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ROYAL FESTIVAL HALL WATER TOWER

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HISTORIC BUILDING RECORDING

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Historic Building Survey of the Water Tower Between the Royal Festival Hall and Hungerford Bridge

Central National Grid Reference: TQ 3074 8039

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Pre-Construct Archaeology Ltd, February 2005

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1 NON-TECHNICAL SUMMARY

1.1 The historic building survey of the water tower adjacent to the Royal Festival Hall was commissioned by The South Bank Centre. The work was undertaken in partial fulfilment of the conditions attached to the grant of Planning Consent for the demolition of the water tower in advance of the construction of the Royal Festival Hall extension building. This report details the results of the survey, intended as a record of the building. The site's location is illustrated in Fig. 1.

1.2 The National Grid Reference for the centre of the site is TQ 3074 8039.

1.3 The structure under investigation was built to support a large water tank that supplied the steam trains on the Waterloo to Charing Cross line over Hungerford Bridge. The water tank itself had been removed in the 1950s or 1960s, but the brick tower was relatively unaltered and the cast iron beams that supported the tank remained. The narrow classical structure was built against the north side of the railway viaduct, with its two supporting arches built against those of the bridge behind. Above these arches there were originally two groups of rooms at track level, accessed from two doors facing the railway track. The building continued to be adapted in response to changing uses and the additional weight of the alterations required ties and braces to stabilise the structure.

1.4 The upper level space was subdivided in the twentieth century into five rooms, three of which had filler joist concrete ceilings. From the 1950s the building was used as mess rooms for railway workers while rooms for use by the Royal Festival Hall were built under the arches. The tower stood derelict in recent years.

2 INTRODUCTION & PLANNING BACKGROUND

2.1 The historic building survey of the water tower adjacent to the Royal Festival Hall was commissioned on behalf of The South Bank Centre by René Von Müllen of Bovis Lend Lease. The survey was undertaken by Pre-Construct Archaeology Ltd prior to and during the demolition of the water tower in part fulfilment of the conditions attached to the grant of Planning Consent for the construction of the Royal Festival Hall extension building.

2.2 The water tower stood to the south of the Royal Festival Hall against the railway viaduct that runs from Charing Cross Station to Waterloo Station (see location plan Fig. 1). As with most railway buildings, the water tower was built in classical style. The building was long, narrow and flat fronted. Its lower level consisted of two arches that aligned with those of the adjacent viaduct and supported a six-bayed upper level that was built at the level of the railway track. Cast iron beams, which originally supported a water tank, remained in situ but were covered by a mid to late 20th century roof. Although the building was not listed it was considered to be of historic interest, and the recording of the structure prior to demolition was included as a condition of planning consent.

2.3 Plans showing the building's exterior and a drawing of the north elevation were prepared by architects Allies and Morrison. The historic building survey and watching brief were undertaken by PCA Ltd in accordance with current best practice and the following guidelines laid out by statutory and professional bodies:

- Association of Local Government Archaeological Officers: *Analysis and Recording for the Conservation and control of works to historic buildings* (1997)
- British Archaeologists and Developers Liaison Group: *Code of Practice* (1986)
- British Standards Institution: *Guide to the Principals of the Conservation of Historic Buildings (BS 7913)* (1998)
- English Heritage (Clark, K.): *Informed-Understanding historic buildings and their landscapes for conservation*, (2001)
- English Heritage: *Guidance Paper 98;* GLAAS: *Guidance Paper 3-Standards and Practices in Archaeological Fieldwork in London*; English Heritage (Clark K): *Informed Conservation* (2001)
- English Heritage: *The presentation of historic building survey in CAD* (2000)

- IFA: *Standards and guidance for the archaeological investigation and recording of standing buildings or structures* (1999)
- Royal Commission on the Historic Monuments of England (now part of English Heritage)*: Recording historic buildings: a descriptive specification*, 3rd edition (1996)

2.4 The written scheme of investigation, produced by Pre-Construct Archaeology[1], was approved by Katherine Cavanagh and Robert Whytehead of GLAAS, and the London Borough of Lambeth, whilst the work was monitored by Robert Whytehead.

2.5 The historic building survey and watching brief on demolition were undertaken between December 2003 and September 2004. Plans, elevations and a section of the building were drawn, with fixtures, fittings and architectural detail also recorded. In addition a full photographic survey was undertaken in medium format (black and white and colour print) and in 35mm format (black and white print and colour slide). The results of the survey and the subsequent archival research are presented in this report.

