

WATER TREATMENT WORKS

LOW BRADFIELD, SOUTH YORKSHIRE



Historic Building Appraisal

July 2014

Document No: TJC2014.34



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SUMMARY OF PROJECT DETAILS

OASIS ID: Thejesso1-183516
TJC Project Code: LBF14
Project Type(s): Historic Building Appraisal

National Grid Reference: SK 26246 91703 (centered); S6 6HZ
County: South Yorkshire
Parish: Bradfield
Local Authority: Peak District National Park Authority
Planning Reference: TBC
Designation Status(s): Low Bradfield Conservation Area
Within the boundary of the Peak District National Park

HER/SMR Record No(s): None

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Reviewed by: Karen E Walker MIfA FSA

Date: July 2014
Version: Final

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NON-TECHNICAL SUMMARY

A historic building survey of the structural remains of the former water treatment works at Low Bradfield in South Yorkshire has been undertaken by The JESSOP Consultancy to provide supporting information for a planning application to the Peak District National Park Authority.

The site is 1ha in size and centered on SK 26246 91703. The plot of land that comprises the study area, can be subdivided into a series of structures including the large shell of the former water treatment building, an ancillary garage, two water settling ponds and a large covered reservoir. The site has been redundant, for a number of years, being decommissioned by the Water Authority in 1994. None of the original plant or machinery survives and the interior has been extensively decorated with modern pictorial graffiti and murals.

The site was developed on a greenfield site by the Sheffield Water Company, and was operational by 1913. Its purpose was to filter water from the reservoirs at Strines, Dale Dyke and Agden for distribution to Sheffield and the surrounding districts. The site was expanded in the 1950s, which effectively doubled the amount of water that could be processed and cleaned.

The building is a good example of a purpose built plant for the pressurized filtration of raw water, although as none of the interior fixtures and fittings survive, the heritage value can be regarded as the external form and layout of the individual spaces. The visual relationship of the buildings upon the existing character of the village of Low Bradfield has previously been recognized by their inclusion within the Low Bradfield Conservation Area.

The proposed re-use of the interior spaces into residential units, will preserve the character of the two-storey 1913 Filtration Hall, including the double height colonnade of cast-iron columns and clerestory skylight. The proposed scheme will maintain the external appearance of buildings dating to 1913 and 1954. The architectural development is a significant aspect of the Site, which adds to the overall historic character, especially when viewed from the street frontage.

This report will be submitted to the Peak District National Park Authority and Sheffield Sites and Monuments Record for inclusion within their archaeological archives and uploaded to the Online Archaeological Database of Archaeological Projects – OASIS (No. Thejesso1-183516).

It is recommended that should planning permission be granted for the re-use of the built structures, a black and white photographic survey (EH Level 1) would be an appropriate form of mitigation.

1 INTRODUCTION

BACKGROUND

This document presents the results of a historic building survey of the remains of the former water treatment works at Low Bradfield, South Yorkshire (**Figure 1**). It has been prepared at the request of the Peak District National Park Authority (PDNPA) to provide supporting information for a planning application to adapt the redundant building and surrounding land into residential units, and for the conversion of the former settling ponds to a trout farm.

A second survey report (Jessop 2014) considers the wider archaeological context of the Site and considers any impacts by the proposals upon the archaeological resource.

None of the structures within the Site are Listed. The Site, is adjacent to a converted Methodist Chapel and opposite a former Wesleyan Chapel that has a Grade II Listing.

The site is within the Low Bradfield Conservation Area.

AIMS OF THE FIELDWORK

The aim of the archaeological survey has been to examine the standing structures on the site and identify their phased development. This survey has been undertaken in accordance with a project brief prepared by Sarah Whiteley (April 2014), PDNPA Senior Conservation Archaeologist.

PRINCIPAL DELIVERABLES DERIVING FROM THIS WORK:

- An archaeological description of the extant structures on the site;
- An analysis of the phased development of the surviving buildings;
- A historical summary of the function of the buildings when constructed;
- A digital photographic record of the principal spaces and features of historic significance.

DISSEMINATION

Printed and digital copies of this report will be distributed to the Client, the PDNPA SMR and South Yorkshire Historic Environment Record (HER). In addition, once permission has been obtained from the Client, a digital copy will be uploaded to the OASIS (Online AccesS to the Index of archaeological investigations) with the reference number: **thejesso1-183516**.

