilities.

Significance - Low: historical significance for H2 is derived through its associations with the ARD and CSAR during the significant periods of Fort Halstead's history - the Second World War and the years immediately after its conclusion, though its use as a chemical store then as a library indicates a fairly low level function that marries to a lower level of significance when compared to the principal laboratories and testing facilities at the site. Architecturally, the building is of little interest due to its standard utilitarian design.

Designations - N/A

Building H2.1

Date of construction - 1961 - 1962

Uses - Currently houses MOD police.

Construction - Single storey brick building having a flat felt roof, with barge boarding around the roof edge, and modern casement windows. The building is connected to H2 via building H6 and is terraced below the level of the parking area to its rear.

History - A later addition to the adjacent building of H6, it represents an in-fill building constructed during a period of little major expansion at the site. It's original purpose is not currently known though it is currently used by MOD Police.

Significance - Low: its construction date suggests H2.1 is not associated with any nationally important research and development that was undertaken at Fort Halstead.

Designations - N/A



H4



H4



H5



H5

Buildings H4 & H5

Building H4

Date of construction - 1936 - 1946

Uses - Originally a canteen. Offices, computer suites and occupational health facility.

Construction - Rectangular red brick building comprising two storeys, the ground floor extending slightly beyond the first floor to the north-east and south-west, creating narrow external first floor terraces behind a brick parapet. The structure possesses a flat roof, also behind a brick parapet, and there is a small single storey annexe on the building's north-west side. At the western corner of the building an external stair is incorporated within the rectangular footprint of the ground floor, opening onto the terrace outside an external first floor door. Some of the buildings windows have been in-filled and the remainder have been replaced with modern PVC examples, as have the external doors. The building retains a large room, which probably represents the dining area of the canteen, as an open plan office at first floor level, although a number of small offices have been created through the introduction of stud walls. Previously large rooms at ground floor level have also been partitioned.

History - The building was the canteen block for the site in 1944 but is labelled 'Canteen (Old)' in 1949, by which time the new canteen (A23) had been constructed. A V1 flying bomb caused considerable damage to H4, along with damage to A3, during the latter stages of the Second World War. The building has been turned to use as offices and is mainly used in an administrative function.

Significance - Low: its use as the site's main canteen is indicative of a fairly low level function though it has associations with historically important periods at Fort Halstead - the arrival of the ADD and ARD during the second world war, who would have undoubtedly used the building. It is representative of the site's rapid expansion during the war and post-war years. The building has a limited modest degree of architectural interest as a result of concrete lintel and plinth band.

Designations - N/A

Building H5

Date of construction - 1936 - 1946

Uses - Telephone exchange. Offices. Now a site canteen.

Construction - Rectangular prefabricated concrete whitewashed structure with a low pitched lead roof and a small rectangular annexe with a flat roof on its south western side. Both components feature modern replacement uPVC casement windows. Internally, the building has been reconfigured and now features stud partition walls supporting suspended ceilings.

History - The building was purpose built as a telephone exchange during the war time programme of construction at Fort Halstead and fulfilled this role through the 1940s and 50s before being turned to use as offices. It has recently been refurbished and now fulfils a role as a site cafe.

Significance - Low: though constructed during a significant phase of development at Fort Halstead the building has few associations with the nationally important research and development that was undertaken at the site during the Second World War and the years following its conclusion. Similarly, the building also displays little in the way of architectural interest and derives no significance from this.

Designations - N/A



Building H6

Date of construction - 1947 - 1953

Uses - Toilet facilities. Laboratory.

Construction - Small brick structure with a flat roof now connecting buildings H2 and H2.1 and accommodating toilet facilities. The proportionally large number of windows around the building, some of which are the original vertically arranged four light casements, the others being recent replacements, derives from its original use as a laboratory block. Internally the building has been considerably altered to suit its new purpose and the central corridor features suspended ceilings.

History - Originally built as a laboratory block during a period of major expansion at Fort Halstead, though H6 represents an in-fill building not likely associated with areas that saw major expansion during the post war period. Its label on the 1949 plan is 'odeon' which perhaps relates to a particular project although this description has more recently been used on site in relation to the now demolished Q10 building because it housed a cinema facility.

Significance - Low: some historical significance derived from associations with significant phases of development and research and development at Fort Halstead, though these are not particularly strong owing to its low level use and its changes of use that has diluted what significance it may have held. Like its neighbouring structure, H6 derives no significance from its architecture.

Designations - N/A



Buildings H7 & H7.1

Building H7

Date of construction - 1944 - 1946

Uses - Accommodation. Now offices and laboratories.

Construction - A large single storey office building comprising six spurs extending to the east and west from a central connecting corridor, over the southern end of which stands a water tank. The central corridor is brick built but the spurs have a brick skin over a substantial steel frame, the girders of which are exposed beneath the ceiling, suggesting that the structure may have been intended to support an upper storey. Where they have not been blocked, the building's windows have been replaced with double glazed casement windows. The southern, project managers', wing has been partitioned internally with breeze block. The northern wings remained open plan for draughtsmen, but some areas were later partitioned with plaster board.

History - Built during the wartime construction programme at Fort Halstead (along with drawing office structures A2 and A20 to provide accommodation for the 250 staff that arrived with the ADD and ARD. Building H7 was constructed to house the ADD at the end of the Second World War and is labelled 'CEAD Block No. 2' in 1949. It also incorporated laboratory facilities, as indicated by the presence of ventilation rods shown in aerial photographs of 1946. It has been maintained as offices.

Significance - Low: significance is derived from its historical associations with the ARD, who would have been involved with research into experimental and highly secretive projects being undertaken at Fort Halstead during the Second World War and the post-war years. With regards to architecture, the building is of a standard utilitarian design and derives no significance from this.

Designations - N/A

Building H7.1

Date of construction - Post 1999

Uses - Storage or experimental usage.

Construction - A shed constructed in wood panels on a brick base, with a pitched felt roof. Access is provided by a pair of large double doors.

History - Constructed to provide additional storage or experimental space for H7.

Significance - Low: no historical associations of interest and displays no elements of architectural interest.

Designations - N/A





Buildings H8 & H10

Building H8

Date of construction - 1936 - 1946

Uses - Storage.

Construction - Rectangular whitewashed prefabricated concrete structure with a lead roof. The building has small recessed casement windows divided into six lights, the majority of which are arranged in the north-eastern two thirds of the building, suggesting an internal partition along these lines and a storage function in the south west portion. The arrangement of the two single doors would seem to corroborate this interpretation.

History - The building was the CSAR store and offices in 1947 and this remains its function.

Significance - Low: the building has historical associations with the ADD and CSAR though it fulfilled a low level function and is not directly linked to the research and development carried out at Fort Halstead during the Second World War and post-war period. It is of a utilitarian design and derives no architectural interest from this.

Designations - N/A

Building H10

Date of construction - 1972 - 1974

Uses - Generators and transformers.

Construction - A single storey, windowless, rectangular brick building with a flat roof and two sets of wooden double doors at its southwest end.

History - This building is an in-fill structure not attributed to any major development at Fort Halstead. It replaced an earlier example which was labelled 'breaker house' in 1947 and as 'electrical intake house' in 1949.

Significance - Low: the building's date of construction indicates no important historical associations and its utilitarian design means it derives no architectural significance.

Designations - N/A



Buildings H11 & H12

Building H11

Date of construction - 1936 - 1946

Uses - Administrative and storage.

Construction - A single storey brick building with a pitched roof featuring parapets at each gable end. It is also divided into two by a wall which projects above the roof, separating the original structure from the western portion which was added in the late 1960s. The latter would seem to have an administrative function, featuring two windows on each side, now modern uPVC casements. The original portion of the building, which is buttressed and has no windows but is otherwise similar to the adjacent H12, has two single entrances at its eastern end replacing what would appear to have been double doors.

History - Built as part of the wartime programme of construction to accommodate either the ADD or ARD. It is labelled as a solvent store on a 1947 plan but now houses shredders and stores.

Significance - Low: some historical significance derived from associations with significant phases of development and research and development at Fort Halstead, though these are not particularly strong owing to its low level function. Like its neighbouring structure, H11 derives no significance from its architecture.

Designations - N/A

Building H12

Date of construction - 1936 - 1946

Uses - Store.

Construction - Single storey brick structure of similar construction to the original portion of the adjacent H11. It has a pitched corrugated metal roof with parapets on each gable wall, the eastern of which has a double entrance. Unlike H11 it would appear to have had windows in its southern side at one stage, but these have been in-filled.

History - Built as part of the wartime programme of construction to accommodate either the ARD. It is labelled as a an CSAR acid store on a 1947 plan and fulfils a similar function today.

Significance - Low: some historical significance derived from associations with significant phases of development and research and development at Fort Halstead, though these are not particularly strong owing to its low level function. Like its neighbouring structure, H12 derives no significance from its architecture.

Designations - N/A



Buildings H14 & H16

Building H14

Date of construction - 1936 - 1946

Uses - Office and possibly laboratories.

Construction - A large single storey brick office building with a warehouse roof and smaller flat roofed annexes to the northwest and east. The building, which has modern double glazed windows throughout, is raised above the road to its north on a bund navigated by two brick stairs.

History - Built as part of the wartime programme of construction to accommodate either the ADD or the ARD. It was the CSAR office in 1947 and remains in a similar use, although two large vents beneath the roof line suggest a possible laboratory function.

Significance - Low: some historical significance derived from associations with significant phases of development and research and development at Fort Halstead and the ARD, though these are not particularly strong owing to its low level function. Like its neighbouring structure, H14 derives no significance from its architecture.

Designations - N/A

Building H16

Date of construction - 1936 - 1946

Uses - Originally site's main garage. Drawing office and print room.

Construction - Large workshops building comprising four brick bays, each of which has recent replacement hipped corrugated metal roof. A large garage door fronts each of the bays and there is a small single storey brick annexe running the length of the building's northern side. The building has large multi-light windows on its southern side and smaller examples elsewhere.

History - The building would have been constructed as part of the wartime programme of construction to accommodate an influx of staff attributed to the ADD or ADD. As a whole the building is described as the 'main' garage, as the mechanical transport (MT) sheds, in 1944 but in 1947 it was divided into three sections; a drawing store, a printing room and a garage. It now serves a variety of functions.

Significance - Low: not directly linked to the important research and development carried out at Fort Halstead though has some historical associations through its construction date, which contemporary with other structures directly involved with work carried out by the ADD and ARD during the Second World War and post-war years. The building is representative of the major expansion that took place during the war and the requirement for greater circulation of the site following its growth. The building is of a standard utilitarian design and derives no significance from this.

Designations - N/A





Buildings H18 & H19

Building H18

Date of construction - 1961 - 1967

Uses - Office that has served a variety of administrative functions. Now empty though last functioned as the accommodation and the DSTL site archive and library.

Construction - Single storey L-shaped brick and wood panel building with a flat felt roof. Barge boarding surrounds the roof edge and there is a canopy over the entrance.

History - Original reasons for the construction of the building are unclear though it had served a variety of administrative and low level functions until its decommission. Was likely built with flexibility in mind so as to allow for future changes of use.

Significance - Low: of little significance due in part to its fairly generic construction, design and purpose as an ancillary structure that is not directly related to any of the nationally important research and development undertaken at Fort Halstead. Contains no items that indicate a specific use, other than its form, design and arrangement. Its adaptability and constant change of use is representative of many of the buildings at Fort Halstead which have undergone numerous alterations to function.

Designations - N/A

Building H19

Date of construction - 1936 - 1947

Uses - Storage.

Construction - A windowless brick storage building with a pitched felt roof featuring a single double door beneath a concrete lintel at its north-western corner.

History - Built as part of the wartime construction programme at Fort Halstead following the arrival of the ADD and ARD during the Second World War. It stands on the site of a building marked as 'Records', possibly the precursor to the adjacent H18.

Significance - Low: some historical significance derived from associations with significant phases of development and research and development at Fort Halstead, though these are not particularly strong owing to its low level function. Like its neighbouring structure, H19 derives no significance from its architecture.

Designations - N/A



Buildings H20 & H28

Building H20

Date of construction - 1946 - 1947

Uses - Store.

Construction - A substantial brick building, reinforced with steel beams, comprising two components; a main western section with a flat roof and a superstructure, containing a water tank or plant, over its northern entrance and an eastern wing with a pitched standing seam roof. The building at both ends of its northern frontage.

History - The building is labelled as the 'PAD centre' in plans dating to the 1940s, after which it apparently became the civil defence building. It was turned into a document store in the mid-late 20th century.

Significance - Low: not directly associated with the research and development at undertaken at Fort Halstead during significant phases of its history, but can derive some historical interest through this link. It is of a standard utilitarian style that is seen on a number of contemporary structures throughout the site and it derives little architectural significance from this.

Designations - N/A

Building H28

Date of construction - 1936 - 1947

Uses - Generator housing.

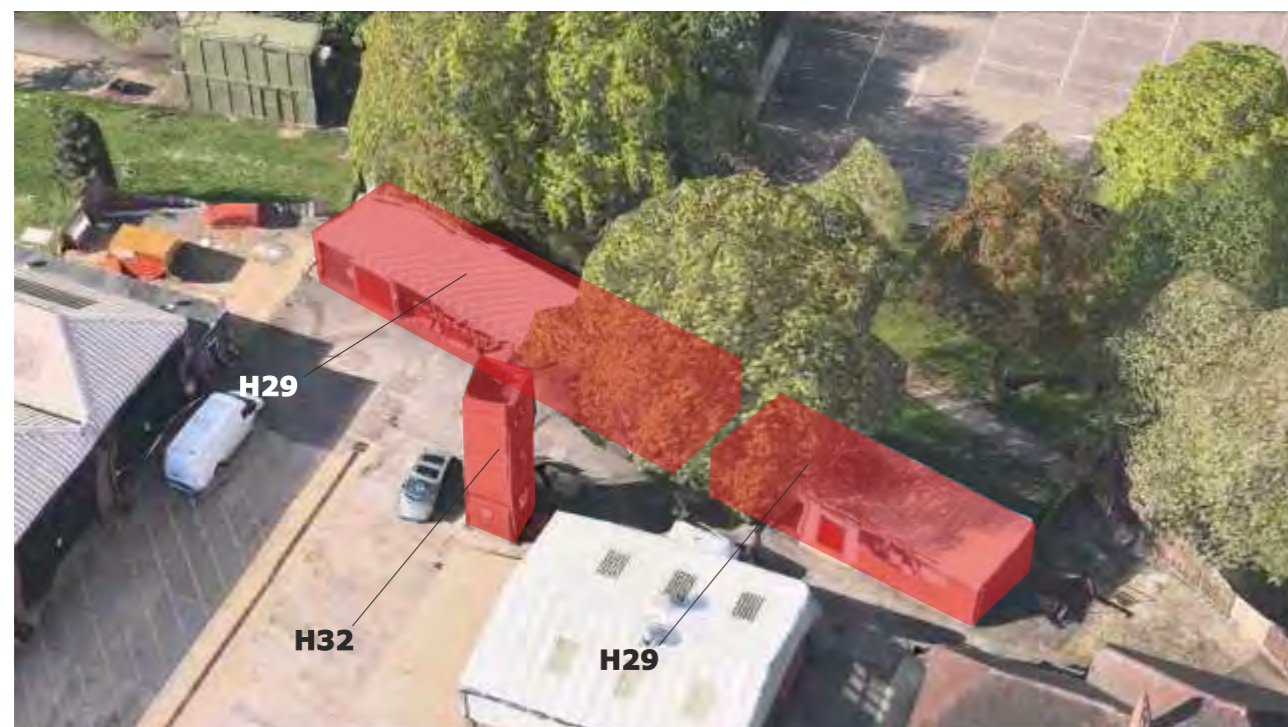
Construction - A tall single storey brick building with an original eighteen and thirty two light casement windows in its southern facade, the former over a double roller door. The pitched asbestos tile roof, which is overlooked by parapet walls over the gable ends, contains twenty roof lights spanning the length of the building to the north of the ridge. A small circular window sits in the eastern gable wall and four tall twelve light windows a spaced equally along the buildings northern side.

History - Built as part of the wartime construction programme at Fort Halstead following the arrival of the ADD and ARD during the Second World War. The building is labelled as 'emergency power plant' and 'power plant' on plans of 1947 and 1949 respectively. The generator originally housed in the building is now a museum and it is now used by the emergency services.

Significance - Low: not directly associated with the research and development at undertaken at Fort Halstead during significant phases of its history, but can derive some historical interest through this link. Its use as an power plant is indicative of the growing needs of the site following the expansion of Fort Halstead during the Second World War. It is of a standard utilitarian style that is seen on a number of contemporary structures throughout the site and it derives little architectural significance from this.

Designations - N/A





Buildings H29, H30 & H32

Building H29

Date of construction - 1936 - 1946

Uses - Garage.

Construction - A single storey brick garage with a corrugated metal roof supported on steel beams and stanchions along its open southern side. A timber boarded shed is incorporated at the south end.

History - Formed part of the wartime construction programme at Fort Halstead and originally provided parking for OCS cars.

Significance - Low: constructed during a key phase of development at Fort Halstead though has weak historical associations owing to its low level function. Is of no architectural significance.

Designations - N/A

Building H30

Date of construction - 1957 - 1961

Uses - Storage.

Construction - A brick storage building constructed around a steel frame with a set of double doors and two three light casement windows in its southern facade.

History - An in-fill building not attributed to any major phase of development at Fort Halstead. It has continued in its original use as storage and now stores fire extinguishers.

Significance - Low: limited or no historical associations of note and is built in a standard utilitarian design from which it derives no architectural interest.

Designations - N/A

Building H32

Date of construction - 1993 - 1995

Uses - Fire training tower.

Construction - A steel frame tower with brick in-filling, standing at three storeys.

History - A structure forming part of the minor development at Fort Halstead that now deals with fire safety.

Significance - Low: no historical or architectural interests.

Designations - N/A



H32



H32



H32



Buildings H33.1 & H34.1

Building H33.1

Date of construction - 1957 - 1961

Uses - Unknown

Construction - A small rectangular brick building, with a flat roof, casement windows on all sides and a single door to the south.

History - An in-fill building not attributed to any major phase of development at Fort Halstead. The reason for its construction is unknown.

Significance - Low: is of little significance with regards to historical and architectural interest.

Designations - N/A

Building H34.1

Date of construction - 1984 - 1985

Uses - Storage.

Construction - Single storey brick structure with a flat corrugated metal roof over barge boarding and accessed through a single double door in its western side.

History - A modern in-fill structure that was previously an annexe to building H34, which is now demolished. It now fulfils a storage role.

Significance - Low: is of little significance with regards to historical and architectural interest.

