The Amenities Block or Bathhouse
Central Ironworks, Queen Street South, Huddersfield
West Yorkshire:
Historic Building Record

June 2015
NGR: SE 14591 16171
Historic township: Huddersfield

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SUMMARY

The grade II listed “Amenities Block”, or bathhouse (NGR: SE 14591 16171) was built for the foundry of Thomas Broadbent & Sons in 1955, to comply with new legislation regarding changing and washing facilities for employees. It was designed to a high standard in a modernist style by the local architectural firm of Abbey & Hanson, and may be unique as a surviving, largely unaltered, purpose-built foundry bathhouse. The building was recorded in May 2015 for AHR Global, prior to its conversion to a data centre for the University of Huddersfield.

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THE AMENITIES BLOCK OR BATHHOUSE, CENTRAL IRONWORKS, QUEEN STREET SOUTH, HUDDERSFIELD WEST YORKSHIRE:

HISTORIC BUILDING RECORD

1 Introduction

1.1 This report presents the results of historic building recording at the grade II listed building originally and formally known as the Amenities Block, but more commonly as the Bathhouse, at the Central Ironworks premises of Thomas Broadbent & Sons Ltd in Huddersfield, West Yorkshire. The work was carried out in May 2015, prior to the building's conversion to a data centre for the University of Huddersfield, and was commissioned by the architects AHR.

1.2 The Amenities Block dates from 1955. It was designed by the local but nationally acclaimed architects then known as Abbey & Hanson, and housed single sex changing and washing facilities for male workers at the adjacent foundry, to comply with a legal ruling of 1953 which placed an obligation on employers to provide these. The building remained in its original use into 2015 with very little alteration, and is of historic and architectural interest not only as a good and well-preserved example of a purpose-built foundry bathhouse, but because of the high quality of its design.

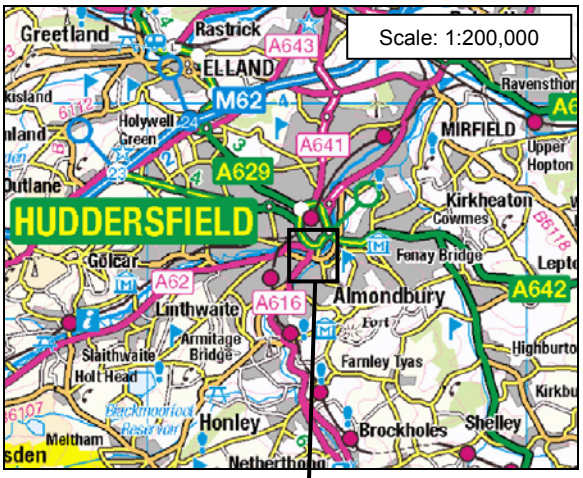
1.3 The recording work was carried out in accordance with a specification from the West Yorkshire Archaeology Advisory Service (WYAAS) (Appendix 2), and involved photographic and drawn surveys, as well as research into the building's background. This report will be submitted to the client, the West Yorkshire Historic Environment Record and the West Yorkshire Archive Service, and will be published on the internet via the OASIS project.

2 Location and current use

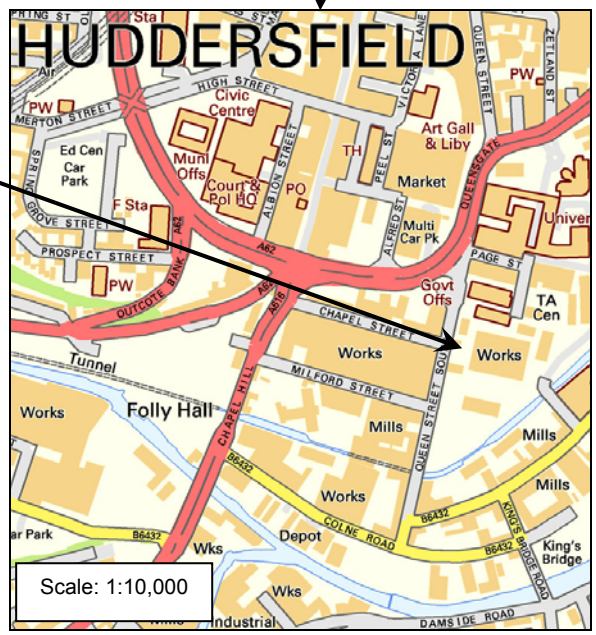
2.1 The site stands on the east side of Queen Street South, on the southern edge of Huddersfield town centre (figures 1 & 2). The national grid reference for the site is SE 14591 16171, and its height above Ordnance Datum (sea level) is approximately 80m.

2.2 The building occupies the north-west corner of the Central Ironworks site, set back a few metres from the perimeter fence, and comprises a single, detached structure measuring about 22m long and 13m wide, its long axis orientated close to north-south (see figure 3). Its front elevation faces east.

2.3 At the time of survey the building had very recently become disused, as the site as a whole has been acquired by the University of Huddersfield for redevelopment. The former owners, Thomas Broadbent & Sons Ltd, have recently vacated the site but continue to trade from other nearby premises.



1: Location map (i)



2: Location map (ii)

3: Site plan

3 Planning background

3.1 The Amenities Block has been listed as having special architectural or historic interest (grade II) since 2009, as "Bath House (Amenity Block) at Thomas Broadbent and Sons Ltd"[1]. The lengthy and detailed list entry description is reproduced in Appendix 1.

3.2 Outline planning consent for the whole of the Central Ironworks site has been granted by Kirklees Council, for the "demolition of existing buildings and the erection of educational development (d1) with associated access (listed building)", and listed building consent for the "demolition of existing buildings" (ie the foundry and other buildings adjacent to the bathhouse)[2]. In response to the applications, the planning authority's advisor the West Yorkshire Archaeology Advisory Service requested a programme of archaeological work relating to the whole site. However, this report and its associated archive relate only to the bathhouse.

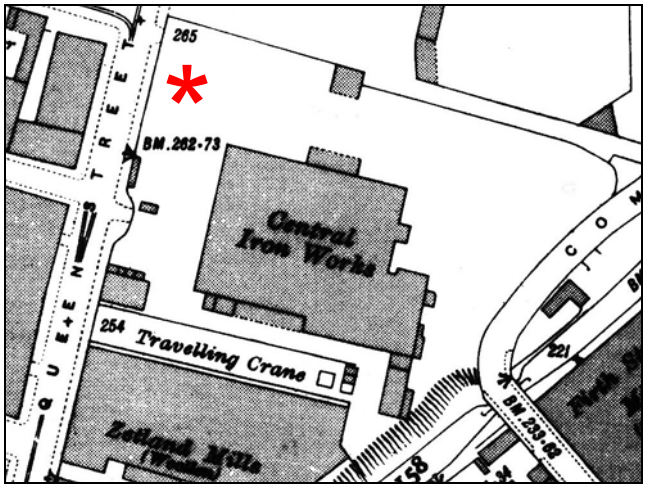
[1] National Heritage List no: 1393532
[2] application numbers 2013/60/92907/W and 2013/65/92920/W respectively

4 Previous investigative work

4.1 Other than the research carried out at the time of listed building designation, it is not believed that the site has been subject to an investigation of this type previously.

5 Historical background

5.1 The foundry company of Thomas Broadbent was established as an engineering concern in 1864, originally serving the local textile industry but later diversifying into a wider range of products including steam engines and large overhead travelling cranes. The Central Ironworks are believed to have been constructed in 1916 as a new, purpose-built premises, probably for manufacturing armaments among other items. The extent of the buildings by the 1930s is shown on the Ordnance Survey 1:2500 map from that time (figure 4); the north-west corner of the site then remained vacant.



4: OS 1:2500 map, 1932[3]

5.2 The stimulus for constructing the bathhouse appears to have been purely legislative: in 1953, as part of a wider post-war programme of new laws concerned with improving workplace safety and welfare, Statutory Instrument 1464 was made by the Minister of Labour and National Service, known as the *Iron and Steel Foundries Regulations*[4], of which section 9 states that:

[3] Map sheet: Yorkshire, 246.15, surveyed 1887-9, revised 1930
[4] http://www.legislation.gov.uk/uksi/1953/1464/pdfs/uksi_19531464_en.pdf viewed 3 June 2015

> *Bathing facilities and clothing accommodation*
>
> **9.**—(1) The occupier shall provide and maintain, for the use of persons employed in the foundry, adequate and suitable facilities for taking shower or other baths, with suitable arrangements for privacy (including, in close proximity to such facilities, suitable accommodation for dressing, undressing or changing clothes, and an adequate number of lockers or other suitable arrangements for the accommodation of clothing belonging to persons using the baths) and such arrangements as are reasonably practicable for drying clothing belonging to persons using the baths.
>
> (2) The facilities provided for the purposes of paragraph (1) of this Regulation shall be placed in charge of a responsible person or persons and maintained in a clean and orderly condition.
>
> (3) This Regulation shall come into operation on the 1st January, 1956.

5.3 It is not clear how common or widespread washing and changing facilities for foundry workers were prior to this new law, and although some progressive or enlightened employers may have provided them voluntarily, it was noted by the *Glasgow Herald* that members of the Amalgamated Union of Foundry Workers demanded their provision, at their 1950 conference[5]. In a comparably dirty industry, pithead baths for coal miners in England only became widespread after nationalisation in 1946, despite the setting up of a dedicated Baths Fund in 1926, which drew funds from a levy on production. In this respect England lagged behind its continental competitors Belgium, France and Germany, which had all made bathing facilities compulsory at coal mines by 1914; the German steel company Krupps had provided them since the 1870s.

5.4 Published documentation regarding foundry bathhouses as a group understandably appears to be scarce, but a 1949 example at the Lion Foundry, in Kirkintilloch, Dunbartonshire[6], shares many features with the Huddersfield one, including the prominent water tower and flat roofs. This Scottish example is however believed to have been demolished.

5.5 Thomas Broadbent & Sons Ltd commissioned the Huddersfield architects Abbey & Hanson to design their new facilities at the Central Ironworks, and the proposals, designed by Andrew Buck[7], were received by the Borough's Engineer's Department as "Additions to Works" on 9 April, and approved by them on 22 April 1954[8]. The drawings (see figures 5 - 7) show plans of the basement, ground floor and roof, as well as the four elevations and a cross-section, at 8 feet to 1 inch, and together indicate that very little change has taken place to the

[5] *Glasgow Herald* 22 June 1950, p5 "Foundry Baths Urged". Viewed online 4 June 2015 at https://news.google.com/newspapers?nid=2507&dat=19500622&id=S0hAAAAAIBAJ&sjid=ZZEMAAAAIBAJ&pg=3224,4317893&hl=en

[6] http://www.edlcimages.co.uk/archive/categories/baths/view/4041/ Viewed online 18 June 2015

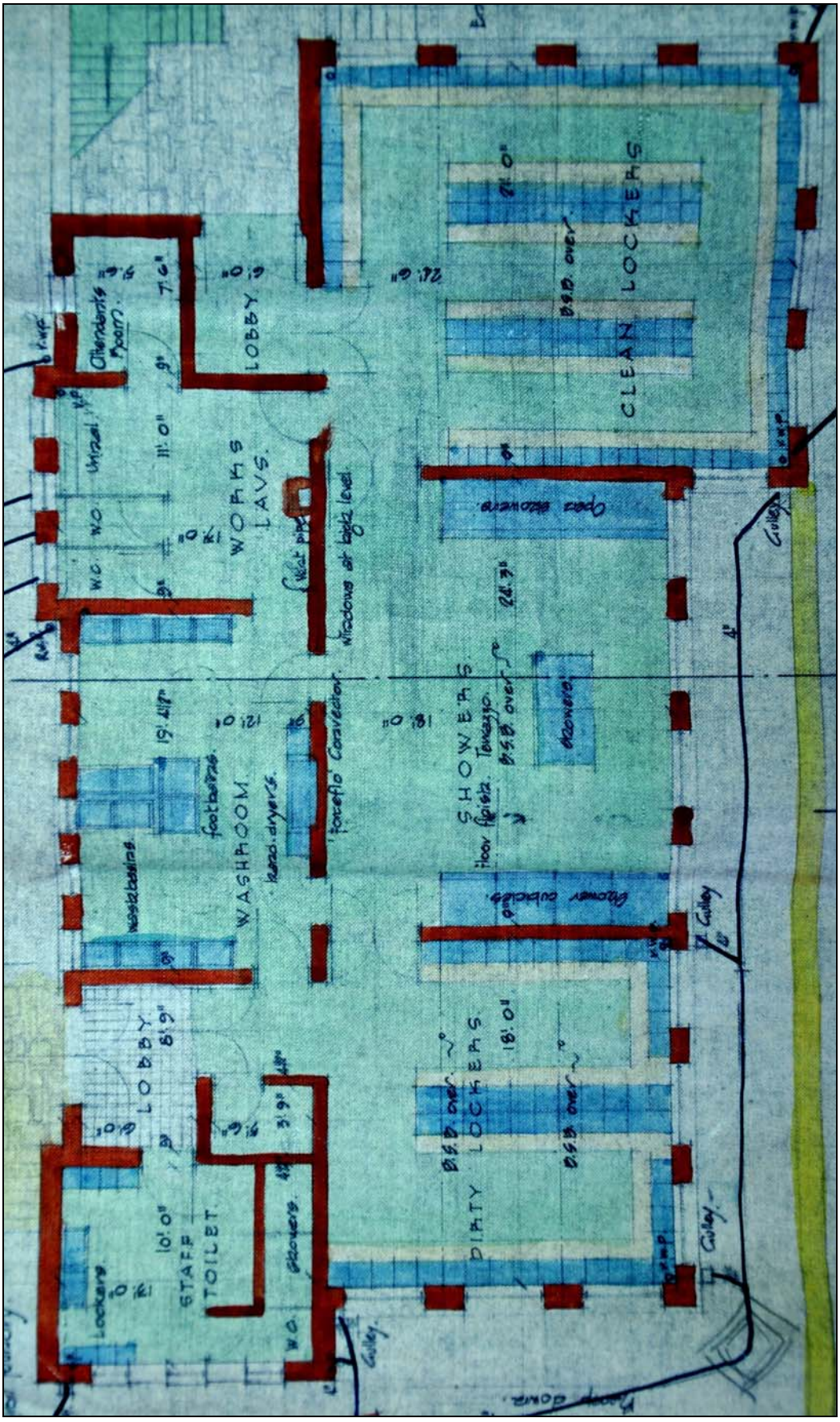
[7] according to the National Heritage List Entry

[8] West Yorkshire Archive Service Kirklees, Borough Engineer's Department plan number 40481. Plans reproduced here by kind permission.

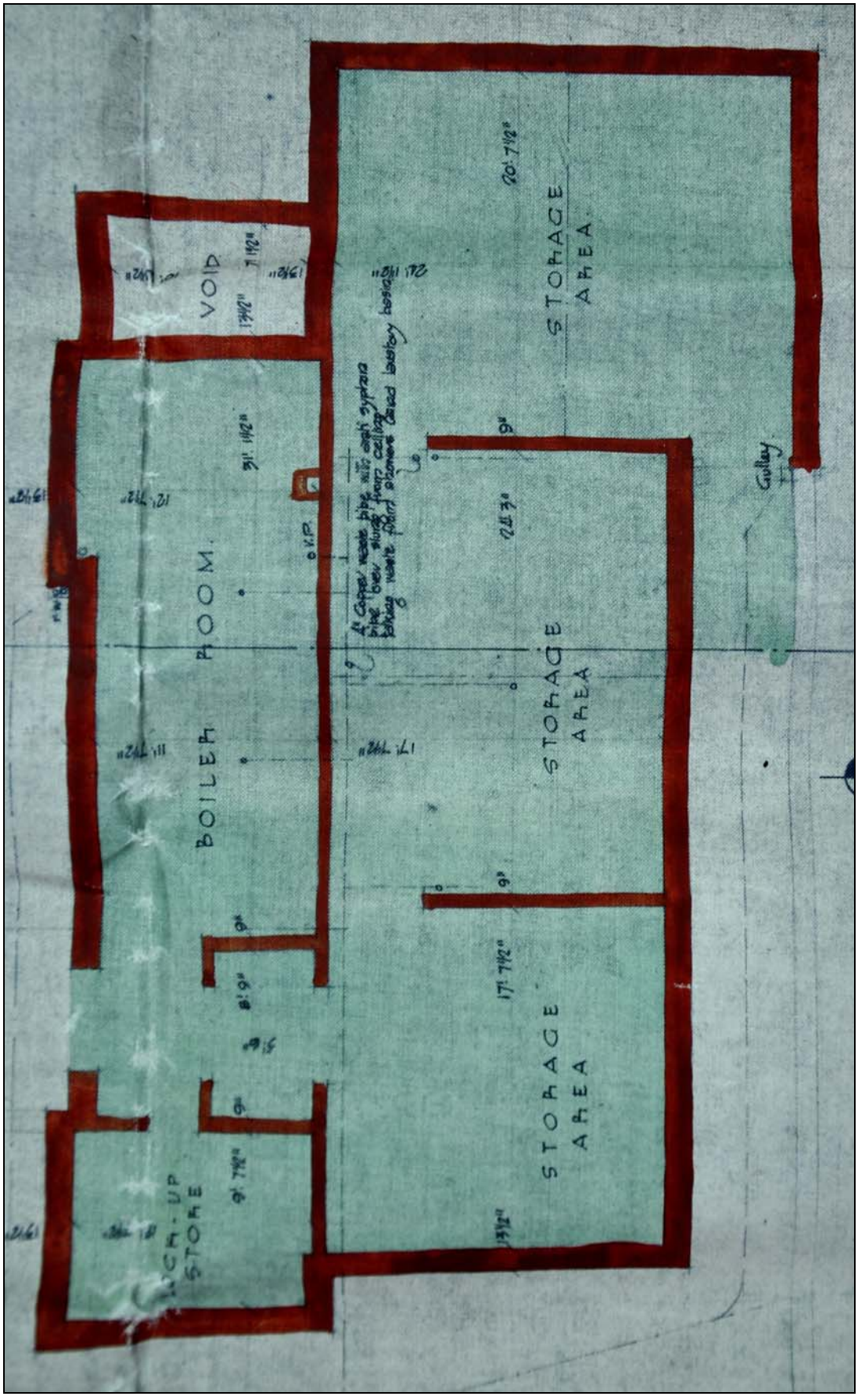
building subsequently, and although a number of anomalies with the existing building can be identified, these may result from slight changes to the design before or during construction. The cost of building was then estimated at £17,500 and the contractor was the prominent local firm Law Stead and Sons. Inspection of the construction process began in June 1954, but it was not until October the following year that it was reported as having been completed and brought into use, the local newspaper reporting it under the heading "*So optimistic – They've even built a sun lounge!*[9]", a comment on the rather unusual inclusion of a sun room on the roof. The same article explained that each foundry worker was provided with two lockers, one for working and one for clean, everyday clothes, through which "warm air is constantly circulated to keep the clothes dry, thus avoiding the possibility of colds being caught after taking showers". Foot-action valves were fitted to wash basins, and the rooms were described as air conditioned and temperature-controlled, and the value of the facilities was much appreciated by apprentices who could now go directly from work to evening sessions at the nearby Technical College [now university] in clean clothes.

5.6 The outline of the completed building is shown on the Ordnance Survey map of 1961 (figure 8).

[9] *Huddersfield Daily Examiner* 28 October 1955, p7

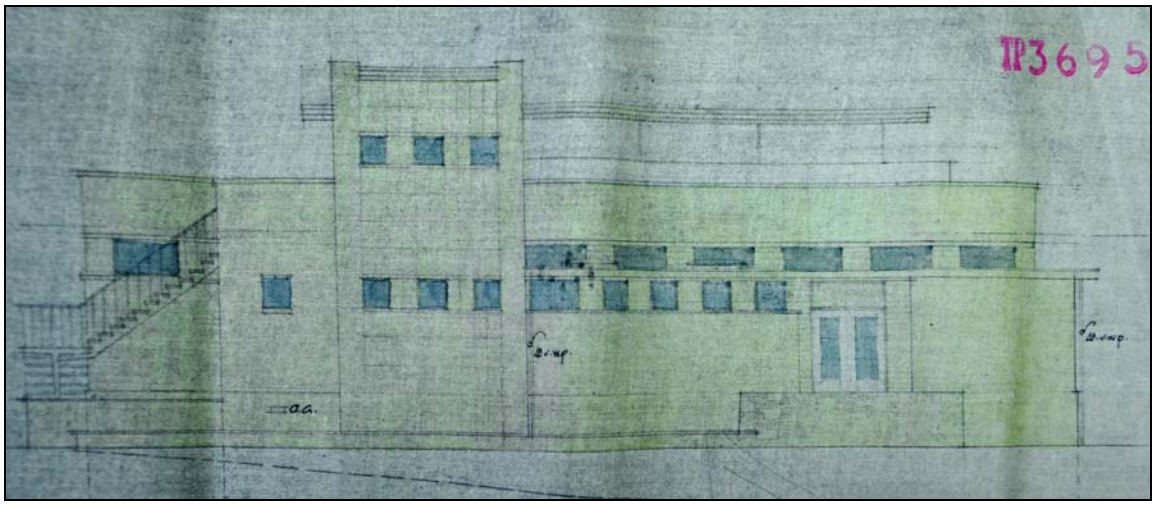


5: Proposed ground floor plan, 1954

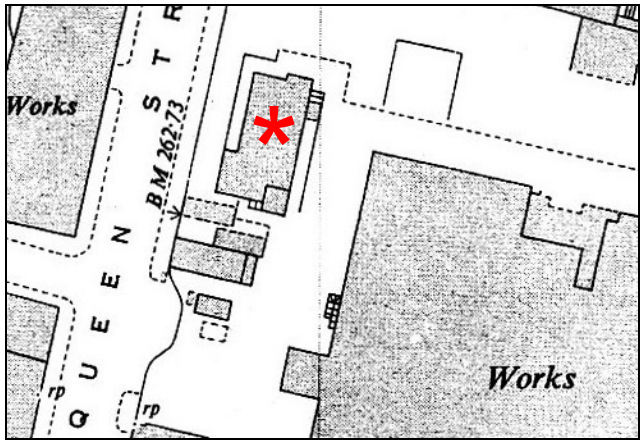


6: Proposed basement plan, 1954

north



7: Proposed east elevation, 1954



8: OS 1:2500 map (at 1:1250), 1961[10]

6 Recording methodology

6.1 The recording, carried out during site visits between 12 and 14 May 2015, involved detailed inspection, a drawn survey, and photographic recording of the Amenities Block, in accordance with the specification (Appendix 2).

6.2 The drawn survey comprises floor plans of the building on three levels at 1:100 scale, and a cross-section and longitudinal section at 1:50, all based on an existing laser scanned survey by AHR. In addition, more detailed drawings of a sample of the lockers have been produced at 1:20. These drawings show all

[10] Map sheet: SE 1416 revised 1959

significant archaeological and architectural detail and use conventions based on those specified by English Heritage[11].

6.3 The photographic record was made using a medium format camera with perspective control and other lenses, and black and white film for archival stability (as required by the specification). External and internal photographs were taken of all parts of the building using a 2m ranging pole marked with 0.5m graduations as a scale, or a 0.5m baton with 0.1m graduations. These black and white photographs have been printed at 7" x 5" or 10" x 8", and are all copied in this report, where they are referred to by numbers in **bold**. A small number of photographs was also taken using a digital camera (see Appendix 3), which will be deposited on a CD only, with WYAAS. Locations of all photographs taken are marked on copies of the site and floor plans.

7 Architectural description

Exterior

7.1 The Amenities Block stands on ground which slopes up slightly from south to north, and comprises a full height basement, a single main storey, over which is a flat roof on two levels for the most part, though the "water tower" on the east front of the building rises above these (**1**-**4**). The outer walls are faced with local sandstone, mostly in thin courses, and the manner in which the stone is used contributes much to the building's form and quality. Pitch-faced stone is used for the perimeter walls surrounding two ramps which descend to basement entrances (one on each of the long sides), as well as for the terraces of the outside steps serving the two ground floor entrances, on the east and south sides, and these walls are surmounted by plain steel railings. All the windows to the ground floor are relatively small, plain openings, set at a high level above approximate head height, for privacy. Those within the east side of the water tower are set between vertical timbers, with the panels between the glazing filled with timber boarding, in contrast to the proposed drawings of 1954 which show stonework and windows here in a similar style to those in the rest of the building.

7.2 The building belongs firmly in the modernist or Dutch Formalist school (an exponent of the latter being W M Dudok), by virtue of its "cubic" and asymmetric composition, and the paucity, simplicity, and regularity in the pattern of openings, among other aspects (**5**). In addition to the water tower, the block has two main spatial components: the larger of these is that along the west side, which contains the "clean" and "dirty" locker rooms, with showers between, while along the east side, under a lower roof, are the "staff" showers and lockers, as well as

[11] English Heritage 2006 Understanding Historic Buildings: A guide to good recording practice

a large wash-room (**6**,**7**). There are entrances to both "clean" and "dirty" ends, implying that employees would pass through the former to change clothing before beginning work in the foundry, emerging and later re-entering through the other doorway at the end of their shift before undressing, washing, and putting on their clean clothes on their ways home, but whether or not they used it in such an orderly manner is something that the surviving fabric cannot disclose.

7.3 The "clean" entrance is located in the south side of the building, and is reached from a stone-flagged terrace, attained via a short flight of stone steps, and from which an upper stair leads to the roof (**8**-**10**); a similar terrace arrangement exists for the "dirty" entrance in the east side (**11**-**13**). Each has double, panelled doors with circular handles, though these are now crudely overboarded. The two basement entrances are reached by gently sloping ramps set within retaining walls, one on the east side of the block and one on the west, and these would have provided easy and wheeled access to this storey, making plant installation and the movement of goods in and out of the storage areas there highly practicable (**14**-**16**).

7.4 There are steel stairs to the roof level at the south-east corner of the building, and a short flight of stone stairs on the roof itself. This level was intended to be readily accessible to employees, and is surrounded by a parapet with triangular stone coping, though a gap in the parapet at the south-west corner, containing railings, suggests there was the possibility of another means access at one time. The gap is shown on the 1954 plans, but there is no indication of its true purpose. From the roof there is access to the top room within the water tower, as well as to a small "sun lounge", behind which is a canopy supported on steel columns, in a poor state of repair and now only partly complete (**17**-**20**). The latter seems to have no purpose except to provide shelter for those spending time on the roof.