[1] Pre-Construct Archaeology Ltd, 22/9/03, Royal Festival Hall Extension Building-Water Tower between Royal Festival Hall and Hungerford Bridge, Written Scheme of Investigations for the Recording and Analysis of the Water Tower, unpublished report.

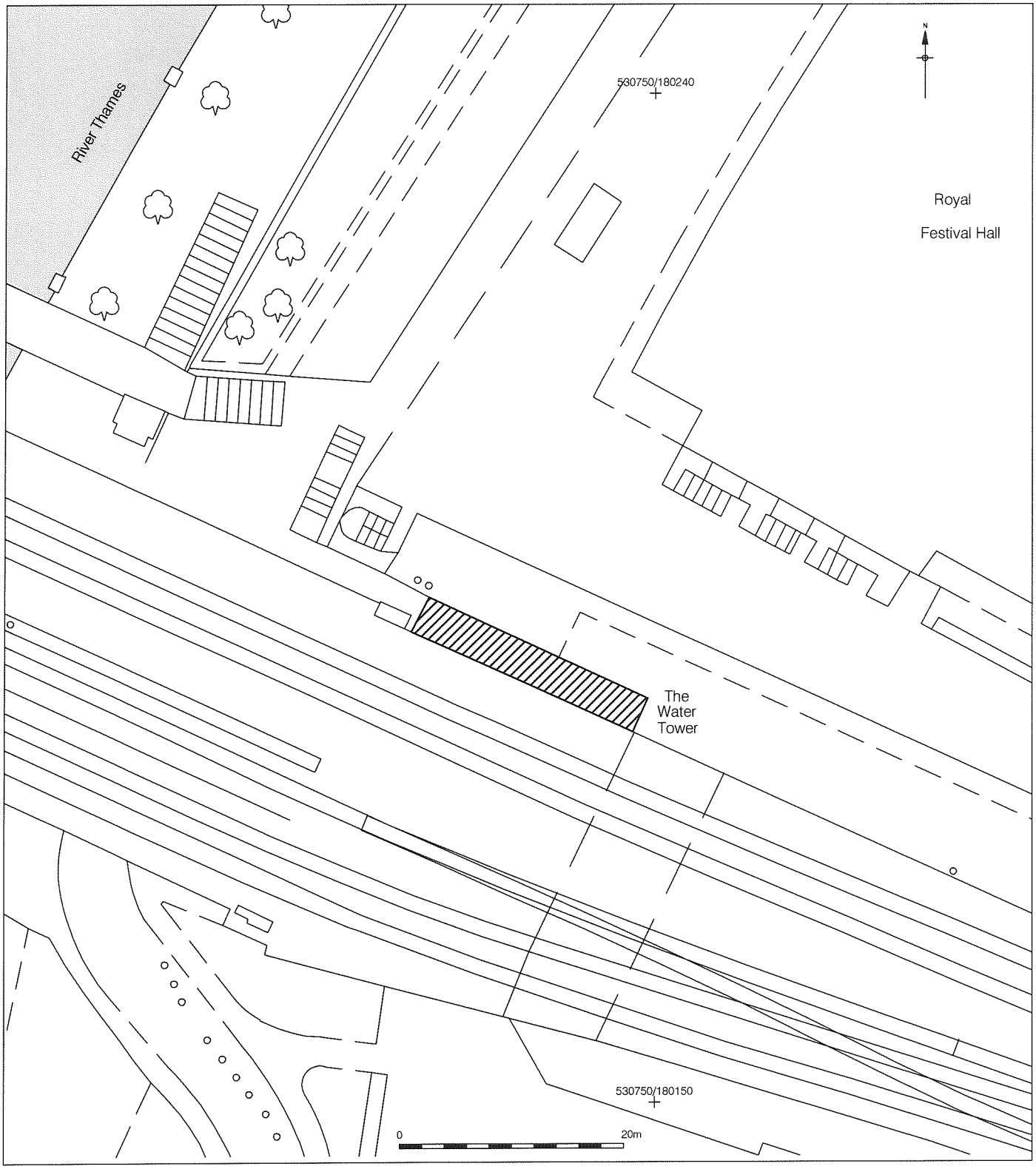

Figure 1
Site location
1:500

3 METHOD

3.1 The survey was undertaken in three phases. The parts of the building that were safely accessible were recorded prior to the erection of scaffolding for demolition. This included the photographic recording of the exterior of the building and the measured survey of the lower level arches and of the southern, track side elevation. Once scaffolding had been erected, the upper parts of the tower were recorded. The third phase of work consisted of a watching brief on the demolition of the tower. The site work consisted of a hand-measured survey of the historic fabric, a written description and a full photographic survey.