Designations - N/A



Building H38

Date of construction - 1949 - 1953

Uses - Workshops and laboratories.

Construction - Rectangular brick structure comprising two bays, each of which has a pitched corrugated metal roof, the main rafters of which are supported upon large metal brackets built into the wall and forming a series of trusses. A large store in the north-west corner of the building is accessed by an external sliding garage door, and alternative access to the building is provided by double doors to the north and through a small flat roofed annexe to the east. Although the original wooden partitions survive in places, the interior has been largely reconfigured through the introduction of stud walls and suspended ceilings.

History - Built to accommodate laboratories and workshops as a result of Great Britain's expanding requirement following the conclusion of the Second World War and the beginning of the Cold War. Built slightly later than its neighbouring structures in the 'H' area, it likely represents an in-fill structure not attributed to any major developments at Fort Halstead.

Significance - Low: some historical interest through its associations with the research and development that was conducted at Fort Halstead following the conclusion of the Second World War and the beginning of the Cold War though it is not known what precisely this work entailed and whether it was attributed to the ADD or the ADD. The building displays no architectural merit and therefore derives no significance from this.

Designations - N/A





Building H40

Date of construction - 1949 - 1953

Uses - Administration and security.

Construction - A whitewashed single storey brick building with a pitched standing seam metal roof. All of the windows and doors are modern double glazed replacements. The interior of the building has been entirely renovated for its current use as the main post building for the site and now comprises a main room from which two smaller rooms have been separated by stud walls. A suspended ceiling has been introduced but the original brackets are still visible indicating a truss construction.

History - Originally a clocking station that later dealt with top security telecoms. It is likely an in-fill building not attributed to any major phases of development at Fort Halstead. It is now used as the main post building for the site.

Significance - Low: few historical associations other than being representative of the site's expansion following the end of the Second World War and the beginning of the Cold War. Its dealing with top security telecoms is also indicative of the new need for greater security following the beginning of the Cold War and the top level research and development that was being carried out at Fort Halstead in the mid-20th century. The building has little architectural significance due to its standard utilitarian design.

Designations - N/A



Buildings H42.1 & H43

Building H42.1

Date of construction - 1953 - 1957

Uses - No obvious purpose.

Construction - Small rectangular brick ancillary building with a flat roof over barge boarding. Standing on the north-western corner of a raised car park area to the rear of building H43, it has a single door in the southern side, facing H43, but no windows.

History - Formed part of the minor development in the 'H' area involving the construction of buildings that were to be occupied by the Ministry of Works. It most likely relates to the works that would have been conducted in the now demolished H42 building. The expansion of Fort Halstead during the mid-20th century resulted in the need for a dedicated maintenance team, provided by the Ministry of Works.

Significance - Low: few historical associations related to significant works carried out at the site and no architectural significance.

Designations - N/A

Building H43

Date of construction - 1949 - 1953

Uses - Offices.

Construction - A two storey brick office building with a slightly cambered flat roof. The windows are modern three light double glazed casements and there is a fire escape on the northern wall. A double door at the northwestern corner of the building has been in-filled and, since its construction, H43 has been connected to H28 to its east by the construction of a further similar bay. Extensive internal rearrangement with several doors blocked to combine offices, whilst additional stud walls and suspended ceilings have also been introduced.

History - H43 was purpose built as the main site office for the Ministry of Works, which were involved in government building projects and maintenance of Fort Halstead. Since then it has continued in its office use for various organisations. The expansion of Fort Halstead during the mid-20th century resulted in the need for a dedicated maintenance team, provided by the Ministry of Works.

Significance - Low: its use as a Ministry of Works office results in some historical associations relating to the expansion of the site in the mid 20th century. The introduction of the Ministry of Work buildings is indicative of the site's growing need for proper maintenance following major expansion. It is not related to the nationally important research and development that was conducted at the site during the same period. The building is of a standard utilitarian design and derives no significance from this.

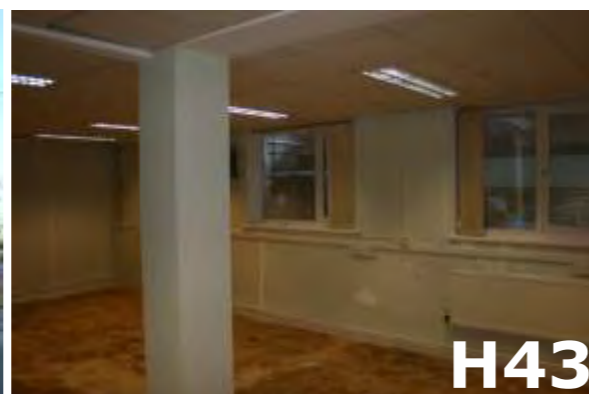
Designations - N/A



H42.1



H43



H43



Buildings H45 & H45.1

Building H45

Date of construction - 1953 - 1957

Uses - Workshops.

Construction - A rectangular brick building with a replacement pitched metal sheet roof featuring skylights at its western end. This also retains a chimney at its west end as testimony to its previous accommodation of a blacksmiths workshop, the buildings in this area being constructed to accommodate the various maintenance departments for the Ministry of Works at the site, also including plumbers, electrical fitters, mechanical fitters and painters. The building now features modern replacement casement windows and doors throughout.

History - Formed part of the minor development in the 'H' area involving the construction of buildings that were to be occupied by the Ministry of Works in the 1950s. The expansion of Fort Halstead during the mid-20th century resulted in the need for a dedicated maintenance team, provided by the Ministry of Works. It now provides office space.

Significance - Low: its use as a Ministry of Works workshop results in some historical associations relating to the expansion of the site in the mid 20th century. The introduction of the Ministry of Work buildings is indicative of the site's growing need for proper maintenance following major expansion. It is not related to the nationally important research and development that was conducted at the site during the same period. The building is of a standard utilitarian design and derives no significance from this.

Designations - N/A

Building H45.1

Date of construction - 1961 - 1967

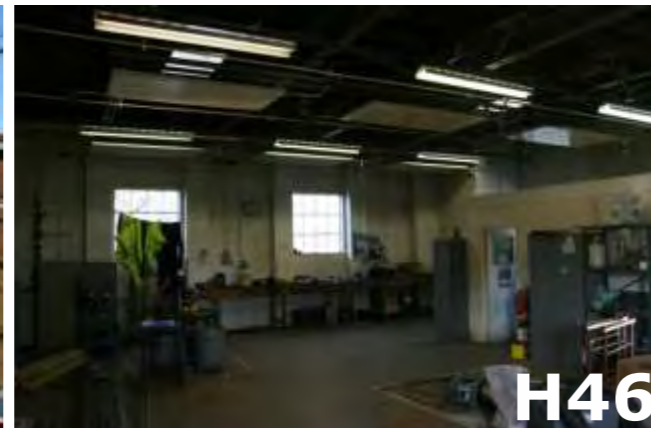
Uses - Storage.

Construction - Single storey brick shed with an asbestos tile roof. The building comprises two units, the western of which has a wood panel front separating a single and double door, each with the respective number of overhead lights. The eastern unit has a brick frontage, originally accommodating a large entrance aperture, for which the concrete lintel remains, but since in-filled to accommodate a smaller set of double doors.

History - Formed part of the minor development in the 'H' area involving the construction of buildings that were to be occupied by the Ministry of Works in the 1950s. The expansion of Fort Halstead during the mid-20th century resulted in the need for a dedicated maintenance team, provided by the Ministry of Works. It now provides office space. It fulfils a similar function today.

Significance - Low: few historical associations related to significant works carried out at the site and no architectural significance.

Designations - N/A



Buildings H46 & H47

Building H46

Date of construction - 1953 - 1957

Uses - Workshop. Office.

Construction - Tall single storey brick structure with a flat roof, accessed through an original sliding garage door to the east. Internally, modern steel gantries support strip lighting and radiators whilst a small office has been inserted within through the erection of stud walls supporting a low plasterboard ceiling in the northeastern corner. The building has original casement windows between internal brick buttresses on its western and northern sides. On its southern side the main building is abutted by a lower flat roofed annexe containing two rooms with a mixture of original and modern casement windows. The western of the two rooms, used as an office, now has a suspended ceiling concealing the steel beams supporting the roof. These are visible in the eastern anteroom.

History - Formed part of the minor development in the 'H' area involving the construction of buildings that were to be occupied by the Ministry of Works in the 1950s. The expansion of Fort Halstead during the mid-20th century resulted in the need for a dedicated maintenance team, provided by the Ministry of Works.

Significance - Low: its use as a Ministry of Works workshop results in some historical associations relating to the expansion of the site in the mid 20th century. The introduction of the Ministry of Work buildings is indicative of the site's growing need for proper maintenance following major expansion. It is not related to the nationally important research and development that was conducted at the site during the same period. The building is of a standard utilitarian design and derives no significance from this.

Designations - N/A

Building H47

Date of construction - 1949 - 1953

Uses - Office and possible laboratories.

Construction - Rectangular single storey workshop range with a replacement pitched metal sheet roof. It is similar in design to H45 to its west, to which it is connected by an unnamed brick addition with a flat roof. H47 has double glazed windows, some retaining original concrete.

History - Slightly pre-dates the surrounding structures that were constructed to house the Ministry of Works and may have been . The expansion of Fort Halstead during the mid-20th century resulted in the need for a dedicated maintenance team, provided by the Ministry of Works. This building now houses offices and possibly laboratories.

Significance - Low: its use as a Ministry of Works office results in some historical associations relating to the expansion of the site in the mid 20th century. The introduction of the Ministry of Work buildings is indicative of the site's growing need for proper maintenance following major expansion. It is not related to the nationally important research and development that was conducted at the site during the same period. The building is of a standard utilitarian design and derives no significance from this.

Designations - N/A



H47.1 & H47.2



H49

Buildings H47. 1, H47.2 & H49

Building H47.1 & H47.2

Date of construction - 1957 - 1961

Uses - Storage.

Construction - Two small brick storage sheds with concrete slab roofs and original wooden double doors facing to the north.

History - Formed part of the minor development in the 'H' area involving the construction of buildings that were to be occupied by the Ministry of Works in the 1950s. The expansion of Fort Halstead during the mid-20th century resulted in the need for a dedicated maintenance team, provided by the Ministry of Works.

Significance - Low: few historical associations related to significant works carried out at the site and no architectural significance.

Designations - N/A

Building H49

Date of construction - 1949 - 1953

Uses - Toilet block.

Construction - Brick structure with a flat roof, on which sits a water tank. The building has original casement windows with concrete sills and lintels throughout. A later flat roofed annexe abuts it to the north.

History - Formed part of the minor development in the 'H' area involving the construction of buildings that were to be occupied by the Ministry of Works in the 1950s. The expansion of Fort Halstead during the mid-20th century resulted in the need for a dedicated maintenance team, provided by the Ministry of Works.

Significance - Low: few historical associations related to significant works carried out at the site and no architectural significance.

Designations - N/A



Buildings H50 & H52

Building H50

Date of construction - 1949 - 1953

Uses - Administrative or laboratory function.

Construction - Rectangular single storey brick building with a very shallow pitched felt roof retaining its original metal casement windows. A later extension to the east is windowless but features double doors to the south, and a small lean-to with a flat roof has been added to the southern side of the building,

History - Non-descript administrative or laboratory structure. Its proximity to Ministry of Work buildings suggest it may have been occupied by the aforementioned, though its possible laboratory function suggests another organisation associated with research and development may have occupied the building afterwards.

Significance - Low: few historical associations related to significant works carried out at the site and no architectural significance.

Designations - N/A



H50



H52

Building H52

Date of construction - 1947 - 1953

Uses - Oil store.

Construction - A lean-to brick structure abutting the eastern end of H28. The building, which now has a replacement corrugated metal roof, is accessible from both northern and southern ends and features six large vents on its eastern face.

History - Constructed as a later lean-to structure to house oil stores used in the boiler in H28. The additional oil stores are indicative of the greater power requirements of the site following major expansions during the Second World War and post-war years.

Significance - Low: few historical associations related to significant works carried out at the site and no architectural significance.

Designations - N/A



H53



Building H53

Date of construction - 1962 - 1967

Uses - Offices or workshops.

Construction - Rectangular brick building with a replacement sheet metal roof over barge boarding. Comprises two identical units each retaining their original casement windows and accessed through a single door.

History - Formed part of the minor development in the 'H' area involving the construction of buildings that were to be occupied by the Ministry of Works in the 1950s. The expansion of Fort Halstead during the mid-20th century resulted in the need for a dedicated maintenance team, provided by the Ministry of Works. The building now contains offices and workshops.

Significance - Low: few historical associations related to significant works carried out at the site and no architectural significance.

Designations - N/A

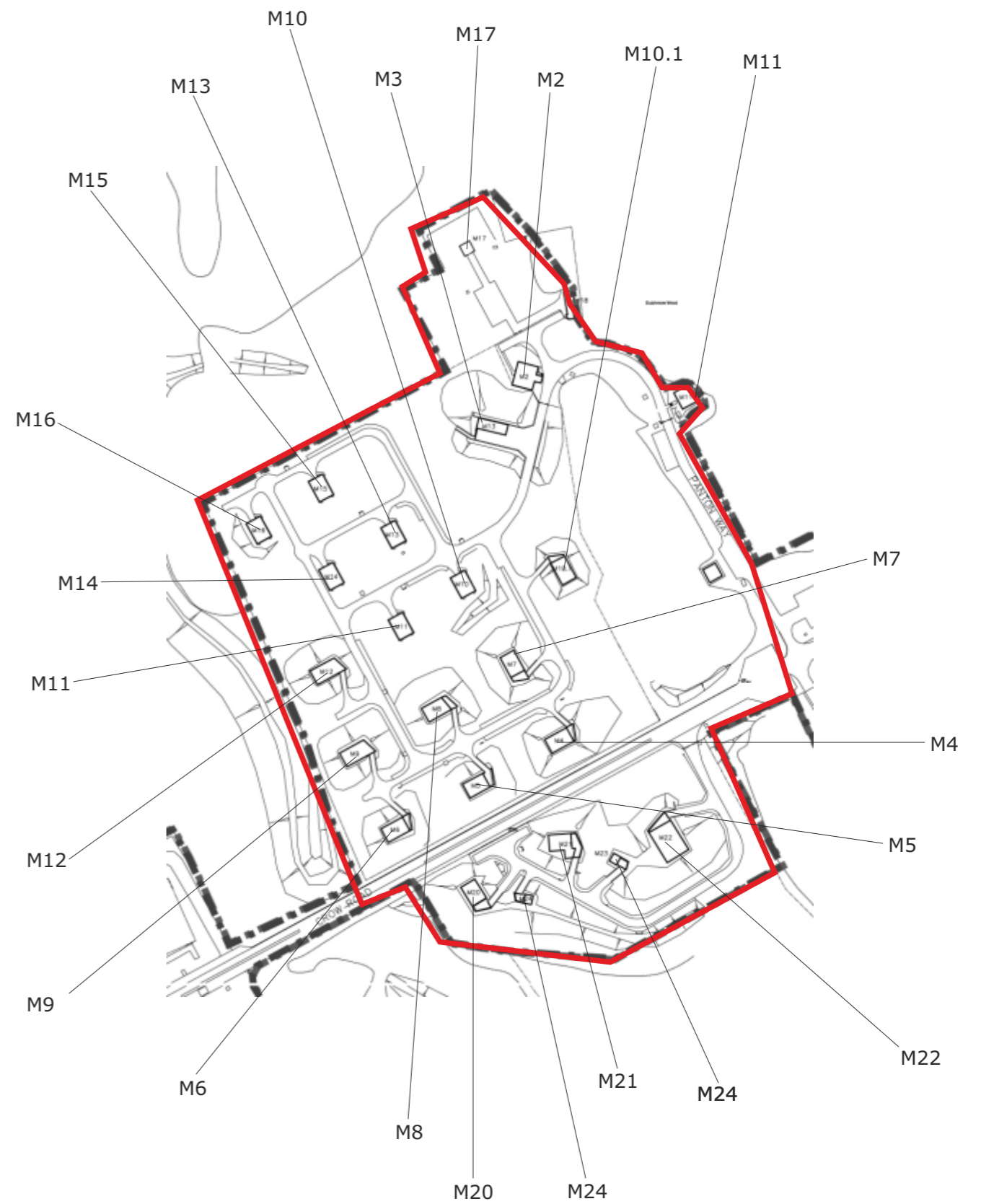
'M' Area

HeritageCollective



The 'M' area is the newest addition to Fort Halstead and is comprised almost entirely of magazines. Developed in the early 1980s, the western site entrance was moved to the junction of Crow Road with Star Hill to accommodate this new magazine facility. Buildings not used as magazines include M2 and M3, explosive receipt buildings that replaced X60. From these buildings explosives would be distributed to processing and testing facilities around the site on small red 'milk float' vehicles.

With the completion of the 'M' area in the mid 1980s, Fort Halstead had attained its maximum extent. Subsequent development has mostly taken the form of in-filling within the established perimeter, although additional magazines constructed between 1988 and 1993 extended the M Area to the south of Crow Road.





Buildings M1 & M2

Building M1

Date of construction - 1981 - 1984

Uses - Office and security.

Construction - Single storey brick building on the approach to the 'M' Area. It has a flat roof behind a shallow parapet, on which sits a small superstructure probably containing an air conditioner. The building, which sits in a slight hollow, has three windows, all on its south eastern side.

History - These buildings are attributed to the re-arrangement of the site in the early 1980s. The building provides security for the magazine area. It retains this function.

Significance - Low: very basic utilitarian design and little historic interest though representative of the site's continual expansion throughout the 20th century.

Designations - N/A

Building M2

Date of construction - 1981 - 1984

Uses - Explosive receipt building.

Construction - Brick building with a flat roof behind a shallow parapet, accessed at its south-eastern side through a contemporary entrance annexe with a flat roof and barge boarding. The building has an additional access to the north-west and fixed windows on the remaining sides.

History - Together M3 replaced the explosive receipt building X60. Explosives are distributed to processing and testing facilities around the site from here. It continues in this function today.

Significance - Low: very basic utilitarian design and little historic interest though representative of the site's continual expansion throughout the 20th century.

Designations - N/A





Building M3

Date of construction - 1981 - 1984

Uses - Explosive receipt building.

Construction - Comprises a main steel lined chamber beneath a reinforced concrete canopy which also spans a loading area between the massive concrete revetments of the compound entrance. The structure is surrounded by mounded earth on each of the remaining sides, egress being provided by a concrete revetted passage to the west.

History - Together M2 replaced the explosive receipt building X60. Explosives are distributed to processing and testing facilities around the site from here. It continues in this function today.