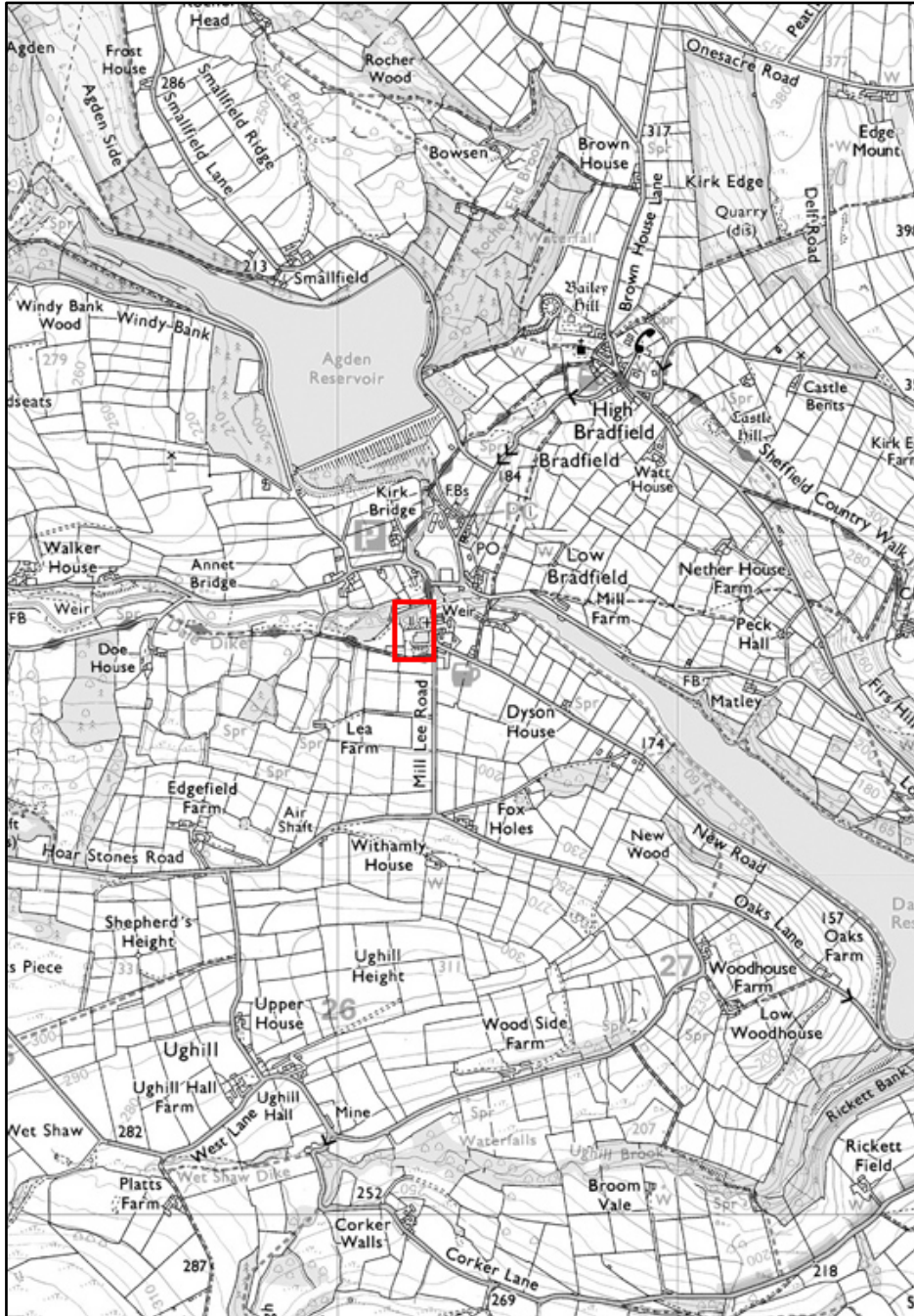


Figure 1: Location map of Site in Low Bradfield (marked with a red rectangle).

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2 SITE LOCATION

LOCATION OF SITE AND SETTING

The Site is located in the south of the village of Low Bradfield in Bradford Dale (**Figure 1**). It is defined by Mill Lee Lane to the east, Plumpton Lane to the south, open fields to the west and the Dale Dyke River to the north. The site extends around the former Bradfield Methodist Chapel, which has previously been converted into a dwelling. The north part of the site is c.7m lower than the south, being defined by two irregular settling ponds with sluices into the Dale Dyke River and a small enclosed field to the north of the Methodist chapel.

Vehicular access is from Mill Lee Road along an access road into the center of the Site. This roadway looped around the Filtration Building to a second gate on Mill Lee Road, but this was blocked when the Site was decommissioned. There is a single pedestrian gate along this frontage.

The Site is centred on NGR SK 26246 91703, with a height difference of between 167m to 160m above sea level. The Site covers an area 1ha in size.

SITE LAYOUT

For ease of reference the Site can be subdivided into two parts - north and south (**Figure 2**). The northern part is wrapped around the former Bradfield Methodist Chapel and consists of three elements. There is a small field to the northeast that measures 27m x 38m, and two settling ponds to the northwest. These ponds (1 and 2) cover an area of c.45m x 60m and have hand-operated sluice mechanisms in the north banks that allow the water to flow into the Dale Dyke River.

The southern part of the Site is larger and represents the main part of the processing area for the water works. In the south is a large covered reservoir with sloping steeply sloping sides, c.3m in height (**Appendices 2.15, 2.16**). The central area contains a large structure, the main Filtration Building (**Appendix 2.3**). Internally, it is subdivided into sixteen rooms, or spaces, that have been grouped into three sections – the Filtration Building; the West Extension; and the South Extension. There is a 10m strip of land along the street frontage.

Along the west edge of the site is a small Garage (**Appendix 2.14**), and also the former Caretakers House (the latter being excluded from the Site boundary).

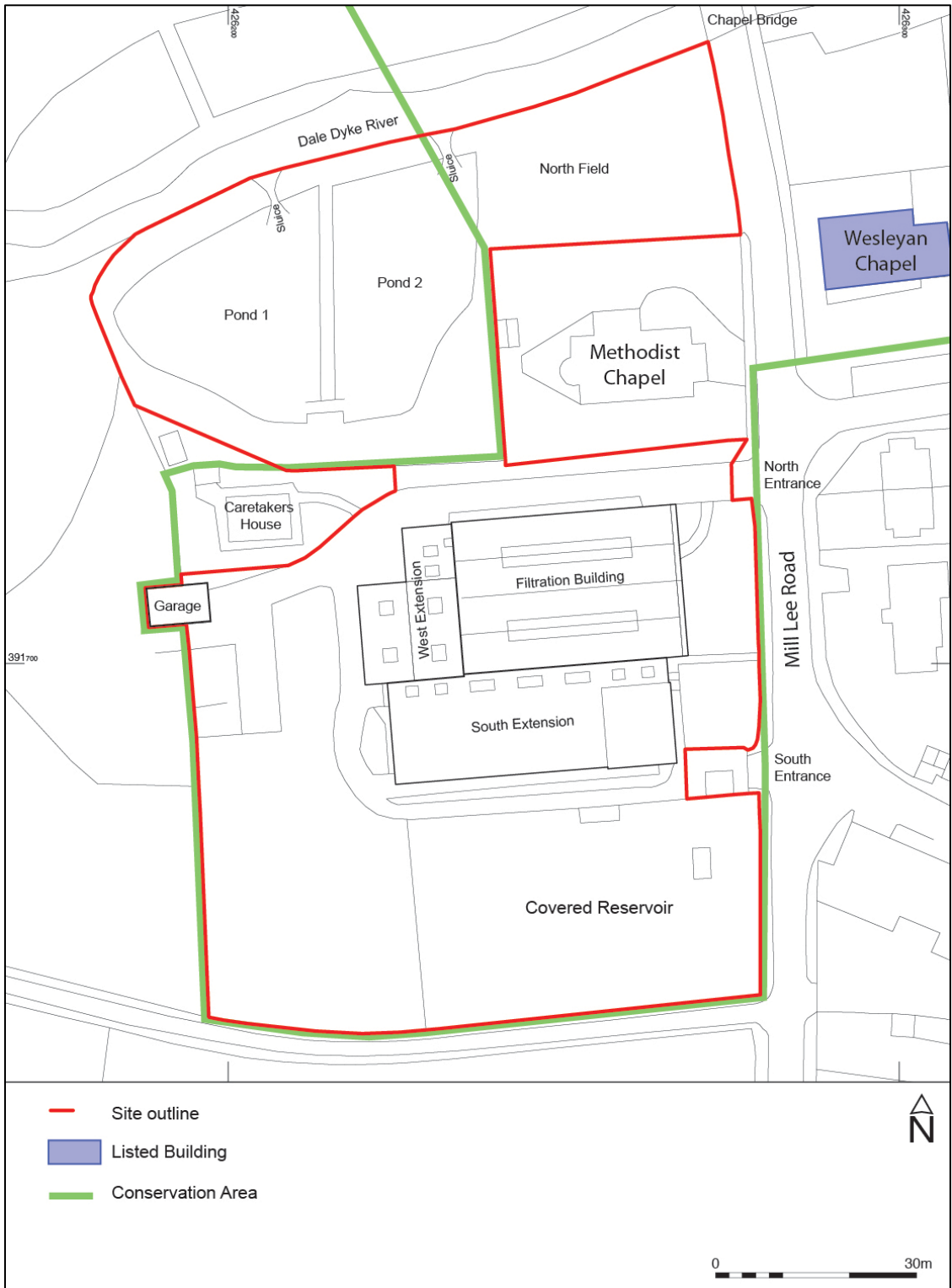


Figure 2: Site plan with key features.