3.2 The drawings produced included lower and upper level plans and a section through the building. External elevations were also produced of the north, south and east elevations. The information recorded during the site survey was added onto the existing architects' plans and elevation of the building, and additional elevations, plans and a section were drawn. Profiles were drawn of fittings such as the window frames and mullions at a scale of 1:1 and original ironwork (water pipes and cast-iron beams) at a scale of 1:5. Medium format photographs were taken (in black and white and colour print) with additional 35mm black and white print and colour slide photographs to record exterior and interior views of the building before and during demolition. The photography included views of the building's setting and context, elevations, views showing circulation within the building and typical and unique details.

3.3 To record the building effectively the rooms and spaces within the upper level of the water tower were numbered. The upper level rooms are numbered 1-5 from west to east.

3.4 Attempts were made to find and interview former railway employees who worked in the building when it functioned as a water tower. The water tower ceased to function as such in the early 1950s and it was not possible to obtain oral testimonies relating to this use.

4 HISTORICAL BACKGROUND

4.1 No documentary evidence has been found that refers directly to the water tower. There is, however, a limited historical resource covering the Hungerford Bridge, Waterloo and Charing Cross stations, which aids understanding of the tower's history.

4.2 The original Hungerford Bridge was a suspension bridge built for pedestrians to reach Hungerford Market on The Strand from the Thames' south bank. It was designed by Isambard Kingdom Brunel and opened in 1845[2]. By 1860 the market had closed and the bridge and adjoining land were bought by the South Eastern Railway[3]. When Charing Cross Station was built, Brunel's bridge was inadequate to support railway lines across the Thames to Waterloo station. The bridge was demolished and the cables taken for use in the Clifton suspension bridge in Bristol[4]. Four of the original piers survive and were incorporated into the replacement bridge, which was designed by John Hawkshaw, opened in 1864 and still survives, with modifications.

4.3 The 1872 Ordnance Survey Map[5] (fig 2) shows a turntable and tank to the south of the railway tracks by the Surrey embankment. In 1887 the viaduct was widened by 48' 9" to the south for three more railway lines[6]. The turntable and track would have had to have been demolished for this extension. The 1916 Ordnance Survey map (fig 4) shows these additional tracks and a replacement turntable closer to Waterloo Station. It also shows the water tower to the north of the railway lines. No documentary source indicates when it was built, but it would have replaced the tank that was demolished for the 1887 widening works. The water tower was built against the north side of the railway viaduct and against the east side of one of the remaining suspension bridge piers.

4.4 Increased rail traffic in the early twentieth century meant that the bridge required widening and strengthening. One plan from the early 1900s (fig 2) shows the water tower threatened by track widening, and a proposed larger water tower to its east, with a capacity of 67,000 gallons[7]. Grandiose plans were later drawn up for rebuilding the bridge and a new Waterloo terminus on the south bank of the

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[2] Croad, S. 1983 *London Bridges.* London, RCHME.
[3] Clark, R. H. 1964 *A Southern Region Record.* London, The Oakwood Press.
[4] Jackson, A. A. 1969 *London's Termini.* Newton Abbot, David and Charles.
[5] Ordmamce Survey, First edition 25 inch series, London Sheet 76.
[6] *Ibid.* pp249.
[7] Network Rail Archives: Plan Arch Waterloo. *SECR Widening General Plan.*

Thames (even suggesting a Channel Tunnel Link in 1924)[8]. However, electrification was introduced here in 1926 and the lighter trains obviated the need for a more substantial viaduct and bridge, preserving both the viaduct and the water tower.

4.5 The water tower's original use became redundant with the gradual phasing out of steam in the mid-20th century. Although the last South Eastern Railway steam train ran in 1962, much redevelopment took place in the vicinity for the Festival of Britain in 1951. With the construction of the Royal Festival Hall came local changes to the railway including the demolition of a nearby turntable. It is unclear when the tank was removed, but it may have been at this time, giving a better view across the track from the Royal Festival Hall to the Skylon on the South Bank.

4.6 The structure of the tower below the water tank remained and was utilised as a space for mess rooms for railway workers. In recent years the arches beneath were enclosed for workshops. The mess rooms above were left derelict and the lower level arches were used by the Royal Festival Hall.

[8] Swinton, G. S. C. 1924 *London: Her Traffic - Her Improvement and Charing Cross Bridge.* London, John Murray. -also-
Keen, A. 1930 *Charing Cross Bridge.* London, Ernest Benn Limited.