Significance - Low: very basic utilitarian design and little historic interest though representative of the site's continual expansion throughout the 20th century.

Designations - N/A





Buildings M4, M5, M6, M7, M8, M9, M10.1 & M12

Date of construction - 1981 - 1984

Uses - Magazine.

Construction - M4 to M9 and M12 are identical. They comprise flat roofed rectangular magazine structures constructed in reinforced concrete and steel lined with an antistatic floor. The structures are surrounded to roof level by mounded earth on every side with access from the north-west through a reinforced concrete revetted passage. This enters a small lobby beneath a concrete canopy onto which open the steel magazine doors. The earth mounds have allowed these structures to be arranged on various different alignments, unlike the 'frangible' magazines to the north.

History - These buildings are attributed to the re-arrangement of the site in the early 1980s and retain their functions as magazine.

Significance - Low: very basic utilitarian design and little historic interest though representative of the site's continual expansion throughout the 20th century. Some illustrative value as an example of late 20th century magazine types.

Designations - N/A



M4



M5



M5



M9



Buildings M10, M11, M13, M14, M15 & M16

Date of construction - 1981 - 1984

Uses - Magazine

Construction - Buildings M10, M11 and M13-16 are identical. Rectangular magazine structures constructed in steel plate with an external brick skin and flat reinforced concrete roof. The buildings have an antistatic floor and the north-west facing front of the magazine is 'frangible', being designed to blow out in the event of an explosion, thus channelling the explosive energy in a less dangerous direction.

History - These buildings are attributed to the re-arrangement of the site in the early 1980s and retain their functions as magazine.

Significance - Low: very basic utilitarian design and little historic interest though representative of the site's continual expansion throughout the 20th century. Some illustrative value as an example of late 20th century magazine types.

Designations - N/A



M10



M11



M15



M15



Buildings M17 & M18

Building M17

Date of construction - 1981 - 1984

Uses - Burning ground.

Construction - Comprises an area of concrete hard standing shielded from view to the north by a timber frame screen.

History - This structure is attributed to the re-arrangement of the site in the early 1980s and retains its function as a burning ground for the disposal of hazardous materials and small quantities of explosives.

Significance - Low: very basic utilitarian design and little historic interest though representative of the site's continual expansion throughout the 20th century.

Designations - N/A

Building M18

Date of construction - 1986 - 1986

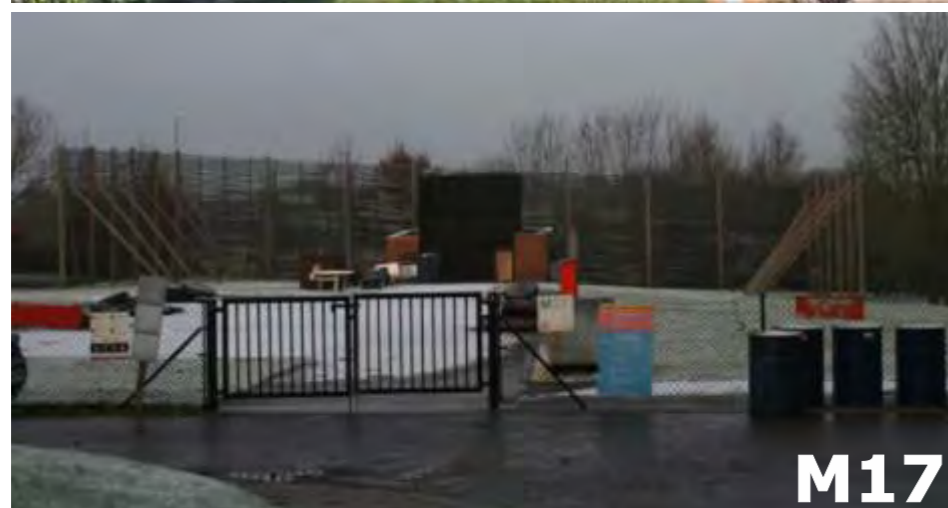
Uses - Control room and utilities.

Construction - Two abutting brick buildings with flat roofs, the earlier south-west portion being slightly lower with barge boarding and having a small brick lean-to shed attached. The structure as a whole features a number of large doors along its facade indicating that it houses electrical circuits, generators or some other utility. The more recent part features a single window that suggests a control room.

History - This structure is attributed to the re-arrangement of the site in the 1980s and retains its function as a control room and housing for services and utilities.

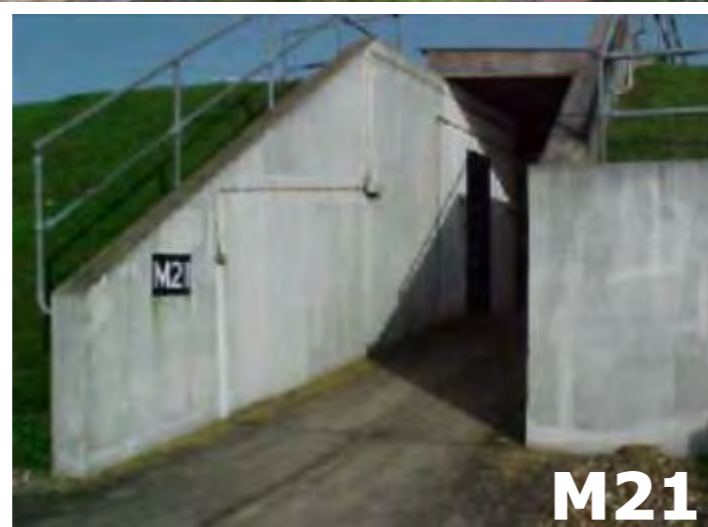
Significance - Low: very basic utilitarian design and little historic interest though representative of the site's continual expansion throughout the 20th century.

Designations - N/A





M20



M21

Buildings M20, M21 & M22

Building 20

Date of construction - 1988 - 1993

Uses - Magazine.

Construction - Flat roofed rectangular magazine. Access restrictions precluded the examination of the structure, but it is probably of similar construction to those to the north of the access road, in reinforced concrete lined with steel plate. The structure is surrounded to roof level by mounded earth on every side with access from the north-east through a reinforced concrete revetted passage. The building appears identical to M21.

History - Additional explosive storage though with strengthened walls, indicating there was a need to store large amounts of explosives. Construction attributed to the expansion and rearrangement of Fort Halstead during the 1980s.

Significance - Low: very basic utilitarian design and little historic interest though representative of the site's continual expansion throughout the 20th century. Some illustrative value as an example of late 20th century magazine types.

Designations - N/A

Building 21

Date of construction - 1988 - 1993

Uses - Magazine.

Construction - Flat roofed rectangular magazine. Access restrictions precluded the examination of the structure, but it is probably of similar construction to those to the north of the access road, in reinforced concrete lined with steel plate. The structure is surrounded to roof level by mounded earth on every side with access from the south through a reinforced concrete revetted passage. The building appears identical to M20.

History - Additional explosive storage though with strengthened walls, indicating there was a need to store large amounts of explosives. Construction attributed to the expansion and rearrangement of Fort Halstead during the 1980s

Significance - Low: very basic utilitarian design and little historic interest though representative of the site's continual expansion throughout the 20th century. Some illustrative value as an example of late 20th century magazine types.

Designations - N/A



Building 22

Date of construction - 1988 - 1993

Uses - Magazine.

Construction - Flat roofed rectangular magazine. Access restrictions precluded the examination of the structure, but it is probably of similar construction to those to the north of the access road, in reinforced concrete lined with steel plate. The structure is surrounded to roof level by mounded earth on every side with access from the east through a reinforced concrete revetted passage. The building appears similar to M20 and M21 although it is slightly larger.

History - Additional explosive storage though with strengthened walls, indicating there was a need to store large amounts of explosives. Construction attributed to the expansion and rearrangement of Fort Halstead during the 1980s.

Significance - Low: very basic utilitarian design and little historic interest though representative of the site's continual expansion throughout the 20th century. Some illustrative value as an example of late 20th century magazine types.

Designations - N/A





M23



M24

Buildings M23 & M24

Building 23

Date of construction - 1988 - 1993

Uses - Magazine.

Construction - Flat roofed rectangular magazine. Access restrictions precluded the examination of the structure, but it is probably of similar construction to those to the north of the access road, in reinforced concrete lined with steel plate. The structure is surrounded to roof level by mounded earth on every side with access from the east through a reinforced concrete revetted passage. The building appears similar to M20 and M21 although it, and the identical M23, are smaller.

History - Additional explosive storage though with strengthened walls, indicating there was a need to store large amounts of explosives. Construction attributed to the expansion and rearrangement of Fort Halstead during the 1980s.

Significance - Low: very basic utilitarian design and little historic interest though representative of the site's continual expansion throughout the 20th century. Some illustrative value as an example of late 20th century magazine types.

Designations - N/A

Building 24

Date of construction - 1988 - 1993

Uses - Magazine.

Construction - Flat roofed rectangular magazine. Access restrictions precluded the examination of the structure, but it is probably of similar construction to those to the north of the access road, in reinforced concrete lined with steel plate. The structure is surrounded to roof level by mounded earth on every side with access from the north-east through a reinforced concrete revetted passage. The building appears similar to M20 and M21 although it, and the identical M23, are smaller.

History - Additional explosive storage though with strengthened walls, indicating there was a need to store large amounts of explosives. Construction attributed to the expansion and rearrangement of Fort Halstead during the 1980s.

Significance - Low: very basic utilitarian design and little historic interest though representative of the site's continual expansion throughout the 20th century. Some illustrative value as an example of late 20th century magazine types.

Designations - N/A



Buildings M25 & M25.1

Building 25

Date of construction - Post 1999

Uses - Warehouse.

Construction - A large warehouse structure of standing seam metal construction on a brick base and with a catslide roof. Access to the building was not possible, but double doors at each end and the surrounding facilities suggest a workshop function. M25, and its ancillary M25.1, lie within a small compound formed by high earth banks and accessed from the north-west, implying a sensitive nature to the activities for which it was constructed.

History - The newest structure at Fort Halstead, along with M25.1. Reasons for its construction are not known.

Significance - Low: very basic utilitarian design and little historic interest though representative of the site's continual expansion throughout the 20th century.

Designations - N/A

Building 25.1

Date of construction - Post 1999

Uses - Storage.

Construction - A windowless rectangular brick structure with a flat roof. The two single doors on its south-eastern facade show that it is composed of two identical units probably having a storage function.

History - The newest structure at Fort Halstead, along with M25. Reasons for its construction are not known.

Significance - Low: very basic utilitarian design and little historic interest though representative of the site's continual expansion throughout the 20th century.

Designations - N/A

'N' Area

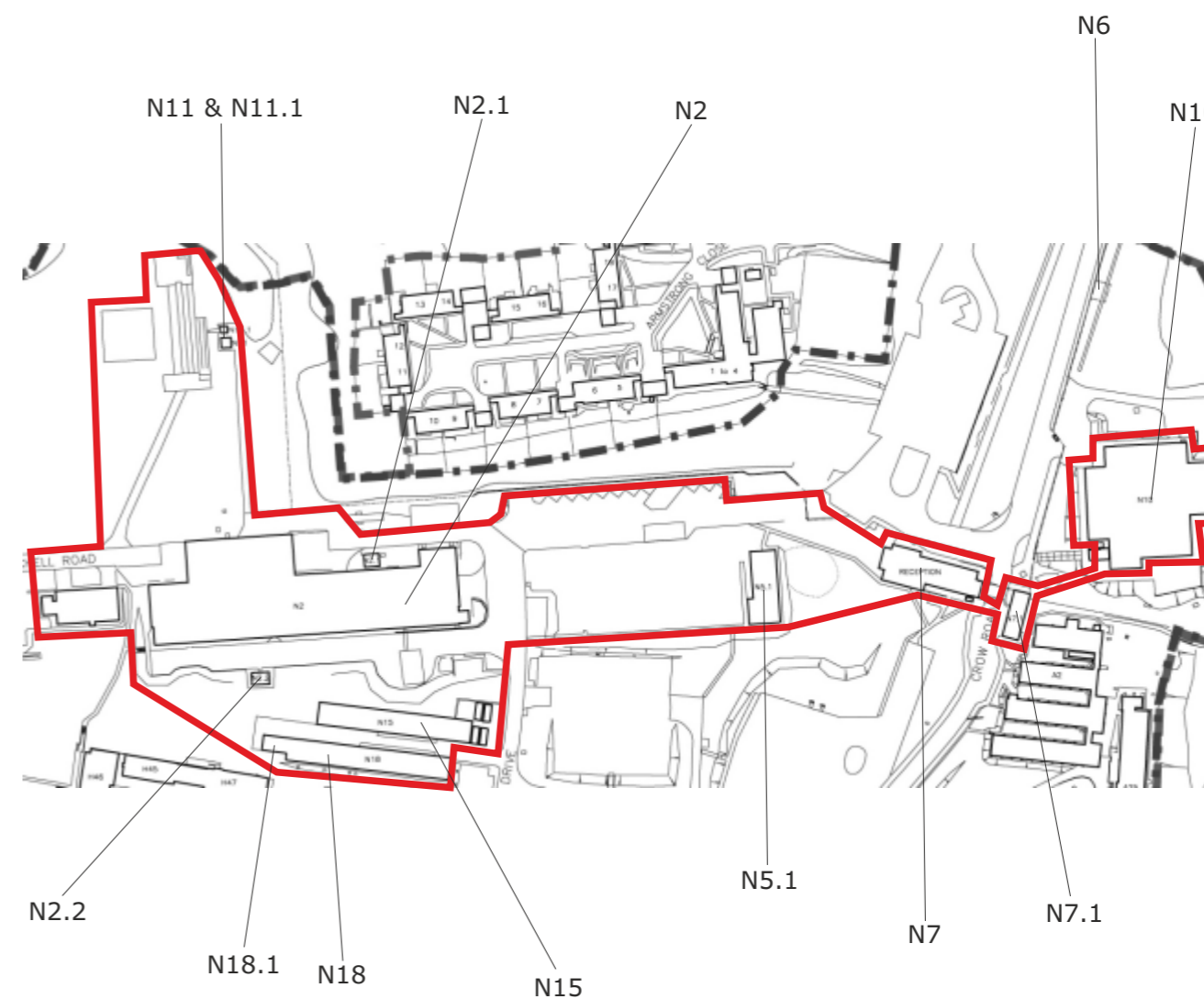
Heritage Collective



The 'N' area has comparatively few buildings and is dominated by the massive 'test house' at N2 to the west of the area, with most of the other structures within the area serving this large structure. Those buildings not serving the test house tend to fulfil an administrative or other low level functions within the fort. A number of the buildings in the 'N' also fall outside the boundary of Fort Halstead, with one (N6) supposedly serving the residences to the north of the site.

The early 1950s saw the growth of Fort Halstead to the north, with the construction of the test house being contemporary with the development of the experimental process buildings in the 'S' area and a number of structures in the 'R' area (which no longer exist). Development within the area has been rather piecemeal throughout the mid to late 20th century and it has also been subject to demolition, indicated by the large areas of open ground punctuated throughout.

Further development in the late 1970s and early 80s saw the site boundary extended northwards and a number of 'N' buildings were constructed in the west of the area as part of the new main entrance to Fort Halstead. Other than the recent expansion of the test house there has been little development in the 'N' area during the late 20th and early 21st centuries.





Building N2

Date of construction - 1949 - 1953

Uses - Testing facility.

Construction - A large hangar structure comprising a number of components which are testament to various stages of construction. The western circa half of the building is constructed in standing seam metal sheeting over a brick base and features a large roller door at its west end, which is also constructed in brick. The western half of the main building, reconstructed within the last ten years, is entirely constructed in standing seam metal sheeting and stands at over twice the height of the eastern part. There are additional double doors on the northern side of the building, including a main door which opens from within a large canopy. This is evidently intended to receive deliveries from large articulated vehicles which enter the site through a dedicated entrance to the east. Of the same standing seam metal construction, this canopy can be closed to conceal the passage of materials into the main building. A single storey brick and sheet metal range runs along the whole of the southern side of the main building and a single storey brick annexe with a flat roof extends to its north-east.

History - Built as the primary structure within the 'N' area, N2 along with N15 and N18 formed part of a major development at Fort Halstead following the end of the Second World War and the beginning of the Cold War. The building is labelled as a 'test house' on a site plan of 1962 at which time its activities included work on gun recoil. In recent years the building, along with numerous other structures at Fort Halstead, has been involved with forensic analysis into explosives, the development of bomb disposal robotics and the testing and analysis of existing and prototype military equipment. The latter being reflected in the recent expansion of the building.

Significance - Low: the primary structure in the area, significance for N2 can be derived from its historical associations with the major developments that were undertaken at Fort Halstead in the mid 20th century and the highly secretive post-war research, development and testing. A functional, extended and altered building of utilitarian architecture lacking interest. Later alterations have deviated from original form

Designations - N/A





Buildings N2.1 & N2.2

Building N2.1

Date of construction - 1961 - 1962

Uses - Storage of hazardous materials.

Construction - A rectangular brick building with a flat roof. Comprises two storage units, each served by double doors and a single side door. Retains its original casement windows.

History - Additional storage structure to N2 built during a phase of little development at Fort Halstead.

Significance - Low: no historical associations with significant periods of Fort Halstead. It is built in a basic and utilitarian style and derives no architectural significance from this.

Designations - N/A

Building N2.2

Date of construction - 1949 - 1953

Uses - Toilet block.

Construction - A single storey brick structure with a water tank in a boarded housing on its flat roof and casement windows flanking a central entrance.

History - Presumably built to provide welfare facilities for those working in the newly constructed N buildings. It continues in this capacity.

Significance - Low: no historical associations with significant periods of Fort Halstead. It is built in a basic and utilitarian style and derives no architectural significance from this.

Designations - N/A





Buildings N5.1 & N6

Building N5.1

Date of construction - 1988 - 1993

Uses - Gymnasium facility.

Construction - Modern single storey L-shaped block in two colours of brick with a standing seam roof.

History - In-fill structure built as an annexe to the now demolished N5, it now accommodate a gym for use by the site staff.

Significance - Low: no historical associations with significant periods of Fort Halstead. It is built in a basic and utilitarian style and derives no architectural significance from this.

Designations - N/A

Building N6

Date of construction - 1949 - 1953

Uses - Pump house or substation for properties on Fort Road.

Construction - Single storey brick building with a concrete slab roof outside the main site. The building has a set of double doors facing onto Crow Drive an original casement window.

History - Described as the substation for the properties on Fort Road to the north, it is indicative of the influx of personnel to the site in the post-war years (some of who were housed in these properties).

Significance - Low: no historical associations with significant periods of Fort Halstead. It is built in a basic and utilitarian style and derives no architectural significance from this.