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3 METHODOLOGY

METHODOLOGY

This scheme of archaeological recording has been undertaken in accordance with a recording specification prepared by the PDNPA (Whiteley, 2014). It also respects the guidelines issued by English Heritage (2006) and with industry best practice.

The survey has entailed archive research (see Jessop 2014), a site walkover inspection and digital photography (**Appendices 1 and 2**).

Whilst this survey should not be regarded as a detailed archaeological record, each photograph includes a metric survey scale of an appropriate scale, and positioned in suitable locations within each frame.

No geotechnical data in the form of borehole logs, test pit reports, or previous mineral extraction studies were available for this Site.

SOURCES CONSULTED

The following sources have been consulted during the preparation of this document:

- South Yorkshire Sites and Monuments Record
- The PDNPA cultural heritage archive
- Sheffield Local Studies Library
- Sheffield Archives
- English Heritage Archive
- Place name evidence
- Relevant archaeological reports and published accounts
- Historic mapping, pictures and photographs (including aerials)
- Business and trade journals
- Listed Building Records

NOMENCLATURE

The terminology used throughout this document has been derived from existing names and descriptions associated with the site and its surrounding area. Additional descriptions are based upon an assessment of the current and historic character of the site, however, it should be noted that future research may identify additional descriptions for these areas, or spaces

4 HISTORICAL BACKGROUND

HISTORICAL SUMMARY

Planning permission for the Water Filtration plant was applied for to the Wortley Rural District in 1911 by Sheffield Corporation and granted on the 29th December (**Figure 5**). The plant was completed in 1913 (**Figure 6**) to filter water from Strines, Dale Dyke and Agden reservoirs.

A letter from the Waterworks Offices in 1915 shows the costs of building and running the plant. It had cost £3,709 for the buildings and a further £17,516 for the plant and apparatus. It was fitted with 32 pressure filters. This can be compared with £43,942 for the buildings, plant and apparatus for sand filter beds at Langsett (six beds and two clear water tanks) and the £937 building cost and £4,267 for the apparatus at the Rivelin plant, although the correspondent, Mr Terrey, pointed out that the Rivelin Plant had only a temporary wooden structure, and ten filters and was incomplete at that date.

The Low Bradfield plant daily processed 6,791,311 gallons of water, although interestingly High Bradfield (listed with 25 houses) did not have treated or mains water in 1915 and the corporation, in a memo to that effect, stated to connect the village would cost £925 with further associated charges of pumping the water £141-0-2d per annum.

The filtration plant closed in 1994 on the completion of a new treatment works in the Loxley Valley.

THE WEST SHEFFIELD WATER SUPPLY.

The principles of water filtration were established in the 18th century. In 1703 La Hire suggested all households in Paris install sand filters and in 1746 Joseph Amy was awarded the first patent for a water filter consisting of charcoal, sponge and wood. Robert Thom, a Scottish engineer, introduced the first city-wide water treatment plant in Paisley in 1804. The slow sand filter makes use of naturally occurring barrier of fungi, bacteria and protozoa to collect any impurities in the water.

As the century progressed better understanding of water borne diseases developed and John Snow having theorised that cholera was water borne in 1849 was able to prove the link between dirty water and cholera in 1854 in a study of the Broad Street (Borthwick Street) area of London. The Metropolis Water Act of 1852 led the way in regulating water quality, although it was almost sixty years before filters were introduced to Sheffield.



Figure 3: Photograph of Jack Yelland and his wagonette at Low Bradfield, 1913
© Picture Sheffield s15701 reproduced with permission.



Figure 4: Photograph of filter houses at Low Bradfield following construction in 1913
© Picture Sheffield s11801 reproduced with permission.

By the mid 20thC there were five filter stations around Sheffield, which filtered and treated domestic supplies to prevent plumbo-solvency and sterilise the supply. Sheffield had led the way at recognising the link between water pipes and lead poisoning. Dr White, the chief medical officer, after an outbreak of lead poisoning in the mid 1880s, concluded that the water from the moors was so soft and acid that it absorbed the lead from the pipes. The addition of lime was shown to reduce this. These included four rapid pressure filters and one slow sand bed. Redmires was the first to be built in 1910 and consisted of ten filters outputting 2.4 million gallons a day. Bradfield, built in 1913 with 32 filters outputted four million gallons a day. Rivelin, which filters water passed from Derwent Water, consisted of four filtration plants built between 1913 and 1948 and containing 88 filters outputting 12 million gallons a day. Ewden built in 1936 with 56 units outputting 7 million gallons a day and the Langsett sandbeds.

In 1915 the Derwent Valley Water Board were very interested in the workings of mechanical filtration versus sand filtration. In a detailed letter dated the 20th Feb 1915, an engineer wrote to the Board to explain the principles of how it worked: the chief difference being the amount of water processed. While 2.5 gallons per day per square foot of sand bed were possible through fine sand, 150 gallons per hour per square foot of sand area were possible through mechanised filters.

“Mechanical Filters are closed cylindrical vessels containing sand, through which the water is filtered under pressure from the main carrying water to the Towns...each filter can be cleaned without removing the sand...The different types of mechanical filters contain devices for admitting lime and sulphate of alumina to form a coagulant which takes the peat stain out of the water. These devices enable the quantity of lime and alumina to be regulated so that the correct proportions of chemicals may be added...Mechanical filters require a pressure of about 9 lbs per square inch to force the water through the filtering medium”

In 1939 as part of the Corporations petition to Parliament for powers to expand and reorganise the supply system Bradfield Filtration Plant was to have been extended, however due to the wartime necessities, this did not occur until 1954.