Figure 2
1st edition Ordnance Survey 1872
1:2,000

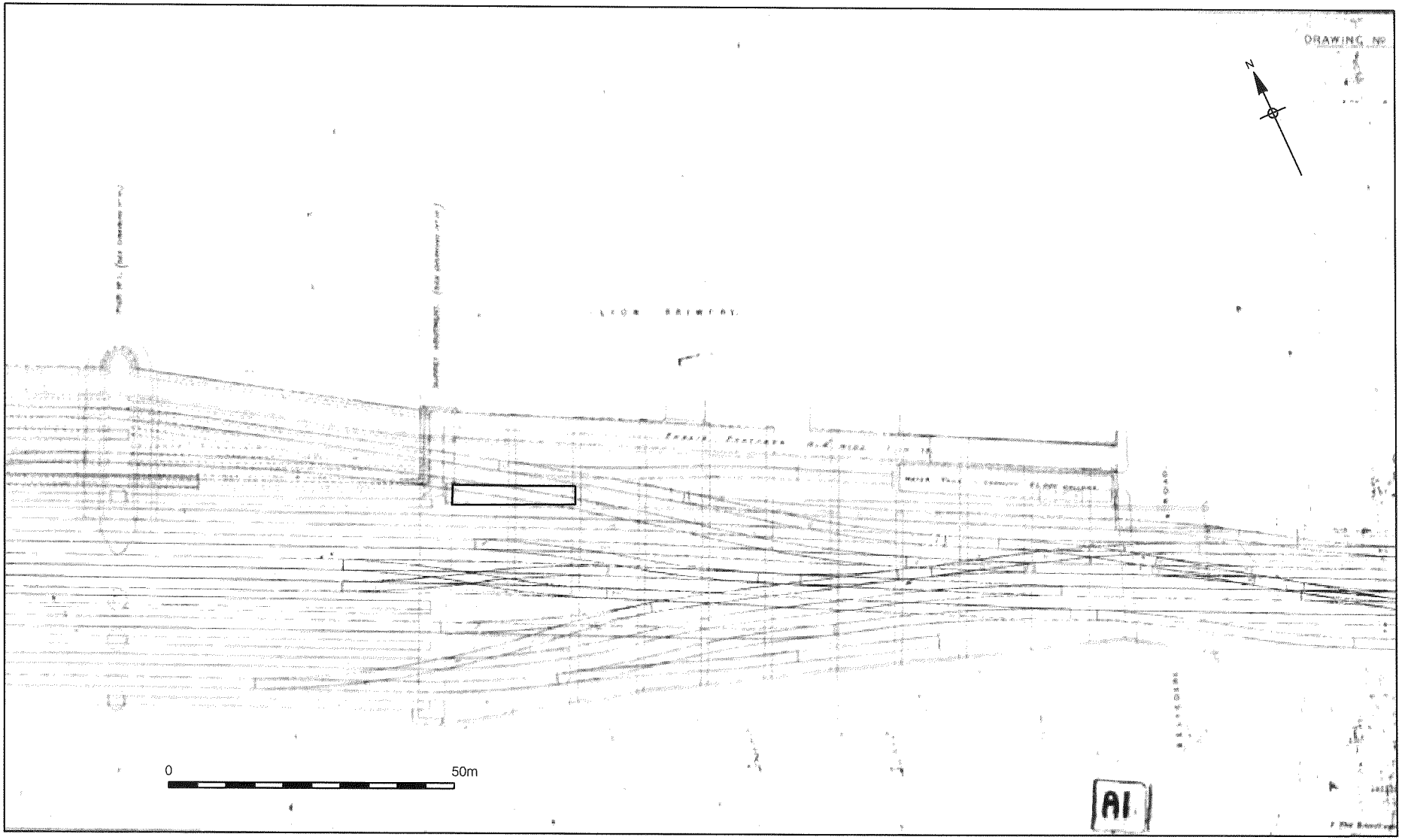


Figure 3
Plan of c.1900 showing site location
1:1,000

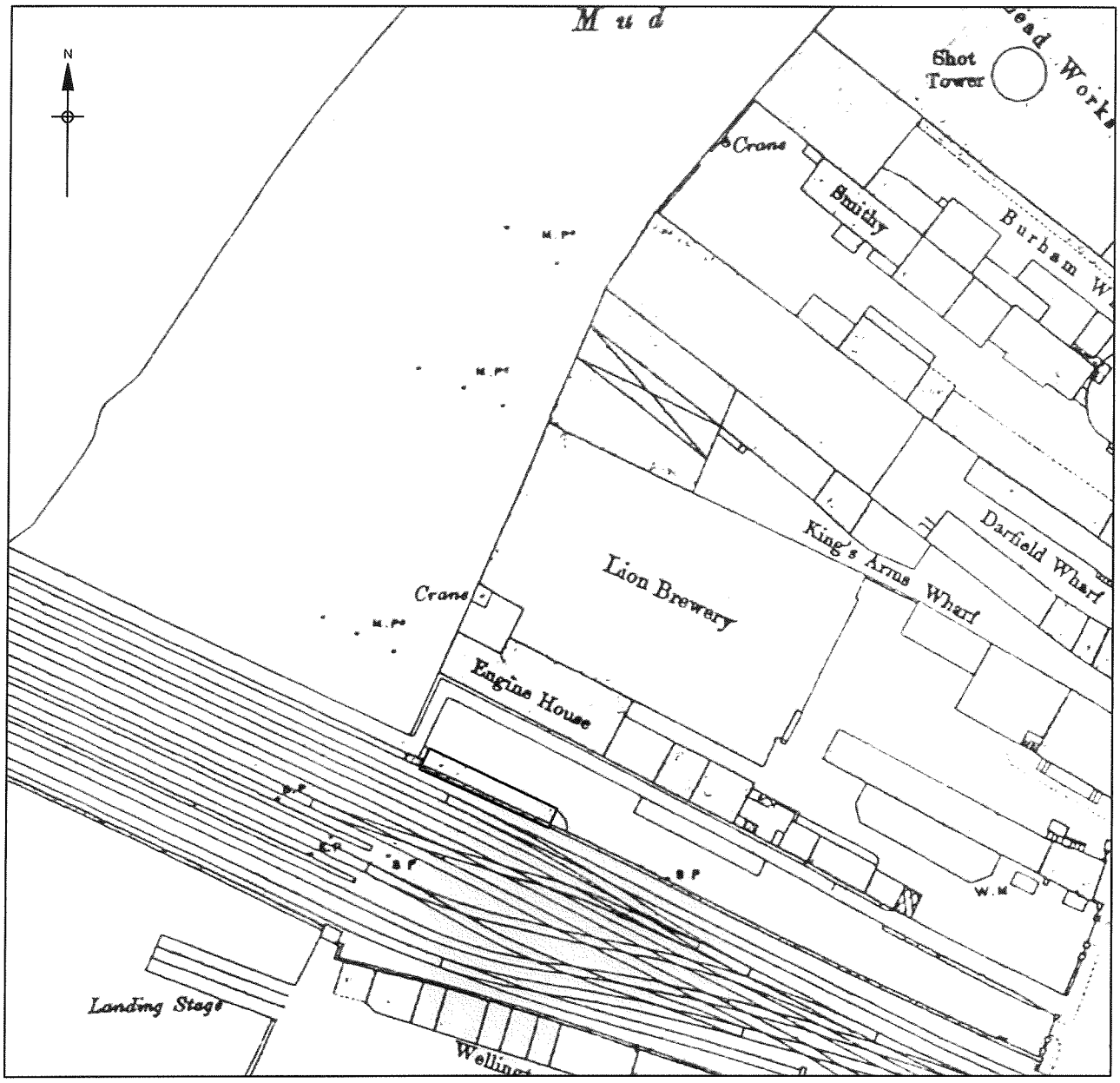


Figure 4
3rd edition Ordnance Survey 1916
1:1,000

5 DESCRIPTION OF THE BUILDING

5.1 At the time of recording the building was empty and the upper level had not been used for some time. The original water tank was no longer present, otherwise the structure survived. The water tower was built in the classical style, as is usual with railway buildings. The building was long, narrow and flat fronted. It had two arches that approximately aligned with those of the adjacent viaduct and supported a six window bayed structure that was built at the level of the railway track. Cast iron beams, which originally supported a water tank, survived but were covered by a later pitched roof. Of two original doors onto the railway tracks, one had been relocated to an original window bay. Internally the original partition wall had been knocked through to insert a doorway. The upper level most recently had five rooms, all with twentieth century concrete floors. A pitched roof, set behind and built into a parapet, replaced the water tank and the space beneath the arches had recently been utilised for workshops. The original masonry was minimally altered by the insertion of service pipes and ducts and by the insertion of steel tie rods to strengthen the structure at lower level.