Designations - N/A



Buildings N7 & N7.1

Building N7

Date of construction - 1981 - 1982

Uses - Reception building and police lodge. Main entrance to the site.

Construction - Single storey modern building and offices constructed in brick with a tiled pitched roof. Three gabled bays project to the south at the structure's western end.

History - Replaced H1 as the site's main entrance lodge and reception building and continues in this role. Is indicative of the expansion at Fort Halstead that took place in the 1980s

Significance - Low: no historical associations with significant periods of Fort Halstead. It is built in a basic and utilitarian style and derives no architectural significance from this.

Designations - N/A

Building N7.1

Date of construction - 1984 - 1985

Uses - Garage. Rest and kitchen facilities.

Construction - A brick built vehicle port with a tiled roof supported on steel beams and stanchions along its open western side. A small flat roofed lodge is attached at the building's northern end. This is furnished with floor to ceiling mirror glass to enable monitoring of the site's main entrance.

History - Modern in-fill structure that was built to provide parking and welfare facilities, presumably for those involved with site security. Continues in this function.

Significance - Low: no historical associations with significant periods of Fort Halstead. It is built in a basic and utilitarian style and derives no architectural significance from this.

Designations - N/A



N7



N7.1



Building N10

Date of construction - 1967 - 1971

Uses - Canteen and social function.

Construction - Large structure positioned immediately outside the main site gate. It is constructed in metal panelling and glazing over a steel frame with a flat felt roof. The building is composed of three main sections; a large canteen area, the kitchens and the CSSC Social Club, together with an additional two brick ranges comprising administrative offices and the 'Director's Dining Room'. The whole structure has stud walls and suspended ceilings throughout.

History - Apparently built in advance of the Queen's visit to the site in 1971. It continues in its capacity as a canteen and now also holds some of the site's archival material.

Significance - Low: no historical associations with significant periods of Fort Halstead, other than the Queen's visit. It is built in a similar style to many contemporary civic structures and derives no architectural significance from this.

Designations - N/A





Building N11 & N11.1

Date of construction - N11 (1946 - 1953), N11.1 (1967 - 1972)

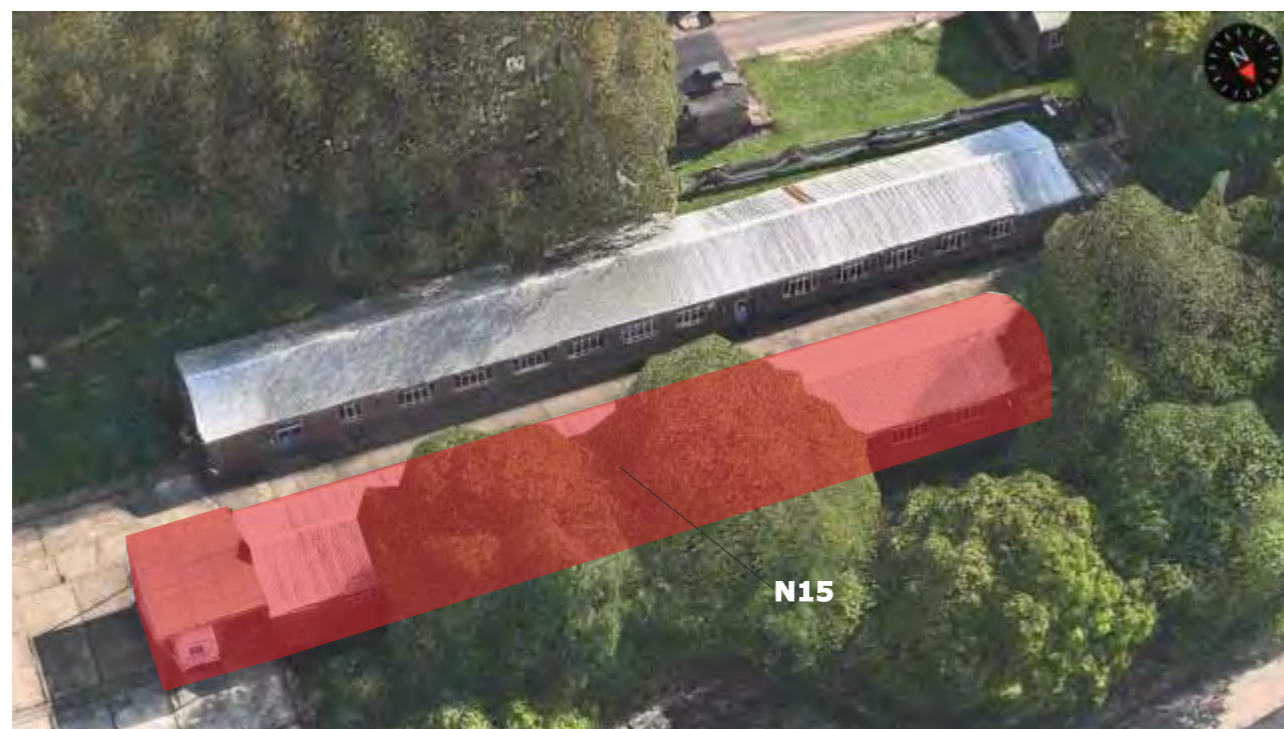
Uses - Observation huts.

Construction - Two flat roofed brick observation huts with large fixed windows overlooking an area of hardstanding to their west used for testing. Between the huts and the hardstanding, a length of railway track and an expanse of tarmac were used to convey test equipment including 'wheel barrow' bomb disposal robots, whilst an expanse of grass is now used to train police dogs. The area of hardstanding is labelled as the site of two fuze hoists in 1974 suggesting that this area may then have been replaced by structure R65 as the site's pyrotechnic testing facility.

History - N11 was built during a phase of major development at Fort Halstead and is roughly contemporary with the N2 'test house'. N11.1 is a later addition not attributed to any major phases of development. The area may have been replaced by structure R65 as the site's main pyrotechnic testing facility.

Significance - Low: some historical associations with the post-war period of Fort Halstead but its function as an observation hut(s) is indicative of it being involved with low level testing. In terms of architecture interest the building derives little from its generic utilitarian design.

Designations - N/A



Building N15 & N17

Building N15

Date of construction - 1949 - 1953

Uses - Workshops. Offices. more recently been used by the military police for training and to accommodate various amenity groups such as the Christian Fellowship.

Construction - Long single storey brick range with a pitched corrugated sheet roof and metal framed casement windows. A steel frame vehicle porch lies at the eastern end of the building, in what was obviously a loading area. Internally, the building would appear to have originally comprised large open sections divided by brick partitions, each accessed by its own external door. One section of the building contains a compartmentalised office, defined by half glazed stud walls, and it may be that the building originally contained more such rooms. However, the walls respect the suspended ceiling, which conceals the roof construction, and these are therefore probably inserted.

History - Contemporary with the large test house to the north and N18 to the south, it is representative of the major developments that occurred at Fort Halstead following the end of the Second World War and the beginning of the Cold War. Originally employed as workshops the building has more recently been used by the military police for training and to accommodate various amenity groups such as the Christian Fellowship.

Significance - Low: some historical associations with the post-war period of Fort Halstead but its function as a workshop indicates it wasn't directly involved with the testing of experimental armaments that form a significant element of the site's historical significance. In terms of architectural interest the building derives little from its generic utilitarian design.

Designations - N/A

Building N17

Date of construction - 1946 - ?

Uses - Storage

Construction - Shed structure removed from the remainder of the site on the corner of Crow Drive and Beckman Close. The majority of the structure is constructed of wood lathing over a wooden frame surmounted by a pitched felt roof. The eastern gable end of the building is brick built with a large concrete lintel over a substantial frame housing a metal roller door and a single door with a grill.

History - Built during a major phase of development at Fort Halstead to provide additional storage, though its position outside the main site would suggest that this was not of a sensitive nature.

Significance - Low: a low level function with minor historical associations with significant periods of Fort Halstead. It is built in a generic and utilitarian style and derives no architectural significance from this.

Designations - N/A





Buildings N18 & N18.1

Building N18

Date of construction - 1949 - 1953

Uses - Workshops, offices, storage and site welfare facilities for contractors.

Construction - Long single storey brick range with a pitched corrugated metal roof and original casement windows. The building was the same length as the adjacent N15 until the mid to late 1960s when it was extended to the west. In common with N15, the building would appear to have originally comprised large open sections divided by brick partitions, each accessed by its own external door. However, internal partitions have been introduced, creating a corridor on the southern side of the building which serves office spaces along its length. A suspended ceiling conceals the truss roof construction.

History - Contemporary with the large test house and N15 to the north, it is representative of the major developments that occurred at Fort Halstead following the end of the Second World War and the beginning of the Cold War. Originally employed as workshops the building has more recently been used to provide storage and site welfare facilities for contractors.

Significance - Low: some historical associations with the post-war period of Fort Halstead but its function as a workshop indicates it wasn't directly involved with the testing of experimental armaments that form a significant element of the site's historical significance. In terms of architectural interest the building derives little from its generic utilitarian design.

Designations - N/A

Building N18.1

Date of construction - 1967 - 1972

Uses - Substation and storage.

Construction - Small square brick ancillary to the west of N18 with a flat roof, attached to the main building by a canopy comprising corrugated plastic sheeting on a frame of wood planking supported on metal posts. The building comprises two parts divided by a brick partition wall. The southern portion is accessed through a single door, whilst the northern portion is accessed through a set of double doors. The building has no windows.

History - In-fill structure that presumably serves the processes undertaken N18 and is representative of the changing functions and requirements of the buildings at Fort Halstead.

Significance - Low: a low level function with no historical associations with significant periods of Fort Halstead. It is built in a generic and utilitarian style and derives no architectural significance from this.

Designations - N/A





Building N21

Building N21

Date of construction - 1967 - 1972

Uses - Security.

Construction - A small brick building with a flat roof, accessed by a single door onto Crow Drive and with replacement casement windows overlooking the approaches along this road.

History - Not attributed to any major phase of redevelopment at Fort Halstead and was built as a police lodge, presumably to provide additional security for the 'N' area.

Significance - Low: a low level function with no historical associations with significant periods of Fort Halstead. It is built in a generic and utilitarian style and derives no architectural significance from this.

Designations - N/A

'Q' Area

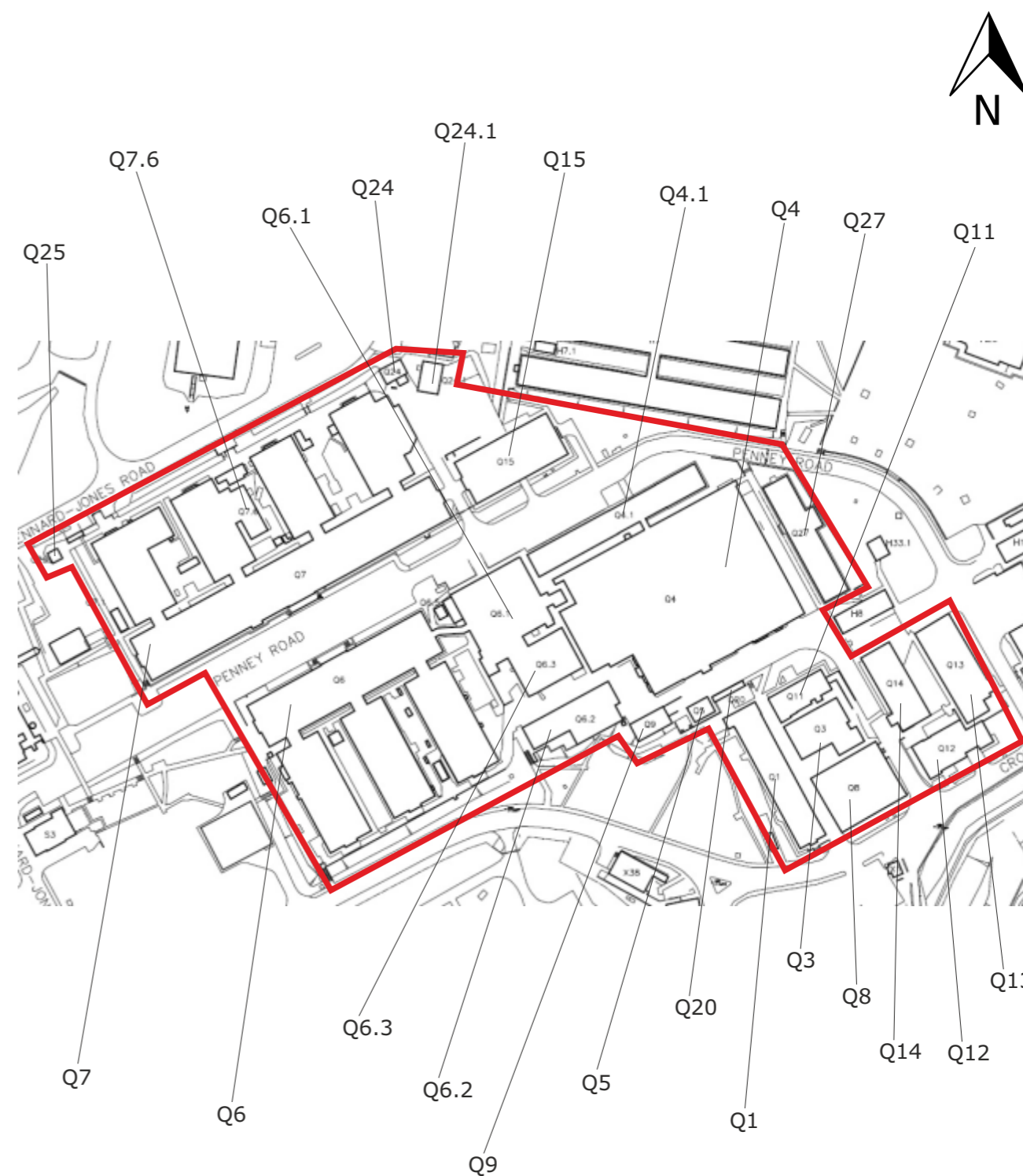
HeritageCollective

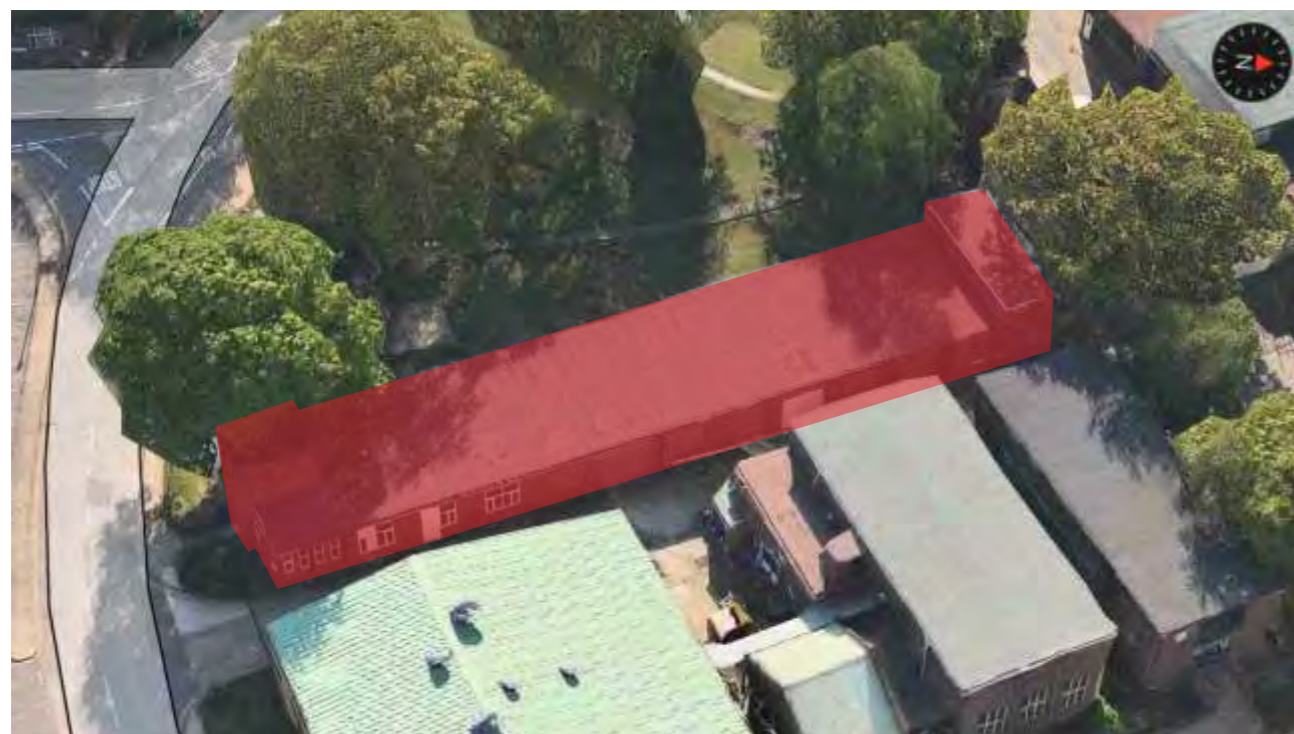


The atomic research carried out at Fort Halstead began in 1947 and was headed by Chief Superintendent Armament Research Dr William Penney. Despite its importance, research was initially conducted in modest facilities within a fenced off enclave of existing buildings. As the project expanded, significant developments were carried out to the north-east of the fort, forming part of what is the 'Q' series of buildings. These buildings were solely built to support the High Explosive Research programme and comprised additional laboratories and drawing offices, and ancillary structures and workshop facilities. Significant development occurred between 1947 - 1949 with additional laboratories, drawing offices, ancillary structures and workshop facilities being rapidly constructed in order to meet the Government's atomic requirements.

Although Q14 is the most prominent and distinctive building in Zone Q and the only listed building outside the confines of the 'fort', a number of the surrounding structures also fulfilled important roles within the research and development of Britain's first atomic weapon and were used by William Penney and his team. These buildings were occupied by the HER team until 1949, when Aldermaston was allocated as the headquarters of the British atomic weapon programme and the HER team was gradually moved here between 1950 and 1954.

As with other buildings on the site, the use of a number of buildings have changed since their construction, representing the ever-changing nature of the site.





Building Q1

Date of construction - 1944 - 1946

Uses - Original function not known. Laboratory and offices.

Construction - Single storey brick building with original casement windows and a flat felt roof. The main entrance, onto Crow Road, is recessed with a projecting surround providing additional support for an overlying superstructure. Accessed externally at first floor level through a double door beneath a concrete lintel, this was probably intended to house air conditioning, heating or ventilation plant. This is indicated by what appear to be in-filled vent apertures beneath the superstructure's concrete roof slab, although this may simply be decoration.