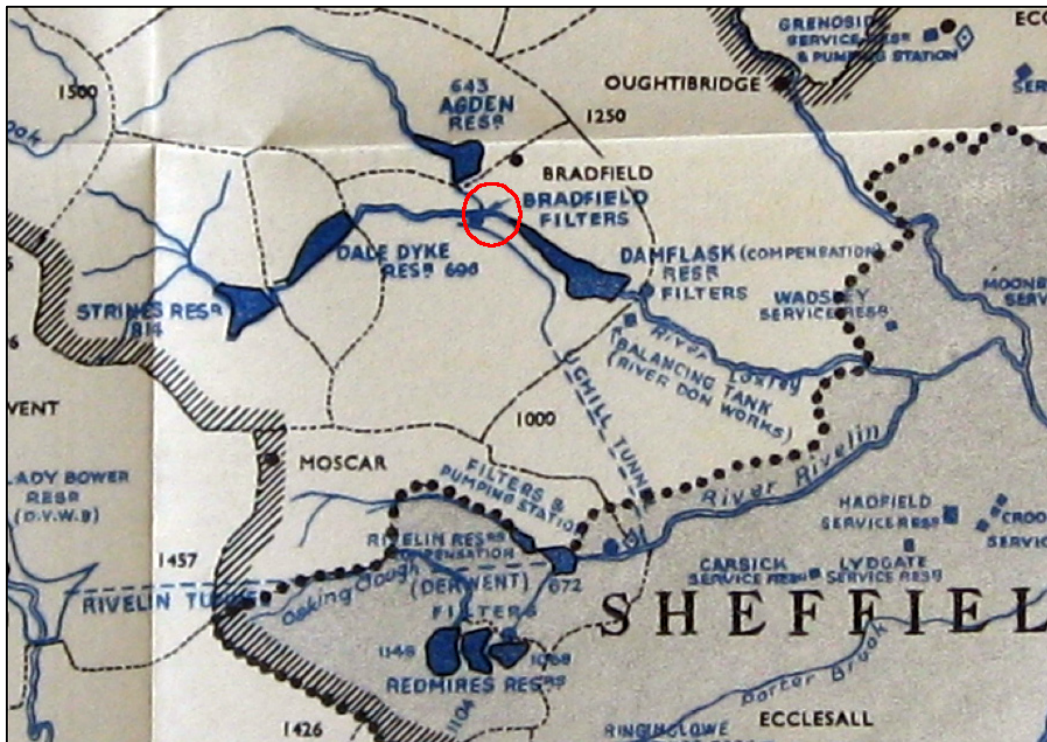


Figure 5: Extract from Map of the Sheffield Corporation Waterworks 1928 (after Bland 1928).

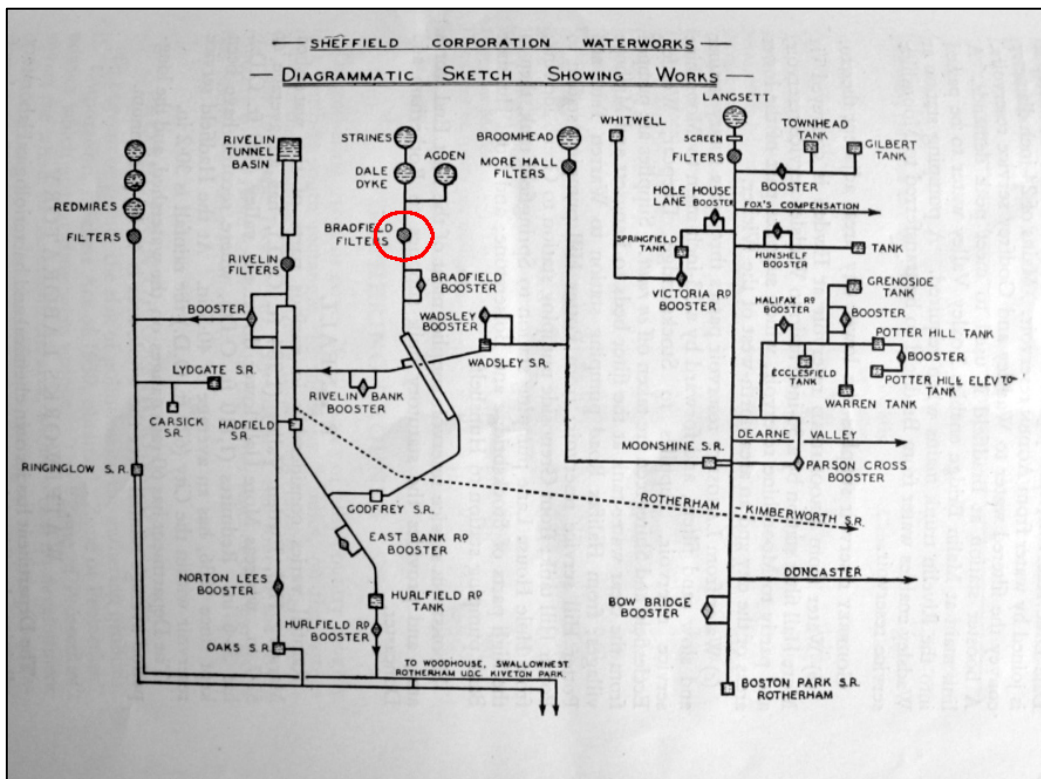


Figure 6: Diagram of the wider network of Sheffield Water supply in 1928 (after Bland 1928).

5 HISTORIC BUILDING SURVEY

INTRODUCTION

This section of the report presents the results of the archaeological survey of the standing buildings on the Site. To accompany the written description digital photographs of each principal space and features of historic significance are included as **Appendix 2**, the locations of which are illustrated in **Appendix 1**.

The phased development of the Site is considered first, followed by a description of the historic fabric. The final section discusses how the plant would have operated based upon surviving historic references, and plans found within the building.

PHASED DEVELOPMENT (SEE FIGURE 7)

Phase 1	The original water treatment works was built in 1913 and comprised of all of the extant features within the red line Site boundary and also the Caretakers House (Figure 2).
Phase 2	The main building that forms the water treatment works was considerably enlarged in 1954 to take advantage of advances in water treatment technology, and to process a larger volume of water. Two extensions were built: one to the west containing chemical preparation and storage rooms; and another larger structure to the south for new horizontal filtration tanks. In addition to these new extensions, the rooms along the east wall of the Filtration building were remodeled.
Phase 3	An external meter room was built against the north wall of the west extension.
Phase 4	In the late 20 th C metal cages and concrete bases were added in the southeast corner of the mezzanine of the Filtration Building.