Interior: ground floor

7.5 Access into the building via the south entrance leads into a small lobby, with large lettering decreeing that no smoking is allowed (**21**; the sign is of unknown date), and from there one passes into the clean locker room, containing 110 lockers arranged around the walls and back-to-back within the middle of the room (**22**-**24**). As with the whole of the ground floor, there are terrazzo tiles here over the shuttered concrete floor, predominantly beige in colour, but interspersed with black ones, usually in pairs, and the walls and ceilings are painted. The only source of heating in this clean locker room was the warm air which was circulated through the lockers (see below), but ventilation was provided by a combination of opening windows and overhead extraction ducts, made from steel

panels in rectangular section. They converge from the other rooms in the west half of the building to rise up into the top floor of the tower (**25**,**26**), from where the air is expelled through a grill in its north side, a system which is not illustrated on the proposed plans of 1954, but does appear to be original to the building. The room's lighting is now by fluorescent strips, but the marks of circular light fittings are visible in places on the ceiling, and elsewhere there are a number of original light switches and round-pinned electrical sockets (**27,28**). The original internal doors remain in place throughout the ground floor, some single, some paired, but all are of flush design with a single glazed panel (**29**). The majority of windows also appear to be original, and are of a single pane, opening by means of a horizontal pivot (**30**).

7.6 The "dirty" entrance into the building, in the east side, also leads into a lobby, in this case containing a small room off, in which the electrical supply switches are located (**31**,**32**); it is also provided with an enamelled drinking fountain (**33**). A room for the use of "staff" (supervisory or managerial employees) is reached from the north side of this lobby, and contains two shower cubicles with terrazzo panels, a WC, pair of hand basins with mirror and shelf over, central heating radiator, and a row of eight lockers (**34**-**38**).

7.7 To the west of this lobby is the "dirty" locker room, essentially similar to but slightly smaller than the "clean" room, an aspect which may have necessitated the construction of lockers in two tiers, to accommodate all 108 of them (**39**,**40**).

7.8 The wash-room, to the south of the lobby, contains its original layout and fixtures, and is notable for its light, airy feel, an attribute which is evidently anything but accidental, as the two, large circular roof lights overhead provide diffuse and even natural lighting (**41**-**45**). Two radiators heat this room; the warm air ducts located against the west side of the room pass through the wall, to serve the shower room beyond (**46**). Washing was done in six large, trough-like basins, each for two men, with water supplied through mixer taps, originally foot-operated, though the pedals themselves have been removed (**47,48**); soap trays are inset into the tiled surfaces, and mirrors fixed above. The size of the basins and the form of the taps would allow a thorough washing of the face, head, arms and perhaps the upper body, as an alternative to the showers. There are also two footbaths with hot and cold taps, set on a shallow plinth in the centre of the room (**49**), and an electrical hand dryer on the west wall, probably a replacement unit, but the 1954 plan does show "hand dryers" here.

7.9 To the south of the washroom are the "works lavs" or toilets, containing two WCs and a three stall urinal (**50**-**52**), all apparently unaltered since 1955. A small room off to the south is the former "attendant's room" (the responsible person

required by the Statutory Instrument), with borrowed light to the lobby; the principal feature here is however the large duct which brings in air from outside and delivers it to the basement to be heated, before distribution to the lockers (**53**).

7.10 The central room in the west part of the building contains the showers to be used by the shop floor men (**54**): these are arranged with four cubicles against the north wall (**55**), with two cubicles in the middle of the room (**56**), and four "open" showers against the south side, separated only by curtains (**57**); a number of the shower taps and heads appear to be original (**58**). This room is unique in that it was heated directly by the warm air ducted from the basement, via grills in the east side, marked on the 1954 plan as "Forceflo convector". Warm air heating was in common use domestically in the 1960s and 1970s, so this was probably a relatively early installation (**59**).

Lockers

7.11 The provision of lockers and a means of drying clothing were both requirements of the Statutory Instrument which led to the building's construction, so two birds were killed by one stone in the installation of heated lockers in three of the rooms. These are not of outstanding interest, and apart from the integral heating are in many ways typical of the lockers widely used in the 20th century and still deployed today in schools and workplaces, but it is worth noting some details of their construction, and slight differences in their form (see figure 14).

7.12 All the lockers in the building share a number of features in common: they are constructed from steel, with narrow fixed benches along their fronts, below which are bars for storing footwear; they all have ventilation grills within the doors, hooks for hanging clothes and towels, internal soap dishes (most removed), and sloping bases with horizontal rods above, of uncertain purpose (**60**-**64**). All are numbered on the door (**65**); in each room the numbering sequence begins at 1, but there are no numbers 13 or 113, no doubt out of superstition, but also curiously none of the numbers ends in 9, perhaps for the same reason.

7.13 Throughout the building, the lockers are heated by means of a continuous duct along the row, located at the rear and base, along which warm air can pass into each locker via diagonal slots. The manner in which heat is supplied to the lockers does vary however. In the "clean" and "dirty" ones, warm air ducting rises through the floor from the basement at the end of each row (**66**,**67**), but quite how these feed into the horizontal runs cannot be seen, due to the protective casings around them. At the opposite end of each of these rows is an access panel to the ducts, either bolted or hinged (**68,69**), presumably to

provide access for maintenance, as dust was carried along in the air flow, and deposited as its speed diminished. In the case of the lockers in the staff toilet however, central heating pipes run beneath them to achieve a similar effect (**70**); this seems to be because a wet, piped heating system with radiators is located within the east half of the building, while the warm air ducting serves only the west half, so these two separate systems (albeit originating from the same source in the basement) are kept to their discrete areas.

Basement

7.14 The principal function of the basement was to accommodate the heating plant, although this takes up only about a quarter of the floor area, so the largest part of this bottom floor was annotated as "storage area" on the 1954 plan. Both basement entrances have double doors, of plain, framed plank construction (**71**), and similarly plain doors are used in a number of the internal openings (**72**); there are no windows anywhere at this level. A lack of wall and ceiling finishes means the brick and shuttered concrete construction is apparent throughout.

7.15 The boiler room contains a large gas boiler of uncertain date, which might conceivably be original, though that is thought unlikely (**73**,**74**); no details of heating are given on the 1954 plan, but there is no indication that solid fuel was used, and town gas would have been readily available. The boiler stands within the middle of the room, with a flue pipe leading to the chimney breast in the west side. This boiler had three functions: to heat water for washing; to heat the central heating pipes and radiators; and to heat air for transmitting up to the west half of the ground floor. To these ends, a large, horizontal hot water cylinder stands to the north of the boiler, from which the supply was pumped upstairs; this too may be original. Pipework also runs south from the boiler to a large box within the air ducting system, where there must be a heat exchanger (**75**). A fan, driven by an external electric motor (**76**), draws in cold air from outside the building via the attendant's room on the ground floor, and blows it through this box, from where it is distributed via overhead ducts to the ground floor. The cold air supply first passes through a small space adjacent to the boiler room (**77**), marked on the 1954 plan as a "void" and lacking an entrance, which together imply that the warm air system, at least in its present arrangement, was not anticipated at that point in the design process. The dendritic system of warm air ducts, which originates at the heat exchanger, is located for the most part at ceiling level in the storage areas of the basement below the clean and dirty locker rooms (**78**,**79**); in places there are control "valves" or flaps within it (**80**).

7.16 The north-east room in the basement is distinguished on the 1954 plan as the sole "lock-up store", but it is not known quite what it was intended to hold. There

is an electrical device within it, suspended from a narrow steel beam, and possibly original, but not understood: it has an electric motor at the top which may have acted to compress an item held in the frame below (**81**). This room is also notable for holding what appears to be an original light fitting (**82**).

Roof level

7.17 The two internal spaces at roof level include the tank room (**83**), containing two large steel water tanks, of a size necessitated by the surge in demand which presumably accompanied the end of a shift in the foundry. The air extraction duct from the west half of the building also passes through this room, en route to its outlet in the north side. Built on to the south side of the tank room is the "sun lounge", with south-facing doorway and glazing to the other two sides. It has a fitted wooden bench around three sides, to seat up to about a dozen people, and is unheated. This was a minor but perhaps valued aspect of the Amenities Block which went beyond the statutory requirements, though quite how much it was used remains the subject of speculation.

8 Discussion

8.1 As the National Heritage List entry indicates, the Amenities Block is a possibly unique example of a surviving purpose-built foundry bathhouse, and the quality of its design, construction, and fixtures all contribute to its architectural and historical significance. Detailed inspection of the building raises some questions however, particularly over the nature of the original heating system. The present gas-fired system may well be largely original (though in 1955 it would have burned manufactured town gas, rather than natural gas), and there is no indication of any provision for solid fuel storage on the architect's plans. It is though peculiar that there should have been dual heating systems, namely piped hot water heating in the east half and blown warm air in the west half, and again the architect's drawings cannot provide any information in this regard, as they show neither the radiators nor the warm air ducts. The mid 1950s would have been an early date for a warm air system, but given the overall quality of the building, the integration of the heating with most of the lockers, and the lack of any obvious evidence that it was introduced later, it can be assumed that the parallel systems are both original to the building.

8.2 Given the paucity of readily available information about foundry bathhouses as a group, it is hard to determine how typical this example is. However the broad similarities in size and plan, and the adoption of the modernist style, which the Kirkintilloch example appears to share with the Huddersfield one, do suggest that the Broadbents Amenities Block was essentially typical, though finished to a

higher standard than was commonly the case. The better documented pithead baths at collieries (of which the vast majority have now been demolished) do not bear close comparison with the foundry bathhouse, as they were often much larger buildings, as dictated by the larger workforces, but also because they often housed other welfare facilities, such as boot cleaning rooms, lamprooms, canteens and medical centres[12]. However, the peak period when such bathhouses were built, from the 1940s, also means that the predominant style was also modernist, and the pithead baths were also usually designed with plain elevations, flat roofs and a prominent water tower.

[12] Thornes, R 1994 *Images of Industry: Coal* p65

Appendix 1: National Heritage List entry

This building is listed under the Planning (Listed Buildings and Conservation Areas) Act 1990 as amended for its special architectural or historic interest.

Name: BATH HOUSE (AMENITY BLOCK) AT THOMAS BROADBENT AND SONS LTD

List Entry Number: 1393532

Location

BATH HOUSE (AMENITY BLOCK) AT THOMAS BROADBENT AND SONS LTD, QUEEN STREET SOUTH

The building may lie within the boundary of more than one authority.

County:
District: Kirklees
District Type: Metropolitan Authority
Parish:

National Park: Not applicable to this List entry.

Grade: II

Date first listed: 18-Nov-2009

Date of most recent amendment: Not applicable to this List entry.

Legacy System Information

The contents of this record have been generated from a legacy data system.

Legacy System: LBS

UID: 507536

Asset Groupings

This List entry does not comprise part of an Asset Grouping. Asset Groupings are not part of the official record but are added later for information.

List Entry Description

Summary of Building

Legacy Record - This information may be included in the List Entry Details.

Reasons for Designation

The Bath House at Broadbent's Engineering in Huddersfield has been designated at Grade II, for the following principal reasons: * The building is a very rare, possibly unique example of a purpose built bath house for foundry workers * Its continuing function as a bath house has preserved its original purpose in both its layout and its fixtures and fittings as well as its design * The design of the building manifests inspiration from both W Dudok and Frank Lloyd Wright, and achieves a high standard of accomplishment in its interpretation of contemporary architectural influences * The use of local stone for external walls distinguishes it from brick built pithead baths of similar style, and the imaginative use of finishes lends further distinction * The interior survives almost entirely intact, with original wash basins, shower and tap fittings, lockers, floor and wall surfaces, doors and light fittings.

History

Legacy Record - This information may be included in the List Entry Details.

Details

919/0/10081 QUEEN STREET SOUTH 18-NOV-09 BATH HOUSE (AMENITY BLOCK) AT THOMAS BROADBENT & SONS LTD

II Bath House for foundry company Thomas Broadbent and Sons, Huddersfield, 1955, by Abbey Hanson architects (designing architect Andrew Buck, project leader Geoffrey Rowe), building work by Law Stead & Sons Ltd. MATERIALS: coursed and finely cut stone of varying widths and finishes, in narrow diminishing courses in some parts and rough-cut block stone in others. All the window ranges are set in ashlar panels. There are iron railings and an iron external staircase. PLAN: the building takes the form of a series of rectangles. At the front, a central washroom is flanked by lavatories and entrances to either side. Behind is a large shower area with dirty lockers to the right and clean lockers to the left. The right hand entrance leads in to the washroom and dirty lockers, while the left hand entrance leads to the clean locker area, providing a through-flow from dirty to clean. A basement level contains the boiler room and storage areas, while on the flat roof is a terrace with a small enclosed room and a tank room. EXTERIOR: The main (east) elevation has an off-centre tower element (carrying the water tank) which has full height, timber framed, opaque glazed panels with strong vertical lines: it breaks forward from the main frontage and its timber-fronted flat roof projects forward. To the right is a lower section with 5 small windows set high, and a double doored entrance approached up a short flight of steps behind a stone parapet and iron railings running parallel to the building. The doors have rounded metal handles. There is a further short stretch of wall beyond the entrance and the whole section has a projecting flat roof above which is a low stone wall, set back, which protects the sun terrace above. To the left of the tower is a narrow block with a single window and the second entrance which faces to the side. An iron cantilever staircase rises from the left and leads to the sun terrace, and a rear block extends from behind the staircase. Along the front of the building is a low stone wall and iron railings which conceal a sloping ramp to the basement with an entrance beneath the stairs to the right. The left return has to the left a block with four high-set windows with opaque glass in timber frames. The stonework is widely coursed to the base, narrow coursed to the main part and very finely coursed to the parapet above. The parapet has a small section of iron railings to the left end. To the right is the side of the water tower, set back. A double doored entrance with original handles is set in the left side of this, while to the right is the iron staircase to the roof. It has a double dog-leg, crossing the side of the tower, extending out from it, and then turning again to the left at the bottom where the steps are in stone and are masked by a stone wall and iron railings. At the upper level is an entrance to the water tower with a projecting canopy above. The right return is largely plain with stonework in diminishing courses and 3 high windows. The rear (which faces the street) also has a series of high windows along its length. The external staircase leads to the sun terrace. Attached to the side of the water tower at the

front is a small enclosed room with wooden slat bench seating round three sides, doors opening to the south and windows to three sides. Running north from this is a low wall, rendered, extending for most of the length of the building, carrying steel columns supporting a canopy. The canopy is supported along its other edge by steel columns rising from the floor, and is timber lined. A low brick wall runs round the perimeter of the terrace and the floor is tarmac.

INTERIOR: The internal doors are original, most with glazed panels and some with original push-pull handles. Some original light switches survive though not in use. The floor throughout is of original buff and black tiles in an abstract pattern, and walls are largely tiled in plain buff tiles. Original plans show that the internal layout is unchanged. The doors on the main façade open into a lobby area containing an original ceramic drinking fountain. To the right is the staff toilet with lockers and showers with original fittings. There is also a storage cupboard leading off the lobby. To the left is the main washroom containing original footbaths and communal washbasins with foot operated taps. Only the original hand dryers have gone. Original ceiling light fittings survive alongside modern strip lights, and there are 2 light wells in the ceiling. Double doors from the lobby to the rear lead to the dirty locker room which contains rows of original steel lockers. Behind the washroom, and accessed from the washroom or the dirty locker room, is the shower room with rows of shower cubicles along each side. The shower fittings are original and the ceiling contains exposed ducting from the original warm air heating. Windows to the rear are boarded up. To the left of the shower room is the clean locker room, slightly larger than the dirty locker room and containing original lockers. Doors from the clean locker room also lead into the lavatories with original urinal and WCs, and to the exit lobby. This lobby has doors opening to the side entrance beneath the stair to the terrace. To the side of the lobby is a storage area, labelled as Attendant's Room on the original plan. The basement floor was not inspected.

HISTORY: The baths were opened in 1955 on 15 July after planning permission was granted in April 1954. The local newspaper, the Huddersfield Examiner, carried an article on the opening, describing the new amenity block as having the `most up to date washing facilities - complete even to plugs for electric razors...Each foundry worker is provided with two lockers, for his outdoor clothes and for his working clothes, and through them warm air is circulated to keep the clothes dry, thus avoiding the possibility of colds being caught after taking showers'. The layout and facilities are described in detail, with a heading `So Optimistic - They've even built a sun lounge!'. Law Stead and Sons, the builders, had been involved in the design and construction of local mills and public buildings in the late C19 and early C20, and houses in the C20. Peter Stead became a director of the firm in 1947 and was involved in the construction of Farnley Hey (listed Grade II) by Peter Wormersley. He later became an academic, opened an art gallery and was a pioneer of Huddersfield Civic Society. The architect Andrew Buck designed supermarkets, other public buildings and houses in the region. Geoffrey Rowe was a senior partner in the firm of Abbey & Hanson, was twice Vice President of the RIBA, president of the West Yorkshire Society of Architects and a visiting professor at Clemson University, South Carolina in 1974. The firm of Thomas Broadbent & Sons was founded in 1864 as an engineering firm serving the local textile industry, and built a range of products including steam engines, cars and travelling cranes. They later specialised in centrifuges which they continue to make. During World War II the firm also built submarines. SOURCES Ashworth, W, The History of the British Coal Industry, Vol 5, (1986), pp 527- 532 Green, L & Hall, R, eds., Peter Stead: a life in dynamic equilibrium, (2006), pp 15-16 Huddersfield Daily Examiner, `So Optimistic - They've even built a sun lounge!', 28 October 1955, p7 Journal of the RIBA Yorkshire Region, `T W Broadbent Limited - Abbey Hanson & Rowe 1953', Aug 1973 Sennett, R. S., ed., Encyclopedia of 20th Century Architecture, (2001), pp 614-5 Stratton, M & Trinder, B, Twentieth Century Industrial Archaeology, (2000), pp 21-24 Supple, B, The History of the British Coal Industry, Vol 4, (1987), pp 473-568

Reasons for Designation The Bath House at Broadbent's Engineering in Huddersfield is designated at Grade II, for the following principal reasons: * The building is a very rare, possibly unique example of a purpose built bath house for foundry workers * Its continuing function as a bath house has preserved its original purpose in both its layout and its fixtures and fittings as well as its design * The design of the building manifests inspiration from both W Dudok and Frank Lloyd Wright, and achieves a high standard of accomplishment in its interpretation of contemporary architectural influences * The use of local stone for external walls distinguishes it from brick built pithead baths of similar style, and the imaginative use of finishes lends further distinction * The interior survives almost entirely intact, with original wash basins, shower and tap fittings, lockers, floor and wall surfaces, doors and light fittings.

Selected Sources

Books and journals

Stratton, M, Trinder, B, Twentieth Century Industrial Archaeology, (2000), 21-4

Appendix 2: WYAAS Specification

Specification For A Drawn and Photographic Building Recording of the Bathhouse and 1916 Foundry at the Central Iron Works, Queen Street South, Huddersfield (SE 14600 16154)

Specification prepared at the request of the Mr Andrew French of AHR on behalf of Kirklees District Council (Planning Permission 2013/65/92920/W & 2013/60/92907/W)

1 Summary

1.1 A building record (drawn and photographic survey) is required to identify and document items of archaeological and architectural interest prior to the conversion of this 1950s foundry bathhouse and the demolition of the adjacent 1916 foundry. This specification for the necessary work has been prepared by the West Yorkshire Archaeology Advisory Service, the curators of the West Yorkshire Historic Environment Record.

NOTE: The requirements detailed in paragraphs 6.1.1 to 6.1.5 inclusive, 8.3 and 8.4 are to be met by the archaeological contractor **prior** to the commencement of fieldwork by completing and returning the attached form to the WY Archaeology Advisory Service.

2 Site Location and Description

2.1 Location

(Grid ref. **SE 14600 16154**) Both bathhouse and foundry are located to the south of Huddersfield town centre on the eastern side of Queen Street South. The buildings have foot prints of 212m^2 and 3,752m^2 respectively and lie in the historic township of Huddersfield.

2.2 Description

The buildings comprise a listed industrial bathhouse (National Heritage list for England No. 1,393,532), an iron foundry, gatehouse and storage building.

The foundry is the earliest building and principally comprises two long narrow sheds aligned south-east to north-west and divided by a narrow space or passage. Local sandstone is the predominant construction material visible on the exterior although brick is used internally and in subsidiary buildings and extensions. The southern side of the foundry is clad in modern profile sheeting. The principal sheds are united in a second storey at the western end of the building. Various subsidiary buildings are attached to the long sides of the sheds.

The foundry can be dated by a cypher reading “19 TBS 16” above its large south-western entrance and at least one location internally. The principal entrance has an iron or steel lintel supported on consoles or brackets; a level of embellishment absent from the other two western entrances. Various round headed windows (some blocked) and pedestrian entrances are provided in the gables at ground level while both pedestrian entrances and taking in-doors (the largest with a crane/lifting beam) are provided to the upper floor in the central section). The northern and southern sheds have circular openings or ventilators high in their gables. These openings have decorative key stones at their quarter points. The gables are raised and coped and have kneelers. Overall the foundry’s external appearance is similar to the company’s original 19th century Central Iron Works located on the western side of Queen Street South.

Internally the sheds provide large uninterrupted spaces with provision for overhead cranes. The floors of modern concrete are generally level. A ramp leads up to the western entrance of the southern shed whilst the floor of the northern shed is stepped up to the west. Both measures are necessary to accommodate the exterior ground level. The northern shed,

formerly a moulding shop, is well illuminated by high level windows whilst the casting shop is lit by glazed roof panels in its modern roof covering.

The grade II listed bath house occupies the north-western corner of the site and is constructed on three levels in a modernist style in local sandstone. A tower rising above the southern facade houses a water tank. Its southern side has a wooden and glazed infill.

The lower semi-basement level houses storage rooms and heating plant. The raised ground floor contains the changing and washing facilities for foundry workers including "clean and dirty" areas, showers, lavatories and separate facilities for supervisory staff. Many original fixtures and fittings survive including original doors, sanitary wares, floor and wall tiles, evidence of foot operated taps and heated lockers. The upper level (not inspected due to safety reasons) is reached via an external stair and comprises a small enclosed space attached to the water tower and a sun terrace with canopy.

The gatehouse and storage buildings are modest single storey buildings in local sand stone with some of the architectural detailing of the foundry.

3 Planning Background

The site owners, through their agents AHR (Norwich Union House, High Street, Huddersfield, West Yorkshire HD1 2LF Mr Andrew French ☏ 01484 537 411) have obtained planning consent (Planning Application No. 2013/65/92920/W & 2013/60/92907/W) for conversion of the bathhouse to a computer centre. The ultimate fate of the foundry is not currently known. The WY Archaeology Advisory Service (as kirklees District's archaeological advisor) has prepared this specification in order to allow the owners/ developers to meet the terms of an archaeological condition which has been placed on the consent.

4 Archaeological Interest

4.1 Historical Background

The foundry buildings which were part Broadbents Central Iron Works are dated to 1916 by several date stones bearing the cypher 19 TB&S 16. In addition to their established centrifuges which were used in numerous industries including chemical and explosives manufacture Broadbents produced a wide range of goods and components during the Great War. Other products included plant for steel manufacture, cranes and lifting gear, capstans and winches and shell hoists for warships. Casting of bomb casings was also carried out (http://www.examiner.co.uk/news/business/thomas-broadbent--sons-ltd-8163911).

Given this level of work and the use of a "greenfield site" it is presumed that the war time foundry buildings represent the best contemporary practice and most efficient industrial design of this period. This approach promoted by the Ministry of Munitions as means of optimizing production during the war (Stratton and Trinder 2000 Twentieth Century Industrial Archaeology, p 95.). It is not currently known if Broadbents had a substantial female workforce during the war. However, this is likely and the provision of a suitable and separate working environment and separate welfare facilities for a female workforce is know to have been provide at other engineering companies during the Great War (e.g. Kirkstall Forge, Leeds).

The foundry principally comprises two long tall stone-built sheds which housed a moulding shop (left) and a casting shop (right) (pers. Comm. Mr Simon Broadbent). The functional spaces were linked by an internal railway crossing a narrow yard (now roofed). Ovens for drying moulds were ranged along the northern wall of the northern shed and cupola furnaces for the production of molten iron along the southern wall of the southern shed. A first floor pattern store partly linked the two sheds on the Queen Street facade. Both sheds were provided with overhead cranes. Contemporary photographs of 'The Works of Thomas Bradbent & Sons@ (reproduced at

http://www.gracesguide.co.uk/images/a/a6/Im1919EnV128-p036a.jpg) may show the 1916 foundry in operation and illustrate that an additional narrow open fronted range was attached to the southern side of the casting shop. This structure has been demolished and the wall is now clad with profile metal sheeting. Three square section industrial chimneys linked by ducting are present towards the south-eastern corner of the building. Note the above photographs show a variety of buildings within the Central Ironworks the majority of which lies to the west of Queens Street South and the images are not exclusively of the 1916 foundry. These photographs also illustrate that during the early 20th century Broadbent's were operating both steel and iron foundries and that electric power was employed to drive some of the works' cranes.

Both sheds were originally provided with roof vents indicative of hot working (http://www.britainfromabove.org.uk/image/eaw010405?search=Queen%20Street%20South%2C%20Huddersfield&ref=1).

The listed bathhouse has benefited from detailed historical research and description as part of the process to list it in 2009. However, the situation is much less clear with regards the context of washing facilities at foundries and industrial premisies in general. By the 1870s Krupps provided bathhouses along with health and welfare facilities, workers' houses and technical schools at their works in Essen. There is little evidence of such farsighted provision in the United Kingdom. However, Statutory Instruments 1953 – 1464 Iron and Steel Foundries Regulations,1953 Section 9 stipulated that foundry operators made washing, bathing and showering facilities, along with changing rooms, secure lockers and drying facilities available to their employees by 1st January 1956.

The provision of bathhouses at collieries is better understood and may to some degree be analogous. These were uncommon before the nationalisation of the coal mining industry in the late 1940s after which provision rapidly improved. Despite the large scale abandonment of the coal industry in the UK a representative sample of washing facilities survive and have been recorded (West Yorkshire examples include a small bathhouse at Walterclogh Pit, Hipperholme which has been recorded while the listed bathhouse and welfare block at Ledston Luck Colliery, Kippax, survives although now split into business units).

The provision of a raised water tank is perhaps the most recognizable feature of mid 20th century bathhouses. However, many question remain as to the operation of the bathhouses (e.g. what fuel was used in firing of the boilers?). English Heritage believe that the example at Broadbent's Central Iron Works is possibly unique, can this be substantiated? The building's significance is enhanced by its continued use as of late 2013 ensuring it has survived in a near original condition.

4.2 Impact of proposed development

The applicant proposes to alter the listed bathhouse to a computer centre whilst the WYAAS understand the foundry buildings are to be demolished. Important archaeological and architectural evidence of the design and operation of both facilities will be lost following conversion.