History - The building is not shown on the 1944 site plan, but it is labelled on a plan of 1947 as 'block 'o'', lying in the middle of six CEAD 'experimental buildings', and then as 'Block 'D' (CSAR) on 1949 indicating a change in departmental occupation. The building also fell within the HER enclave after the arrival of William Penney as the CSAR in 1947 and would have likely been involved with the research and development into the atomic bomb. The building has since been used as an electronics lab and offices and now apparently performs a secure storage function, as suggested by the metal bars visible behind the windows.

Significance - Moderate: significant historical associations with the top secret research and development into explosives and armaments, carried out at Fort Halstead during the Second World War by the ADD and then the ARD. Formed part of the secure inner area of the HER teams enclave and would have been directly related to the work carried out by Penney's atomic weapons team. In terms of architecture the building is fairly basic and has a generic and utilitarian design through which the building's function is difficult to discern. From this the building derives little significance. As part of the inner enclave involved with atomic research and development Q1 also derives some group value with a number of neighbouring structures.

Designations - N/A



Building Q3

Date of construction - 1947 - 1949

Uses - Now contains electrical equipment, offices and storage.

Construction - Building comprises two main brick built components; a double height single storey workshop and a single storey administration block to its south. The former has a flat roof and three six light casement windows at each end between brick buttresses. It features a single storey annexe on its southern side, to the west of the administration block, through which a double door provides access onto a small storage yard. The main building is connected, via a small flat roofed entrance lobby, to the administration block. The latter has a catslide roof overlooked by parapets at its gable ends. A door on the southern side of this building has been in-filled but a covered walkway from its western door connects it to Q8 to its south.

History - Q3 was purpose built to support the work carried out by Penney's HER team and their research into detonators that were to be used in Britain's first atomic bomb. Q3 was apparently originally concerned with metrology but now deals with electrical equipment and also contains offices and storage. The nature of the building's original use may be indicated by the presence of a large suspended crane within the main workshop

Significance - Moderate: significant historical associations with the top secret research and development into the detonators that would be fitted to Britain's first atomic weapon. Formed part of the secure inner area of the HER teams enclave and would have been directly related to the work carried out by Penney's atomic weapons team. In terms of architecture the building is fairly basic and has a utilitarian design through which the building's function is difficult to discern. From this the building derives little significance. As part of the inner enclave involved with atomic research and development Q3 also derives some group value with a number of neighbouring structures.

Designations - Within the setting of a listed building (Q14).



Buildings Q4 & Q4.1

Building Q4

Date of construction - 1947 - 1949

Uses - Workshop

Construction - A large workshop building comprising three large bays aligned north-west to south-east, with an additional shorter bay to the south-west. Each bay comprises a tall open steel frame structure with a brick skin and a raised roof of standing seam metal. These roofs contain rows of casement windows overlooking lower felt roofed ranges between them, and to the south-west of the shorter such bay. A lower flat roofed annexe also abuts the building here. The lower ranges contain office accommodation interspersed with workshop space and have small rectangular windows along the main south-eastern facade. The building was extended to the west in the late 1960s and to the east in the early 1970s.

History - Originally built as workshops to be occupied by the HER team whilst they developed Britain's first atomic bomb, it now accommodates both QinteQ and a variety of contractors, the respective areas having been separated through the erection of stud partitions. Q4 is shown on plans of 1949, at which time it was the site's main workshop for boring gun barrels.

Significance - Moderate: one of the principal structures in the 'Q' area and has significant historical associations with the top secret research and development into the detonators that would be fitted to Britain's first atomic weapon. Formed part of the secure inner area of the HER teams enclave and would have been directly related to the work carried out by Penney's atomic weapons team. It also believed Q4 may have accommodated bomb casings prior to assembly of mock-ups in Q14. In terms of architecture the building is basic and has a utilitarian design through which the building's function is difficult to discern. From this the building derives little significance. As part of the inner enclave involved with atomic research and development Q4 also derives some group value with a number of neighbouring structures.

Designations - Within the setting of a listed building (Q14).

Building Q4.1

Date of construction - 1947 - 1949

Uses - Laboratories and workshops.

Construction - Long single storey brick range, nominally an annexe to Q4. Comprises a central block with a shallow pitched corrugated metal roof flanked by two slightly lower ranges with flat felt roofs over barge boarding, the south-western of the two being approximately twice the length of the other. The brickwork of the two flanking ranges has been painted. The main, north-western, frontage is lined with original fifteen light casement windows.

History - Purpose built to accommodate laboratories and offices associated with the atomic research programme. Has retained these functions.

Significance - Moderate: although not a primary structure within the 'Q' area Q4.1 derives some significance through associations with the top secret research and development into the detonators that would be fitted to Britain's first atomic weapon. Formed part of the secure inner area of the HER teams enclave and would have been directly related to the work carried out by Penney's atomic weapons team. Like the neighbouring structures Q4.1 has been built in a generic and utilitarian style from which little architectural interest is derived.

Designations - N/A



Buildings Q5, Q9 & Q20

Building Q5

Date of construction - 1947 - 1949

Uses - Probably a substation of pump house.

Construction - Single storey brick store with a flat roof with barge boarding at the eaves. The building has three two light casement windows along its rear and two casement windows and a single louvred wooden door on its north western facade.

History - Built to support work in principal 'Q' buildings and has continued in this capacity.

Significance - Low: built as an in-fill structure well after the departure of the atomic research team and derives no significance from historical associations or architectural interest.

Designations - N/A

Building Q9

Date of construction - 1949 - 1953

Uses - Battery charging and storage of hazardous chemicals.

Construction - Tall prefabricated concrete frame structure comprising an open garage area for vehicles and a buttresses brick chamber with large louvred wooden garage doors.

History - Built to support work in principal 'Q' buildings.

Significance - Low: built as an in-fill structure shortly after the departure of the atomic research team and derives no significance from historical associations or architectural interest.

Designations - N/A

Building Q20

Date of construction - 1949 - 1953

Uses - Gas cylinder store.

Construction - Single storey brick with a sloping asbestos tile roof over barge boarding. The building is divided into four compartments, each of which can be secured behind a metal mesh fence.

History - Built to support in principal 'Q' buildings.

Significance - Low: built as an in-fill structure shortly after the departure of the atomic research team and derives no significance from historical associations or architectural interest.

Designations - N/A



Q5



Q9



Q20



Buildings Q6 & Q6.1

Building Q6

Date of construction - 1947 - 1949

Uses - Office and laboratory space. Continues in this function.

Construction - Single storey brick over steel frame building comprising a main south-west to north-west aligned range from which three perpendicular spurs extend to the south-east. The main range and spurs each have valley roofs in corrugated metal. Although smaller, Q6 is almost identical in design and construction to the contemporary Q7 to its north-west. Each side of the building is lined with modern replacement casement windows. The entrance to the main range is via a plinth on Penney Road, but each of the spurs also features an entrance at their south-eastern end, each set beneath a narrow brick porch.

History - Almost identical to the contemporary Q7 building to the north-west, this building was constructed in the late 1940s to provide office and laboratory space for the influx of staff at the base following the Second World War. The building was included in the secure HER enclave and would provide laboratories and office space for those involved with the atomic research programme.

Significance - Low: although not a primary structure within the 'Q' area Q4.1 derives some significance through associations with the top secret research and development into the detonators that would be fitted to Britain's first atomic weapon. Formed part of the secure inner area of the HER teams enclave and would have been directly related to the work carried out by Penney's atomic weapons team. Like the neighbouring structures Q6 has been built in a generic and utilitarian style from which little architectural interest is derived.

Designations - N/A

Building Q6.1

Date of construction - 1947 - 1949

Uses - Office or administrative use along with workshops and laboratories.

Construction - A large single storey brick structure with a three bay valley roof in corrugated metal. This building forms an annex to Q6, to its south-west, to which it is attached by a brick corridor with a flat roof. The front range of the structure, looking onto Penney Road, is lined with replacement modern casement windows flanking a central double door. A flat roofed brick annexe attaches this building to Q6.3 to its south.

History - This building was constructed in the late 1940s, together with Q6, to provide office and laboratory space for the influx of staff at the base following the Second World War. The building was included in the secure HER enclave and would provide laboratories and office space for those involved with the atomic research programme.

Significance - Low: although not a primary structure within the 'Q' area Q4.1 derives some significance through associations with the top secret research and development into the detonators that would be fitted to Britain's first atomic weapon. Formed part of the secure inner area of the HER teams enclave and would have been directly related to the work carried out by Penney's atomic weapons team. Like the neighbouring structures Q4.1 has been built in a generic and utilitarian style from which little architectural interest is derived.

Designations - N/A



Buildings Q6.2 & Q6.3

Building Q6.2

Date of construction - 1947 - 1949

Uses - Spray shop, glass blowing workshop - now storage.

Construction - This brick building comprises two components; a long range of workshops alongside a shorter garage structure. Along its open north-western side, the former has a row of original casement windows interspersed with original single wooden doors relating to the separate brick workshop units divided by brick partitions. This part of the building has a pitched roof of metal sheeting and corrugated plastic sheeting, designed to allow maximum light into the building. The roof is surmounted by pronounced ridge tiles and large central extractor relating to a furnace in the workshop below. The north-eastern gable end of this building features a pair of doors, with overhead lights and flanked by tall casement windows, which provide external access to two small offices at this end of the building. The light of the northern door, and its corresponding window, are both now in-filled but the stone lintels can still be seen. The garage structure comprises a lean-to onto the side of the workshop range, accessed through a large metal sliding door. Its mansard roof, which is supported on a series of shaped girders, also comprises both sheet metal and corrugated plastic sheeting.

History - The structure as a whole originally accommodated a spray shop and glass blower but now provides storage for grounds men's equipment and supplies. Fell within the HER enclave and would served those working on the atomic bomb. It now provides storage for grounds men's equipment and supplies.

Significance - Low: although contemporary with neighbouring structures associated with Penney and his HER team the building's low level function decreases the historical associations the building has the atomic research programme at Fort Halstead. The structure is also of a generic, utilitarian design and derives no significance from this.

Designations - N/A

Building Q6.3

Date of construction - 1949 - 1953

Uses - Possibly a laboratory serving Q6.

Construction - A large corrugated metal warehouse building, with a pitched roof of similar construction, accessed by roller doors at its southern and eastern corners. A single door and small window at its western corner suggest a small office at this location. Four large multi light windows line its south-eastern side.

History - This building was constructed in the late 1940s, together with Q6, to provide office and laboratory space for the influx of staff at the base following the Second World War. The building was included in the secure HER enclave and would provided laboratories and office space for those involved with the atomic research programme.

Significance - Low: although not a primary structure within the 'Q' area Q4.1 derives some significance through associations with the top secret research and development into the detonators that would be fitted to Britain's first atomic weapon. Formed part of the secure inner area of the HER teams enclave and would have been directly related to the work carried out by Penney's atomic weapons team. Like the neighbouring structures Q4.1 has been built in a generic and utilitarian style from which little architectural interest is derived.

Designations - N/A



Buildings Q6.4, Q6.5, Q6.6 & Q6.7

Building Q6.4 & 6.5

Date of construction - 1953 - 1957 (Q6.4), 1961 - 1967 (Q6.5)

Uses - Storage (Q6.4), infrastructure role (Q6.5).

Construction - Small brick ancillary structures a flat roofs. Q6.5 is accessed through a double door and the structure has an external metal ladder to its roof.

History - In-fill structures not attributed to any major phase of development at Fort Halstead. They retain their original functions.

Significance - Low: built as an in-fill structure well after the departure of the atomic research team and derives no significance from historical associations or architectural interest.

Designations - N/A

Building Q6.6 & Q6.7

Date of construction - 1957 - 1961 (both)

Uses - Testing equipment (Q6.6), office or administrative (Q6.7)

Construction - Both small ancillary brick structures with flat roofs and a casement window

History - In-fill structures not attributed to any major phase of development at Fort Halstead. They retain their original functions.

Significance - Low: built as an in-fill structure well after the departure of the atomic research team and derives no significance from historical associations or architectural interest.

Designations - N/A



Q6.4



Q6.5



Q6.6



Q6.7



Buildings Q6.8, Q6.9 & Q6.10

Date of construction - 1961 - 1967

Uses - Emergency Showers.

Construction - Small brick structures between the central and north-eastern spurs of Q6, with a flat roof and louvred double doors on its one open side.

History - Presumably built as a safety measure for the use of chemicals in Q6 and its ancillary buildings. These structures are now disused.

Significance - Low: built as an in-fill structure well after the departure of the atomic research team and derives no significance from historical associations or architectural interest.

Designations - N/A





Building Q7

Date of construction - 1947 - 1949

Uses - Office and laboratory space - retains original functions.

Construction - Single storey brick over steel frame building comprising a main south-west to north-west aligned range from which four perpendicular spurs extend to the north-west. The main range and spurs each have valley roofs in corrugated metal. Although larger, Q7 is almost identical in design and construction to the contemporary Q6 to its south-east. It has though been supplemented by the addition of two brick annexes, each with a pitched corrugated metal roof, adjoining the two south-westerly spurs. Each side of the building is lined with modern replacement casement windows. The entrance to the main range is *via* a plinth on Penney Road, but each of the spurs also features an entrance at their south-eastern end, each sat beneath a narrow brick porch. A large sheet metal extension (Q7.2) was added to its north-eastern side in the mid 1990s. This features a large roller door permitting vehicular access, probably to provide a secure loading bay for the facility.

History - The main building was constructed in the late 1940s, together with Q6, to provide office and laboratory space for the influx of staff at the base following the Second World War. Since the building's construction, internal partitions have been added and removed in line with the requirements of various projects. Fell within the original inner secure area of the HER team's enclave and would have been accommodated functions associated with research and development into Britain's first atomic weapon.

Significance - Low: although not a primary structure within the 'Q' area Q4.1 derives some significance through associations with the top secret research and development into the detonators that would be fitted to Britain's first atomic weapon. Formed part of the secure inner area of the HER teams enclave and would have been directly related to the work carried out by Penney's atomic weapons team. Like the neighbouring structures Q6 has been built in a generic and utilitarian style from which little architectural interest is derived.

Designations - N/A





Buildings Q7.4, Q7.5, Q7.6 & Q25

Building Q7.4

Date of construction - 1981 - 1985

Uses - Possible laboratory function.

Construction - Single storey brick building with a flat roof over barge boarding. The building has two external double door entrances suggesting that it comprises two internally separate units.

History - Modern in-fill structure added to Q7 to provide additional laboratory space. Continues in this capacity

Significance - Low: built as an in-fill structure well after the departure of the atomic research team and derives no significance from historical associations or architectural interest.

Designations - N/A

Building Q7.5 & Q7.6

Date of construction - 1981 - 1985

Uses - Both buildings fulfil a storage, or possibly experimental, function.

Construction - A single storey brick structure, ancillary to Q7, with a flat roof over barge boarding. The building has three sets of double doors beneath concrete lintels along its southern side, the western of which is slightly elevated and features vents. Although not clear, it would seem that these doors are those of Q7.6 whilst the other two relate to Q7.5.

History - In-fill building not connected to a specific phase of development at Fort Halstead.

Significance - Low: built as an in-fill structure well after the departure of the atomic research team and derives no significance from historical associations or architectural interest.

Designations - N/A

Building Q25

Date of construction - 1957 - 1961

Uses - Both buildings fulfil a storage, or possibly experimental, function.

Construction - Tall single storey brick shed with a flat roof, ancillary to Q7. The structure has a single double door beneath a concrete lintel on its eastern side. The aperture was originally larger than what looks to be a reused door, and the remainder of the void has been brick in-filled.

History - In-fill building not connected to a specific phase of development at Fort Halstead.

Significance - Low: built as an in-fill structure well after the departure of the atomic research team and derives no significance from historical associations or architectural interest.

Designations - N/A



Buildings Q8 & Q11

Building Q8

Date of construction - 1985 - 1993

Uses - Library. Testing facility.

Construction - Large single storey structure of steel frame construction with a two tone brick skin. It has a pitched standing seam metal roof which features three large ventilation ducts, and the windows are small double casements with brown metal surrounds. Internally this modern building is partitioned with breeze block walls and has a suspended ceiling.

History - Originally built as a library to serve the 'Q' it now fulfils a role as a testing facility for batteries and other electronics. It represents another in-fill structure not attributed to any major phase of development at Fort Halstead.

Significance - Low: built as an in-fill structure well after the departure of the atomic research team and derives no significance from historical associations or architectural interest.

Designations - N/A

Building Q11

Date of construction - 1961 - 1967

Uses - Warehouse.

Construction - Tall brick warehouse building with a flat roof. The double door main entrance in its eastern end is overlooked by a large five light window and accessed via a concrete and brick ramp. A large in-filled doorway on the southern side of the building would appear to have originally provided access to the earlier Q3 to the south.

History - The building was purpose built to accommodate a jig-bore and is air conditioned.

Significance - Low: built to house engineering activity post dating the atomic research team's activity at the site although exact role is not known. The building lacks architectural interest.

Designations - N/A





Building Q12

Date of construction - 1957 - 1961

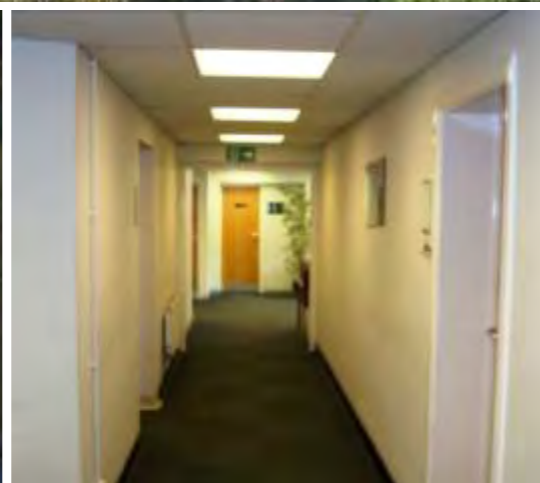
Uses - Site doctors. Now offices.

Construction - Building comprising an L-shaped single storey brick cottage structure, with a hipped roof featuring a central chimney, and a later flat roofed brick wing is attached to its north and east. The whole features modern casement windows throughout. The older portion has been subject to some small changes including in-filled windows and internal reorganisation. A recent conversion has involved the insertion of stud walls in the eastern part of the building there had previously been double doors for the reception of the site ambulance and a lobby flanked by treatment rooms.

History - The building was formerly the site doctor's surgery but is now offices.

Significance - Low: built as an in-fill structure well after the departure of the atomic research team and derives no significance from historical associations or architectural interest.

Designations - Within the setting of a listed building (Q14).





Building Q13

Date of construction - 1936 - 1946

Uses - Storage, laboratories, offices and administration.