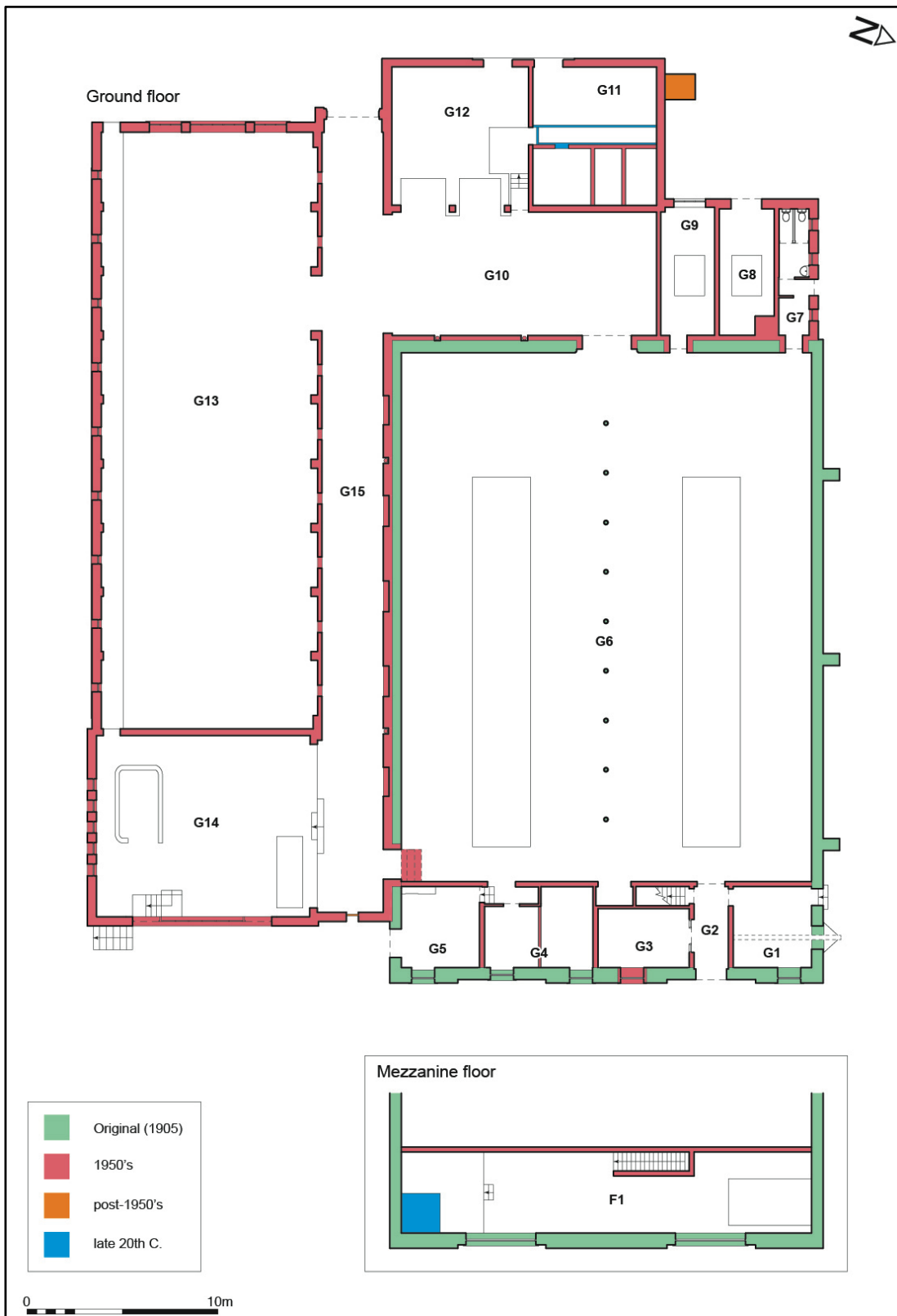


Figure 7: Floor plan of Filtration Building with archaeological phasing.

DESCRIPTION OF FABRIC – THE FILTRATION BUILDING

The Filtration Building can be subdivided into fifteen separate spaces (see **Figure 7**), or rooms of varying sizes on the ground floor **G1-G15**. There is a single upper floor space **F1**, which forms a mezzanine balcony along the east wall of the building. Physical access to all parts of the external elevations was not possible during the site inspection, due to dense vegetation and Heras fencing, for this reason the following description is based upon an analysis of the building in plan form.

EXTERIOR DESCRIPTION

The exterior of the building comprises of the largely unaltered 1913 facades to the east (**Appendix 2.4**) and north (**Appendix 2.8**), whilst the west (**Appendices 2.9-2.11**) and southern sides (**Appendix 2.12**) of the building are defined by two flat roofed extensions that encase the west and south walls of the original structure.

The original building is built from a rock-faced ashlar sandstone, with deep architectural mouldings, including broken pediments and projecting keystones (**Appendix 2.6**). The majority of this ornament is, however, located upon the east façade facing the street. The roof has a double pitch design forming a M profile (**Appendix 2.3**). There are large timber framed casement windows in the upper section of each gable (**Appendices 2.3, 2.4, 2.6, 2.9**). The rear and side elevations of this building comprise of coursed sandstone, with larger blocks used for the quoins. Openings or doorways are plain, with single blocks used for lintels, or sills (**Appendix 2.7**). There are cast-iron box gutters and square downpipes surviving along the north elevation, and are also visible on the 1913 photograph (**Figure 4**) along the south side of the building.

The 1950s extensions are either 1, or 1½ storeys in height, with a projecting eaves course, or coping. They are built with brick, but clad externally in a rock-faced sandstone of a machine cut blocks. The doorways are timber, and windows positioned at high level to provide lighting from above (**Appendix 2.12**). The main west doorway has three leaves, with vertically arranged square windows interspaced with bronze studs (**Appendix 2.11**). A second set of sliding doors (**Appendix 2.10**) provides access to storage rooms, which have raised sills, indicative of vehicular loading bays.

INTERIOR DESCRIPTION

The interior of the Filtration Building is dominated by the large hall **G6** from the original 1913 phase of construction. This room measures 42m x 55.5m and is a double height space

(**Appendices 2.29-2.33**). The interior walls are brick, and support a double pitched roof of L-angled section pre-fabricated steel trusses (**Appendix 2.32**). The central valley is supported on a single girder and a row of nine cast-iron columns (**Appendix 2.29**). None of the internal machinery survives in this room, although scars arranged in the concrete flooring mark the site of the former feet for the filtration tanks (**Appendix 2.33**).

At the east end of **G6** (**Appendix 2.14**) is a single storey row of rooms **G1-G5**. They vary in size, but are 8m in width. Very few retain features of significance, although the entrance hall **G2** (**Appendices 2.36, 2.37**) has a pair of external doors of a similar design to the west elevation, c.1950s in style and ribbed glazed partitions for a former reception office **G3**. **G1** has been used as a chlorine store (**Appendix 2.7**) and retains a steel girder for a travelling hoist and an external taking-in door (**Appendix 2.38**).

Along the east wall of **G6** is a mezzanine level **F1**, with a low parapet (**Appendix 2.34**) measuring 9m x 43m. This has been altered and the central girder supporting the roof has an arrangement of four holes cut into the lower flanges (**Appendix 2.35**) suggestive that there was once another column, but was removed when **G3** was remodeled in the 1950s.

The South Extension that was used for horizontal filtration tanks can be divided into three rooms. There is a single long access corridor **G15** that runs the length of the building and measures 6.5m x 83m (**Appendix 2.17**). This corridor has square skylights and a series of rectangular recesses along the north wall (**Appendix 2.19**). These recesses were used to display a series of plans of the works, however, where these have been removed the original external south wall of **G6** is exposed (**Appendix 2.19**). The corridor is built with machine pressed dark red brick, which incorporates recesses for downpipes from the flat roof above. There are also inspection windows and fixings for pressure gauges (**Appendix 2.20**) along the south wall. These openings allowed for the monitoring of the horizontal tanks in the large filtration room **G13** to the south.

The construction of this extension was in 1954 and involved considerable engineering skill and design. The weight of the pressurized tanks when full of water was considerable, and the building was specifically designed to accommodate this with substantial foundations (see **Figure 8**). The internal space for **G13** needed a wide span and that was uninterrupted by columns or dividing walls. To address this, tensioned concrete beams were used to support the ceiling (see **Figure 10**), and the structures have considerable structural integrity. None of the horizontal filtration tanks survive, however, a series of historic photographs illustrate their size and the ingenuity of the workmen who installed them into the building (see **Figures 9, 10**).