5 Aims of the Project

5.1 The first aim of the proposed work is to identify and objectively record by means of photographs and annotated measured drawings any significant evidence for the original and subsequent historical form and functions of the bathhouse and foundry complex, and to place this record in the public domain by depositing it with the WY Historic Environment Record (Registry of Deeds, Newstead Road, Wakefield WF1 2DE).

5.2 The second aim of the proposed work is to analyse and interpret the buildings as an integrated system intended to perform a specialised functions. The archaeologist on site

should give particular attention to reconstructing as far as possible the functional arrangements and division of the buildings. The roles of historical plan form, technical layout / layout and circulation and process flow should all be considered in this process of interpretation.

5.3 Both the bathhouse and foundry should be assessed in terms of how typical they are of their respective building types. For example in the case of the bathhouse Robin Thornes' 1994 Images of Industry: Coal (a copy is held by the WYAAAS), or RCHM Wales 1994 Collieries of Wales should be consulted to asses the plan and functional arrangements of the bathhouse (available as an ebook).

5.4 The functional arrangements of the foundry should be compared with other contemporary examples. How did its principal role, its site, wartime production methods and possible wartime workforce influence this design? Is there any evidence of a link to the nearby Huddersfield Narrow Canal for the import of raw materials and export of finished goods?

6 Recording Methodology

6.1 General Instructions

6.1.1 Health and Safety

The archaeologist on site will naturally operate with due regard for Health and Safety regulations. Prior to the commencement of any work on site (and preferably prior to submission of the tender) the archaeological contractor may wish to carry out a Risk Assessment in accordance with the Health and Safety at Work Regulations. The archaeological contractor should identify any contaminants or material which constitute potential Health and Safety hazards (e.g. chemical drums, stored machinery) and make arrangements with the client for decontamination/making safe as necessary and appropriate. The WY Archaeology Advisory Service and its officers cannot be held responsible for any accidents or injuries which may occur to outside contractors engaged to undertake this survey while attempting to conform to this specification.

6.1.2 Confirmation of adherence to specification

Prior to the commencement of any work, the archaeological contractor must confirm in writing adherence to this specification (using the attached form), or state in writing (with reasons) any specific proposals to vary the specification. Should the contractor wish to vary the specification, then written confirmation of the agreement of the WY Archaeology Advisory Service to any variations is required prior to work commencing. Unauthorised variations are made at the sole risk of the contractor (see para. 8.3, below). Modifications presented in the form of a re-written project brief will not be considered by the West Yorkshire Archaeology Advisory Service.

6.1.3 Confirmation of timetable and contractor's qualifications

Prior to the commencement of *any work*, the archaeological contractor must provide WYAAS in writing with:

- a projected timetable for the site work
- details of project staff structure and numbers
- names and *CVs* of key project members (the project manager, site supervisor, any proposed specialists, sub-contractors *etc.*)
- details of any specialist sub-contractors

All project staff provided by the archaeological contractor must be suitably qualified and experienced for their roles. In particular, staff involved in building recording should have proven expertise in the recording and analysis of industrial buildings. The timetable should

be adequate to allow the work to be undertaken to the appropriate professional standard, subject to the ultimate judgement of WYAAS.

6.1.4 Site preparation

Prior to the commencement of work on site the archaeological contractor should identify all removable modern material which may significantly obscure material requiring an archaeological record, and should contact the developer in order to make arrangements for their removal (if necessary, under archaeological supervision). It is not the intention of this specification that large-scale removal of material of this type should take place with the archaeological contractor's manpower or at that contractor's expense.

6.1.5 Documentary research

Prior to the commencement of work on site, the archaeological contractor should undertake a rapid map-regression exercise based on the readily-available map and photographic evidence held by the relevant Local History Library (Kirklees Central Library, Princess Alexandra Walk, Huddersfield HD1 2SU Tel.: 01484 221959 Email: huddersfield.lic@kirklees.gov.uk) and the Kirklees branch of the West Yorkshire Archive Service (at the same address Tel: +44 (0)1484 221966 Email: kirklees@wyjs.org.uk).

Both the project architect and Thomas Broadbent & Sons also hold information about the bathhouse and foundry and should be approached (see below).

Secondary sources held by the West Yorkshire Historic Environment may also be of assistance in placing the buildings in their wider context.

6.1.6 Use of existing plans

The project architects AHR have produced plans as existing of the bathhouse and were responsible for designing the building in the 1950s. It is not currently known if plans of the foundry building exist. If appropriate, existing plans may be used as the basis for the drawn record and for any annotation relative to the photographic record. Additional information relevant to the historic record should be indicated on the plans, which shall be re-drawn as necessary. It is the responsibility of the archaeological contractor to check the accuracy of these drawings and to make any necessary adjustments or corrections. Contractors are therefore advised to determine prior to the submission of tender whether major re-survey/re-drawing will be necessary. For this purpose, the WY Archaeology Advisory Service would suggest that the tendering contractor check a small number of randomly selected measurements across the site, e.g. a few long face measurements, the position and size of a selection of doors and windows, and a random series of internal diagonals (it is accepted that the contracting archaeologist will not be able to identify isolated and unpredictable errors by using this method). It is the archaeological contractors' responsibility to obtain the appropriate copyright permissions for any original material employed as a basis for further work.

6.2 Sequence of recording

6.2.1 Initial record

The structures should be recorded as extant, with due provision made for the removal of any debris or modern material which may obscure fabric or features requiring an archaeological record (para 6.1.4 above).

6.3 Written Record

The archaeologist on site should carefully examine all parts of the bathhouse and foundry prior to the commencement of the drawn and photographic recording, in order to identify all features relevant to its original use and to obtain an overview of the development of the building and of the site as a whole. As part of this exercise, the archaeologist on site should produce written observations (e.g. on phasing; on building function) sufficient to permit the

preparation of a report on the structure. This process should include the completion of a Room Data Sheet or similar structured recording pro-forma[13] for each room or discrete internal space within the volume of the structure. The crucial requirement is that each room should be examined individually, that the results of that examination should be noted in a systematic fashion, and that these objective observations should be used to inform an analytical interpretation of the overall development and operation of the site.

6.4 Drawn Record

6.4.1 Drawings required

The drawn record should encompass both the bathhouse and foundry buildings. The drawn record should comprise:

- Plans of each floor of the bathhouse showing the locations of plant, ducting and sanitary wares.
- Plans of each floor of the 1916 foundry
- A short section of the bathhouse
- A long section of the bathhouse
- Plans and sections of a representative group of each type of locker showing how they were heated at a scale of 1:20
- A north-south section of the foundry at the western end to show both sheds and single storey buildings

Drawings should be made at an appropriate scale (not smaller than 1:100 for plans; not smaller than 1:50 for sections). The structures should be recorded as existing, but a clear distinction should be made on the final drawings between surviving as-built features and all material introduced into the structure during the late 20th-century. Where significant areas of original fabric appear to be masked under modern fittings or structural material, this should be noted.

6.4.2 Provision for Additional Drawings

6.4.2a The recording requirements outlined above are based on a brief inspection of the site by the WY Archaeology Advisory Service. However, detailed examination and analysis of the site by the archaeological contractor may reveal features which merit detailed recording beyond what has been specifically required. In addition to what is requisite to complete the work specified above, the archaeological contractor should tender for a contingency period of one days recording on site (with two days drawing-up time off site – three days in total) in order that features so identified may be adequately recorded. This contingency should be clearly and separately identified in any tender document.

6.4.2b If features requiring additional drawing are identified during the course of work on site, the WY Archaeology Advisory Service should be contacted as soon as possible, and should be provided in writing with a schedule of proposed additional work. A site visit will then be arranged by the WYAAS to examine the features in question and to assess the need to apply the contingency (this visit will usually be combined with a routine monitoring visit). Implementation of the contingency will be at the decision of the West Yorkshire Archaeology Advisory Service, which will be issued in writing, if necessary in retrospect after site discussions.

6.4.3 Scope of record

[13] The WY Archaeology Advisory Service would recommend the employment of the attached pro-forma, but will consider any suitable alternative which the archaeological contractor may wish to submit (Note that agreement for the employment of an alternative *schema* must be obtained in writing from the WY Archaeology Advisory Service prior to the commencement of work on site).

All features of archaeological and architectural interest identified during the process of appraisal should be incorporated into, and clearly identified in, the final drawn record. Typically, items of interest would include:

- Floor finishes and relative levels in the case of the foundry
- Access arrangements
- Functional and social divisions such as clean and dirty areas and separate facilities for supervisory staff or female employees in the foundry
- Original sanitary wares and fittings
- Different locker types (and their role)
- Ducting
- Glazing
- Methods of heating
- Hoists and cranes in the foundry
- Roof Structures
- Date stones
- Any evidence for the production or distribution of power in the foundry buildings
- Any evidence of process, original plant etc. surviving in the foundry

but this list should not be treated as exhaustive. The archaeologist on site should also identify and note:

- any significant changes in construction material – this is intended to include significant changes in stone/brick type and size
- any blocked, altered or introduced openings
- evidence for phasing, and for historical additions or alterations to the buildings.

6.4.4 Dimensional accuracy

Dimensional accuracy should accord with the normal requirements of the English Heritage Architecture and Survey Branch (at 1:20, measurements should be accurate to at least 10mm; at 1:50, to at least 20mm; at 1:100, to at least 50mm). Major features such as changes in structural material may be indicated in outline. The recording of individual stones or stone courses is not required unless greater detail is needed in order to adequately represent a particular feature of interest.

6.4.5 Drawing method

The survey may be executed either by hand or by means of reflectorless EDM as appropriate. In accordance with national guidelines[14], drawings executed on site should be made either on polyester-based film (minimum thickness 150 microns) with polymer-bonded leads of an appropriate thickness and density, or on acid-free or rag paper. If finished drawings are generated by means of CAD or a similar proven graphics package, recorders should ensure that the software employed is sufficiently advanced to provide different line-weight (point-size); this feature should then be used to articulate the depth of the drawings. CAD repeats or cloning of features should **not** be used. What is required as an end product of the survey is a well-modelled and clear drawing; ambiguous flat-line drawings should be avoided. Drawing conventions should conform to English Heritage guidelines as laid out in English Heritage 2006, *Understanding Historic Buildings – a guide to good recording practice,* and the WYAAS would recommend that the CAD layering protocol detailed in the same volume (8.3, Table 2) should be adhered to.

6.5 Photographic Record

6.5.1 External photographs

[14] English Heritage 2006, *Understanding Historic Buildings – a guide to good recording practice*, 7.1.1ff

An external photographic record should be made of all elevations of the buildings from vantage points as nearly parallel to the elevation being photographed as is possible within the constraints of the site. The contractor should ensure that all visible elements of each elevation are recorded photographically; this may require photographs from a number of vantage points. A general external photographic record should also be made which includes a number of oblique general views of the building(s) from all sides, showing it/them and the complex as a whole in its/their setting. In addition, a 35mm general colour-slide survey of the building(s) should also be provided (using a variety of wide-angle, medium and long-distance lenses). While it is not necessary to duplicate every black-and-white shot, the colour record should be sufficiently comprehensive to provide a good picture of the form and general appearance of the complex and of the individual structures. The colour slide record should include some internal shots. See digital photography (6.5.6 below) as an alternative to colour transparencies.

6.5.2 Internal photographs

A general internal photographic record should be made of each building. General views should be taken of *each room* or discrete internal space from a sufficient number of vantage points to adequately record the form e.g. views from both ends of the foundry sheds, general appearance and manner of construction of each area photographed. In areas which are wholly modern in appearance, character and materials, a single shot to record current appearance will suffice.

6.5.3 Detail photographs

In addition, detailed record shots should be made of all individual elements noted in section 6.4.3 above. Elements for which multiple examples exist (e.g. each type of roof truss, wash basin, locker or window frame) may be recorded by means of a single representative illustration. **N.B.** Detail photographs must be taken at medium-to-close range and be framed in such a way as to ensure that the element being photographed clearly constitutes the principal feature of the photograph.

6.5.4 Equipment

General photographs should be taken with a Large Format camera (5” x 4” or 10” x 8”) using a monorail tripod, or with a Medium Format camera which has perspective control, using a tripod. The contractor must have proven expertise in this type of work. Any detail photographs of structural elements should if possible be taken with a camera with perspective control. Other detail photographs may be taken with either a Medium Format or a 35mm camera. All detail photographs must contain a graduated photographic scale of appropriate dimensions (measuring tapes and surveying staffs are not considered to be acceptable scales in this context). A 2-metre ranging-rod, discretely positioned, should be included in a selection of general shots, sufficient to independently establish the scale of all elements of the building and its structure.

6.5.5 Film stock

All record photographs to be black and white, using conventional silver-based film only, such as Ilford FP4 or HP5, or Delta 400 Pro (a recent replacement for HP5 in certain film sizes such as 220). Dye-based (chromogenic) films such as Ilford XP2 and Kodak T40CN are unacceptable due to poor archiving qualities.

6.5.6 Digital photography

As an alternative to our requirement for colour slide photography, good quality digital photography may be supplied as an alternative, using cameras with a minimum resolution of 8 megapixels. Note that conventional black and white print photography is still required and constitutes the permanent record. Digital images will only be acceptable as an alternative to colour slide photography if each image is supplied in three file formats (as a RAW data file, a DNG file and as a JPEG file). The contractor must include metadata embedded in the DNG

file. The metadata must include the following: the commonly used name for the site being photographed, the relevant centred OS grid coordinates for the site to at least six figures, the relevant township name, the date of photograph, the subject of the photograph, the direction of shot and the name of the organisation taking the photograph. Images are to be supplied to WYAAS on gold CDs by the archaeological contractor accompanying the hard copy of the report.

6.5.7 Printing

6.5.6a Record photographs should be printed at a minimum of 5" x 7. In addition, a small selection of photographs (the best of the exterior setting shots and interior shots) should be printed at 10" x 8". Approximately 6 such images are considered necessary. Bracketed shots of identical viewpoints need not be reproduced, but all viewpoints must be represented within the report.

6.5.6b Prints may be executed digitally from scanned versions of the film negatives, and may be manipulated to improve print quality (but **not** in a manner which alters detail or perspective). All digital prints must be made on paper and with inks which are certified against fading or other deterioration for a period of 75 years or more when used in combination. If digital printing is employed, the contractor must supply details of the paper/inks used in writing to the WY Archaeology Advisory Service, with supporting documentation indicating their archival stability/durability. Written confirmation that the materials are acceptable must have been received from the WYAAS prior to the commencement of work on site.

6.5.7 Documentation

A photographic register detailing (as a minimum) location, direction and subject of shot must accompany the photographic record; a separate photographic register should be supplied for any colour slides or for colour digital photographs. The position and direction of each photograph and slide should be noted on a copy of the building plan, which should also be marked with a north pointer; separate plans should be annotated for each floor of each building

7. Post-Recording Work and Report Preparation

7.1 After completion of fieldwork

Prior to the commencement of any other work on site, the archaeological contractor **must** arrange a meeting at the offices of the WY Archaeology Advisory Service to present a draft of the 1st- stage drawn record (fully labelled and at the scale specified above), a photo-location plan, and photographic contact prints adequately referenced to this plan (material supplied will be returned to the contractor). Copies of the slides or digital photographs should also be brought in for checking. **N.B**. if full-sized prints or digital versions of contact sheets are supplied for this purpose, they must be accompanied by a sample of the processed negatives. If appropriate, the WY Archaeology Advisory Service will then confirm to District Planning Services that fieldwork has been satisfactorily completed and that other work on site may commence (although discharge of the archaeological condition will not be recommended until a completed copy of the full report and photographic record has been received and approved by the West Yorkshire Archaeology Advisory Service). Please note that as of the 1st April 2011, the WYAAS will charge the archaeological contractor a fee for each fieldwork verification meeting.

7.2 Report Preparation

7.2.1 Report format and content

A written report should be produced. This should include:

- an executive summary including dates of fieldwork, name of commissioning body, and a brief summary of the results including details of any significant finds
- an introduction outlining the reasons for the survey

- a brief architectural description of the buildings presented in a logical manner (as a walk around and through each building, starting with setting, then progressing to all sides of the structure in sequence, and finally to the interior from the ground floor up)
- a discussion placing the buildings in their local, historical and technological contexts, describing and analysing the development of individual structures and of the complex as a whole. This analysis should consider the site type as an integrated system intended to perform a specialised function, with particular attention being given to historical plan form, technical layout and process flow.

The architectural description should be fully cross-referenced to the drawn and photographic record, sufficient to illustrate the major features of the site and the major points raised. It is not envisaged that the report is likely to be published, but it should be produced with sufficient care and attention to detail to be of academic use to future researchers. A copy of this specification and a quantified index to the field archive should also be bound into the back of the report. The cover sheet should include a centred eight-figure OS grid reference and the name of the township in which the site is located (Huddersfield).

7.2.2 Report Illustrations

Illustrations should include:

- a location map at a scale sufficient to allow clear identification of the bathhouse and foundry in relation to other buildings in the immediate area
- an overall keyed plan of the site showing the surviving buildings in relation to each other
- any relevant 20th century ordnance survey maps, with the position and extent of the site clearly indicated
- a complete set of site drawings completed to publication standard, at the scale stipulated in Para. 6.4.1 above (unless otherwise agreed in writing by the West Yorkshire Archaeology Advisory Service)
- a complete set of site drawings at a legible scale, on which position and direction of each photograph has been noted
- any additional illustrations pertinent to the site
- a complete set of good-quality laser copies of all photographs (reproduced at a minimum of 6” by 4”).

The latter should be bound into the report in the same logical sequence employed in the architectural description (Para. 7.2.1 above) and should be appropriately labelled (numbered, and captioned in full). When captioning, contractors should identify the individual photographs by means of a running sequence of numbers (e.g. Plate no. 1; Plate no. 2), and it is this numbering system which should be used in cross-referencing throughout the report and on the photographic plans. However, the relevant original film and frame number should be included in brackets at the end of each caption.

7.3 Report deposition

7.3.1 General considerations

7.3.1a The report should be supplied to the client and identical copies supplied to the West Yorkshire HER, the WY Archive Service and to the Oasis project. A recommendation from WYAAS for discharge of the archaeological condition is dependant upon receipt by WYAAS of a satisfactory report which has been prepared in accordance with this specification. Any comments made by WYAAS in response to the submission of an unsatisfactory report will be taken into account and will result in the reissue of a suitably edited report to all parties, within a timescale which has been agreed with WYAAS. A .pdf copy of the report including drawings and plates should be included on a gold CD.

7.3.1bThe report copy supplied to the West Yorkshire HER should include a complete set of photographic prints (see Para. 7.3.2 below). The finished report should be supplied within eight weeks of completion of all fieldwork, unless otherwise agreed with the West Yorkshire Archaeology Advisory Service. The information content of the report will become publicly accessible once deposited with the Advisory Service, unless confidentiality is explicitly requested, in which case it will become publicly accessible six months after deposit.

7.3.1c **Copyright** - Please note that by depositing this report, the contractor gives permission for the material presented within the document to be used by the WYAAS, in perpetuity, although The Contractor retains the right to be identified as the author of all project documentation and reports as specified in the *Copyright, Designs and Patents Act* 1988 (chapter IV, section 79). The permission will allow the WYAAS to reproduce material, including for commercial use by third parties, with the copyright owner suitably acknowledged.

7.3.1.d The West Yorkshire HER supports the Online Access to Index of Archaeological Investigations (OASIS) project. The overall aim of the OASIS project is to provide an online index to the mass of archaeological grey literature that has been produced as a result of the advent of large-scale developer funded fieldwork. The archaeological contractor must therefore complete the online OASIS form at http://ads.ahds.ac.uk/project/oasis/. Contractors are advised to contact the West Yorkshire HER officer prior to completing the form. Once a report has become a public document by submission to or incorporation into the HER, the West Yorkshire HER may place the information on a web-site. Please ensure that you and your client agree to this procedure in writing as part of the process of submitting the report to the case officer at the West Yorkshire HER.

7.3.1e With the permission of the developer, the archaeological contractor are encouraged to consider the deposition of a copy of the report for this site with the appropriate Local History Library.

7.3.1f A brief note for ‘Post-medieval Fieldwork in England and Northern Ireland’ should be submitted to the Journal of the Society for Post Medieval Archaeology.

7.3.1g The preparation of a short article for inclusion in Industrial Archaeology describing and discussing the buildings and their operation Review should be included in any quotation prepared by the contractor.

7.3.2 Deposition with WY Archaeology Advisory Service (West Yorkshire Historic Environment Record)

The report copy supplied to the WY Archaeology Advisory Service should also be accompanied by both the photographic negatives and a complete set of labelled photographic prints (mounted in archivally stable KENRO display pockets or similar, and arranged in such a way that labelling is readily visible) bound in a form which will fit readily into a standard filing cabinet suspension file (not using hard-backed ring-binders). Labelling should be on the *back* of the print in pencil giving film and frame number only and on applied printed labels on the front of the appropriate photographic sleeve which should include:

- film and frame number
- date recorded and photographer's name
- name and address of building
- national grid reference
- specific subject of photograph. Township name
- Site name and address
- Date of photographs (month/year)
- Name of archaeological contractor

- Film number

Colour slides should be mounted, and the mounts suitably marked with – 'Huddersfield' (the Township name) with 'Central Iron Works' under, at the top of the slide; grid reference at the bottom; date of photograph at the right hand side of the mount; subject of photograph at the left hand side of the mount. Subject labelling may take the form of a numbered reference to the relevant photographic register. The slides should be supplied to the WY Archaeology Advisory Service in an appropriate, archivally stable slide hanger (for storage in a filing cabinet).

7.4 Summary for publication
The attached summary sheet should be completed and submitted to the WY Archaeology Advisory Service for inclusion in the summary of archaeological work in West Yorkshire published on the WYAAS website. During fieldwork monitoring visits WYAAS officers will take digital photographs which may be published on the Advisory Service's social media feeds as part of an ongoing strategy to enable public access to information about current fieldwork in the county.

7.5 Preparation and deposition of the archive
After the completion of all recording and post-recording work, a fully indexed field archive should be compiled consisting of all primary written documents and drawings, and a set of suitably labelled photographic contact sheets (only). Standards for archive compilation and transfer should conform to those outlined in *Archaeological Archives – a guide to best practice in creation, compilation, transfer and curation* (Archaeological Archives Forum, 2007). The field archive should be deposited with the Kirklees District Office of the West Yorkshire Archive Service (Kirklees Central Library, Princess Alexandra Walk, Huddersfield HD1 2SU Tel: +44 (0)1484 221966 Email: kirklees@wyjs.org.uk), and should be accompanied by a copy of the full report as detailed above. Deposition of the archive should be confirmed in writing to the WY Archaeology Advisory Service.

8 General considerations
8.1 Technical queries
Any technical queries arising from this specification should be addressed to the WY Archaeology Advisory Service without delay.

8.2 Authorised alterations to specification by contractor
It should be noted that this specification is based upon records available in the West Yorkshire Historic Environment Record and on a brief examination of the site by the West Yorkshire Archaeology Advisory Service. Archaeological contractors submitting tenders should carry out an inspection of the site prior to submission. If, on first visiting the site or at any time during the course of the recording exercise, it appears in the archaeologist's professional judgement that

i) a part or the whole of the site is not amenable to recording as detailed above, and/or
ii) an alternative approach may be more appropriate or likely to produce more informative results, and/or
iii) any features which should be recorded, as having a bearing on the interpretation of the structure, have been omitted from the specification,

then it is expected that the archaeologist will contact the WY Archaeology Advisory Service as a matter of urgency. If contractors have not yet been appointed, any variations which the WY Archaeology Advisory Service considers to be justifiable on archaeological grounds will be incorporated into a revised specification, which will then be re-issued to the developer for redistribution to the tendering contractors. If an appointment has already been made and site

work is ongoing, the WY Archaeology Advisory Service will resolve the matter in liaison with the developer and the Local Planning Authority.

8.3 Unauthorised alterations to specification by contractor
It is the archaeological contractor's responsibility to ensure that they have obtained the West Yorkshire Archaeology Advisory Service's consent in writing to any variation of the specification prior to the commencement of on-site work or (where applicable) prior to the finalisation of the tender. Unauthorised variations may result in the WY Archaeology Advisory Service being unable to recommend discharge of the archaeological recording condition to the Local Planning Authority and are made solely at the risk of the contractor.

8.4 Monitoring
This exercise will be monitored as necessary and practicable by the WY Archaeology Advisory Service in its role as 'curator' of the county's archaeology. The Advisory Service should receive at least one week's notice in writing of the intention to start fieldwork. A copy of the contractor's Risk Assessment should accompany this notification.

8.5 Valid period of specification

- This specification is valid for a period of one year from date of issue.

Negatives should be supplied in archivally stable mounts (KENRO display pockets or similar), and each page of negatives should be clearly labelled with the following:
After that time it may need to be revised to take into account new discoveries, changes in policy or the introduction of new working practices or techniques.

Any queries relating to this specification should be addressed to the WY Archaeology Advisory Service without delay.