5.2 The Water Tower (figs 5 – 10, Plate 3)

5.2.1 The water tower was a narrow brick structure built on two levels (fig 7). Its lower level consisted of two broad segmental headed arches positioned against the arches of the railway viaduct to the south. The western arch matched that of the viaduct while the eastern arch had a narrower span. On demolition, the abutments were seen to have been tied to the masonry of the railway viaduct. They were of solid brick, although there was a stoneware downpipe built into each abutment, that was hidden within the structure and drained below ground.

5.2.2 The bricks, laid in English bond (the usual bond used for engineering work, where strength was required), were of fabric 3035 (using the archaeological system of building material classification used in Greater London[9]) and measured 225-234 x 99-112 x 67-69mm. Three parallel steel tie rods ran through the length of the building (Plate 5), through the arches of the lower level, held in place with bolts and square steel plates visible on the east elevation (fig 10) and on the west elevation of the viaduct pier to the west. The lower level spaces had been enclosed for use by the Royal Festival Hall, possibly in the 1980s. These rooms extended back through the viaduct arches. There was no internal decoration

[9] Examples of the fabrics can be found in the archives of PCA Ltd and the Museum of London. Fabric 3035 represents yellow 'stock' brick. The bricks are frogged, yellow throughout and are permeated with voids and inclusions where rubbish and ash has been added to the clay before firing as fuel.