Room **G13** measures 22.5m x 62m in size (**Appendix 2.23**). It is supported by a series of massive concrete lintels, and there are high level windows along the south wall (**Appendix 2.12**). There are no features of note within this space. To the east of **G13**, is an ancillary room **G14** (**Appendix 2.21**) that opens onto the access corridor **G15**. **G14** is 1m above the floor of the corridor and retains bases for machinery within the floor (**Appendix 2.22**), the ends of water inlet pipes in the east wall, above which is extensive glazing.

The West Extension to **G6** comprises of small ancillary rooms **G7-G9**, which incorporate toilets and a former compressor room (**Appendix 2.28**). At the north end are two rooms **G12** (**Appendices 2.25, 2.26**) and **G11** (**Appendix 2.27**), which are raised 0.5m above the floor of **G10** and **G15** and were used for the storage of chemicals. Room **G11** still retains large concrete tanks (**Appendix 2.27**), with inlet pipes at the base. A large space that links all these rooms together is **G10**, which measures 13.5m x 39m (**Appendix 2.24**).

DESCRIPTION OF FABRIC – THE ANCILLARY STRUCTURES

Additional standing structures include the large Covered Reservoir (**Figure 2**), which comprises an earth and grass embankment c.35m x 65m in size (**Appendices 2.15, 2.16**). The interior was not inspected, but it has gently sloping sides and internally is likely to use pillars for structural support.

The Garage (**Appendix 2.14**) has a simple rectangular plan and measures c.15m x 7m. It is built in rock-faced sandstone with a brick interior. The roof is pitched and covered with slate tiles. There is a pair of double doors in the east gable and a window to the south.

Outside of the Site boundary is the Caretakers House, which was constructed in 1913 (**Figure 4**), and built with rock-faced sandstone blocks with a slate roof.

LOW BRADFIELD – OPERATION OF THE WORKS

The decommissioning of the water treatment works has removed all items of plant and metalwork, apart from pipes that are located in deep troughs (**Appendix 2.13**), although these have been partially backfilled so exactly what survives is unclear. It has, however, been possible to attempt to re-create the former layout of the operating machinery derived from comparison with similar sites elsewhere (James and Pentelow 1965), the historical accounts that survive and fragments of plans found along the north wall of **G15**.

A reconstruction of the floor plan is included as **Figure 11**, although future work is likely to refine our understanding of the arrangement and use of each item of machinery. There were

two filtration rooms **G6** and **G13**. These contained rows of either vertical, or horizontal tanks. Water was fed via an underground main, from the west and upon entering the building was diverted to the various tanks. The tanks would have been operated in stages, and not all were in use at any one time. The water entered at the top of each tank and then percolated downwards through the filtration medium. It was then fed off away from the site for distribution into the water supply.

During the filtration process, chemicals such as lime, alum and mica were added, along with chlorine and ammonia. The rooms to the north and south of **G6** appear to have been used as stores for these materials and for their preparation. There was a pump room in the southeast corner, and a small compressor room to the northwest. A small office (G3), and mess room for the staff on site (G1) were also located at the east end of **G6**.

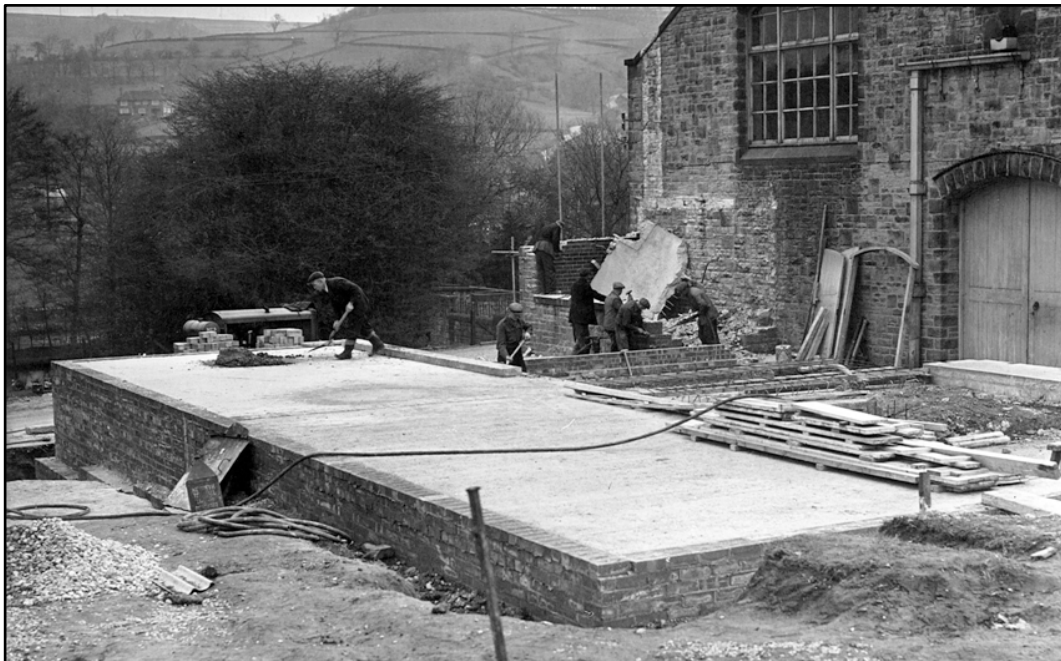


Figure 8: Photograph taken during laying the foundations for **G12** in 1954, looking southeast.



Figure 9: Photograph taken in 1954 during the installation of horizontal tanks in G13.



Figure 10: Photograph taken in 1954 during the installation of horizontal tanks in G13.