West Yorkshire Archaeology Advisory Service
David Hunter December 2014
West Yorkshire Archaeology Advisory Service
Registry of Deeds
Newstead Road
Wakefield
WF1 2DE
Telephone: (01924) 306798.
Fax: (01924) 306810
E-mail: dhunter@wyjs.org.uk

Appendix 3: List of digital photographs

CD of photographs (in JPG, NEF & DNG formats) deposited with the West Yorkshire Historic Environment Record

Number	Subject
d01	General view of the schools, form the west
d02	Foundation plaque of 1879 in north-west gable
d03	Boys' entrance on Carlton Lane elevation
d04	Carlton Lane elevation, from the north-east
d05	Carlton Lane elevation, from the south-west
d06	Windmill Lane elevation and Infants' school, from the north-west
d07	Girls' entrance on Windmill Lane, added 1899, from the west
d08	Windmill Lane elevation (north part), from the west. The three dormers were added in 1899
d09	Windmill Lane elevation, from the south-west
d10	Extensions of 1892-1899, from the east
d11	General view of the main school buildings, from the south-east
d12	Rear side of Windmill Lane wing, from the east
d13	South-east gables of 1890s extensions, from the south-west
d14	Rear of master's house, from the south-east
d15	Entrance to infants' school of 1899, from the north
d16	Entrance to infants' school of 1899, from the north
d17	Windmill Lane elevation of infants' school, from the south-west
d18	Infants' school, from the south
d19	Infants' school, from the north-east
d20	Infants' school and Windmill Lane range, from the north-east
d21	Classroom 1, from the north-east
d22	Historic six-panel door from girls' cloakroom, from the south-west
d23	Classroom 5, from the south-east
d24	Master's house: interior view of front door
d25	Master's house: parlour window, from the south-east
d26	Master's house: detail of stair
d27	Hall of 1892-1899, from the east
d28	Classroom 8, from the south-east
d29	Classroom 9, from the south-east
d30	Classroom 9: remains of sliding/folding partition, from the north-west

Appendix 4: Contents of the project archive

To be deposited with the Kirklees office of the West Yorkshire Archive Service

1 file, containing:

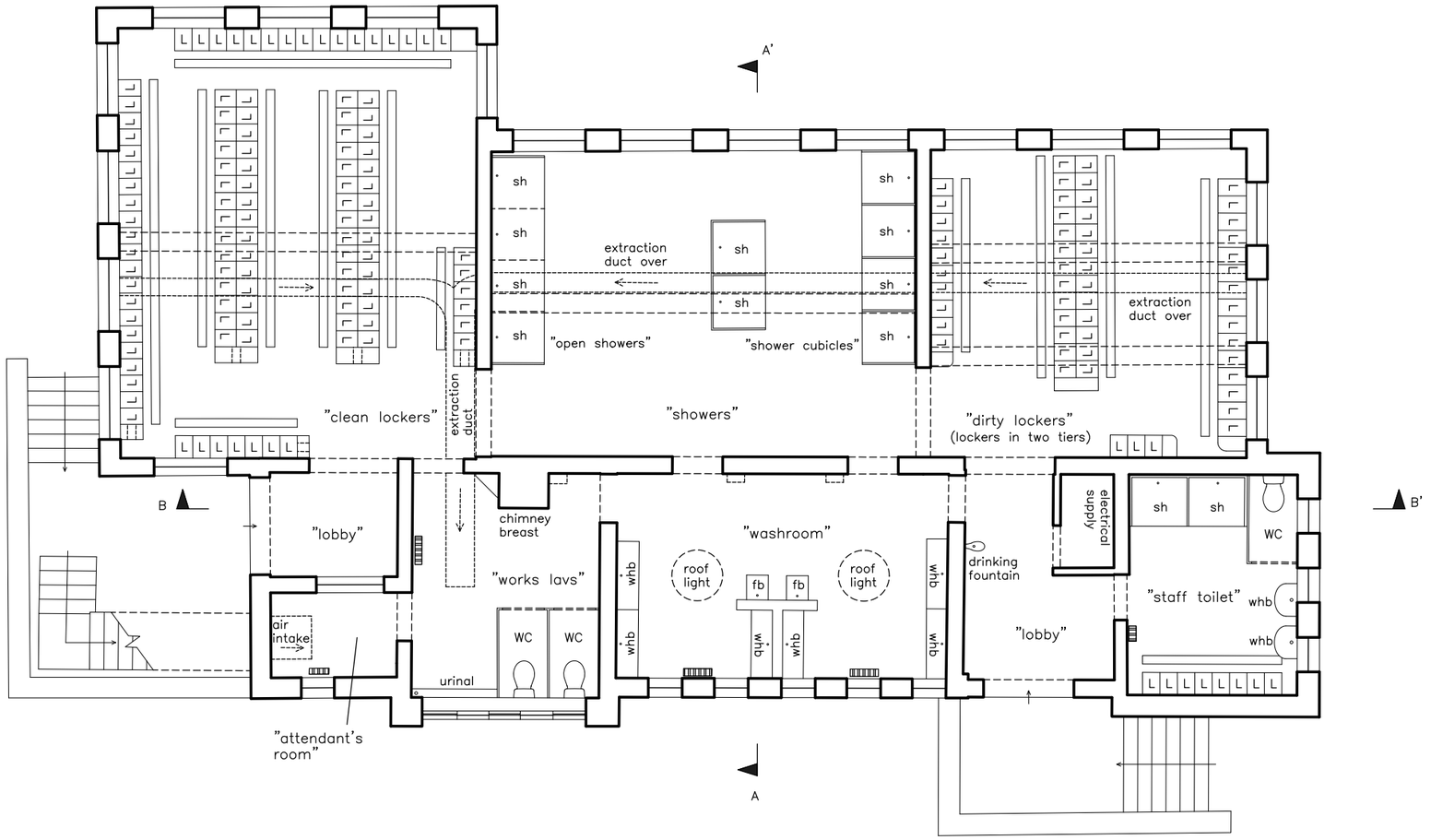
- a copy of the report
- photographic contact sheets (6 no)
- site notes

Complete list of black and white photographs taken, in film order

Photo	Film	Frame	Subject
73	1	1	Basement: boiler room, from the north
72	1	2	Basement: boiler room entrance, from the south-east
74	1	4	Basement: the gas boiler, from the north
75	1	5	Basement: heat exchanger within main warm air duct
76	1	6	Basement: electrical motor and fan serving warm air ducts
81	1	7	Basement: electrical device in “lock-up store”
82	1	9	Basement: pendant light fitting in “lock-up store”
79	1	10	Basement: general view of storage area from the west, with overhead ducts supplying “dirty lockers” above
78	1	11	Basement: general view of storage area from the south-west, with overhead ducts supplying “clean lockers” above
71	1	12	Basement: external doors to storage area
77	1	13	Basement: main air duct at foot of intake
80	1	15	Basement: detail of control on warm air duct (s=shut, o=open)
11	1	16	General view of the building, from the north-east
12	1	17	North entrance to ground floor and wash-house windows, from the east
4	1	18	The water tank tower, from the north-east
13	2	1	North entrance to ground floor, from the north-east
5	2	2	General view of the building, from the south-east
1	2	4	General view of the building, from the south-east
14	2	5	Ramp down to east basement entrance, from the south
8	2	6	General view of the building, from the south
10	2	7	Outside stairs to roof level and water tank tower, from the south
9	2	9	Foot of stairs to roof level, from the west
17	2	10	Sun lounge and top of water tank tower, from the south-west
18	2	11	Sun lounge and roof terrace, with canopy, from the south-west
19	2	12	Roof terrace, with canopy, from the north
20	2	13	Roof terrace, with canopy and water tank tower, from the north
45	2	15	Roof lights over wash-room, and air extraction outlet, from the north-west
84	2	16	Sun lounge interior, from the south
85	2	17	Sun lounge interior, from the south-west
83	2	18	“Tank room” on roof level, from the south-west
16	3	1	West elevation, from the south-west
15	3	2	Ramp down to west basement entrance, from the north
3	3	4	General view of the site, with foundry to right, from the south
6	3	5	General view, from the north-west
7	3	6	General view, from the north-east
2	3	7	General view, from the north-east
31	3	9	“Dirty” lobby, from the west

33	3	10	Detail of drinking fountain
38	3	11	“Staff toilet”, from the south
34	3	12	Shower cubicle in “staff toilet”
37	3	13	“Staff toilet”, from the north-east
36	3	16	“Staff toilet”, from the north-west
35	3	17	Lockers in “staff toilet”
64	3	18	Detail of locker in “staff toilet”
62	4	1	Detail of lockers in “staff toilet”
70	4	2	Detail of shoe rack and heating pipes below lockers in “staff toilet”
32	4	4	Electrical supply and fuse box area
29	4	5	Typical doors, in “dirty lockers” room
39	4	6	“Dirty lockers” room, from the east
40	4	7	“Dirty lockers” room, from the west
25	4	8	Grill in overhead extraction duct, in “dirty lockers” room
63	4	10	Internal detail of lower tier of “dirty lockers”
60	4	11	Detail of lower tier of “dirty lockers”
61	4	12	Internal detail at top of “dirty locker”
69	4	13	Detail of hinged flap for warm air duct at end of row of “dirty” lockers
67	4	14	Detail of metal casing at end of row of “dirty lockers”, containing warm air duct from below
30	4	16	Detail of typical window, west side of “dirty lockers” room
42	4	17	“Washroom”, from the south
43	5	1	“Washroom”, from the north-west
49	5	3	Foot-baths in “washroom”
44	5	4	“Washroom”, from the north-west
46	5	5	“Washroom”, from the north-east
41	5	6	“Washroom”, from the south-west
47	5	8	Detail of wash basin in “washroom”
48	5	9	Detail of mixer control and foot-operated taps for wash basin in “washroom”
51	5	10	Detail of WC in “works lavs”
52	5	11	Detail of urinal in “works lavs”
50	5	12	Door to “attendant’s room” from “works lavs”
26	5	14	Detail of overhead extraction duct in “works lavs”
53	5	15	“Attendant’s room”, from the north, showing air intake for warm air system
21	5	16	“Clean” entrance lobby
23	5	17	“Clean lockers” room, from the west
22	5	18	“Clean lockers” room, from the east
24	6	1	“Clean lockers” room, from the west
66	6	4	End of row of “clean” lockers”, showing casing and warm air duct at floor level
65	6	5	Detail of “clean locker”
68	6	6	Detail of panel for warm air ducts at end of row of “clean” lockers
54	6	7	“Showers”, from the south-east
59	6	9	Shower room, from the west, showing grills from warm air ducts through wall
55	6	10	Cubicles at north side of shower room, from the south-east
57	6	11	“Open showers”, from the north-east
56	6	12	Cubicles in middle of shower room, from the north-east
58	6	13	Detail of shower tap and head in open showers

28	6	15	Detail of three-pin electrical socket in “washroom”
27	6	16	Detail of original and later light switches in “dirty” lobby



KEY

air duct (at all levels) and direction of flow

step up

radiator

"boiler room" room use given on 1954 plan

L = locker
sh = shower
whb = wash hand basin
fb = foot–bath

10m

BASED ON ORIGINAL SURVEY BY AHR BUILDING CONSULTANCY LTD

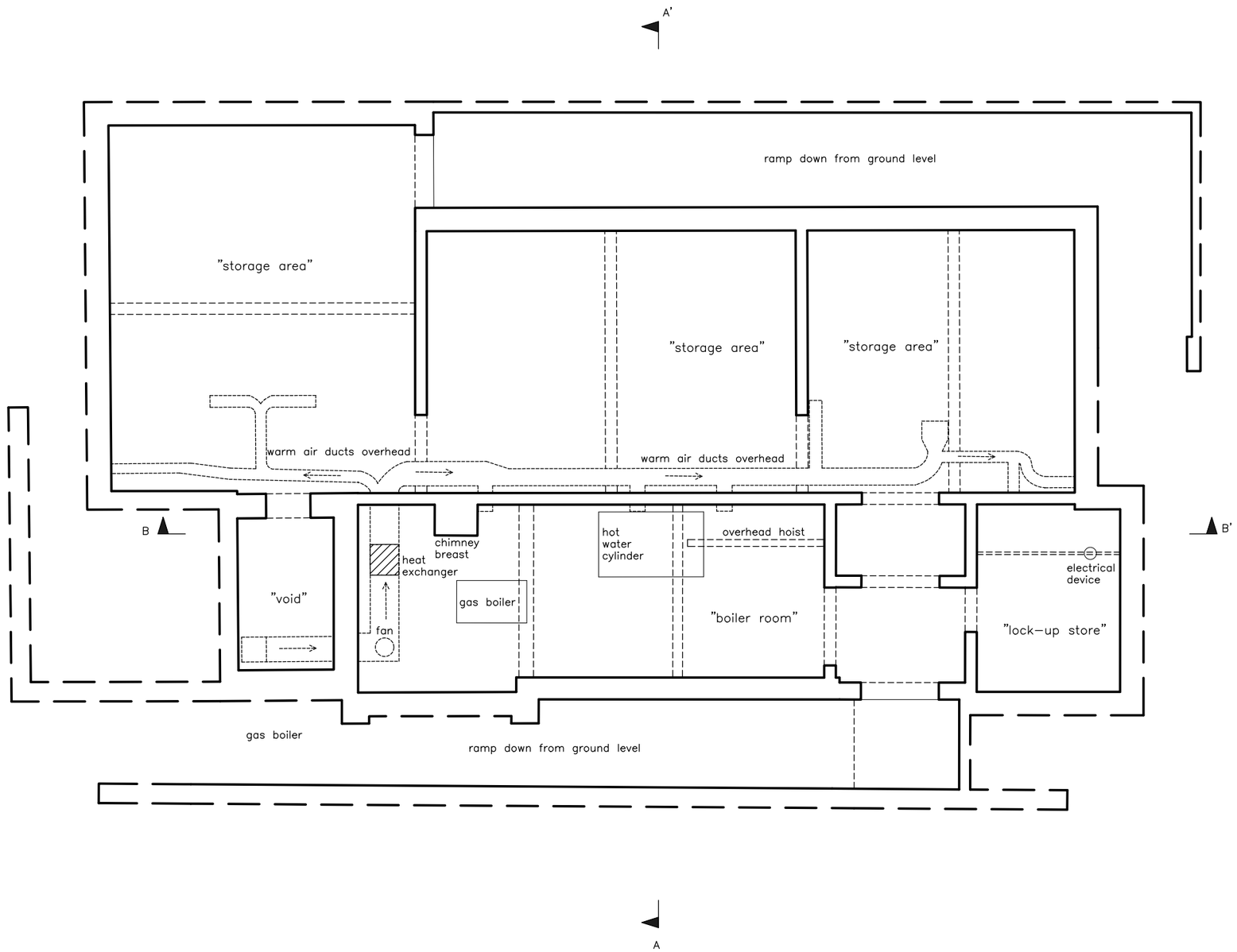
THE AMENITIES BLOCK OR BATHHOUSE
CENTRAL IRONWORKS, QUEEN ST STH
HUDDERSFIELD, WEST YORKSHIRE
(SE 14591 16171):
HISTORIC BUILDING RECORD

FIGURE 9:
GROUND FLOOR PLAN

SCALE: 1:100 (at A3)

DATE OF SURVEY: MAY 2015

STEPHEN HAIGH
Buildings Archaeologist



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BASED ON ORIGINAL SURVEY BY AHR BUILDING CONSULTANCY LTD

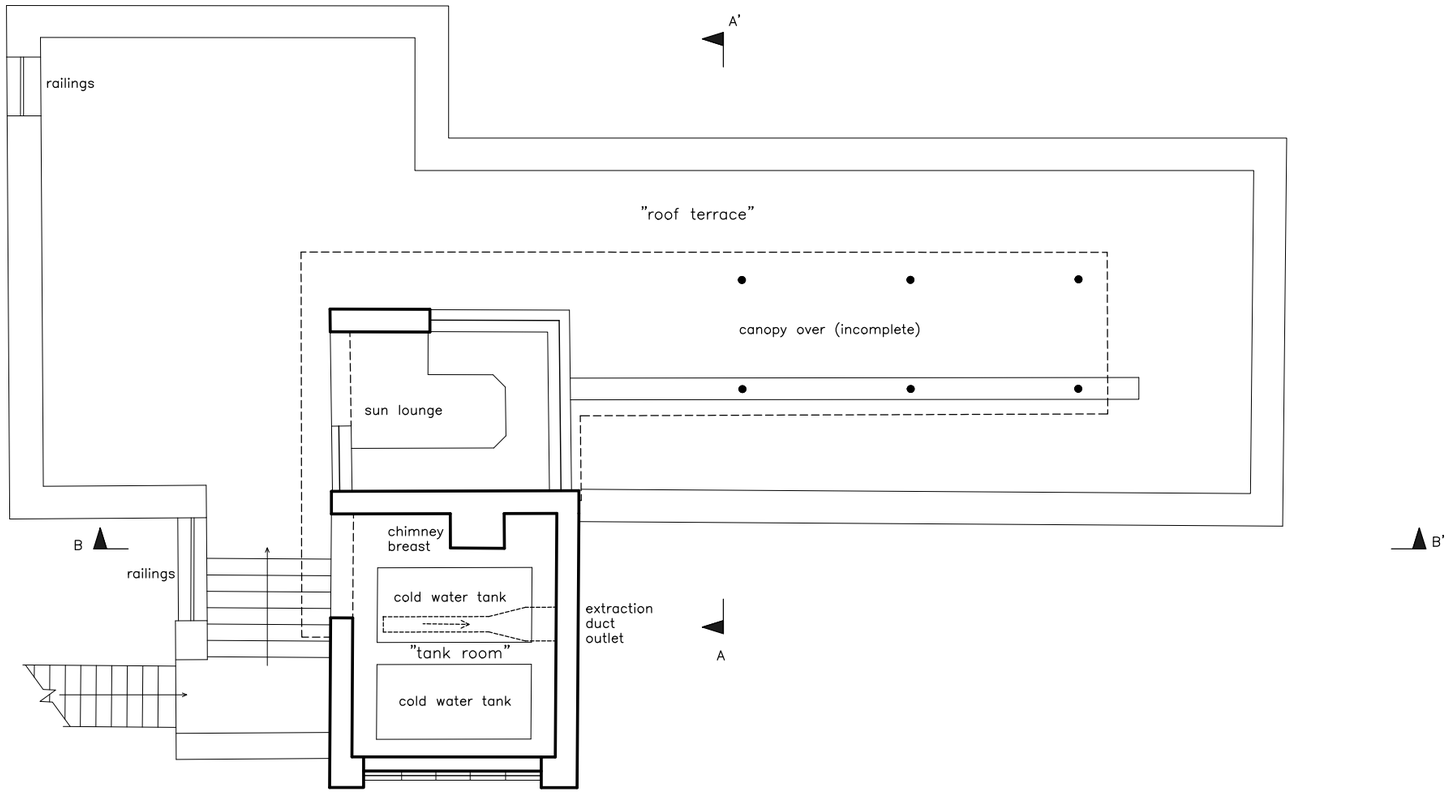
THE AMENITIES BLOCK OR BATHHOUSE
CENTRAL IRONWORKS, QUEEN ST STH
HUDDERSFIELD, WEST YORKSHIRE
(SE 14591 16171):
HISTORIC BUILDING RECORD

FIGURE 10:
BASEMENT PLAN

SCALE: 1:100 (at A3)

DATE OF SURVEY: MAY 2015

STEPHEN HAIGH
Buildings Archaeologist



KEY

air duct (at all levels) and direction of flow

step up

radiator

"boiler room" room use given on 1954 plan

L = locker
sh = shower
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fb = foot-bath

10m

BASED ON ORIGINAL SURVEY BY AHR BUILDING CONSULTANCY LTD

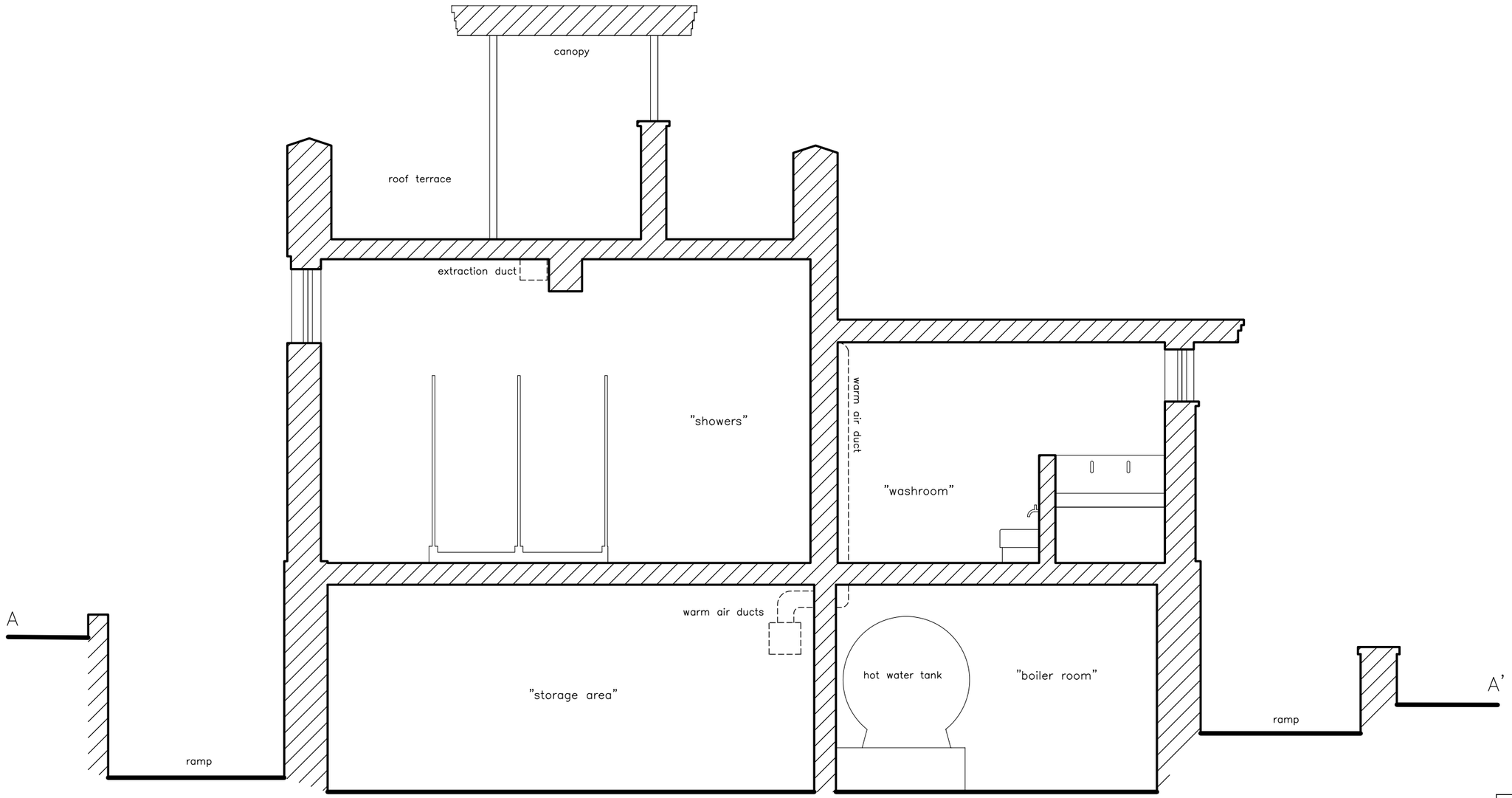
THE AMENITIES BLOCK OR BATHHOUSE
CENTRAL IRONWORKS, QUEEN ST STH
HUDDERSFIELD, WEST YORKSHIRE
(SE 14591 16171):
HISTORIC BUILDING RECORD

FIGURE 11:
ROOF PLAN

SCALE: 1:100 (at A3)

DATE OF SURVEY: MAY 2015

STEPHEN HAIGH
Buildings Archaeologist



5m

BASED ON ORIGINAL SURVEY BY AHR BUILDING CONSULTANCY LTD

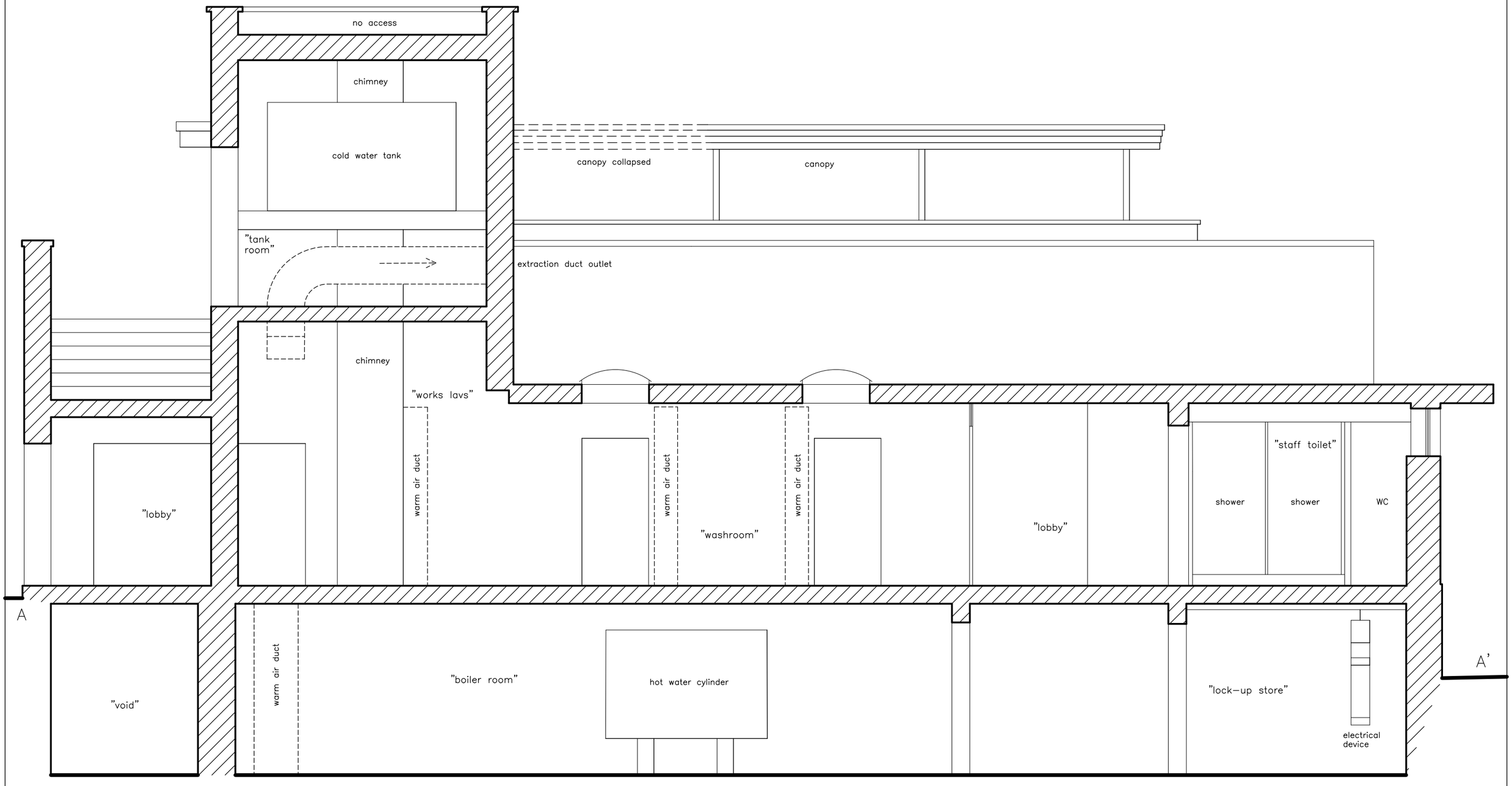
THE AMENITIES BLOCK OR BATHHOUSE
CENTRAL IRONWORKS, QUEEN ST STH
HUDDERSFIELD, WEST YORKSHIRE
(SE 14591 16171):
HISTORIC BUILDING RECORD

FIGURE 12:
CROSS–SECTION

SCALE: 1:50 (at A3)