Construction - A large brick office building standing at two storeys but with a three storey frontal (southern) entrance and stair block from which a single storey flat roofed brick annex extends to the south. The eastern side of the three storey block incorporates a tall two by ten light stair window flanked by external decorative buttresses. The stair provides access to the flat roof around which runs a guard rail. The roof is also accessed via a fire escape block abutting the rear (north) of the building which connects with a small first floor terrace on this side of the building. A large wooden superstructure sitting atop the entrance block houses a water tank or boiler, the pipes from which are supported out of this structure on a short length of parapet wall. A similar section of wall stands along the western side of the building, suggesting that a similar arrangement may have once stood here. The building features recent replacement casement windows throughout around which concrete banding provides detailing, and this is supplemented in the case of the window over the main entrance by brickwork relief. Internally, spinal corridors on both floors provide access to offices and meeting rooms, some of which have been converted from laboratories. The connecting main staircase is in the original period style as are many of the internal doorways, over-lights and other fixtures and fittings, and a large original wooden door provides alternative exterior access at the northern end of the building.

History - This building was one of several structures in this part of the Fort Halstead site used by William Penney and his team during their work on the UK's first atomic weapon though it was built before his arrival in 1947. A surviving drawing of December 1939 confirms its construction to the original phase of the ARD. It is labelled as simply 'Laboratory block' on a plan of 1944 but is described as the CSAR Chemical Laboratory in 1947, during which time Penney held that position (Chief Superintendent Armament Research). It now appears to fulfil an administrative role.

Significance - Moderate: significant historical associations with the top secret research and development into explosives and armaments, carried out at Fort Halstead during the Second World War by the ADD and then the ARD. Formed part of the secure inner area of the HER teams enclave and would have been directly related to the work carried out by Penney's atomic weapons team. Along with Q1 and Q14, Q13 occupied a relatively prominent role in the development of the site. In terms of architecture the building is fairly basic and has a generic and utilitarian design through which the building's function is difficult to discern. This being said the building derives some interest from the use of architectural embellishments, which add to the structures architectural significance. As part of the inner enclave involved with atomic research and development Q13 also derives some group value with a number of neighbouring structures.

Designations - Within the setting a listed building (Q14).



Building Q14

Date of construction - 1949 - 1953

Uses - Workshop and offices.

Construction - A tall two storey brick workshop and office block with a flat roof behind a low parapet. The building has a small brick lean-to store at its south-west corner. The building has an external metal fire escape on its southern side. The windows are all recent replacement casements, and it is evident that the ground floor originally comprised a much taller workshop space where the original windows on its northern and western sides have been replaced with smaller examples and the remaining void in-filled with brick. The ground floor is accessed by a single door on its eastern side and by a double door to the south, both of which lie next to identical in-filled versions. Along the building was vacant at the time of survey, it would appear that the ground floor has been converted to a smaller scale workshop or, to judge by the carpet, an open plan office. The walls remain bare painted brickwork, this conversion was accompanied by the insertion of a suspended ceiling mounting strip lights at a level which corresponds to the brick in-filling to the windows, thus creating a void above, beneath the original ceiling of the workshop. Looking up through displaced ceiling tiles, it was not possible to confirm the suggestion that an in-situ suspended crane was present in this void. At first floor level, a spinal corridor provides access to offices. The windows throughout this remainder of the building retain their original sill tiling, on which substantial brackets suggest the original presence of some kind of grill over the windows.

History - This building was one of several structures in this part of the Fort Halstead site used by William Penney and his team during their work on the UK's first atomic weapon, a fact that is commemorated by a brass plaque affixed to the western side of the building, unveiled by Penney himself in 1982. It is possible that its role included electrical fitting and the assembly of mock-ups of the early atomic devices. After the departure of Penney and the HER team between 1949 - 1954 the building most likely continued to function as a workshop with associated office space. It is now empty.

Significance - High: see below

Designations - Grade II Listed.

List entry Number: 1396578

REASONS FOR DESIGNATION: Building Q14, Fort Halstead is listed at Grade II for the following principal reasons: * Historic interest (personnel): of considerable significance nationally for its association with William Penney, Chief Superintendant of Armaments Research, who led Britain's atomic bomb development programme here and which association is celebrated by a memorial plaque; * Historic interest (bomb development): the only building nationally where the prototype bomb was put together and thus instrumental in the detonation of Britain's first atomic bomb in 1952; * Form and design: purpose-built for Britain's atomic bomb development programme. Although a functional building without architectural embellishment its form expresses the secrecy surrounding the programme, being blind on the public-facing side, and which retains its original workshop space and support accommodation for the assembly of the prototype warhead and ballistic casing; * Group value: for its associations with Fort Halstead and the contemporary buildings within and outside of the mobilisation centre which were also part of the atomic bomb development work.



Building Q15

Date of construction - 1949 - 1953

Uses - Photo labs.

Construction - Single storey brick building with a standing seam metal valley roof. Essentially the same design as the spurs of building Q7 to its west, the building has entrances at both ends, each sat under a narrow brick porch. The building now features double glazed casement windows throughout.

History - Built around the period that the HER team was moved to Aldermaston, Q15 was still involved in Britain's atomic programme - in 1952 Q15 apparently housed the photography section responsible for producing films documenting the UK's atomic bomb tests on Christmas Island. Its current use is not known.

Significance - Low: although not a primary structure within the 'Q' area Q15 derives some significance through associations with Britain's atomic programme. Q15 has been built in a generic and utilitarian style from which little architectural interest is derived.

Designations - N/A



Building Q24 & Q24.1

Building Q24

Date of construction - 1949 - 1953

Uses - Garage. Possibly testing.

Construction - Single storey brick building with an external stair providing access to the roof. The building is accessed through a double door at its west end. This and brick in-filling seem to have replaced a much larger aperture and two narrow window apertures high in the side of the building which have also been in-filled. These have been replaced with larger sliding windows suggesting a more active use for the building.

History - Built around the period that the HER team was moved to Aldermaston, Q24 occupied a role as storage or testing facility. Examples of buildings elsewhere on the site (e.g. F16) suggest that the roof access may relate to the installation and maintenance of testing equipment.

Significance - Low: no known historical associations with the atomic research programme or other programmes related to significant research and development at Fort Halstead. Is of a generic utilitarian design from which little significance is derived.

Designations - N/A

Building Q24.1

Date of construction - 1967 - 1972

Uses -

Construction - A brick built double garage with a flat roof over painted boarding. Two roller doors fill the main door apertures. Small pivot windows run along the top of each of the other walls and there is a single door in the building's eastern corner.

History - An in-fill structure not attributed to any major phases of development at Fort Halstead.

Significance - Low: built as an in-fill structure well after the departure of the atomic research team and derives no significance from historical associations or architectural interest.

Designations - N/A



Building Q27

Date of construction - 1967 - 1972

Uses - Office block. Now Empty.

Construction - Large late 1960s office block with a flat roof, constructed in steel frame supporting facades of hung tiles and plastic panelling surrounding uPVC casement windows and doors. The building has entrances in the centre of its western and eastern sides, the latter through a single storey annex, and a fire escape serves emergency exits on its southern side. The internal floors, which are also supported on the steel frame, are characterised by stud partitions separating open plan office spaces over which are suspended ceilings.

History - Built at a time when Fort Halstead seems to have been influenced as much by economic considerations as by such factors as new technology or developing intelligence assessments of the threats posed to the country. Larger buildings such as Q27 were constructed in utilitarian fashion in similar styles and materials to their contemporary civilian counterparts, frequently with prefab steel or concrete frames clad in brick or aluminium sheets. No information is available as to what functions Q27 fulfilled over the years though its current arrangement suggests it was maintained in an office or administrative use.

Significance - Low: of little significance with regards to historical or architectural interest. It displays some architectural features not seen on other buildings in this part of the site, such as hung tiles and joinery items though these are not considered to be of architectural interest. Contains no items that indicate a specific use, other than its form, design and arrangement.

Designations - N/A

'R' Area

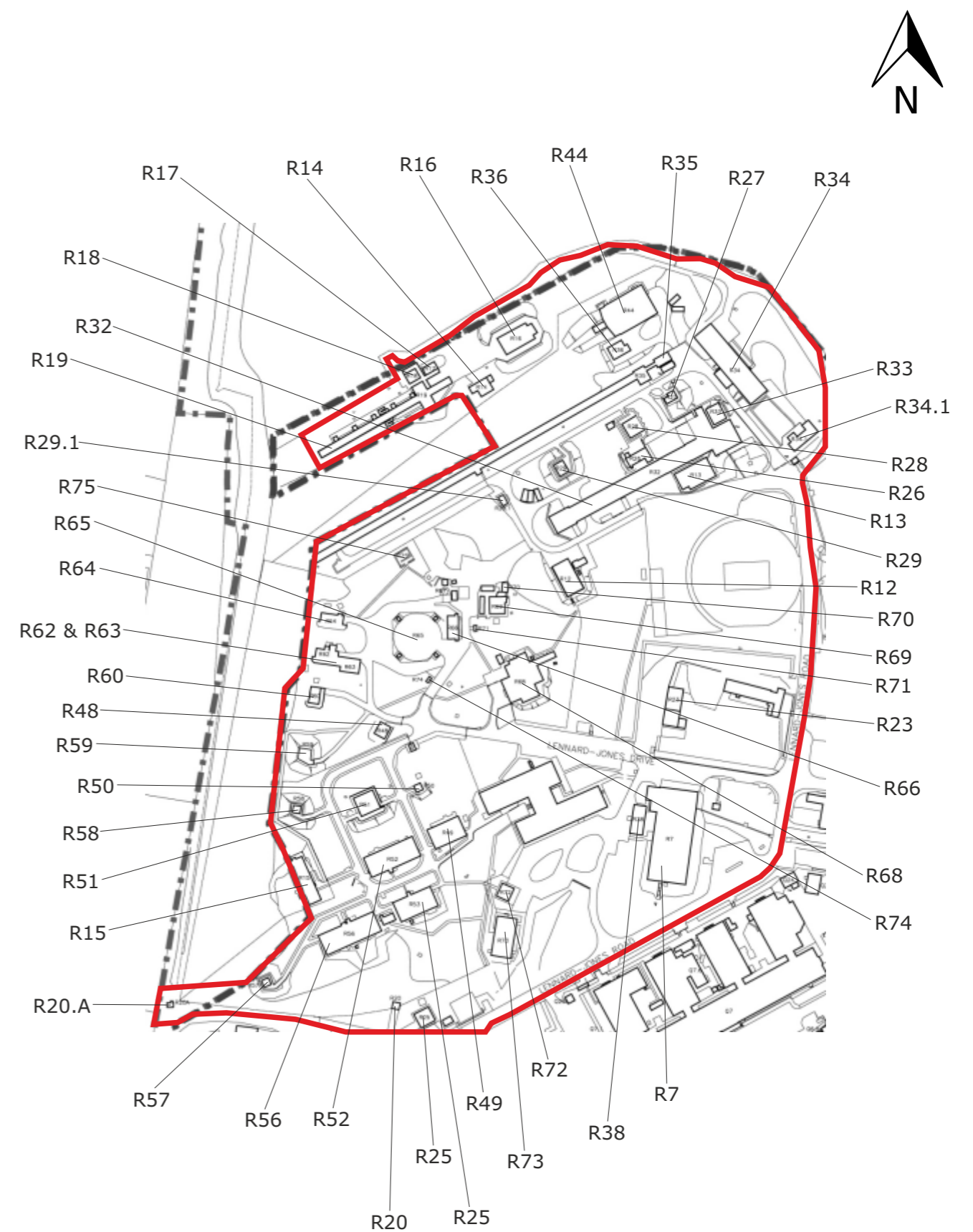
Heritage Collective



The 'R' zone has a number of building types though the primary structures relate to processing of explosives and ballistics testing. The area was first occupied in either the early 40s following the arrival of the ADD and ARD from Woolwich Arsenal in 1942. It was once again expanded in the early 1950s, along with S and N area, though none of these buildings appear to survive.

The R area was subject to minor in-fill development throughout the middle of the 20th century though the large firing ranges and supporting structures were constructed in the eastern R area between 1967 and 1972. Major redevelopment at the end of 1970s saw new structures added, which comprised two main groups; the south-western concerned with explosives processing, shell filling and pyrotechnics and the north-eastern with high explosives. The former incorporated the existing 'frangible' processing buildings. This expansion was shortly followed by a smaller phase of redevelopment in the early 1980s and comprised the construction of an additional range and support buildings at the northern extent of the site.

A number of in-fill structures have been added to the area in the late 20th century though a number of existing structures now appear to be empty and several have been scheduled for demolition.





Building R7 & R38

Building R7

Date of construction - 1936 - 1946

Uses - Storage, offices and meeting facilities.

Construction - Large warehouse structure in corrugated metal with a pitched roof of standing seam metal partially interspersed with corrugated plastic sheeting. The front of the building has recently been reconfigured, with the frontal facade being replaced and now incorporating modern casement windows and a larger roller door. The original casement windows survive on the sides and rear of the building and it has a metal fire escape at its north-eastern corner providing egress from a first floor door, suggesting an internal gallery. A brick administration block with a flat roof over barge boarding is attached to the north-west corner of the main structure. This has casement windows and a single recessed door at the front.

History - One of the first buildings to occupy the 'R' area and one of the only remaining structures in this part of the site that dates to the early years of Fort Halstead as a military research facility. It is labelled as a 'hangar' in 1947, at which time it provided the main site stores, including a repository for old gun barrels. It now apparently provides office and meeting facilities and secure storage for sensitive materials.

Significance - Low: is contemporary with the older structures in the 'H' area to the east and can possibly be associated with the work that was undertaken at Fort Halstead following the arrival of research and development organisations that occupied the site prior to and during the Second World War. With regards to architecture it is of a standard utilitarian design and derives little architectural significance from this.

Designations - N/A

Building R38

Date of construction - 1972 - 1974

Uses - Storage of hazardous materials.

Construction - Tall single storey brick building with a corrugated asbestos tile pitched roof topped by ridge vent tiles. The building is accessed via a slight concrete ramp to a central double door which is flanked by groups of four horizontally arranged awning windows, and two pairs of awning windows are also positioned beneath each gable end. Two small square fixed windows at either end of the building are low in the wall, suggesting a basement or semi-basement.

History - Likely built as an in-fill structure to facilitate the storage of hazardous materials in conjunction with R7.

Significance - Low: no historical associations with significant periods of Fort Halstead. It is built in a basic and utilitarian style and derives no architectural significance from this.

Designations - N/A



Buildings R12 & R13

Building R12

Date of construction - 1986 - 1993

Uses - Storage

Construction - Large warehouse structure with a pitched roof of standing seam metal construction over a steel frame. A large roller door dominates the main (northern) facade, where it is also accompanied by a single access door. A lean-to structure of identical construction stands against the main structure's east side, as does a further flat roofed structure.

History - Modern in-fill structure that is contemporary with R13 though falls outside the secure north section of the R area. Has maintained its storage function.

Significance - Low: no historical associations with significant periods of Fort Halstead. It is built in a basic and utilitarian style and derives no architectural significance from this.

Designations - N/A

Building R13

Date of construction - 1986 - 1993

Uses - Storage.

Construction - Modern warehouse structure constructed with a brick base and a standing seam upper and pitched roof. Fixed windows line either side of the structure, whilst its front features a folding garage door a single door alongside and an additional window.

History - A modern in-fill structure that is associated with the secure north section of the R area. It was built slightly than its neighbouring structures and is probably used for storage or testing, as suggested by the hazardous material signs on its frontage, which it still does.

Significance - Low: no historical associations with significant periods of Fort Halstead. It is built in a basic and utilitarian style and derives no architectural significance from this.

Designations - N/A





Buildings R14 & R15

Building R14

Date of construction - 1981 - 1985

Uses - Unknown, possibly ancillary to R19.

Construction - A single storey brick building with a flat roof over barge boarding. The building comprises three sections; a main rectangular structure featuring garage roller door alongside a single door, a brick annex with its own single door built onto the side of the original structure and a wooden lean-to. The former two components (including the annex which is labelled R15 although this number is also employed elsewhere) are probably internally separate.

History - The expansion of the western part of the 'R' area in the late 1970s and 80s was followed by construction of R19 together with its supporting structures (R14 and R16 - R18), at what is now the northern extent of the R area. The testing of rockets is carried out in this range, and continues in this capacity today.

Significance - Low: no historical associations with significant periods of Fort Halstead. It is built in a basic and utilitarian style and derives no architectural significance from this.

Designations - N/A

Building R15

Date of construction - 1972 - 1974

Uses - Testing and administrative function.

Construction - A large, low building with a flat roof. The front of the building is constructed in brick, whilst the rear portion is built in concrete. From external inspection alone, the building would appear to exist in two parts; the southern featuring four window bays flanking a double door, and the northern featuring two casement windows flanked by two single doors. It seems likely that the double door in the southern section gives access onto a large ante-room. Large vents on this side of the building indicate a similar function for both areas.

History - Attributed to no major phase of development at Fort Halstead though is likely contemporary with the processing buildings to the east.

Significance - Low: no historical associations with significant periods of Fort Halstead. It is built in a basic and utilitarian style and derives no architectural significance from this.

Designations - N/A



Buildings R16 & R17

Building R16

Date of construction - 1984 - 1985

Uses - Rocket preparation area.

Construction - Large structure composed of pre-cast reinforced concrete panels, probably around an internal steel skeleton. The building appears to comprise two identical units, the respective north and south entrances to which are each screened by mounded earth behind concrete revetting which opens to the west and east.

History - The expansion of the western part of the 'R' area in the late 1970s and 80s was followed by construction of R19 together with its supporting structures (R14 and R16 - R18), at what is now the northern extent of the R area. The testing of rockets is carried out in this range, and continues in this capacity today.

Significance - Low: no known historical associations with significant periods of Fort Halstead. It is built in a basic and utilitarian style and derives no architectural significance from this. Some interest as a purpose built structure associated with the site's later weaponry research.

Designations - N/A

Building R17

Date of construction - 1984 - 1985

Uses - Ammunition preparation.

Construction - Flat roofed pre-cast concrete slab structure with a projecting porch of corrugated plastic sheeting on a wooden frame over its sole southern double door entrance.

History - The expansion of the western part of the 'R' area in the late 1970s and 80s was followed by construction of R19 together with its supporting structures (R14 and R16 - R18), at what is now the northern extent of the R area. The testing of rockets is carried out in this range, and continues in this capacity today.

Significance - Low: no historical associations with significant periods of Fort Halstead. It is built in a basic and utilitarian style and derives no architectural significance from this.