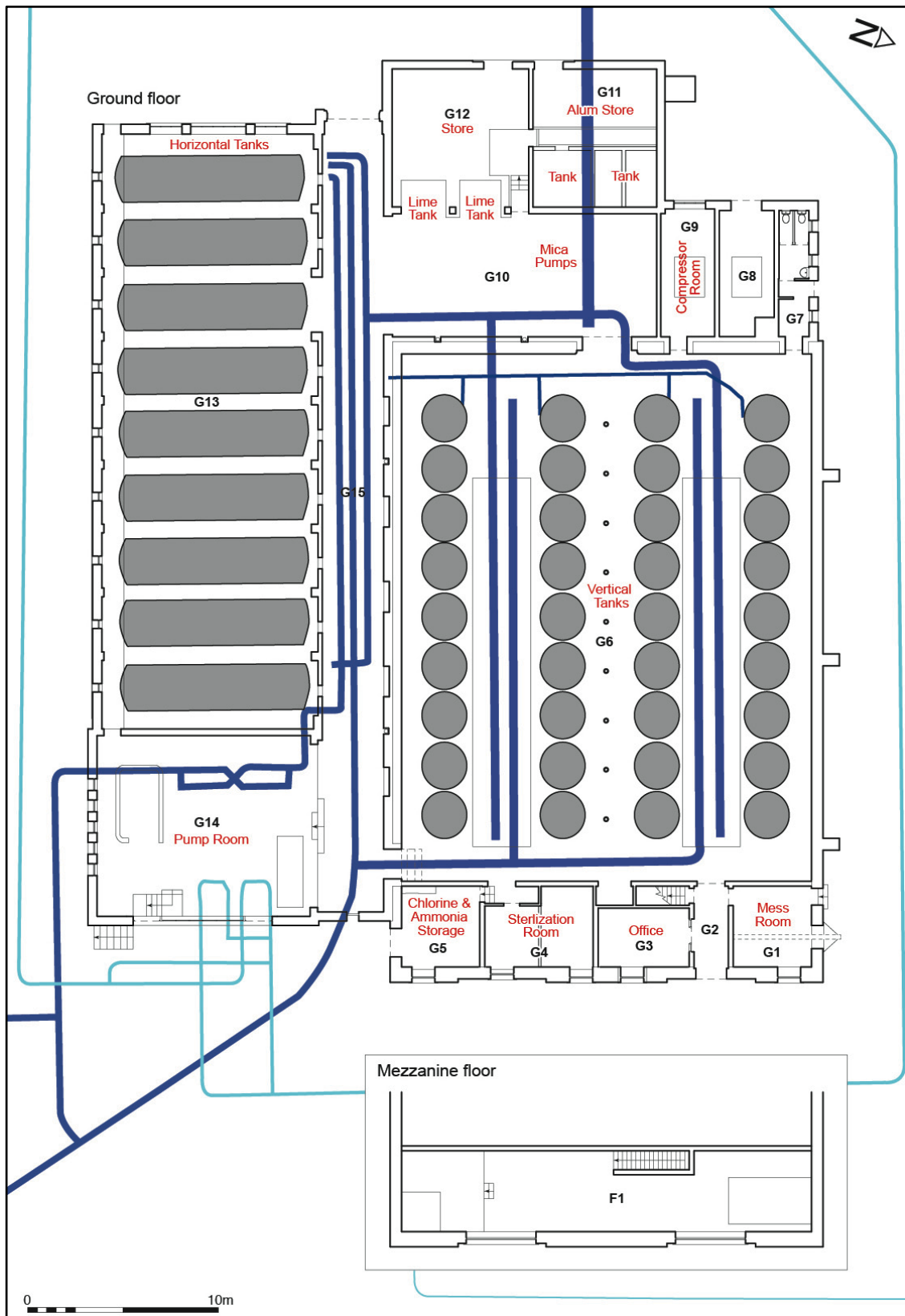


Figure 11: Reconstructed layout of Water Filtration Building.

6 CONCLUSIONS

DISCUSSION

The location of the Site falls within an area that was an extension to the Low Bradfield Conservation Area and is thus not overlooked, by, nor is in direct association with any other heritage assets along approximately 75% of the red line boundary. Thus proposals that seek to enhance and restore the exterior will make a positive contribution to the streetscape and enhance this southern part of the village of Low Bradfield.

It is only the northeast sector of the Site (**Figure 2**) around the North Field and Ponds where the Site has any visual, or direct physical link to the edge of the Conservation Area. This area is however, partially shielded by the stone boundary wall along Mill Lee Road, and the land does fall away down to the ponds. It is suggested therefore that if development in this area was of a low height, then the impact upon the Conservation Area would be low, although new vehicular access may be necessary to access this part of the Site and this would have an impact upon the setting of the Listed Building directly opposite.

The decommissioning of the site in 1994, has resulted in the gradual decline in visual character of this part of the Conservation Area, however, the Filtration Building is a good example of a purpose-built plant for the pressurized filtration of raw water, built between 1911-1913 and extensively enlarged in the 1950s. The structural fabric is relatively intact, but the total loss of all of the internal plant, pipework and machinery has had a dramatic impact upon understanding the former function of the building. The existing abandoned state of the interior is clearly detrimental to the fabric of the building, and the threat from increased ingress from vandals and 'graffiti' artists needs to be addressed by granting permission to find an appropriate re-use of the standing structures.

The proposed re-use of the interior spaces into residential units, will preserve the character of the two-storey 1913 Filtration Hall, including the double height colonnade of cast-iron columns and clerestory skylight. The proposed scheme will maintain the external appearance of buildings dating to 1913 and 1954, which is a significant aspect of the Site. The construction of the 1954 extension is an important aspect of the Site and represents a development in the technology of pressurized filtration, a process that has been subsequently been replaced by new filtration techniques.

CONCLUSION

The impact of the proposed alterations to the Filtration Building is considered to be beneficial to ensure the long term preservation of the historic fabric, which has a phased development. This includes both the 1913 Filtration Building, and the later flat roofed rooms from 1954. Potential interventions into the existing walls, or the creation of new internal floors and subdivisions will detract from the existing character of individual spaces, however, they are of such a large size that internal re-ordering may be the only way that the external shell, (which enhances the Conservation Area), can be preserved.

It is recommended that should planning permission be granted for the re-use of the built structures, a black and white photographic survey (English Heritage Level 1) would be an appropriate form of mitigation.

7 SUPPORTING INFORMATION

AUTHORSHIP

This report has been prepared by Oliver Jessop MfA, with support from Ian Atkins MfA (illustrations), and Dr Victoria Beauchamp (historic research). Preliminary editing has been provided by Karen E Walker MfA, FSA.

ACKNOWLEDGEMENTS

Barry Stancer of Tatlow Stancer Architects has provided details of the proposed alterations, site plans and reference material and is acknowledged for this.

The staff at the Sheffield archives and local studies library were helpful in identifying historical material and images for the Site. Picture Sheffield (Sheffield City Council) has allowed permission to reproduce historic photographs for the Site.

SOURCES AND REFERENCES CONSULTED

PRIMARY SOURCES CONSULTED: MAPPING AND ENGRAVINGS

- Ordnance Survey Map, 1884, 6" (1st Edition)
- Ordnance Survey Map, 1903, 6" (2nd Edition)
- Ordnance Survey Map, 1974, 1:2,500
- Ordnance Survey Mastermap, 2014, 1:1,250
- British Geological Map of Britain (digital data), 2014

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INTERNET RESOURCES

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- British Geological Survey: www.bgs.ac.uk
- British History Online: www.british-history.ac.uk
- British Library: www.catalogue.bl.uk
- Heritage Gateway: www.heritagegateway.org.uk
- Images of England: www.imagesofengland.org.uk
- National Archives: www.nationalarchives.gov.uk/a2a
- National Heritage List: <http://www.english-heritage.org.uk/professional/protection/process/national-heritage-list-for-england/>
- Picture Sheffield: <http://www.picturesheffield.com>