DATE OF SURVEY: MAY 2015

STEPHEN HAIGH
Buildings Archaeologist



5m

BASED ON ORIGINAL SURVEY BY AHR BUILDING CONSULTANCY LTD

THE AMENITIES BLOCK OR BATHHOUSE
CENTRAL IRONWORKS, QUEEN ST STH
HUDDERSFIELD, WEST YORKSHIRE
(SE 14591 16171):
HISTORIC BUILDING RECORD

FIGURE 13:
LONGITUDINAL SECTION

SCALE: 1:50 (at A3)

DATE OF SURVEY: MAY 2015

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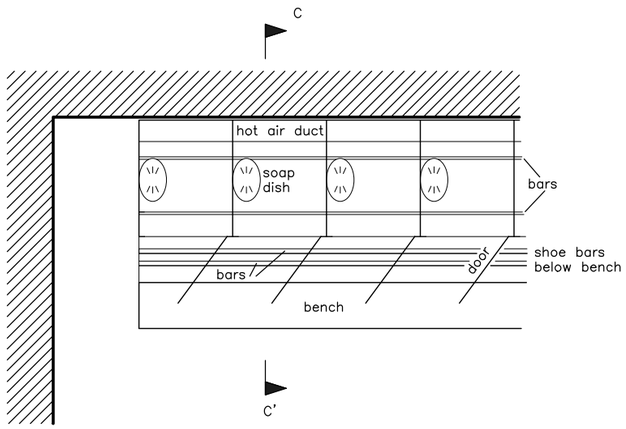
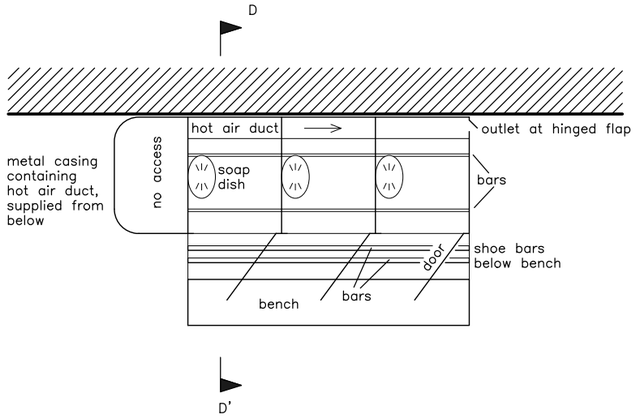
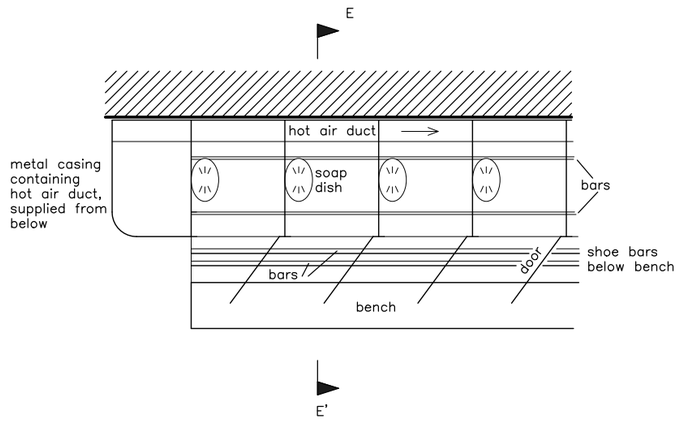
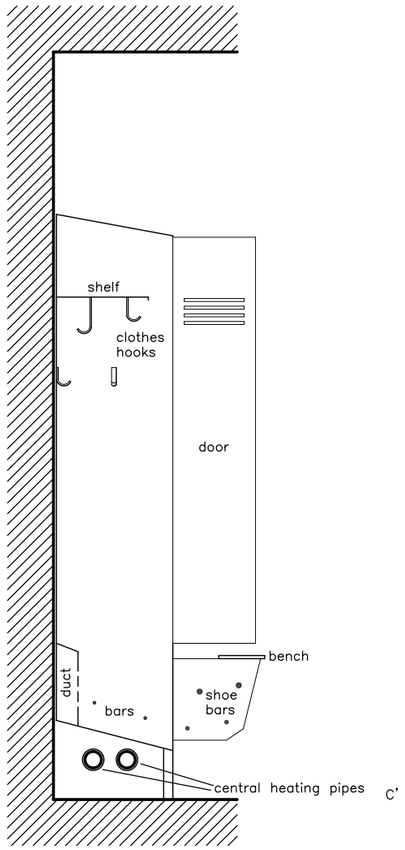
Buildings Archaeologist

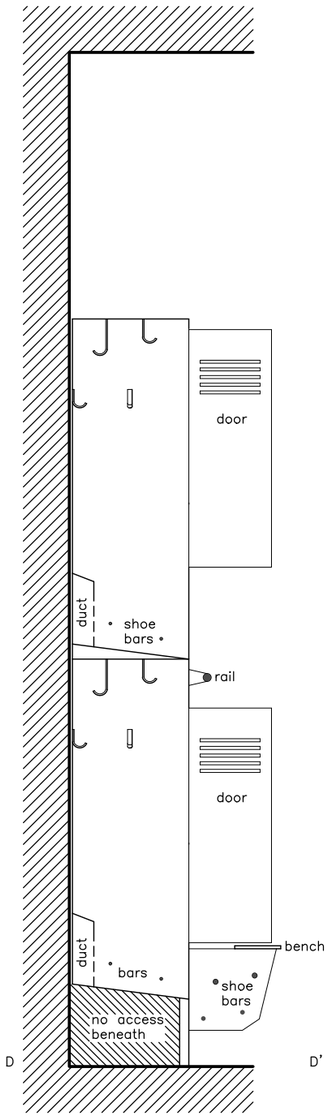




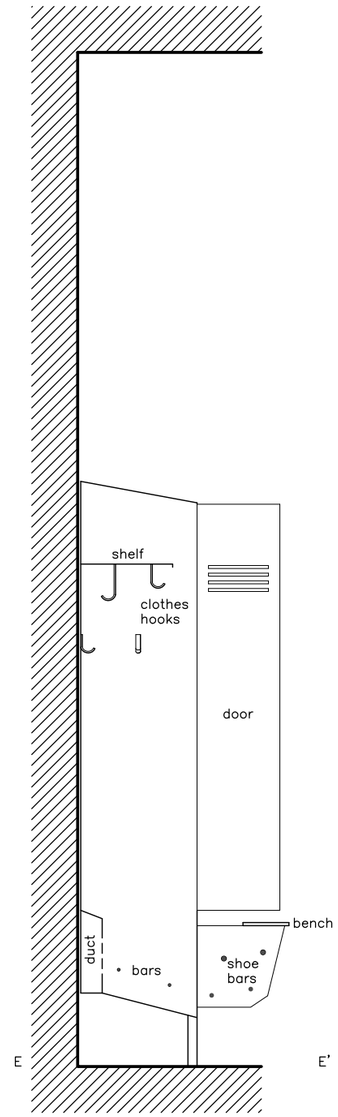




i) in "staff toilet"



ii) "dirty" lockers



iii) "clean" locker

1m

THE AMENITIES BLOCK OR BATHHOUSE
CENTRAL IRONWORKS, QUEEN ST STH
HUDDERSFIELD, WEST YORKSHIRE
(SE 14591 16171):
HISTORIC BUILDING RECORD

FIGURE 14:
DETAILS OF LOCKERS

SCALE: 1:20 (at A3)

DATE OF SURVEY: MAY 2015

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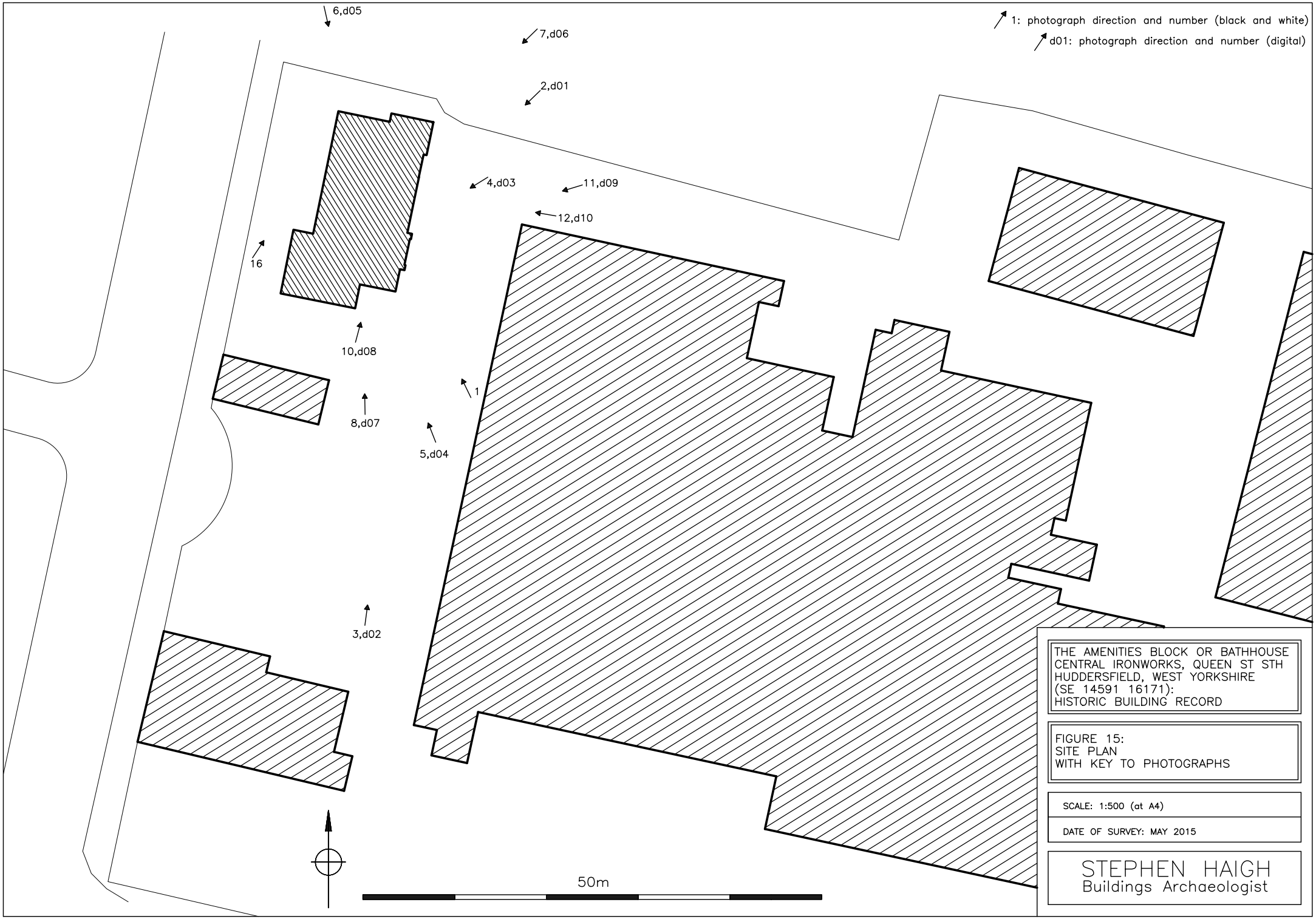
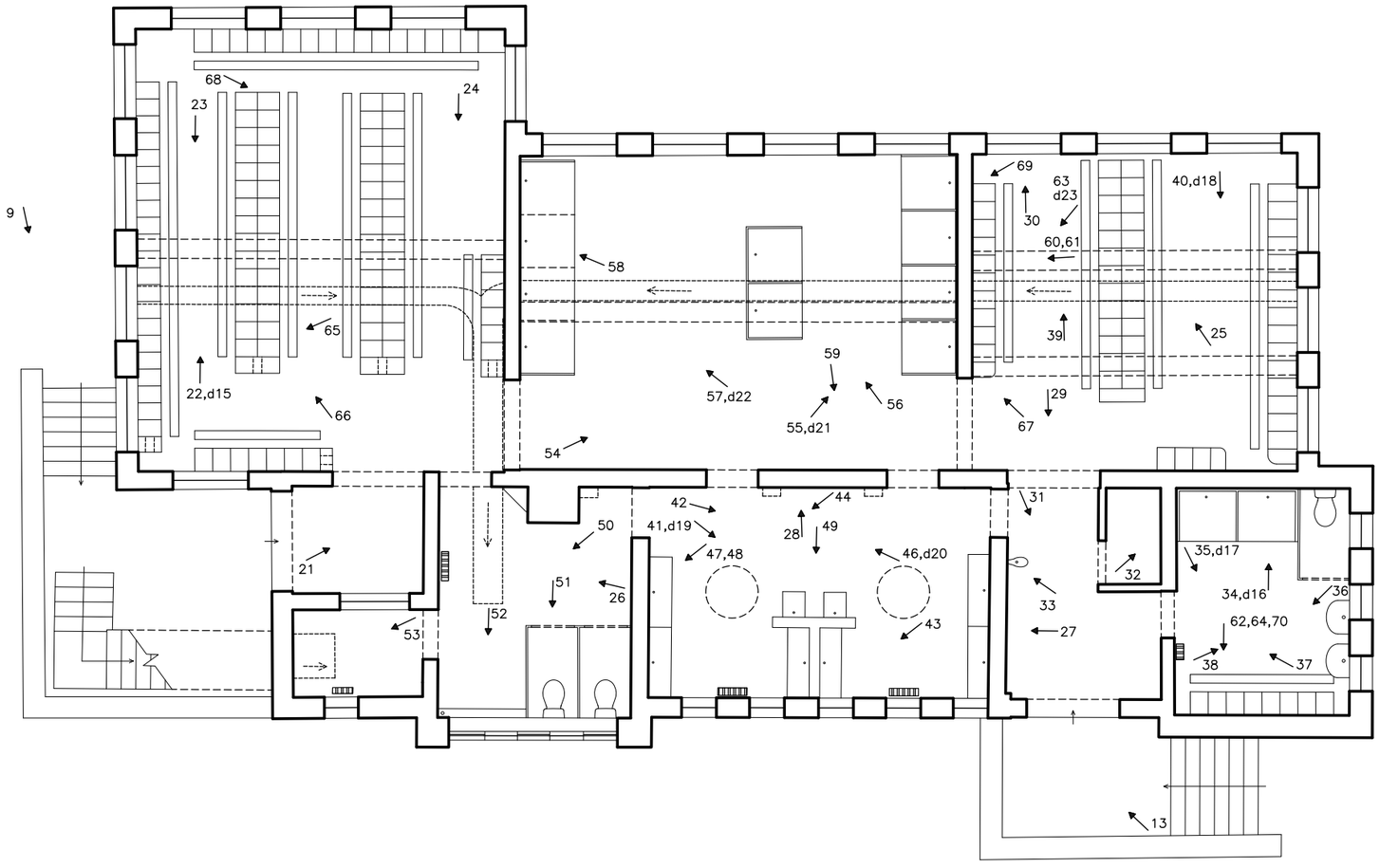

1: photograph direction and number (black and white)
d01: photograph direction and number (digital)
6,d05
7,d06
2,d01
4,d03
11,d09
12,d10
16
10,d08
1
8,d07
5,d04
3,d02
50m
THE AMENITIES BLOCK OR BATHHOUSE CENTRAL IRONWORKS, QUEEN ST STH HUDDERSFIELD, WEST YORKSHIRE (SE 14591 16171): HISTORIC BUILDING RECORD
FIGURE 15: SITE PLAN WITH KEY TO PHOTOGRAPHS
SCALE: 1:500 (at A4)
DATE OF SURVEY: MAY 2015
STEPHEN HAIGH
Buildings Archaeologist



KEY

1: photograph direction and number (black and white)

d01: photograph direction and number (digital)

10m

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CENTRAL IRONWORKS, QUEEN ST STH
HUDDERSFIELD, WEST YORKSHIRE
(SE 14591 16171):
HISTORIC BUILDING RECORD

FIGURE 16:
GROUND FLOOR PLAN
WITH KEY TO PHOTOGRAPHS

SCALE: 1:100 (at A3)

DATE OF SURVEY: MAY 2015

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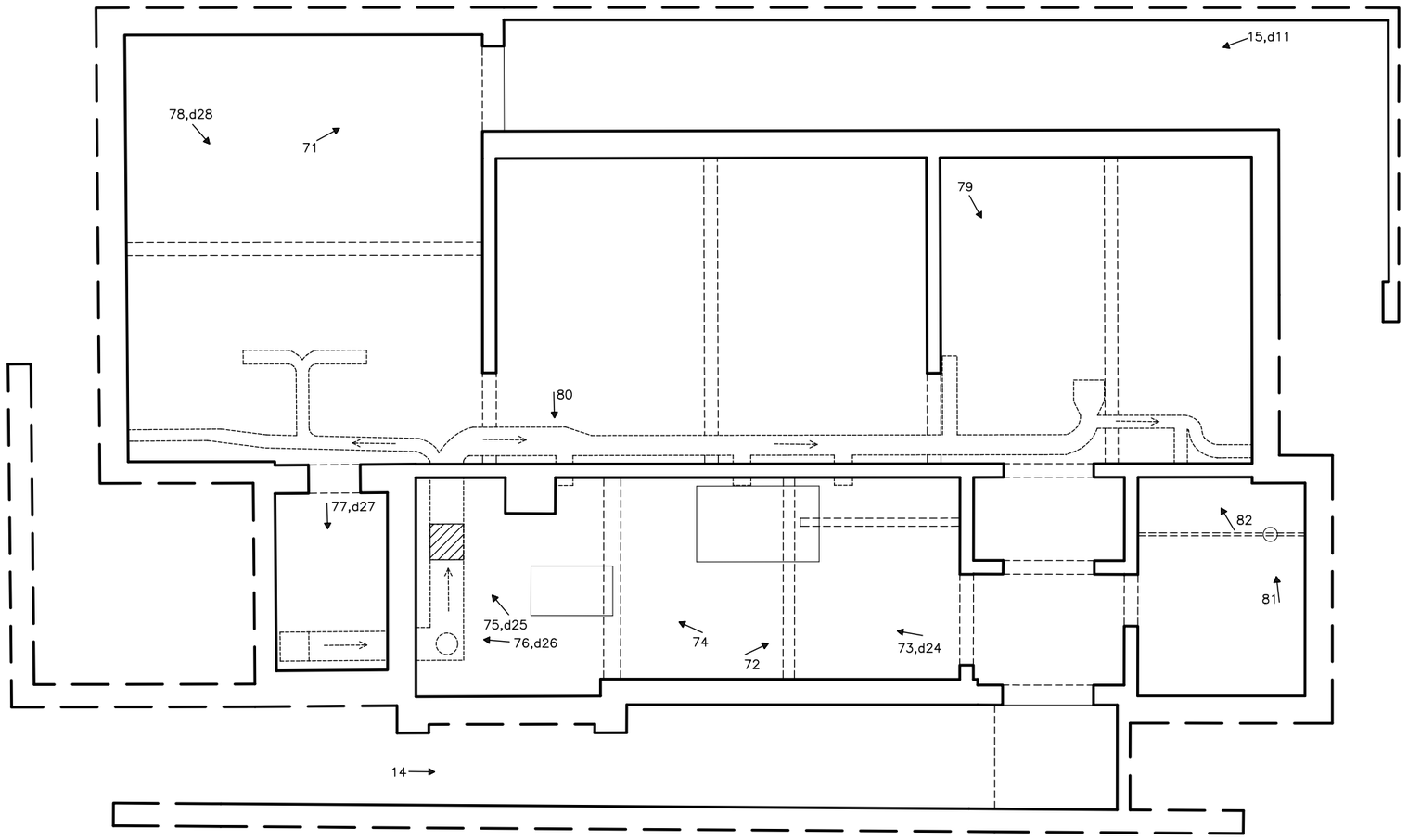


KEY

1: photograph direction and number (black and white)

d01: photograph direction and number (digital)

10m

BASED ON ORIGINAL SURVEY BY AHR BUILDING CONSULTANCY LTD

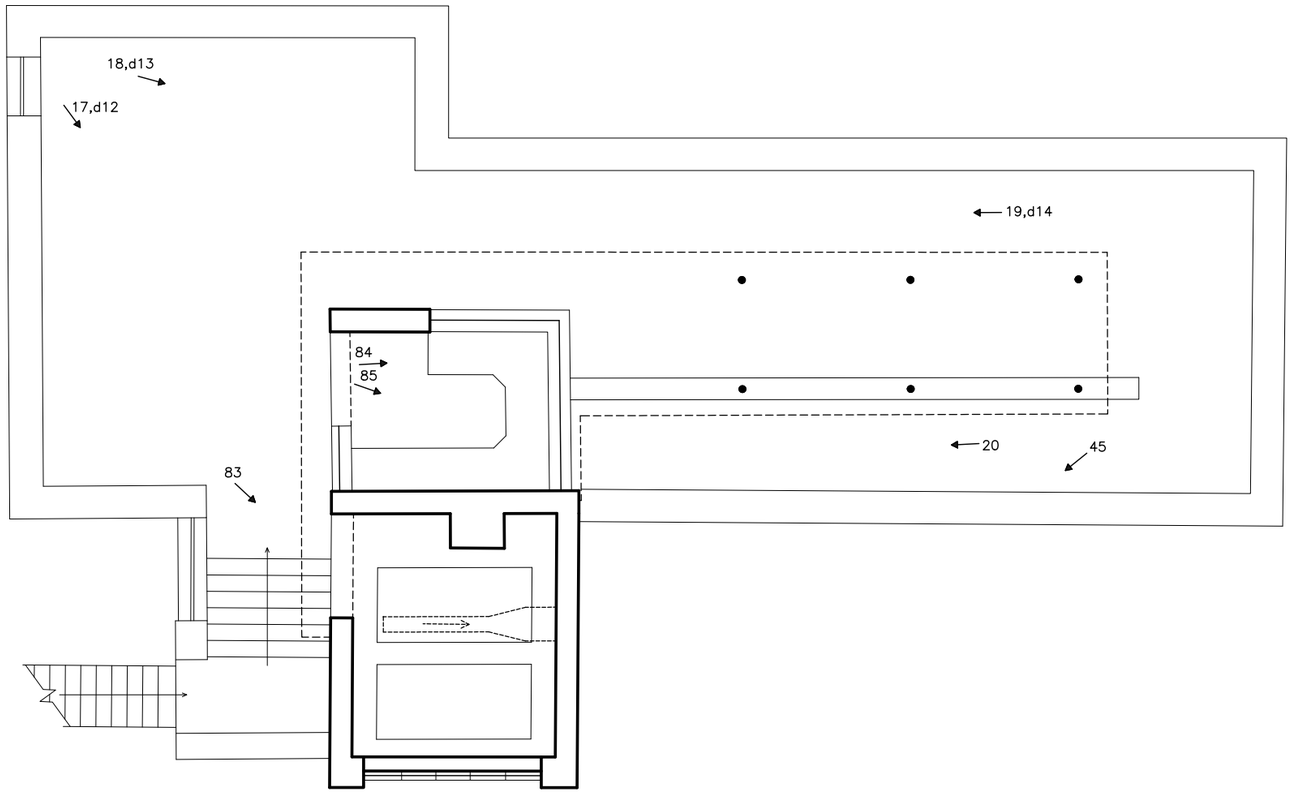
THE AMENITIES BLOCK OR BATHHOUSE
CENTRAL IRONWORKS, QUEEN ST STH
HUDDERSFIELD, WEST YORKSHIRE
(SE 14591 16171):
HISTORIC BUILDING RECORD

FIGURE 17:
BASEMENT PLAN
WITH KEY TO PHOTOGRAPHS

SCALE: 1:100 (at A3)

DATE OF SURVEY: MAY 2015

STEPHEN HAIGH
Buildings Archaeologist



KEY

1: photograph direction and number (black and white)

d01: photograph direction and number (digital)

10m

BASED ON ORIGINAL SURVEY BY AHR BUILDING CONSULTANCY LTD

THE AMENITIES BLOCK OR BATHHOUSE
CENTRAL IRONWORKS, QUEEN ST STH
HUDDERSFIELD, WEST YORKSHIRE
(SE 14591 16171):
HISTORIC BUILDING RECORD

FIGURE 18:
ROOF PLAN
WITH KEY TO PHOTOGRAPHS

SCALE: 1:100 (at A3)

DATE OF SURVEY: MAY 2015

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Buildings Archaeologist

Photo 1: General view of the building, from the south-east (film 2, frame 4)

Photo 2: General view, from the north-east (film 3, frame 7)

Photo 3: General view of the site, with foundry to right, from the south (film 3, frame 4)

Photo 4: The water tank tower, from the north-east (film 1, frame 18)

Photo 5: General view of the building, from the south-east (film 2, frame 2)

Photo 6: General view, from the north-west (film 3, frame 5)

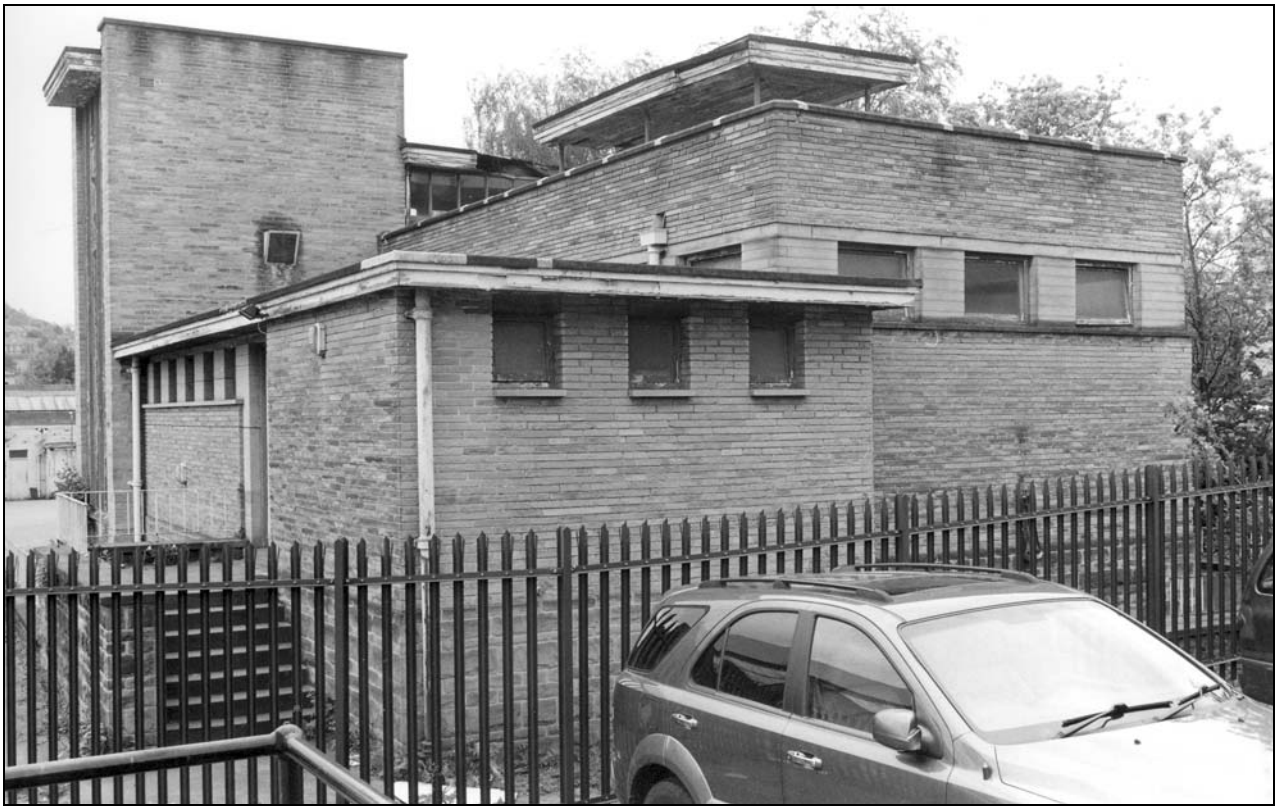

Photo 7: General view, from the north-east (film 3, frame 6)