Designations - N/A



Buildings R18 & R19

Building R18

Date of construction - 1984 - 1985

Uses - Test monitoring.

Construction - Flat roofed pre-cast concrete slab structure with a projecting porch of corrugated plastic sheeting on a wooden frame over its sole northern double door entrance.

History - The expansion of the western part of the 'R' area in the late 1970s and 80s was followed by construction of R19 together with its supporting structures (R14 and R16 - R18), at what is now the northern extent of the R area. The testing of rockets is carried out in this range, and continues in this capacity today.

Significance - Low: no historical associations with significant periods of Fort Halstead. It is built in a basic and utilitarian style and derives no architectural significance from this.

Designations - N/A

Building R19

Date of construction - 1984 - 1985

Uses - Firing range.

Construction - Constructed in precast concrete slabs the range features a butt of over 100 tons of sand at the target (western) end in which to arrest tested projectiles. A number of ancillary wings radiate from the firing position at the eastern end of the range, within which materials are prepared and analysed. In addition, four gates, comprising concrete frames lined with corrugated plastic sheeting, provide periodic access along its northern side. Metal scaffolding supports further corrugated plastic sheeting over the roof of the range, providing a covered walkway, accessed via a metal stair on the building's north side, for monitoring and maintenance.

History - The expansion of the western part of the 'R' area in the late 1970s and 80s was followed by construction of R19 together with its supporting structures (R14 and R16 - R18), at what is now the northern extent of the R area. The testing of rockets is carried out in this range, and continues in this capacity today.

Significance - Low: no historical associations with significant periods of Fort Halstead. It is built in a basic and utilitarian style and derives no architectural significance from this. Its purpose built form illustrates its distinctive use.

Designations - N/A



R18



R19



R19



Buildings R20, R20.A & R22.A

Building R20

Date of construction - 1972 - 1974

Uses - Function not clear.

Construction - A small brick building comprising a square ground floor, half of which supports an additional superstructure. The whole building is flat roofed. The ground floor has two casement windows and is accessed by a single door. The upper part of the structure is windowless and a large tap protruding over the lower part of the building betrays a tank of sorts.

History - Not attributed to any major phase of development at Fort Halstead and its use is not known.

Significance - Low: a low level function with no historical associations with significant periods of Fort Halstead. It is built in a generic and utilitarian style and derives no architectural significance from this.

Designations - N/A

Building R20.A

Date of construction - 1972 - 1974

Uses - Possibly a guard house. Present function not clear.

Construction - A small single storey L-shaped brick building with a flat roof over barge boarding.

History - Its position at the edge of the site suggests that this building could have been a guard house. However, the sole window has been in-filled indicating a change of function, whilst large inserted wires suggest the presence of electrical equipment, the nature of which is unclear.

Significance - Low: a low level function with no historical associations with significant periods of Fort Halstead. It is built in a generic and utilitarian style and derives no architectural significance from this.

Designations - N/A

Building R22.A

Date of construction - 1993 - 1995

Uses - Substation

Construction - A brick substation with a flat roof and barge boarding. Accessed via vented double doors on its northern side.

History - An in-fill building not attributed to any major phases of development at Fort Halstead. The building may have previously formed an annex to the now demolished R22 Information Systems building.

Significance - Low: a low level function with no historical associations with significant periods of Fort Halstead. It is built in a generic and utilitarian style and derives no architectural significance from this.

Designations - N/A



Buildings R23 & R25

Building R23

Date of construction - 1957 - 1961

Uses - Received goods and distributed to the rest of the site.

Construction - Single storey distribution building, constructed in brick over a steel frame and with a flat roof over wood slats. The building has a roller door on its southern side which opens out into an open fronted steel loading bay. There is brick in-filling where another similar door previously occupied the building's northern side, and this now accommodates a modern casement window. A metal frame plastic roofed vehicle port is attached to the north.

History - An in-fill building not attributed to any major phases of development at Fort Halstead. It still retains its function as a distribution point for the wider site.

Significance - Low: a low level function with no historical associations with significant periods of Fort Halstead. It is built in a generic and utilitarian style and derives no architectural significance from this.

Designations - N/A



Building R25

Date of construction - 1981 - 1985

Uses - Contains site utilities.

Construction - Large rectangular structure of standing seam metal construction on a brick base and with a flat steel roof.

History - An in-fill building not attributed to any major phases of development at Fort Halstead. The position of this building outside the enclosed 'R' compound suggests that it does not have a sensitive or hazardous testing function. It probably contains plant relating to site utilities.

Significance - Low: a low level function with no historical associations with significant periods of Fort Halstead. It is built in a generic and utilitarian style and derives no architectural significance from this.

Designations - N/A





R26



R27

Buildings R26 & R27

Building R26

Date of construction - 1985 - 1986

Uses - Close vessel firing.

Construction - Pre-cast concrete slabs test structure with a flat concrete roof, ancillary to firing range R32 to which it is connected by way of a small flat roofed annex. There are double doors on the structure's northern and eastern side. The former opens beneath a narrow canopy and onto a short covered walkway to the adjacent R28, whilst the latter is screened behind a concrete block blast wall, indicating the explosive testing conducted within. On the building's northern side a small lean-to shed constructed in louvered wooden panels probably contains an extractor unit.

History - Formed part of the major redevelopment of the western part of the R area carried out during the late 20th century. Possibly related to the amalgamation of RARDE (Royal Armament Research and Development Establishment) with the Military Vehicle Engineering Establishment (MVEE) which had been based at Westcott and Royal Gunpowder Mills at Waltham Abbey, in particular.

Significance - Low: It is fairly generic when compared to contemporary structures of the wider site and similar sites across the country and is of little heritage interest. It is not associated with any significant historical events or any nationally important research and development and displays little in the way of architectural merit.

Designations - N/A

Building R27

Date of construction - 1981 - 1985

Uses - Explosive conditioning.

Construction - Pre-cast single storey concrete building with a flat corrugated metal roof over barge boarding. The building's entrance, to the east, is screened behind a concrete blast wall reinforced with mounded earth. A smaller lean-to structure in slatted wooden panels with louvered double doors abuts its northern side. This may house an electrical sub-station or other plant necessary to undertake the explosive conditioning for which the structure was built.

History - Formed part of the major redevelopment of the western part of the R area carried out during the late 20th century. Possibly related to the amalgamation of RARDE (Royal Armament Research and Development Establishment) with the Military Vehicle Engineering Establishment (MVEE) which had been based at Westcott and Royal Gunpowder Mills at Waltham Abbey, in particular.

Significance - Low: It is fairly generic when compared to contemporary structures at the wider site and similar sites across the country and is of little heritage interest. It is not associated with any significant historical events or any nationally important research and development and displays little in the way of architectural merit.

Designations - N/A



Buildings R28 & R29

Building R28

Date of construction - 1974 - 1981

Uses - Preparation for testing.

Construction - Reinforced concrete structure with a concrete roof and buttressed walls. The building comprises two twin rooms each accessed by separate steel doors on opposite sides of the building. It is connected to the adjacent R26 by a covered walkway comprising corrugated plastic sheeting supported on metal stanchions. The two rooms comprise antistatic flooring and storage, with each being served by a single casement window.

History - Formed part of the major redevelopment of the western part of the R area carried out during the late 20th century. Possibly related to the amalgamation of RARDE (Royal Armament Research and Development Establishment) with the Military Vehicle Engineering Establishment (MVVEE) which had been based at Westcott and Royal Gunpowder Mills at Waltham Abbey, in particular.

Significance - Low: relatively rare in terms of design and function at this site but only forming part of a wider process. There are no direct historic associations with people or events of note and its architectural composition is functional and robust to reflect former use.

Designations - N/A

Building R29

Date of construction - 1974 - 1981

Uses - Magazine.

Construction - Flat roofed rectangular magazine structure constructed in reinforced concrete. The structure is surrounded to roof level by mounded earth on every side supported by a reinforced concrete revetment wall. Access to the building's steel double doors is through a passage defined by continuations of this wall to the north. The interior comprises

History - Formed part of the major redevelopment of the western part of the 'R' area carried out during the late 20th century. Possibly related to the amalgamation of RARDE (Royal Armament Research and Development Establishment) with the Military Vehicle Engineering Establishment (MVVEE) which had been based at Westcott and Royal Gunpowder Mills at Waltham Abbey, in particular.

Significance - Low: It is fairly generic when compared to contemporary structures at the wider site and similar sites across the country and is of little heritage interest. It is not known to be associated with any significant historical events or any nationally important research and development and displays little in the way of architectural merit.

Designations - N/A



Buildings R29.1 & R32

Building R29.1

Date of construction - 1984 - 1985

Uses - Storage.

Construction - A single storey brick building with a flat felt roof, accessed via a ramp to steel double doors to the east or via a single steel door to the north.

History - Formed part of the major redevelopment of the western part of the R area carried out during the late 20th century. Possibly related to the amalgamation of RARDE (Royal Armament Research and Development Establishment) with the Military Vehicle Engineering Establishment (MVEE) which had been based at Westcott and Royal Gunpowder Mills at Waltham Abbey, in particular.

Significance - Low: Is of little heritage interest. It is not associated with any significant historical events or any nationally important research and development and displays little in the way of architectural merit.

Designations - N/A

Building R32

Date of construction - 1967 - 1972

Uses - Firing range(s).

Construction - Single storey building comprising two 75m firing ranges of different widths and support areas. The ranges are constructed in pre-cast concrete with a felt covered concrete roof. A small concrete wing extends to the north, at the end of which a small brick annex may house an electricity sub-station. To its west an enclosed 'yard' is defined by concrete blast walls supported by steel girders and reinforced with mounded earth. This area is probably intended to provide a controlled area into which can be achieved rapid, possibly emergency, egress from the range. The brick eastern section of the building appears to comprise administrative offices, whilst a roller door flanked by multi-light metal frame casement windows probably provides access to a preparation area. A hinged shrapnel curtain to the larger range remains, as do a series of hoists and pulleys to the that would have presumably been used in the preparation of testing.

History - Contemporary with R35 and constructed as a firing range during a period of relative quiet at Fort Halstead and is not associated with a period of major redevelopment.

Significance - Low: Low: one of three principal firing ranges within the site it is built of a generic robust construction, typical of contemporary structures used for storage of testing of munitions at this and other sites. It is not known to have direct historic association with any significant events or nationally important research and development activities other than as part of the wider Fort Halstead site and its role as an important research and development facility. The building retains a number of fixtures related to its use although that interest is relatively limited.

Designations - N/A



Buildings R33 & R34

Building R33

Date of construction - 1972 - 1974

Uses - Material Preparation for firing range.

Construction - Brick structure with a flat roof over barge boarding, originally a separate structure but now combined to form an annex to R32. The building has multi-light casement windows facing north and east and is accessed through a single eastern door. A double door to the north has been removed and in-filled. The interior is divided into 4 plain rooms, which comprise blacked-out storage rooms and preparation rooms. The building has been decommissioned and is empty.

History - Built during a period of little expansion at Fort Halstead and was likely constructed to assist in the preparation of tests in the adjacent R32 range. It continued in this capacity until its recent decommission.

Significance - Low: A fairly generic structure with no elements that infer its previous use or relation to the function of this area of Fort Halstead. Its later construction date means the building has few associations with the nationally important research and development that was undertaken at Fort Halstead.

Designations - N/A

Building R34

Date of construction - 1967 - 1972 (since extended)

Uses - Administrative, laboratories and storage.

Construction - A single storey brick building, extended to its current state in 1985, with double light casement windows and a slightly cambered felt roof featuring a small superstructure housing a water tank and a covered skylight. A metal frame wooden lean-to shed on the building's western side provides storage for various non-hazardous materials.

History - Built during a period of little expansion at Fort Halstead though forms part of a relatively small phase of development that included the construction of a number of R34's neighbouring structures.

Significance - Low: Fairly generic with regard to historical and architectural interest and is of little significance. It is not associated with any significant historical events or any nationally important research and development (relative to the rest of the site) and displays little in the way of architectural merit.

Designations - N/A



Buildings R34.1 & R35

Building R34.1

Date of construction - 1984 - 1985

Uses - Storage and distribution for 'R' area.

Construction - Large brick structure with a flat lead roof over barge boarding. The structure appears to have been built in two stages creating its two virtually identical halves. Both halves of the building, which is accessed through a roller door at its south-western end, include a lower annex on their north-western side, each of which is accessed externally through a single external door. These are linked to corresponding doors in the main building by small leaded wooden canopies.

History - Formed part of the major redevelopment of the western part of the R area carried out during the late 20th century. Possibly related to the amalgamation of RARDE (Royal Armament Research and Development Establishment) with the Military Vehicle Engineering Establishment (MVEE) which had been based at Westcott and Royal Gunpowder Mills at Waltham Abbey, in particular.

Significance - Low: Its later construction date means the building has few associations with the nationally important research and development that was undertaken at Fort Halstead. The building is of generic and utilitarian architecture and derives no significance from this. Its age is likely indicative of a relatively low significance.

Designations - N/A

Building R35

Date of construction - 1967 - 1972

Uses - Small arms testing range

Construction - Very long structure comprising a 175m long firing range together with preparation and storage areas. The range itself, which has a double brick skin, lined internally with 16" steel, and a concrete roof, contained a 120 ton sand butt at its western target end. The other sections are also of brick construction with flat roofs and comprise a main preparation block, with a single casement window and door to the south, and two further blocks, both of which are accessed through double doors at the building's eastern end. The southern of these blocks, which has four casement windows, appears to also have an administration or preparation function, whilst the other is windowless and therefore probably has a storage capacity.

History - Built during a period of little expansion at Fort Halstead and along with the other ballistic range at R32, represents in-fill construction which was common at the site. It continued in its use as a firing range until it was recently decommissioned.

Significance - Low: It is fairly generic when compared to similar sites across the country and is of little heritage interest. It is not associated with any significant historical events or any nationally important research and development and displays little in the way of architectural merit.

Designations - N/A



Buildings R36 & R44

Building R36

Date of construction - 1967 - 1972

Uses - Office and storage.

Construction - A single storey L-shaped brick block with a flat roof over barge boarding. Casement windows to the north and south elevations.

History - Contemporary with R32 and R35, it was built during a period of little expansion at Fort Halstead and was most likely retained in an office and explosive storage capacity until its decommission.

Significance - Low: Its later construction date means the building has few associations with the nationally important research and development that was undertaken at Fort Halstead. The building is of generic and utilitarian architecture and derives no significance from this. Its age is likely indicative of a relatively low significance.

Designations - N/A

Building R43

Date of construction - 1974 - 1981

Uses - Pumping station.

Construction - A small single storey brick structure with barge boarding and a flat roof. The building is windowless and accessed by a single set of double doors. Its proximity to a SWT suggests that the structure contains a pumping station.

History - Constructed, or at least re-purposed, as part of major redevelopment of the 'R' area in the late 20th century and replaced earlier structures. This episode of expansion may have related to the 1980s amalgamation of RARDE with the Military Vehicle Engineering Establishment (MVEE) and the Propellants, Explosives and Rocket Motor Establishment (PERME), which had been based at Westcott and the Royal Gunpowder Mills at Waltham Abbey.

Significance - Low: no known historical associations of note and is built in a utilitarian style from which no significance is derived.

Designations - NA



Buildings R44

Date of construction - 1988 - 1993

Uses - Storage

Construction - A large modern warehouse structure with a pitched roof of standing seam metal construction over brick foundation walls. The building has a large roller door at its eastern end and double doors at its northwestern and south-western corners. Casement windows and additional single doors are arranged periodically along both sides.

History - A later in-fill structure not attributed to any major phases of development at Fort Halstead. The building replaced R45 (1967-1972) and was apparently built for a specific purpose for which it was never used and fulfils a storage function.

Significance - Low: no known historical associations of note and is built in a utilitarian style from which no significance is derived.

Designations - NA



Buildings R48 & R48.1

Building R48

Date of construction - 1974 - 1981

Uses - Compressor housing; generates or manages the compressed air used to power all of the machinery in the nearby processing buildings.

Construction - Single storey brick structure with a flat roof. There are two steel casement on the southern side of the building, and a large transom light over louvered double doors on its eastern side. A small brick revetted alley to the west of the building accommodates external cylinders.

History - Constructed, or at least re-purposed, as part of major redevelopment of the 'R' area in the late 20th century and replaced earlier structures. This episode of expansion may have related to the 1980s amalgamation of RARDE with the Military Vehicle Engineering Establishment (MVEE) and the Propellants, Explosives and Rocket Motor Establishment (PERME), which had been based at Westcott and the Royal Gunpowder Mills at Waltham Abbey.

Significance - Low: no known historical associations of note and is built in a utilitarian style from which no significance is derived.

Designations - N/A

Building R48.1

Date of construction - 1974 - 1981

Uses - Guard house/check point.

Construction - Brick entrance porch with a flat roof lined with wooden boarding. The structure is open to front and rear and divided by a one metre high brick partition and a metal mesh gate. It accompanies a gate on the adjacent access road.

History - Constructed, or at least re-purposed, as part of major redevelopment of the 'R' area in the late 20th century and replaced earlier structures. This episode of expansion may have related to the 1980s amalgamation of RARDE with the Military Vehicle Engineering Establishment (MVEE) and the Propellants, Explosives and Rocket Motor Establishment (PERME), which had been based at Westcott and the Royal Gunpowder Mills at Waltham Abbey.

Significance - Low: no known historical associations of note and is built in a utilitarian style from which no significance is derived.

Designations - N/A



R48



R48.1



Buildings R49 & R50

Building R49

Date of construction - 1974 - 1981

Uses - Processing building.

Construction - 'Frangible' building of the same type as R52, R53 and R56. It is constructed in concrete block over a steel frame on a concrete raft foundation, and with a sloped corrugate metal roof. The north-western wall of the building is comprised of individual light-weight steel panels representing a 'frangible' barrier in that it is designed to collapse in the event of an accidental explosion, so releasing the force in a controlled direction. The south-eastern wall is internally brick lined around a long window aperture externally covered by what appears to be corrugated asbestos cladding, to admit light and perhaps also designed to blow out in the event of an explosion. This side of the building houses a corridor which features a large sink, and from which three large processing rooms are accessed through double doors. The building has an antistatic floor and, at the time of survey, the individual rooms still contained heavy duty extraction systems and steel processing chambers. A metal frame stands to the buildings southern corner. This is identical to an example adjacent to R53 and probably held a water tank.

History - Constructed, or at least re-purposed, as part of major redevelopment of the 'R' area in the late 20th century and replaced earlier structures. This episode of expansion may have related to the 1980s amalgamation of RARDE with the Military Vehicle Engineering Establishment (MVEE) and the Propellants, Explosives and Rocket Motor Establishment (PERME), which had been based at Westcott and the Royal Gunpowder Mills at Waltham Abbey.