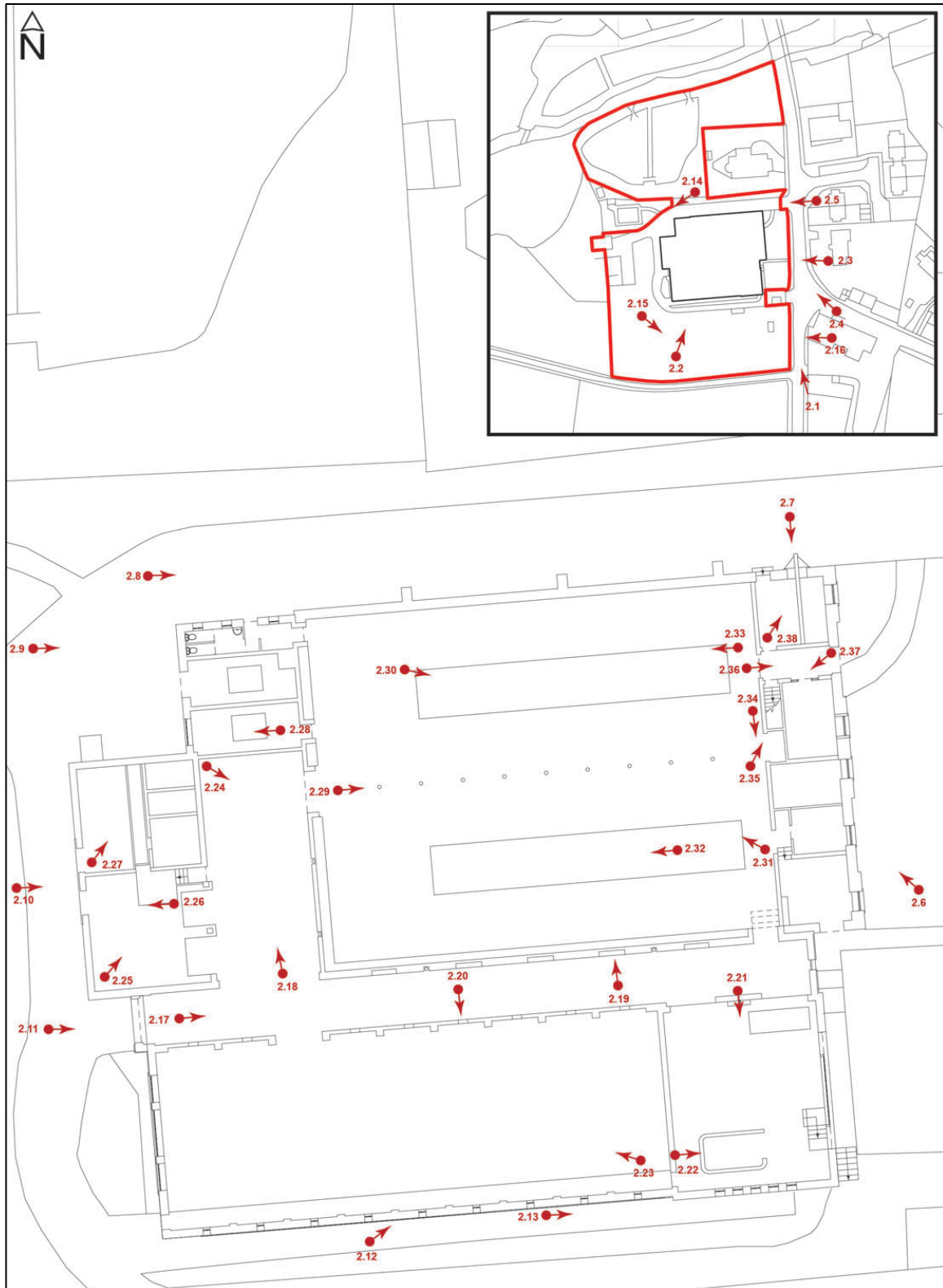
APPENDICES

APPENDIX 1: LOCATION OF SITE PHOTOGRAPHS

APPENDIX 2: RECORD PHOTOGRAPHS

Appendix 1:

Location of Site Photographs



Appendix 1.1: Location of photographic viewpoints

Appendix 2:
Record Photographs



Appendix 2.1: General view of Site boundary wall from the southeast (2m scale).



Appendix 2.2: General of roof scape of central section of Site, looking northeast.



Appendix 2.3: General view of front elevation; note pedestrian gate (1m scale).



Appendix 2.4: General view of frontage, looking northwest along Mill Lee Road.



Appendix 2.5: Detail of south entrance that was blocked during decommissioning in 1994 (2m scale).



Appendix 2.6: Detail of keystone on Filtration Building in the form of a console bracket; note broken pediment.



Appendix 2.7: Detail of taking-in door to G1; note inserted hoist (2m scale).



Appendix 2.8: General view along north elevation of Filtration Building, looking east.



Appendix 2.9: General view of rear elevation of Filtration Building; note 1950s extension and chimney (2m scale).



Appendix 2.10: Detail of sliding loading doors into rooms G11 and G12 (2m scale).



Appendix 2.11: Detail of main west doorway into 1950s extension, looking east (2m scale).



Appendix 2.12: Detail external stone walling and continuous upper glazing to G13 (2m scale).



Appendix 2.13: Detail of *in-situ* water pipe alongside south external wall of G13 (1m scale).



Appendix 2.14: General view of Garage and Caretakers House, looking west (2m scale).



Appendix 2.15: General view of Covered Reservoir, looking southeast (2m scale).



Appendix 2.16: General view of Covered Reservoir, looking west.



Appendix 2.17: General view of central corridor **G15**, in South Extension (2m scale).



Appendix 2.18: General view of **G10**, in West Extension; note concrete beams supporting roof (2m scale).



Appendix 2.19: General view of picture recess in north wall of **G15**; note earlier stonework (1m/2m scale).



Appendix 2.20: Detail of pressure gauge and switches in south wall of **G15** (2m scale).



Appendix 2.21: General view of G14, looking south (2m scale).



Appendix 2.22: Detail of foundations for removed plant in G14, looking east (1m/2m scale).



Appendix 2.23: General view of G13, looking west (2m scale).



Appendix 2.24: General view of G13, looking southeast (2m scale).



Appendix 2.25: General view of G12, looking northeast (2m scale).



Appendix 2.26: Detail of sliding door in G12, looking west (2m scale).



Appendix 2.27: General view of concrete tanks in G11 (1m/2m scale).



Appendix 2.28: General view of G9, looking west (1m scale).



Appendix 2.29: General view of G6, looking east; note floor scars from removed filtration tanks (4m scale).



Appendix 2.30: General view of northeast end of G6 (2m scale).



Appendix 2.31: General view of central columns in G6, looking northwest.



Appendix 2.32: Detail of metal roof truss above **G6**; note glazed clerestory windows forming skylight.



Appendix 2.33: General view of north floor bay of **G6**; note central area where pipework was located (2m scale).



Appendix 2.34: General view of mezzanine level in G6; note wire cages against southeast corner (2m scale).



Appendix 2.35: Detail of central girder in G6; foreground represents site of removed column.



Appendix 2.36: General view of entrance hall **G2**; note ceiling light fitting (2m scale).



Appendix 2.37: General view of entrance hall **G2**; note glazing to reception office **G3** (2m scale)



Appendix 2.38: General view of **G1**, looking northeast; note inserted girder for hoist (2m scale).