Photo 8: General view of the building, from the south (film 2, frame 6)

Photo 10: Outside stairs to roof level and water tank tower, from the south (film 2. frame 7)

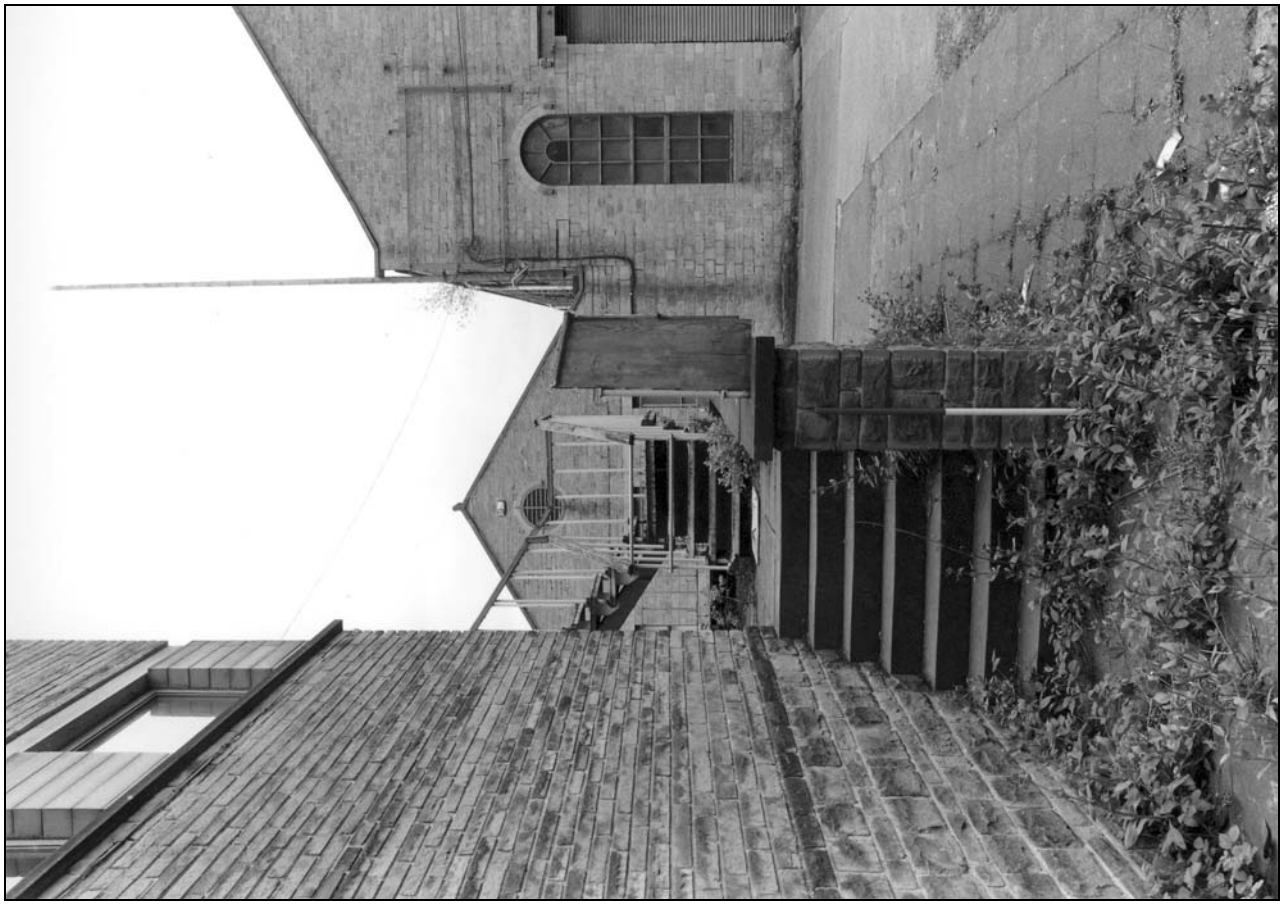

Photo 9: Foot of stairs to roof level, from the west (film 2, frame 9)

Photo 11: General view of the building, from the north-east (film 1, frame 16)

Photo 12: North entrance to ground floor and wash-house windows, from the east (film 1, frame 17)

Photo 14: Ramp down to east basement entrance, from the south (film 2. frame 5)

Photo 13: North entrance to ground floor, from the north-east (film 2. frame 1)

Photo 16: West elevation, from the south-west (film 3, frame 1)

Photo 15: Ramp down to west basement entrance, from the north (film 3, frame 2)

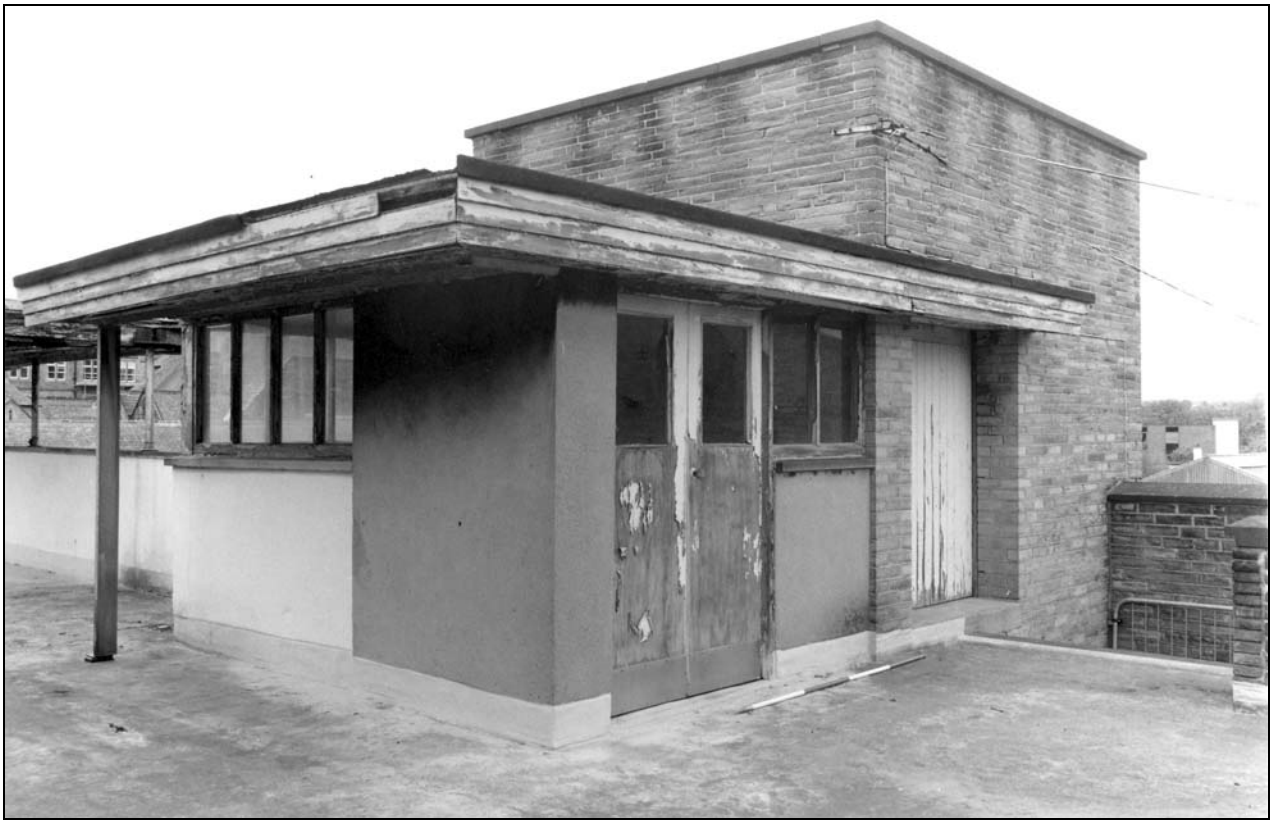

Photo 17: Sun lounge and top of water tank tower, from the south-west (film 2, frame 10)

Photo 18: Sun lounge and roof terrace, with canopy, from the south-west (film 2, frame 11)

Photo 19: Roof terrace, with canopy, from the north (film 2, frame 12)

Photo 20: Roof terrace, with canopy and water tank tower, from the north (film 2, frame 13)

Photo 21: “Clean” entrance lobby (film 5, frame 16)

Photo 22: “Clean lockers” room, from the east (film 5, frame 18)

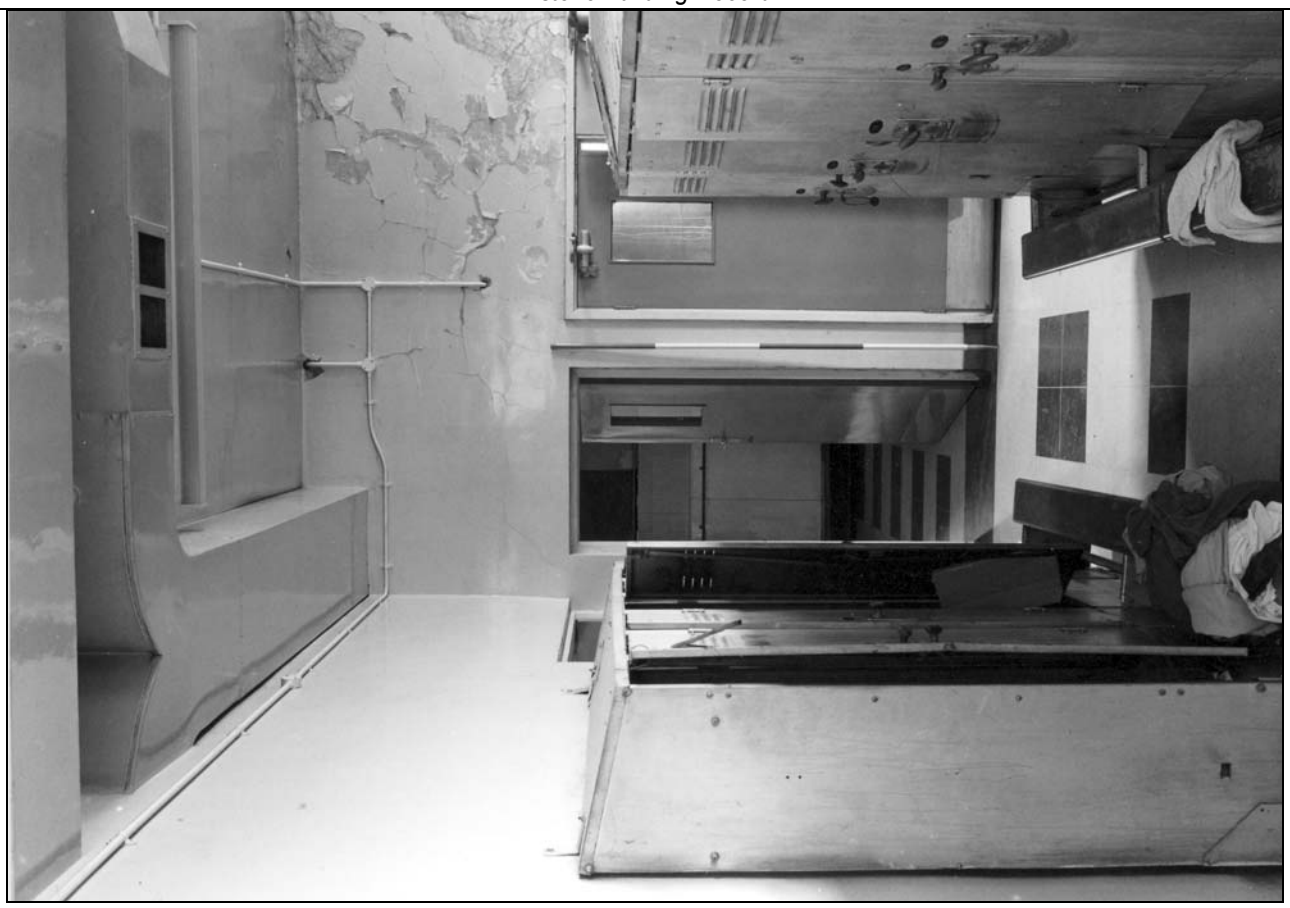

Photo 24: "Clean lockers" room, from the west (film 6, frame 1)

Photo 23: "Clean lockers" room, from the west (film 5, frame 17)

Photo 25: Grill in overhead extraction duct, in “dirty lockers” room (film 4, frame 8)

Photo 26: Detail of overhead extraction duct in “works lavs” (film 5, frame 14)

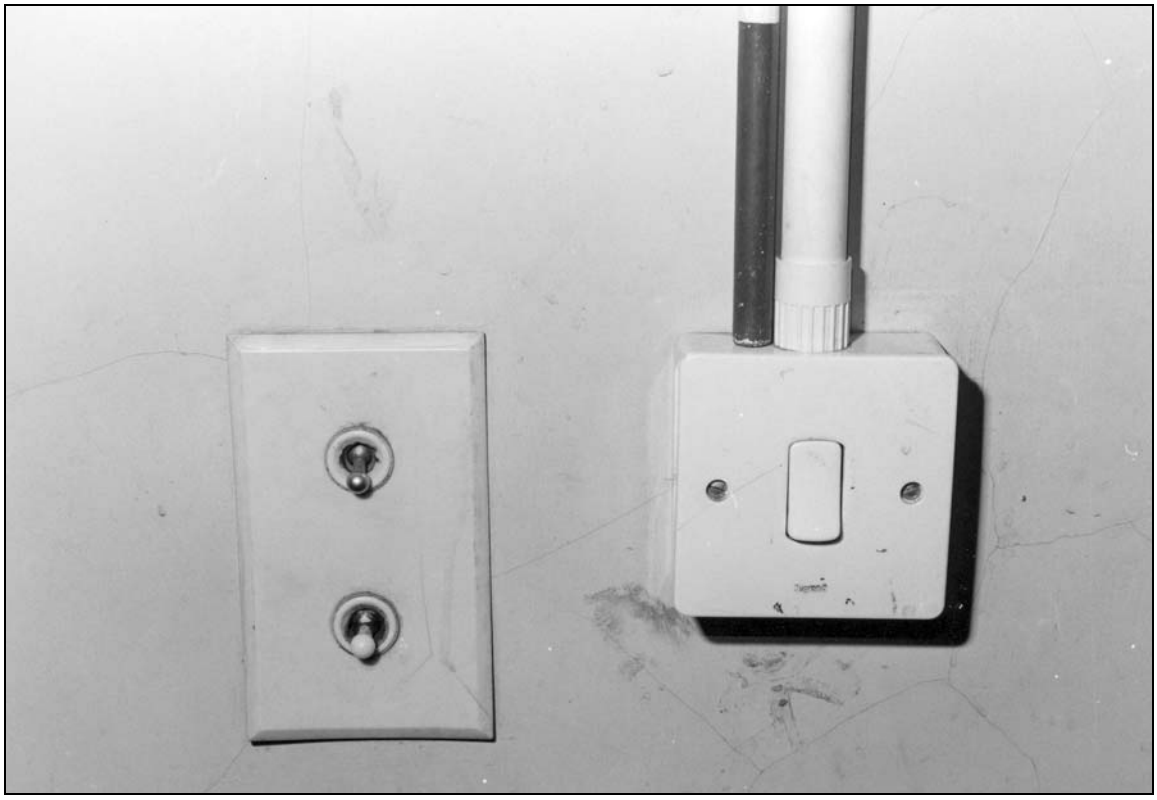

Photo 27: Detail of original and later light switches in “dirty” lobby (film 6, frame 16)

Photo 28: Detail of three-pin electrical socket in “washroom” (film 6, frame 15)

Photo 29: Typical doors, in "dirty lockers" room (film 4, frame 5)

Photo 30: Detail of typical window, west side of "dirty lockers" room (film 4, frame 16)

Photo 32: Electrical supply and fuse box area (film 4, frame 4)

Photo 31: "Dirty" lobby, from the west (film 3, frame 9)

Photo 34: Shower cubicle in "staff toilet" (film 3, frame 12)

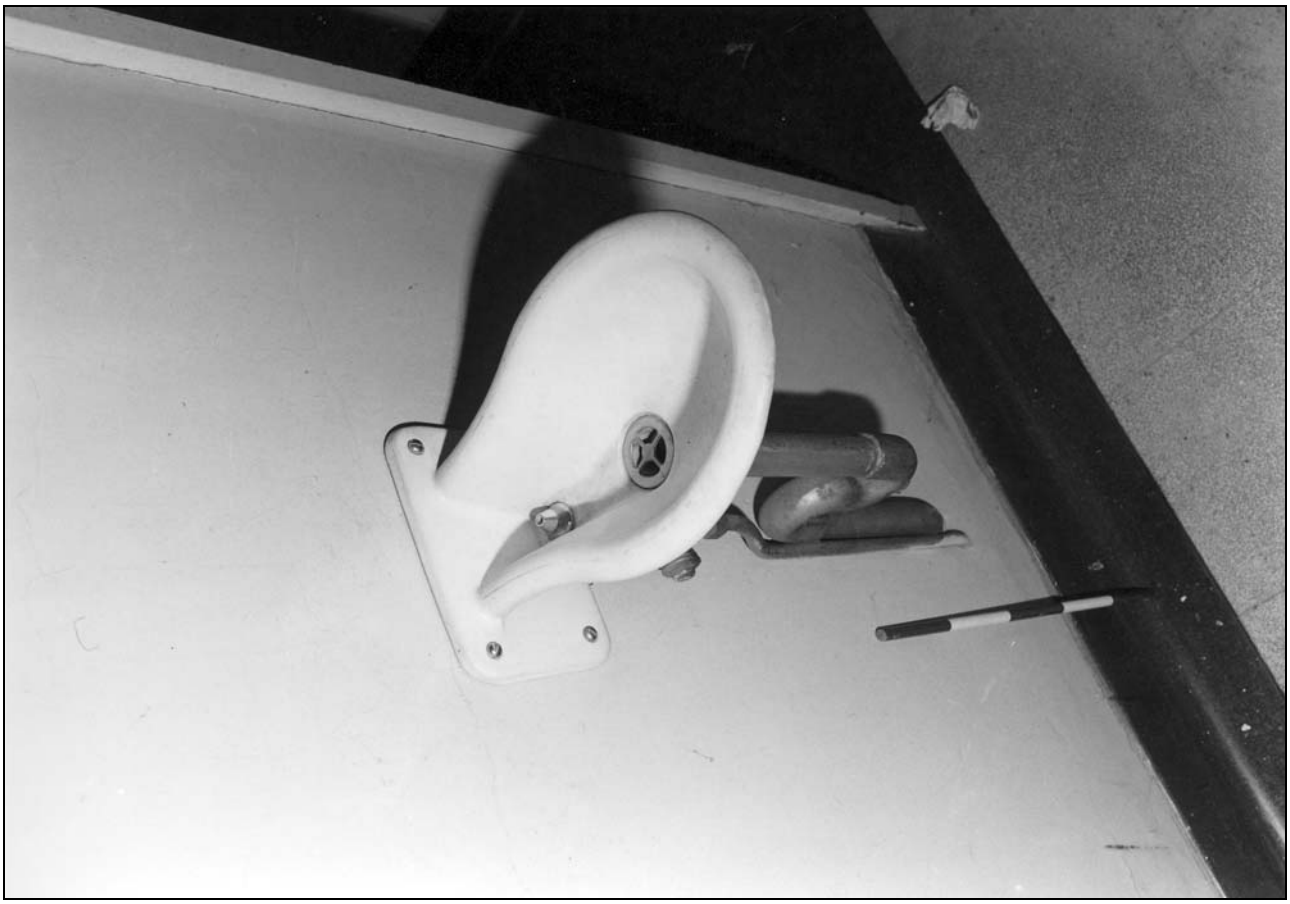

Photo 33: Detail of drinking fountain (film 3, frame 10)

Photo 35: Lockers in “staff toilet” (film 3, frame 17)

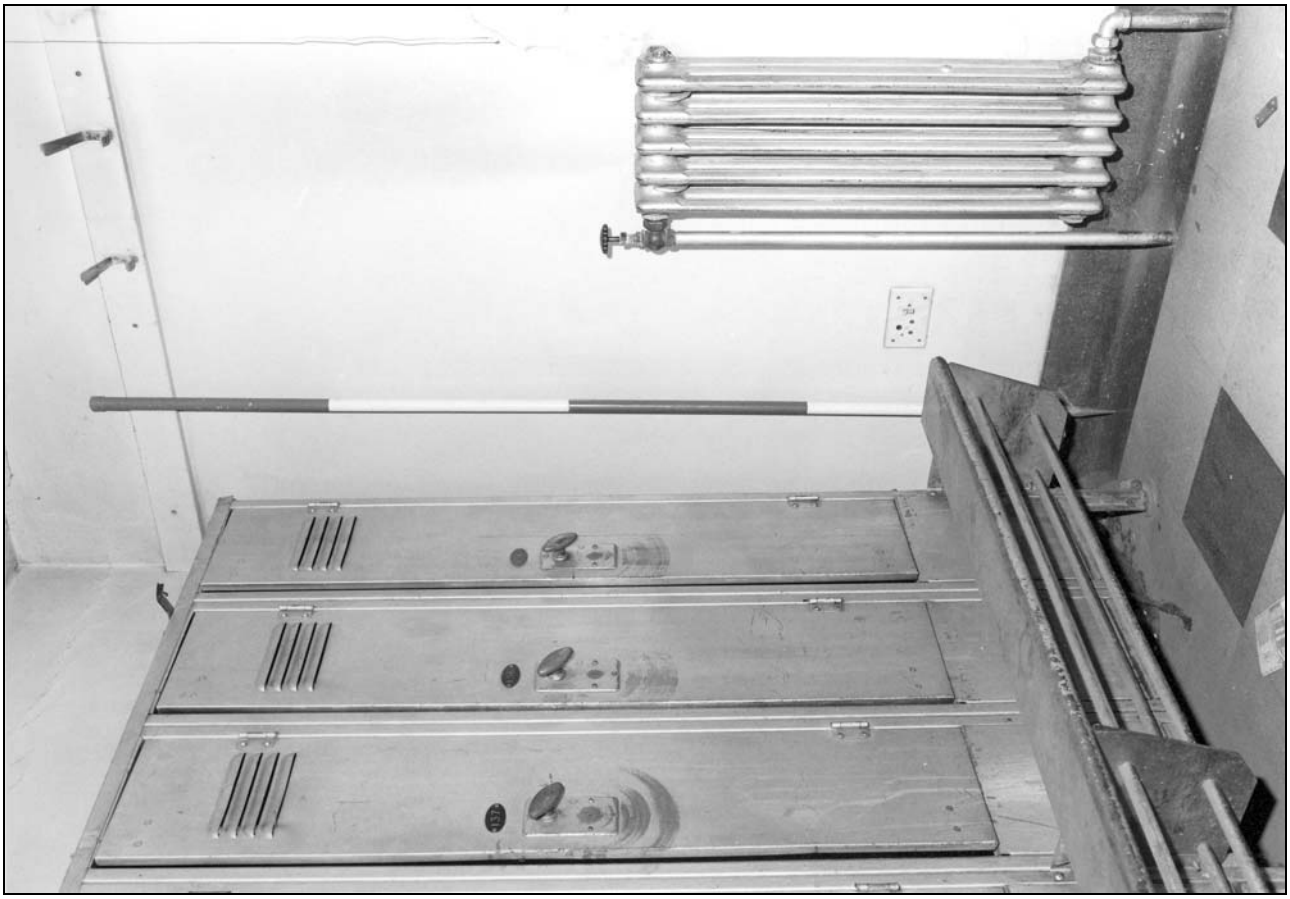

Photo 36: “Staff toilet”, from the north-west (film 3, frame 16)