Significance - Low: no known historical associations of note and is built in a utilitarian style from which no significance is derived.

Designations - N/A

Building R50

Date of construction - 1974 - 1981

Uses - Storage

Construction - A small square single storey brick structure with a concrete slab roof. This may represent a store for flammable or otherwise hazardous materials, although health and safety signage on its outside concerning electrical shock suggest that it may in fact house a substation.

History - Constructed, or at least re-purposed, as part of major redevelopment of the 'R' area in the late 20th century and replaced earlier structures. This episode of expansion may have related to the 1980s amalgamation of RARDE with the Military Vehicle Engineering Establishment (MVEE) and the Propellants, Explosives and Rocket Motor Establishment (PERME), which had been based at Westcott and the Royal Gunpowder Mills at Waltham Abbey.

Significance - Low: no known historical associations of note and is built in a utilitarian style from which no significance is derived.

Designations - N/A





Buildings R51 & R52

Building R51

Date of construction - 1974 - 1981

Uses - Test building.

Construction - Single storey brick building, the southern side and entrance of which are encased behind mounded earth, indicating that the building is intended to store or otherwise accommodate relatively large amounts of explosive material. A corrugated plastic canopy supported on metal railings runs around the building. Internally, it comprises process and monitoring rooms, containing ovens and concerned with the heat testing of explosives, and a plant room housing heater units. A pair of external double doors provides alternate access to the north and a smaller door between provides access to a segregated solvent store. The building features a concrete slab roof on which stands a weather-boarded superstructure, probably housing additional plant of some kind.

History - Constructed, or at least re-purposed, as part of major redevelopment of the 'R' area in the late 20th century and replaced earlier structures. This episode of expansion may have related to the 1980s amalgamation of RARDE with the Military Vehicle Engineering Establishment (MVEE) and the Propellants, Explosives and Rocket Motor Establishment (PERME), which had been based at Westcott and the Royal Gunpowder Mills at Waltham Abbey.

Significance - Low: no known historical associations of note and is built in a utilitarian style from which no significance is derived.

Designations - N/A

Building R52

Date of construction - 1974 - 1981

Uses - Processing building.

Construction - A 'frangible' building of the same type as R49, R53 and R56. It is constructed in concrete block over a steel frame on a concrete raft foundation, and with a recently replaced sloped corrugated metal roof. The north-western wall of the building is comprised of individual light-weight steel panels representing a 'frangible' barrier in that it is designed to collapse in the event of an accidental explosion, so releasing the force in a controlled direction. The south-eastern wall is internally brick lined around a long window aperture externally covered by what appears to be corrugated asbestos cladding, to admit light and perhaps also designed to blow out in the event of an explosion. This side of the building houses a corridor, accessed by double doors at either end. The corridor, which features a large sink, provides access to three large processing rooms through double doors, although the western room has its own external double doors and a single frosted window. The building has an antistatic floor and, at the time of survey, the individual rooms still contained heavy duty extraction systems and steel processing chambers. A metal frame stands to the building's southern corner. This is identical to an example adjacent to R53 and probably held a water tank.

History - Constructed, or at least re-purposed, as part of major redevelopment of the 'R' area in the late 20th century and replaced earlier structures. This episode of expansion may have related to the 1980s amalgamation of RARDE with the Military Vehicle Engineering Establishment (MVEE) and the Propellants, Explosives and Rocket Motor Establishment (PERME), which had been based at Westcott and the Royal Gunpowder Mills at Waltham Abbey.

Significance - Low: no known historical associations of note and is built in a utilitarian style from which no significance is derived.





Buildings R53 & R54

Building R53

Date of construction - 1974 - 1981

Uses - Test building.

Construction - 'Frangible' processing building of the same type as R49, R52 and R56. Lying on a concrete raft foundation and with a sloped corrugated metal roof, it is constructed in concrete block over a steel frame and has additional concrete slabs reinforcing its east and west ends. The south-western wall of the building is comprised of individual light-weight steel panels representing a 'frangible' barrier in that it is designed to collapse in the event of an accidental explosion, so releasing the force in a controlled direction. The southeastern wall is internally brick lined around a long window aperture externally covered by what appears to be corrugated asbestos cladding, to admit light and perhaps also designed to blow out in the event of an explosion. This side of the building houses a corridor providing access to a probable total of three processing rooms, probably all with antistatic floors, although this was not confirmed as the building was not accessed. A metal frame holding a water tank stands on the northern side of the building next to a small brick annex which is probably a chemical store.

History - Constructed, or at least re-purposed, as part of major redevelopment of the 'R' area in the late 20th century and replaced earlier structures. This episode of expansion may have related to the 1980s amalgamation of RARDE with the Military Vehicle Engineering Establishment (MVEE) and the Propellants, Explosives and Rocket Motor Establishment (PERME), which had been based at Westcott and the Royal Gunpowder Mills at Waltham Abbey.

Significance - Low: no known historical associations of note and is built in a utilitarian style from which no significance is derived.

Designations - N/A

Building R54

Date of construction - 1974 - 1981

Uses - Generator housing

Construction - Two storey brick structure with a flat roof and a small projecting single door entrance porch with a sloping felt roof. The building has two front facing casement windows in metal surrounds at ground level, above which a first floor loading bay door with projecting concrete sill permits movement of heavy or large objects to this level. A large louvred vent at this first floor level, and a warning klaxon are the only two other features of note.

History - Constructed, or at least re-purposed, as part of major redevelopment of the 'R' area in the late 20th century and replaced earlier structures. This episode of expansion may have related to the 1980s amalgamation of RARDE with the Military Vehicle Engineering Establishment (MVEE) and the Propellants, Explosives and Rocket Motor Establishment (PERME), which had been based at Westcott and the Royal Gunpowder Mills at Waltham Abbey.

Significance - Low: no known historical associations of note and is built in a utilitarian style from which no significance is derived.

Designations - N/A



R55



R56

Buildings R55 & R56

Building R55

Date of construction - 1974 - 1981

Uses - Either hazardous material storage or substation.

Construction - A small square single storey brick structure with a concrete slab roof.

History - Constructed as part of major redevelopment of the 'R' area in the late 20th century and replaced earlier structures. This episode of expansion may have related to the 1980s amalgamation of RARDE with the Military Vehicle Engineering Establishment (MVEE) and the Propellants, Explosives and Rocket Motor Establishment (PERME), which had been based at Westcott and the Royal Gunpowder Mills at Waltham Abbey.

Significance - Low: no known historical associations of note and is built in a utilitarian style from which no significance is derived.

Designations - N/A

Building R56

Date of construction - 1974 - 1981

Uses - Processing building

Construction - 'Frangible' building of the same type as R49, R52 and R56. Lying on a concrete raft foundation and with a sloped corrugated metal roof, it is constructed in concrete block over a steel frame and has additional concrete slabs reinforcing its east and west ends. The south-western wall of the building is comprised of individual light-weight steel panels representing a 'frangible' barrier in that it is designed to collapse in the event of an accidental explosion, so releasing the force in a controlled direction. The southeastern wall is internally brick lined around a long window aperture externally covered by what appears to be corrugated asbestos cladding, to admit light and perhaps also designed to blow out in the event of an explosion. This side of the building houses a corridor providing access to a probable total of three processing rooms, probably all with antistatic floors, although this was not confirmed as the building was not accessed. A metal frame holding a water tank stands on the northern side of the building next to a small brick annex which is probably a chemical store.

History - Constructed, or at least re-purposed, as part of major redevelopment of the 'R' area in the late 20th century and replaced earlier structures. This episode of expansion may have related to the 1980s amalgamation of RARDE with the Military Vehicle Engineering Establishment (MVEE) and the Propellants, Explosives and Rocket Motor Establishment (PERME), which had been based at Westcott and the Royal Gunpowder Mills at Waltham Abbey.

Significance - Low: no known historical associations of note and is built in a utilitarian style from which no significance is derived.

Designations - N/A



Buildings R57, R58 & R59

All three structure are identical

Date of construction - 1974 - 1981

Uses - Test buildings

Construction - Brick test building concealed behind mounded earth and reinforced concrete revetting, the latter extending above the earth and the building within. The roof of the building would appear to comprise a concrete slab, although a corrugated plastic canopy extends across the entire structure, also covering the access corridor through the revetting. From here, two single doors and a set of double doors provide access to the interior of the building and these, together with two casement windows, suggest that it exists as a series of rooms or cubicles. Signage indicates that at least one of these has an internal asphalt floor. There is apparently slight internal variations which have arisen as a result of adaptation for particular projects.

History - Constructed as part of major redevelopment of the 'R' area in the late 20th century and replaced earlier structures. This episode of expansion may have related to the 1980s amalgamation of RARDE with the Military Vehicle Engineering Establishment (MVVEE) and the Propellants, Explosives and Rocket Motor Establishment (PERME), which had been based at Westcott and the Royal Gunpowder Mills at Waltham Abbey.

Significance - Low: no known historical associations of note and is built in a utilitarian style from which no significance is derived. Of limited interest as an illustration of test buildings of the late 20th century.

Designations - N/A





Buildings R60 & R62

Building R60

Date of construction - 1974 - 1981

Uses - Workshop or testing facility.

Construction - Building comprising two separate components. The main building is constructed of concrete slabs against a steel frame on which a sloping corrugated metal roof is slightly raised above the walls, probably in order to ventilate the test area. On the northern side of this structure, a flat roofed brick annex probably represents a preparation or control room. This has two metal casement windows on its northern side and is accessed from the east by a single door. A corrugated plastic canopy supported on a metal frame runs from this side of the building around to the south, at which point it is enclosed with concrete panels, probably to retain any blast or shrapnel emerging from the structure's main entrance on this side.

History - Constructed as part of major redevelopment of the 'R' area in the late 20th century and replaced earlier structures. This episode of expansion may have related to the 1980s amalgamation of RARDE with the Military Vehicle Engineering Establishment (MVEE) and the Propellants, Explosives and Rocket Motor Establishment (PERME), which had been based at Westcott and the Royal Gunpowder Mills at Waltham Abbey.

Significance - Low: no known historical associations of note and is built in a utilitarian style from which no significance is derived.

Designations - N/A

Building R62

Date of construction - 1974 - 1981

Uses - Workshop or processing building.

Construction - Reinforced concrete building constructed on a concrete raft with a corrugated metal roof, structurally identical to R64 to its north. Access is via a walkway around the southern side of the structure which is itself enclosed in concrete and roofed in corrugated plastic sheeting. This canopy also connects the building with the adjacent R63 to its east. A small more recent brick annexe to the north is accessed by a pair of double doors and probably represents a store of some kind. Internally, the main structure contains a single room which, at the time of survey, contained machinery concerned with drawing explosive tubes.

History - Constructed as part of major redevelopment of the 'R' area in the late 20th century and replaced earlier structures. This episode of expansion may have related to the 1980s amalgamation of RARDE with the Military Vehicle Engineering Establishment (MVEE) and the Propellants, Explosives and Rocket Motor Establishment (PERME), which had been based at Westcott and the Royal Gunpowder Mills at Waltham Abbey.

Significance - Low: no known historical associations of note and is built in a utilitarian style from which no significance is derived.

Designations - N/A



Buildings R63 & R64

Building R63

Date of construction - 1974 - 1981

Uses - Workshop. Building was concerned with paper rolling for the explosive tubes produced in the adjacent R62.

Construction - Single storey brick building with a flat felt roof over barge boarding immediately to the east of R62. It comprises a large main room, accessed by double doors at the west end of the building, and from which open the building's two metal casement windows open. A second set of double doors at the opposite end of the building provides access to a storage room.

History - Constructed as part of major redevelopment of the 'R' area in the late 20th century and replaced earlier structures. This episode of expansion may have related to the 1980s amalgamation of RARDE with the Military Vehicle Engineering Establishment (MVEE) and the Propellants, Explosives and Rocket Motor Establishment (PERME), which had been based at Westcott and the Royal Gunpowder Mills at Waltham Abbey.

Significance - Low: no known historical associations of note and is built in a utilitarian style from which no significance is derived.

Designations - N/A

Building R64

Date of construction - 1974 - 1981

Uses - Workshop/processing building

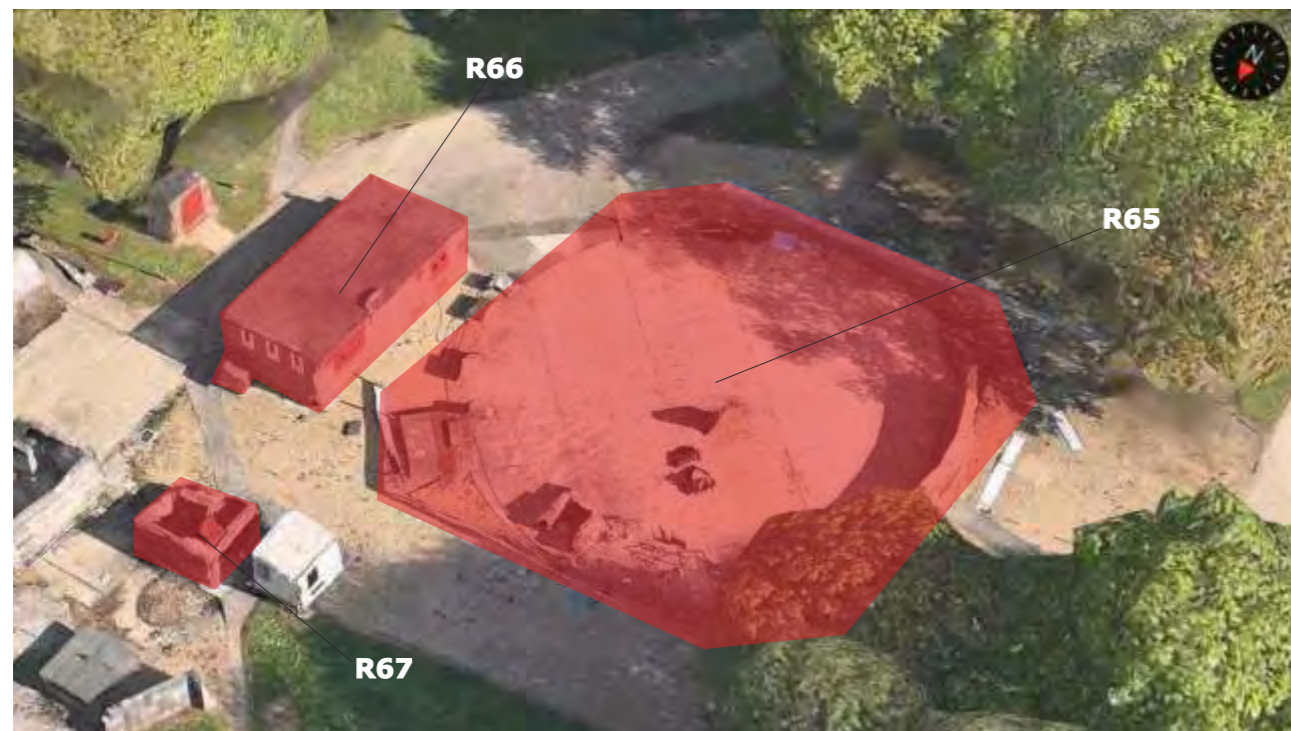
Construction - Reinforced concrete building constructed on a concrete raft with a corrugated metal roof, structurally identical to R62 to its south. Access is via a walkway around the southern side of the structure which is itself enclosed in concrete and roofed in corrugated plastic sheeting. A small brick addition to the north probably houses plant relating to the work undertaken in the main structure, probably for fume extraction. Although this building was not accessed, it can be assumed that it comprises a single room in common with R62, and the presence of an emergency shower at the entrance to the building implies that the work undertaken within has involved dangerous materials.

History - Constructed as part of major redevelopment of the 'R' area in the late 20th century and replaced earlier structures. This episode of expansion may have related to the 1980s amalgamation of RARDE with the Military Vehicle Engineering Establishment (MVEE) and the Propellants, Explosives and Rocket Motor Establishment (PERME), which had been based at Westcott and the Royal Gunpowder Mills at Waltham Abbey.

Significance - Low: no known historical associations of note and is built in a utilitarian style from which no significance is derived.

Designations - N/A





Buildings R65 & R66

Building R65

Date of construction - 1974 - 1981

Uses - Drop testing and recording.

Construction - A large circular area of concrete hardstanding, around which are arranged a number of small concrete block structures and foundations. This originally accommodated four metal towers used for drop testing and a series of masts. These were recently removed owing to the cost of their maintenance.

History - Constructed as part of major redevelopment of the 'R' area in the late 20th century and replaced earlier structures. This episode of expansion may have related to the 1980s amalgamation of RARDE with the Military Vehicle Engineering Establishment (MVEE) and the Propellants, Explosives and Rocket Motor Establishment (PERME), which had been based at Westcott and the Royal Gunpowder Mills at Waltham Abbey.

Significance - Low: no known historical associations of note and is built in a utilitarian style from which no significance is derived. Any significance has been reduced by the removal of the four towers.

Designations - N/A

Building R66

Date of construction - 1974 - 1981

Uses - Control facility

Construction - Single storey brick structure with a flat roof, comprising two main rooms, each accessed through double doors approached by a ramp along its eastern side, separated by a small plant room accessed by a single door with vents.

History - Constructed as part of major redevelopment of the 'R' area in the late 20th century and replaced earlier structures. This episode of expansion may have related to the 1980s amalgamation of RARDE with the Military Vehicle Engineering Establishment (MVEE) and the Propellants, Explosives and Rocket Motor Establishment (PERME), which had been based at Westcott and the Royal Gunpowder Mills at Waltham Abbey.

Significance - Low: no known historical associations of note and is built in a utilitarian style from which no significance is derived.

Designations - N/A



Buildings R67

Date of construction - 1974 - 1981

Uses -

Construction - A series of diminutive concrete block structures and a lower brick example, built on a concrete foundation and with a small door suggestive of a storage function. These surround an octagonal concrete pad which originally accommodated a large upright cylindrical tank which, together with a supporting tower (pictured) and test platform, was apparently purpose-built in-situ to test submarine rescue apparatus. Neither the tower nor the tank now remains.

History - Constructed as part of major redevelopment of the 'R' area in the late 20th century and replaced earlier structures. This episode of expansion may have related to the 1980s amalgamation of RARDE with the Military Vehicle Engineering Establishment (MVEE) and the Propellants, Explosives and Rocket Motor Establishment (PERME), which had been based at Westcott and the Royal Gunpowder Mills at Waltham Abbey.

Significance - Low: no known historical associations of note and is built in a utilitarian style from which no significance is derived. Exact nature of activity carried out here not known.

Designations - N/A