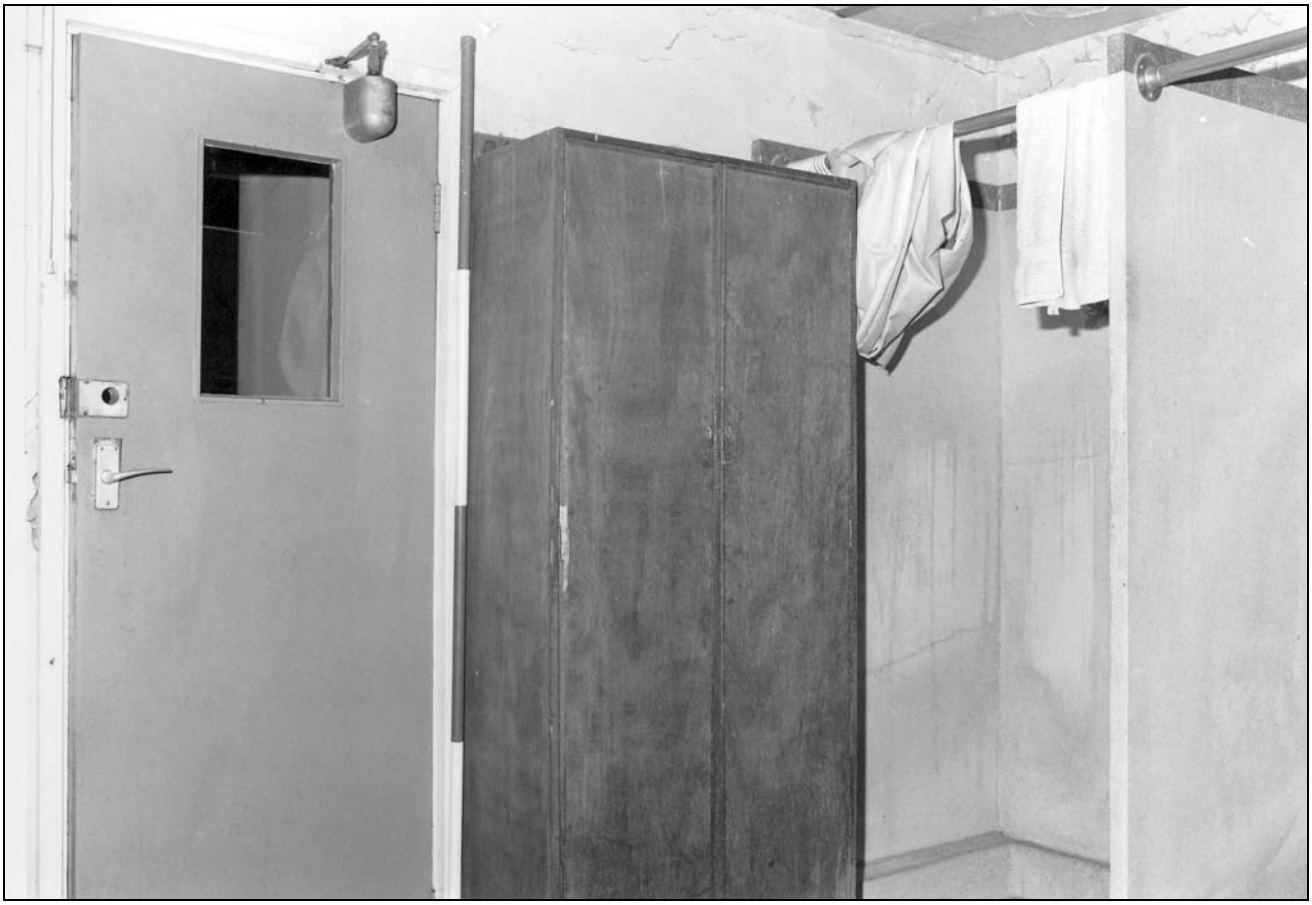

Photo 37: “Staff toilet”, from the north-east (film 3, frame 13)

Photo 38:“Staff toilet”, from the south (film 3, frame 11)

Photo 40:: "Dirty lockers" room, from the west (film 4, frame 7)

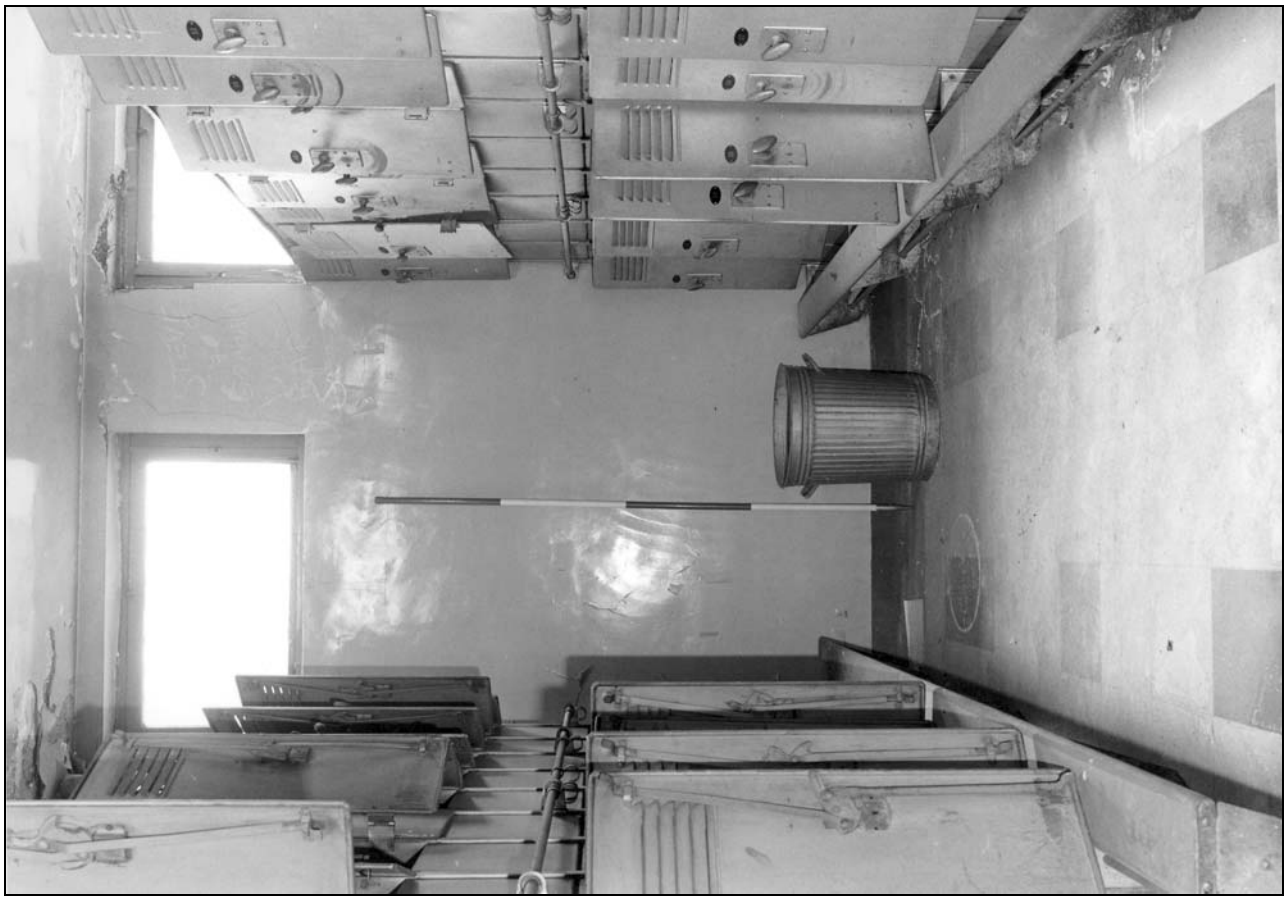

Photo 39: "Dirty lockers" room, from the east (film 4, frame 6)

Photo 41: "Washroom", from the south-west (film 5, frame 6)

Photo 42: “Washroom”, from the south (film 4, frame 17)

Photo 43: “Washroom”, from the north-west (film 5, frame 1)

Photo 44: “Washroom”, from the north-west (film 5, frame 4)

Photo 45: Roof lights over wash-room, and air extraction outlet, from the north-west (film 2. frame 15)

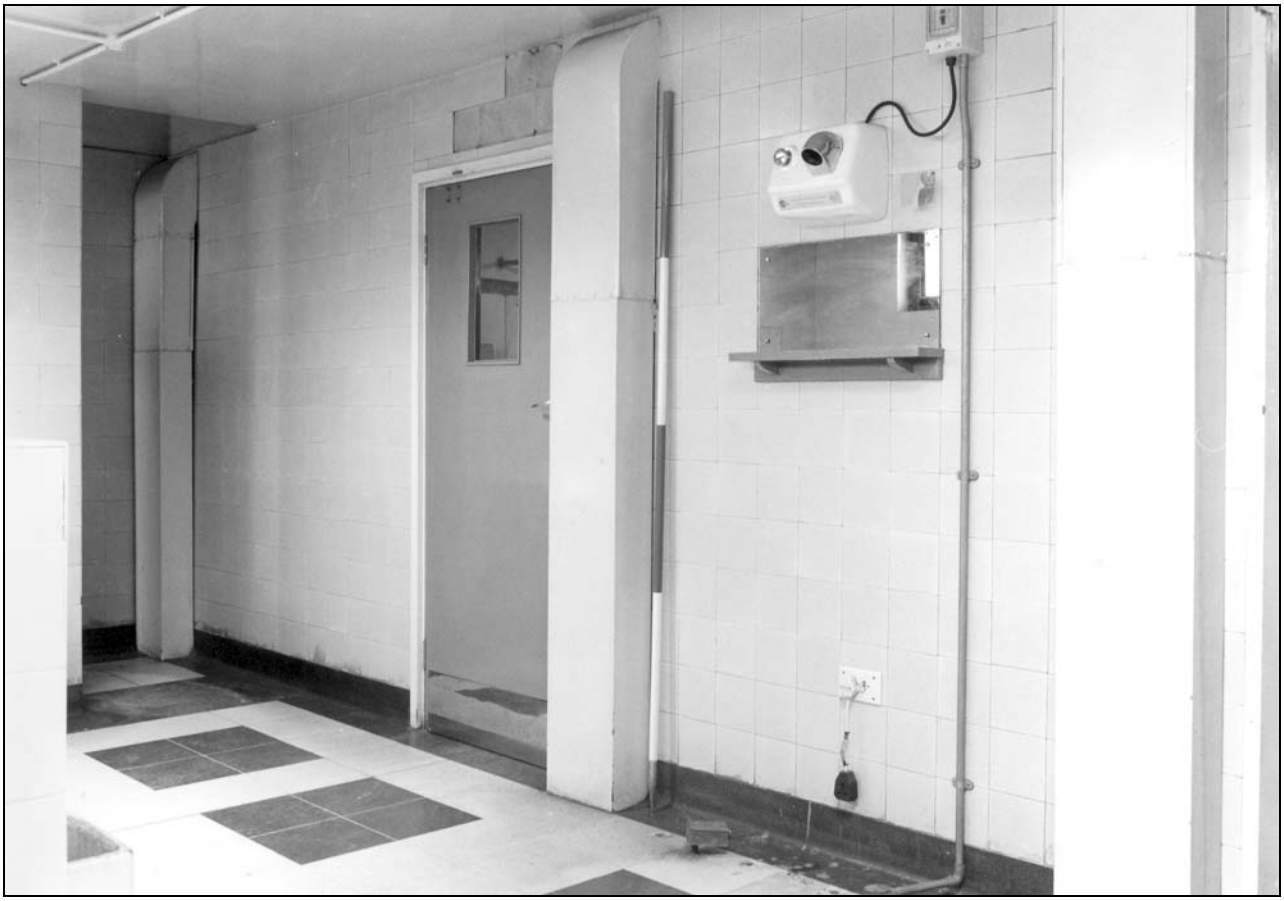

Photo 46: “Washroom”, from the north-east (film 5, frame 5)

Photo 47: Detail of wash basin in “washroom” (film 5, frame 8)

Photo 48: Detail of mixer control and foot-operated taps for wash basin in “washroom” (film 5, frame 9)

Photo 49: Foot-baths in “washroom” (film 5, frame 3)

Photo 50: Door to “attendant’s room” from “works lavs” (film 5, frame 12)

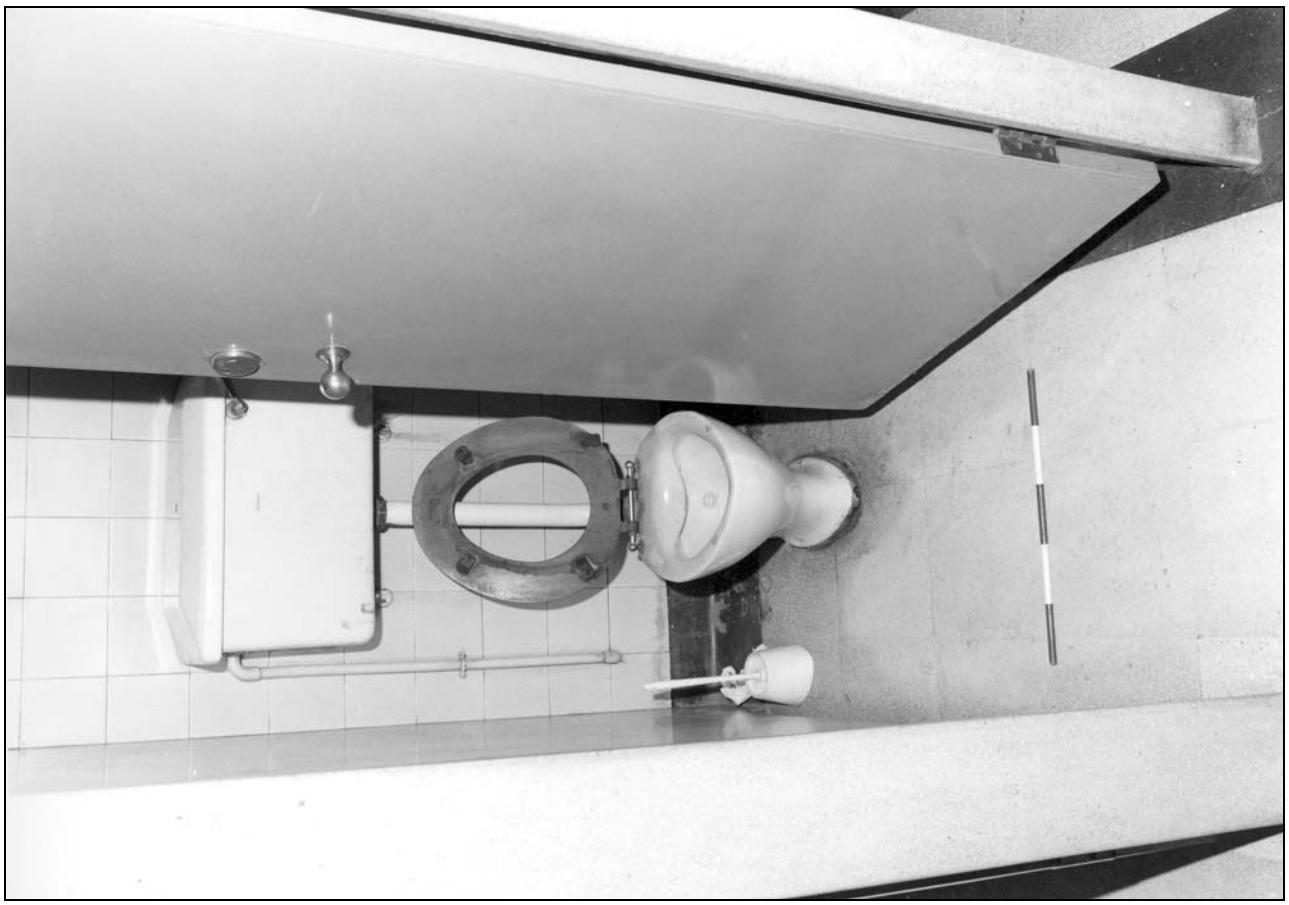

Photo 51: Detail of WC in “works lavs” (film 5, frame 10)

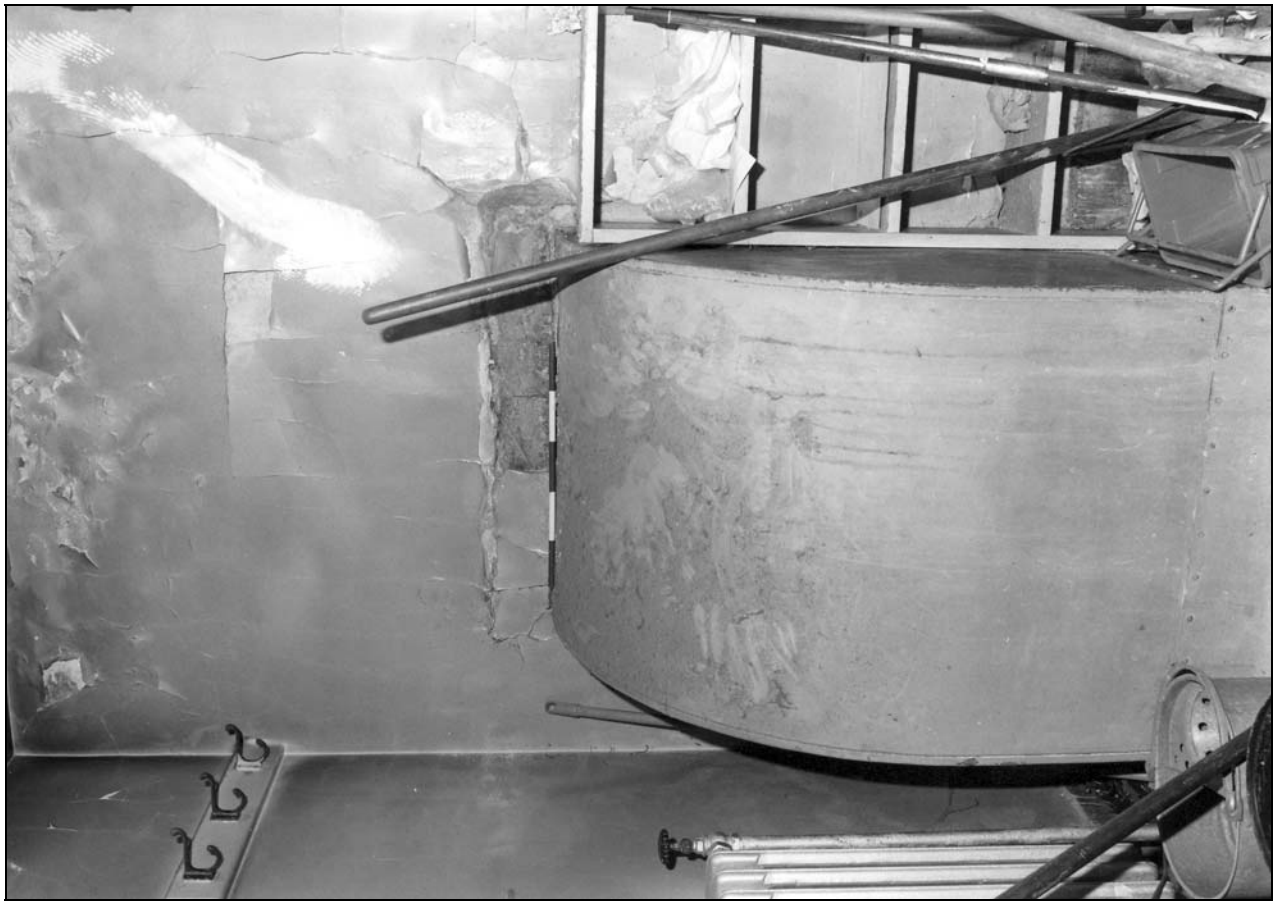

Photo 53: "Attendant's room", from the north, showing air intake for warm air system (film 5. frame 15)

Photo 52: Detail of urinal in "works lavs" (film 5, frame 11)

Photo 54: “Showers”, from the south-east (film 6, frame 7)

Photo 55: Cubicles at north side of shower room, from the south-east (film 6, frame 10)

Photo 56: Cubicles in middle of shower room, from the north-east (film 6. frame 12)

Photo 57: “Open showers”, from the north-east (film 6, frame 11)

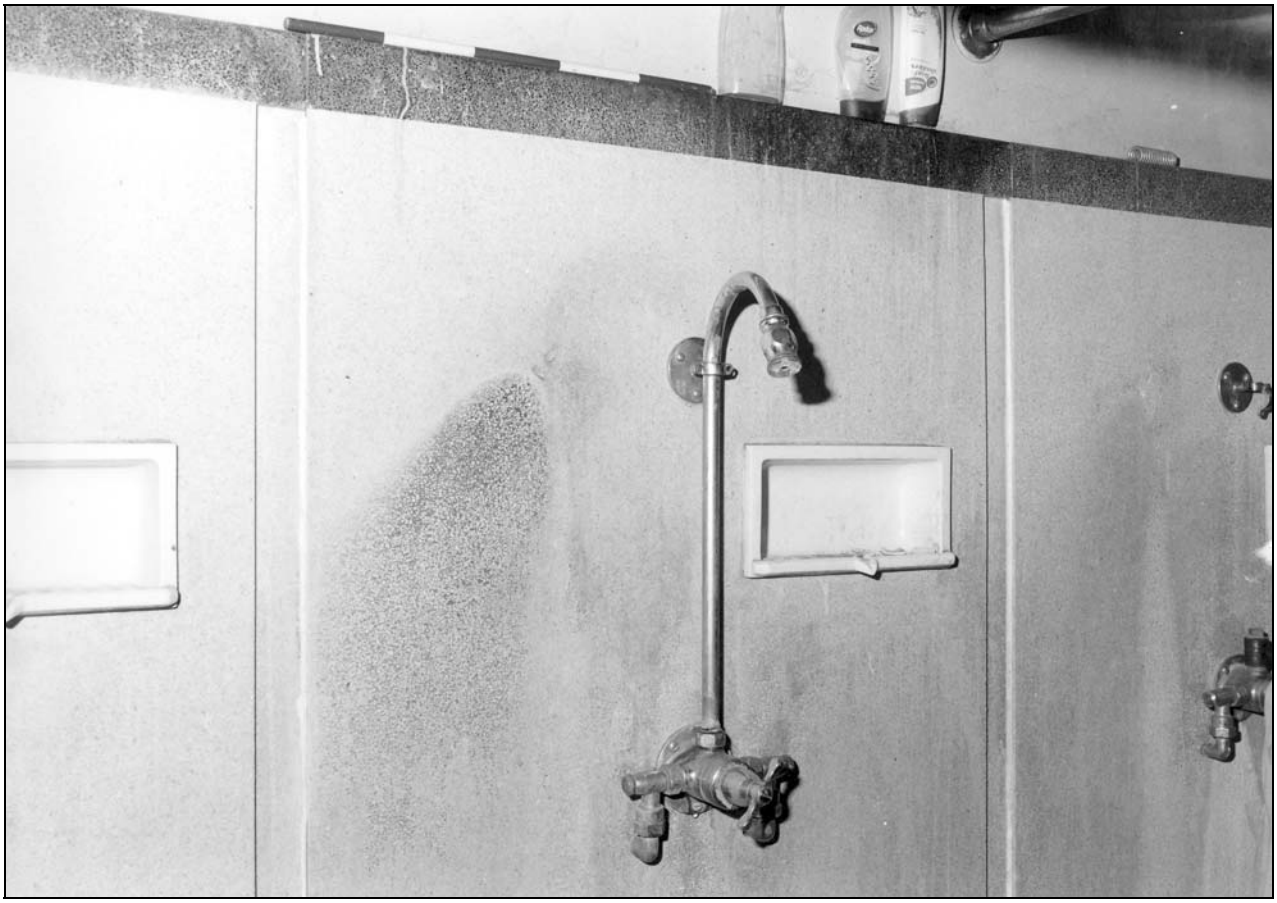

Photo 58: Detail of shower tap and head in open showers (film 6, frame 13)

Photo 59: Shower room, from the west, showing grills from warm air ducts through wall (film 6. frame 9)

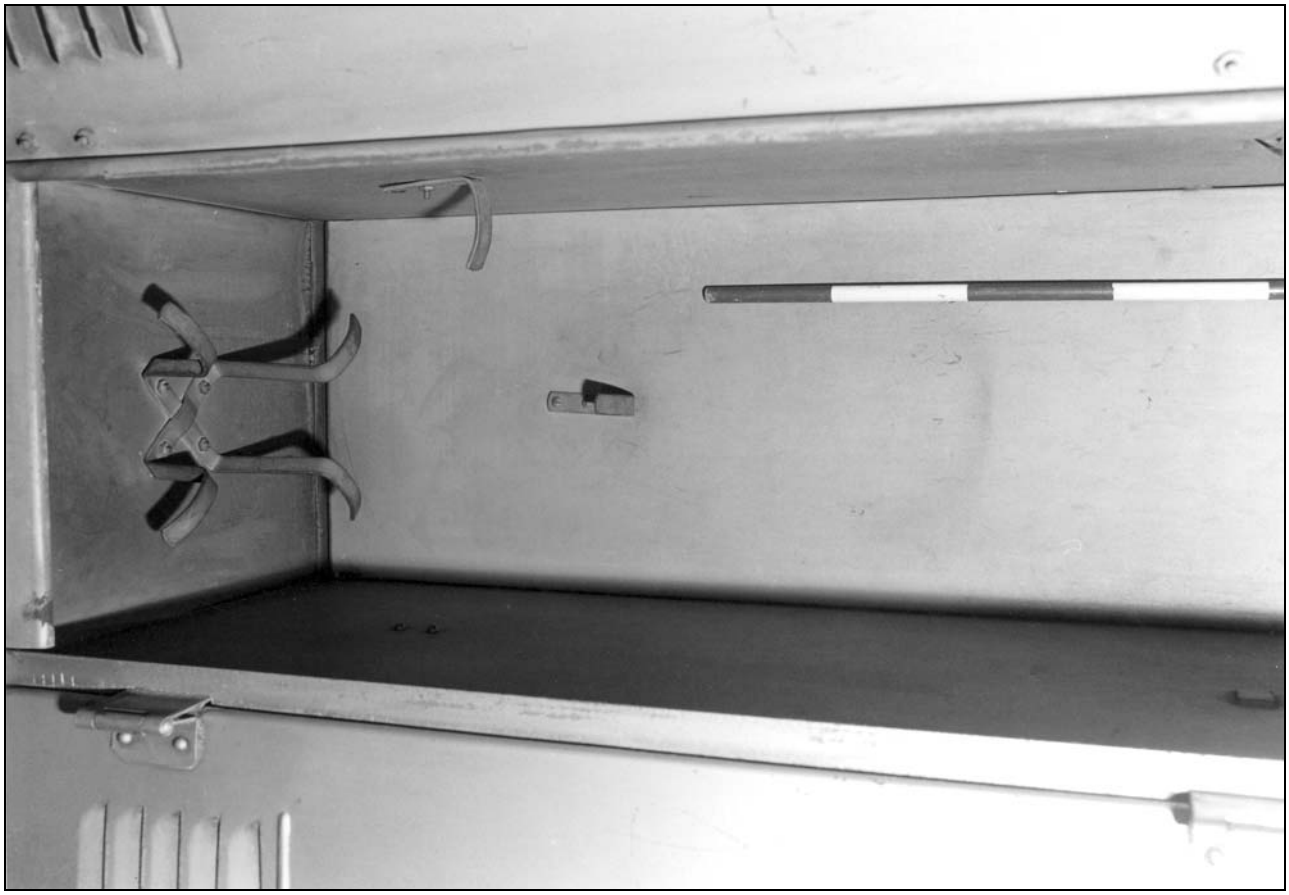

Photo 61: Internal detail at top of "dirty locker" (film 4, frame 12)

Photo 60: Detail of lower tier of "dirty lockers" (film 4, frame 11)

Photo 63: Detail of lower tier of "dirty lockers" (film 4, frame 10)

Photo 62: Internal detail of lockers in "staff toilet" (film 4, frame 1)

Photo 64: Detail of locker in "staff toilet" (film 3, frame 18)

Photo 65: Detail of "clean locker" (film 6, frame 5)

Photo 66: End of row of "clean" lockers", showing casing and warm air duct at floor level (film 6. frame 4)

Photo 67: Detail of metal casing at end of row of "dirty lockers", containing warm air duct from below (film 4, frame 14)

Photo 68: Detail of panel for warm air ducts at end of row of “clean” lockers (film 6, frame 6)

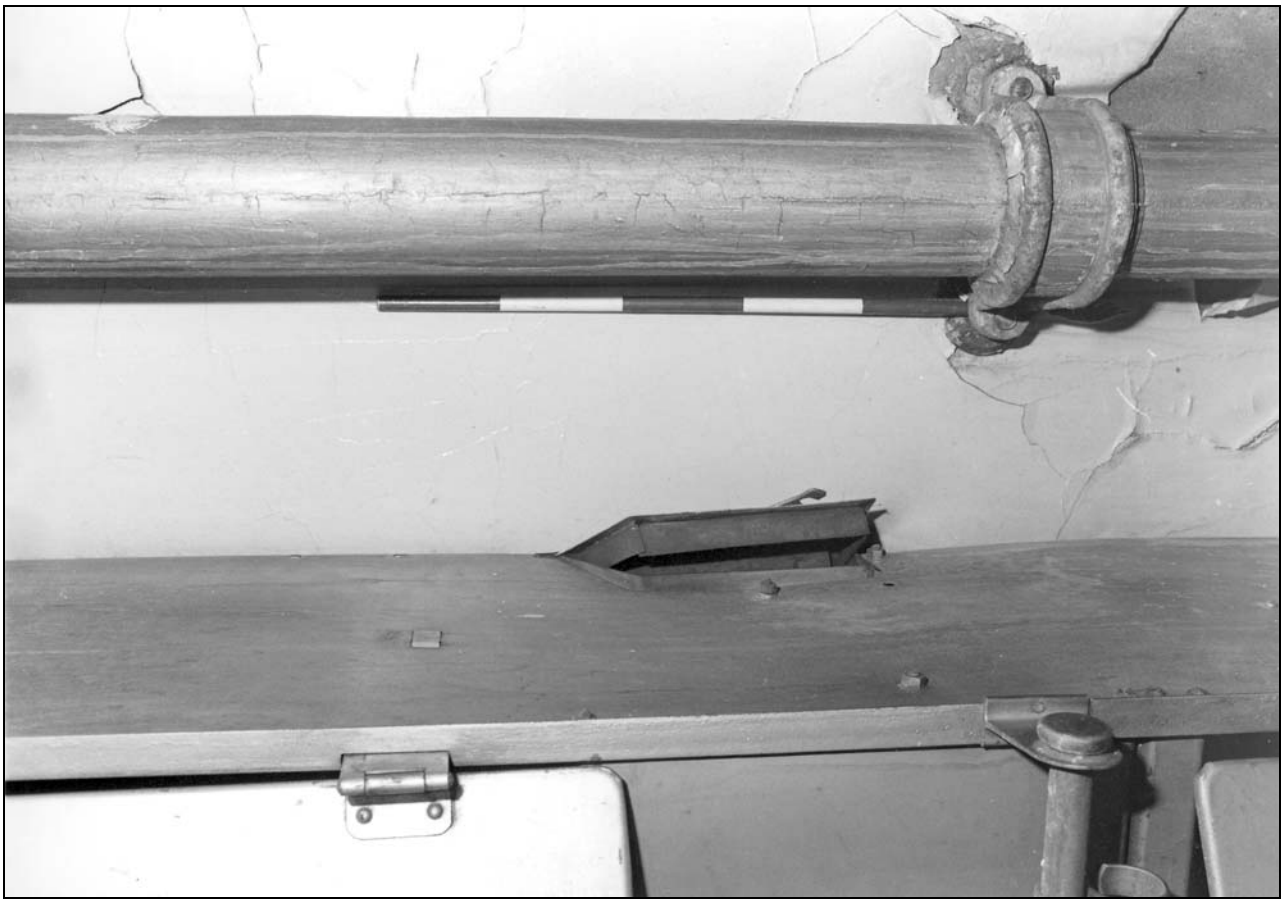

Photo 69: Detail of hinged flap for warm air duct at end of row of “dirty” lockers (film 4. frame 13)

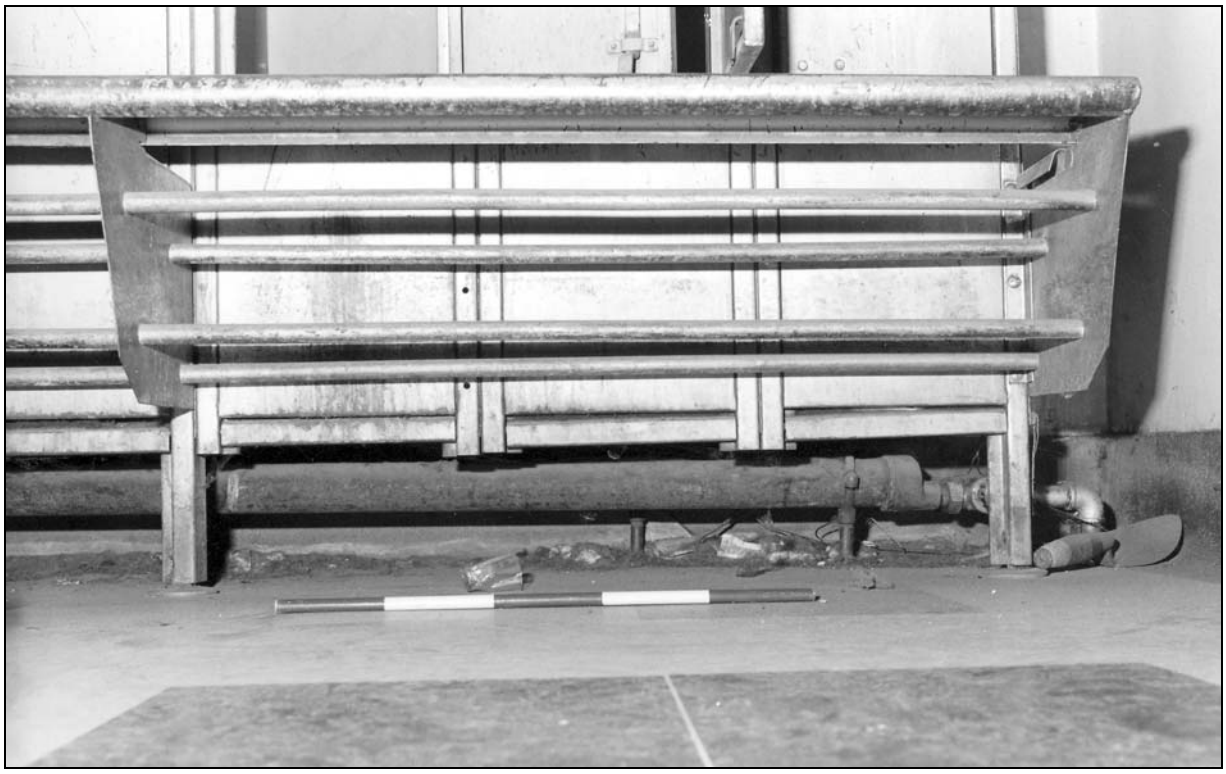

Photo 70: Detail of shoe rack and heating pipes below lockers in “staff toilet” (film 4, frame 2)

Photo 71: Basement: external doors to storage area (film 1, frame 12)

Photo 72: Basement: boiler room entrance, from the south-east (film 1, frame 2)

Photo 73: Basement: boiler room, from the north (film 1, frame 1)

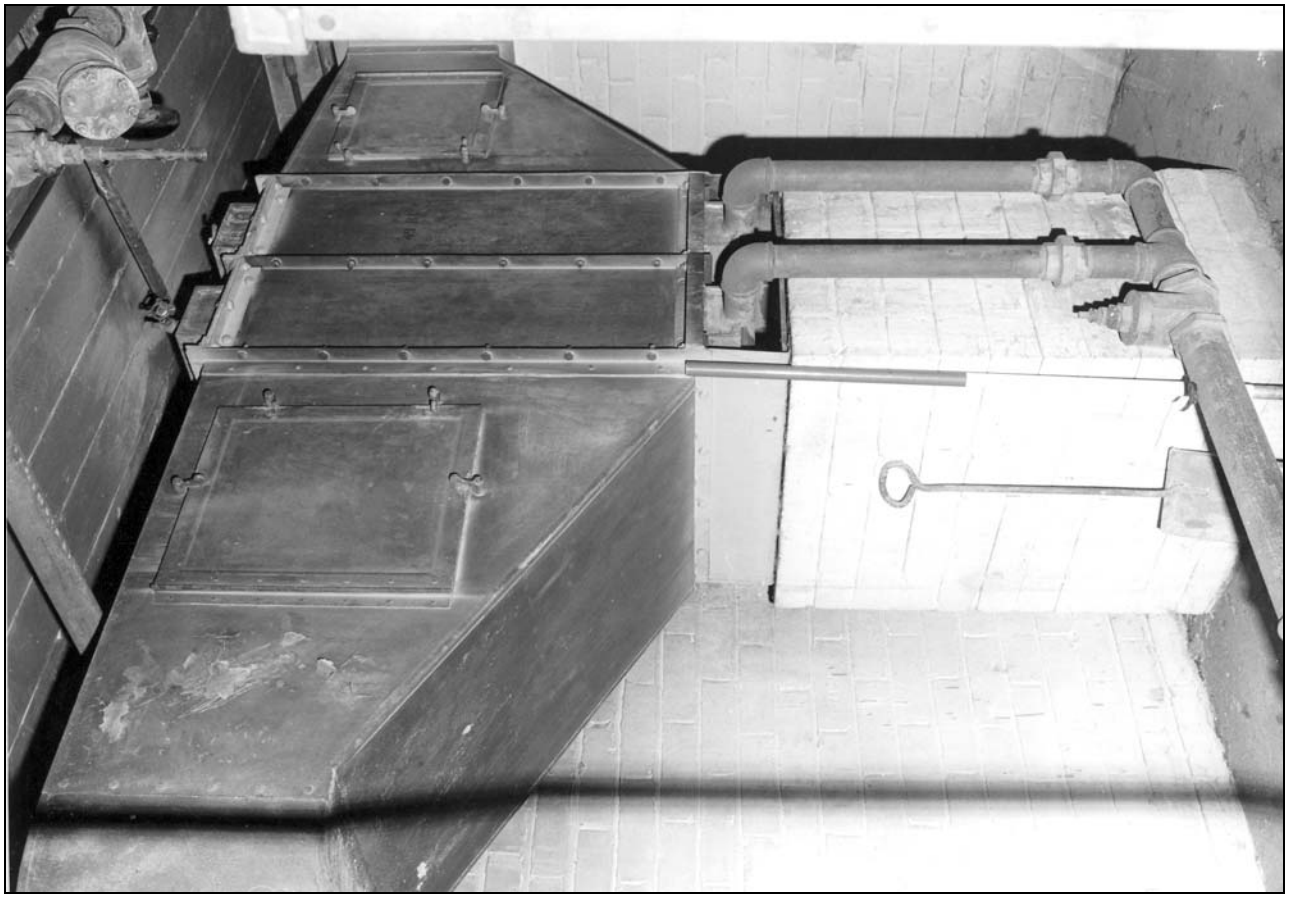

Photo 75: Basement: heat exchanger within main warm air duct (film 1, frame 5)

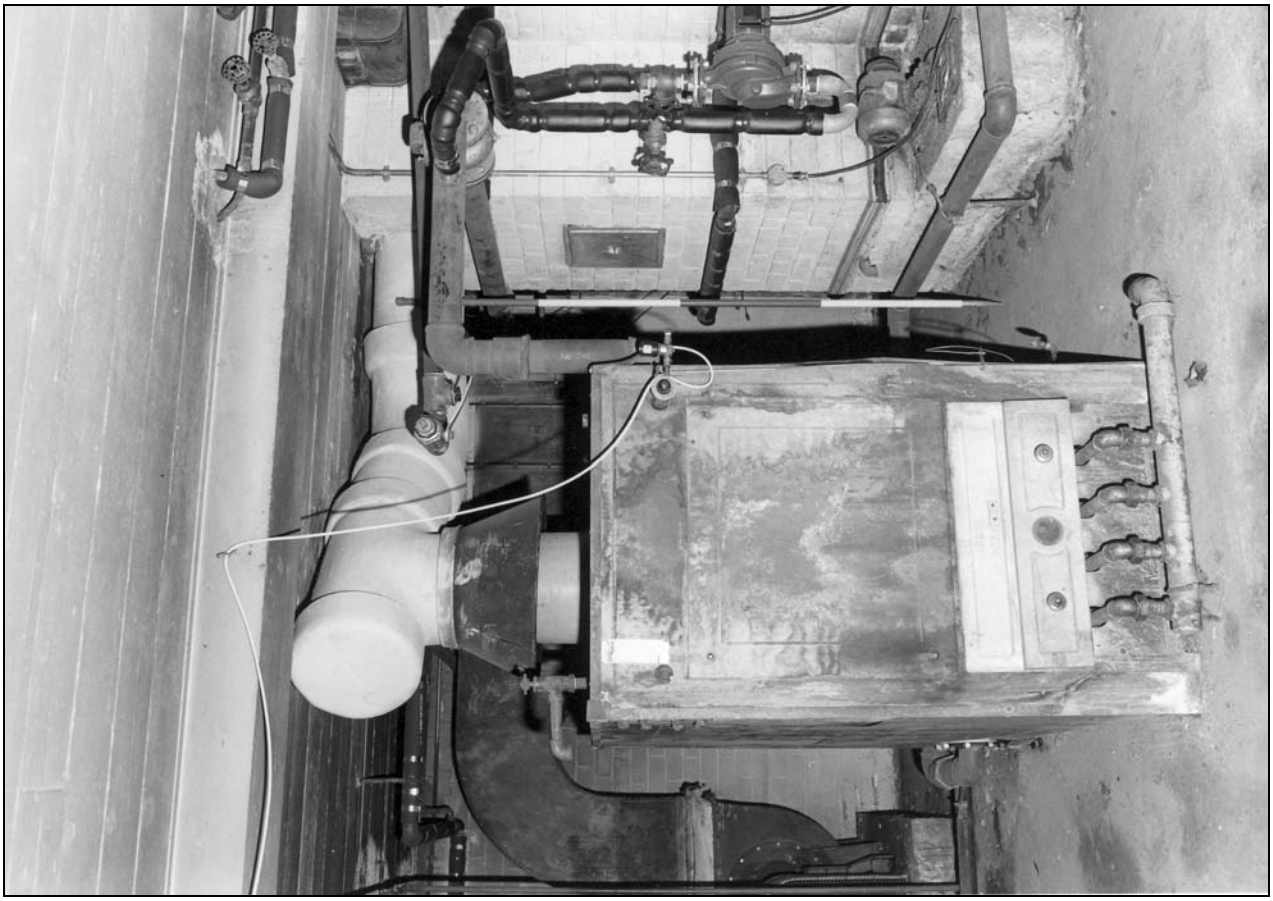

Photo 74: Basement: the gas boiler, from the north (film 1, frame 4)

Photo 77: Basement: main air duct at foot of intake (film 1, frame 13)

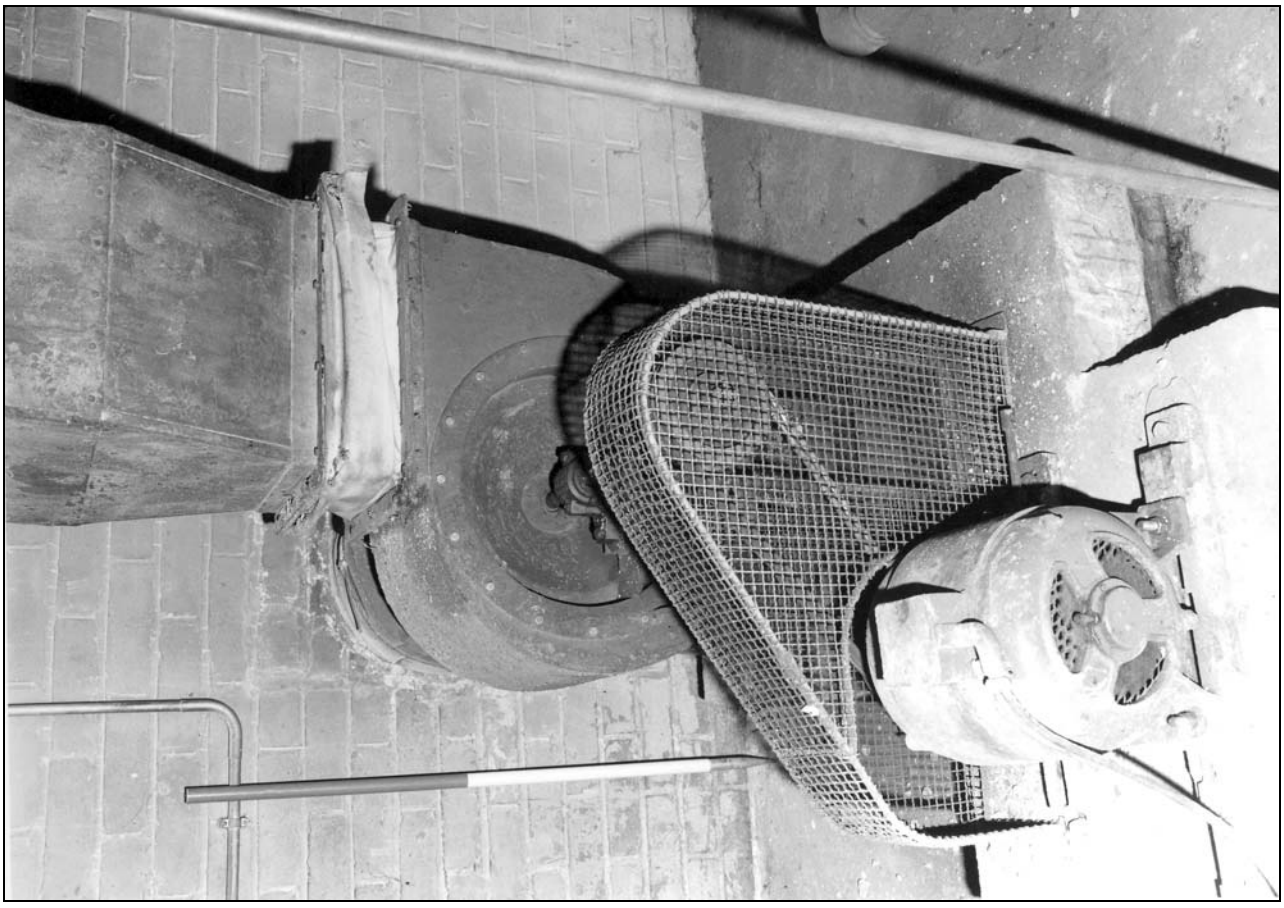

Photo 76: Basement: electrical motor and fan serving warm air ducts (film 1, frame 6)

Photo 78: Basement: general view of storage area from the south-west, with overhead ducts supplying “clean lockers” above (film 1, frame 11)

Photo 79: Basement: general view of storage area from the west, with overhead ducts supplying “dirty lockers” above (film 1, frame 10)

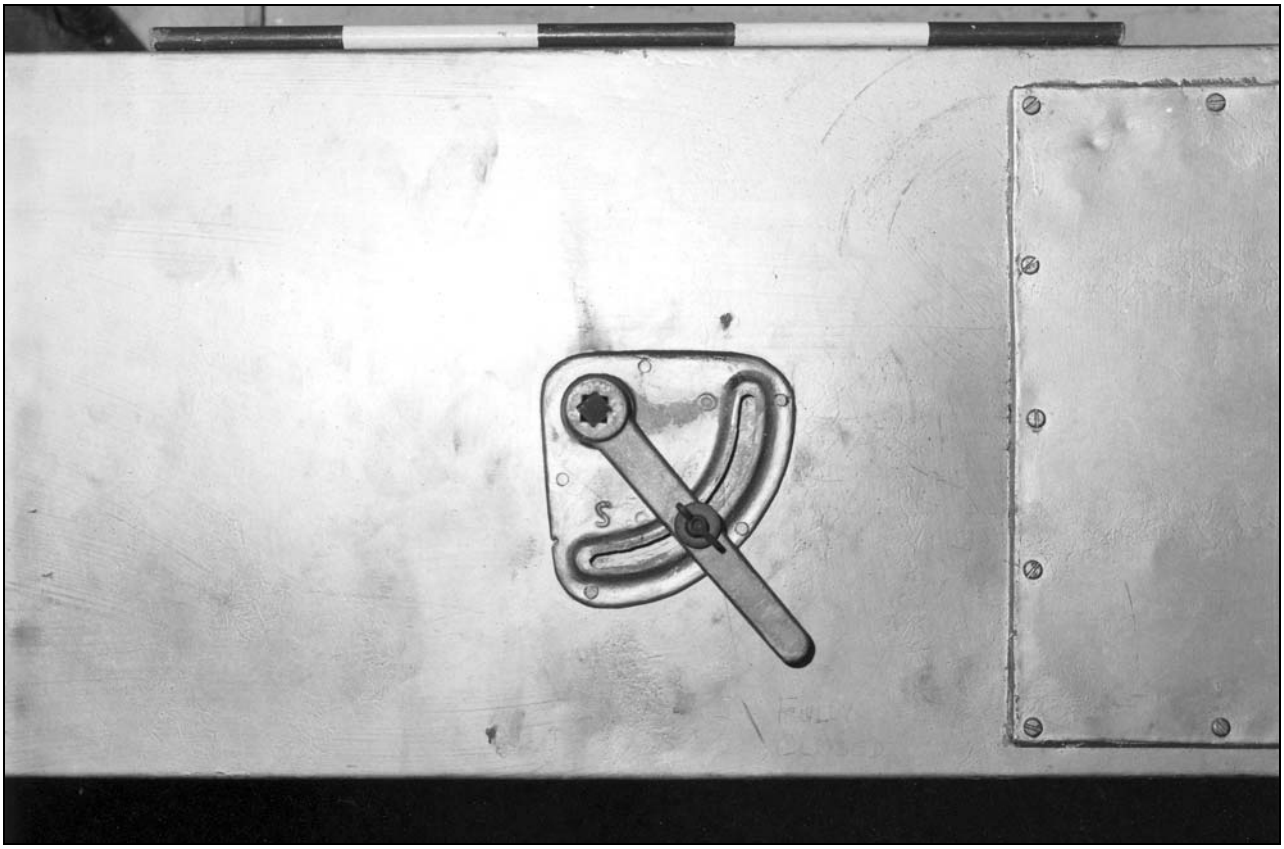

Photo 80: Basement: detail of control on warm air duct (s=shut, o=open) (film 1, frame 15)

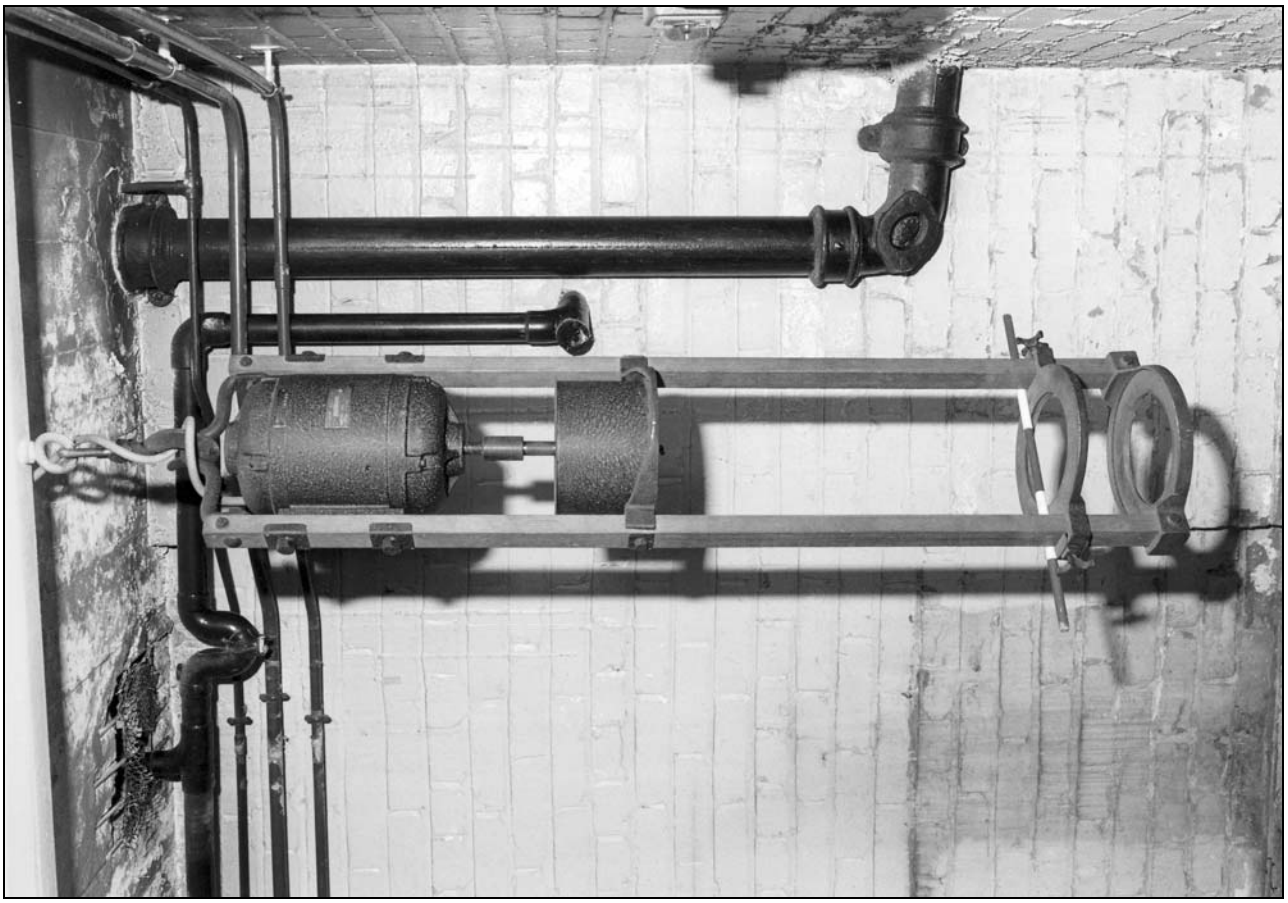

Photo 81: Basement: electrical device in "lock-up store" (film 1, frame 7)

Photo 82: Basement: pendant light fitting in “lock-up store” (film 1, frame 9)

Photo 83: “Tank room” on roof level, from the south-west (film 2, frame 18)

Photo 85: Sun lounge interior, from the south-west (film 2, frame 17)

Photo 84: Sun lounge interior, from the south (film 2, frame 16)