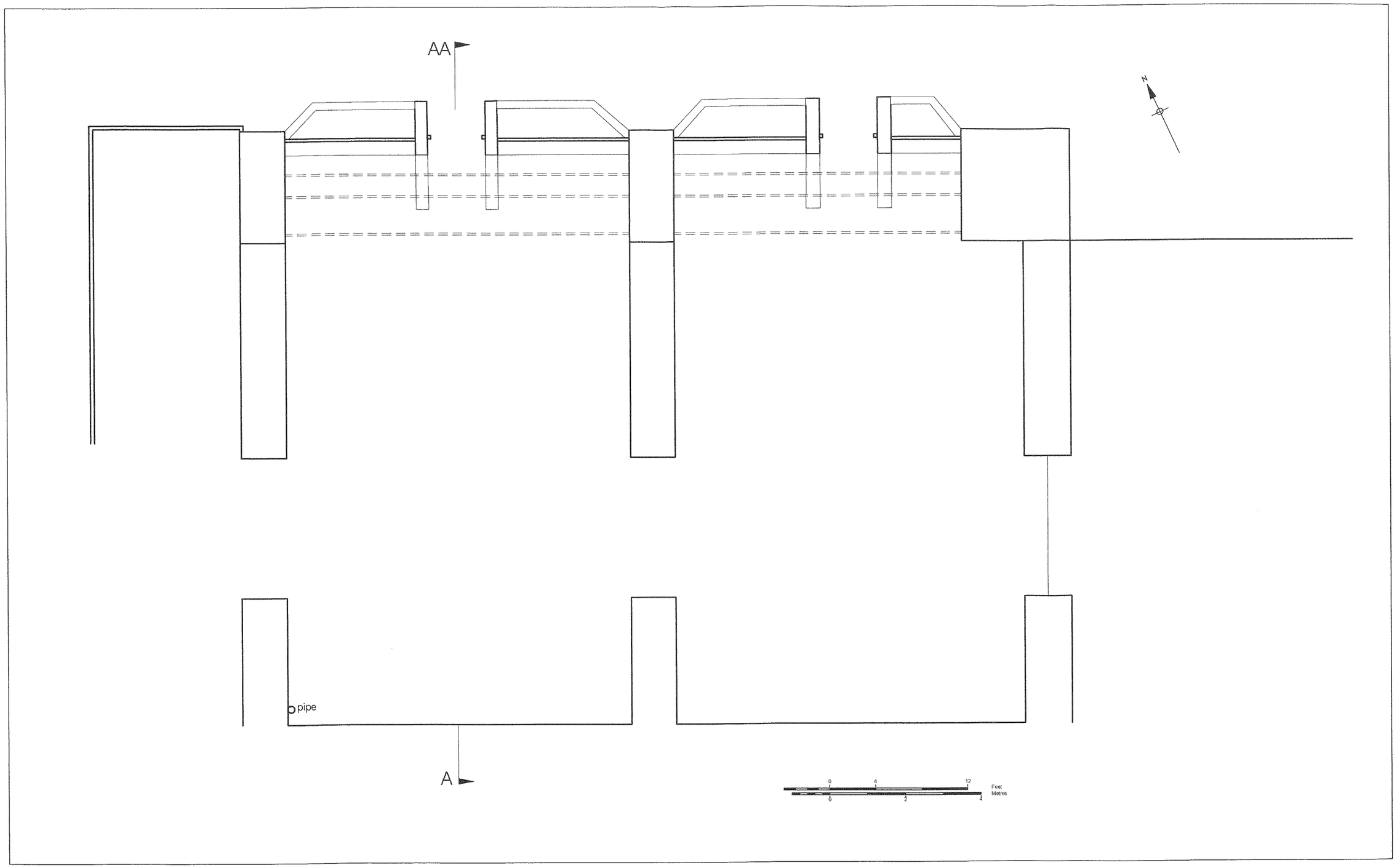


Figure 5
Plan of lower level arches
1:100

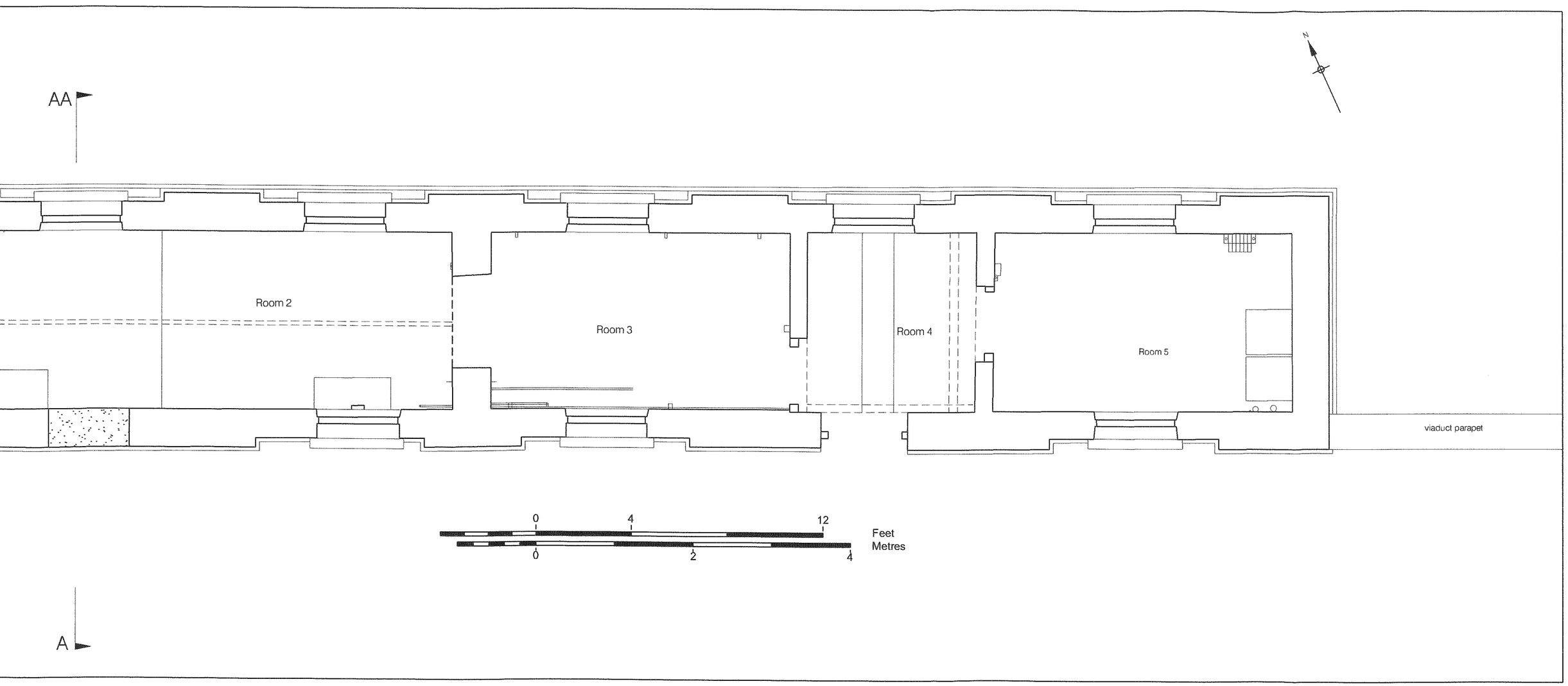


Figure 6
Plan of upper level
1:50

AA

Room 1

Room 2

Room 3

Room 4

0 4 12 Feet

0 2 4 Metres

A

AA

Room 1

Room 2

Room 3

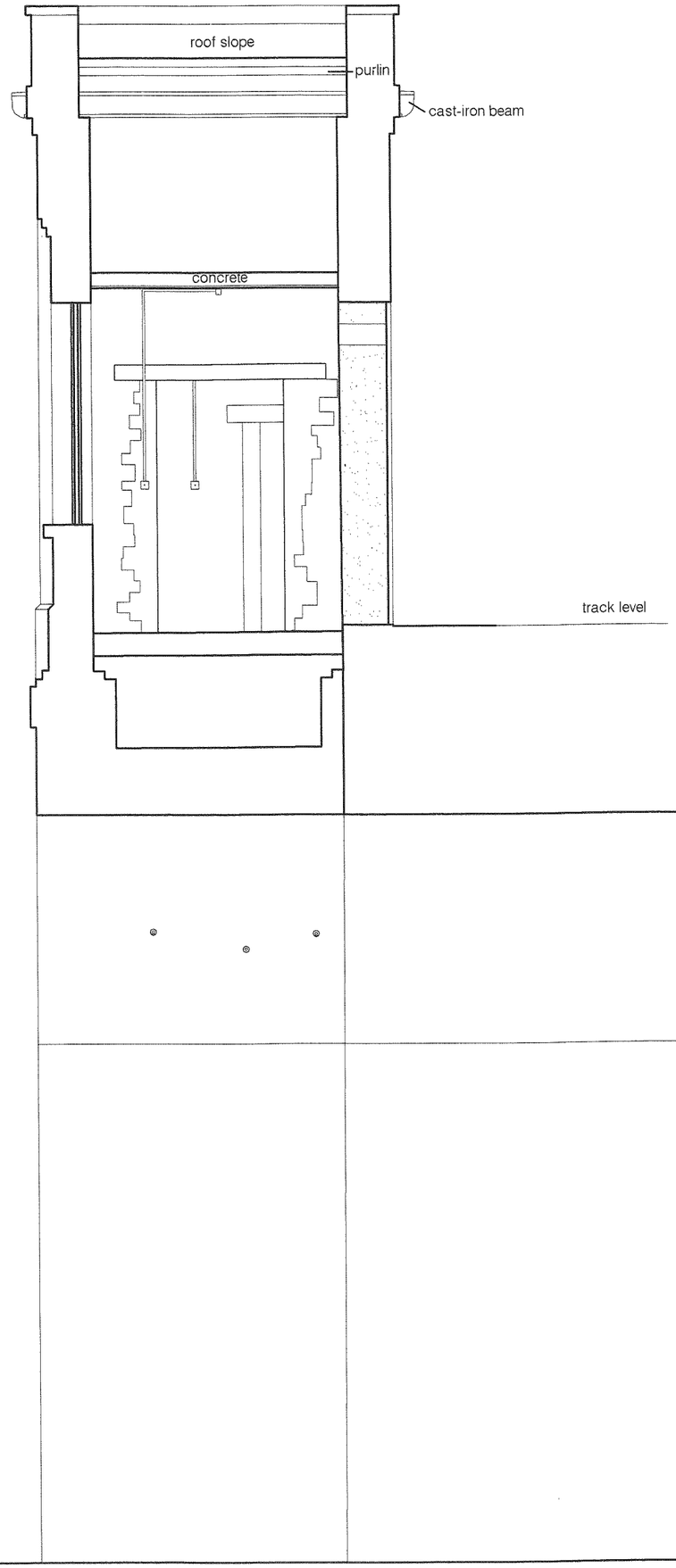
Room 4

0 4 12 Feet

0 2 4 Metres

A

AA



A

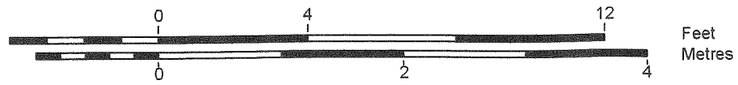


Figure 7
Section A-AA
1:50

although light fittings and plumbing were evident. The northern faces of the arches (fig 8) were glazed and each had a modern brick framed arched doorway. The brickwork around the doorways extended internally as low walls.

5.2.3 Externally, a string course separated the upper and lower levels. Just below window sill level on the upper level the brickwork stepped in to form a chamfered plinth. The openings on the north elevation (Plate 1) were set into six recesses. On the south elevation (fig 9) there was no chamfered plinth (Plate 2). The upper level rooms were accessed via two doors that opened onto the railway track. Three of the original four windows on the south elevation survived, set into recesses, as on the north elevation (in the middle two bays and the eastern bay). The doorway inserted in the western bay was set into recessed brickwork, while the doorway in the second bay from the east and the blocked opening in the second bay from the west were not recessed. The windows had sandstone sills and cast iron frames and mullions (fig 11). The window glass was unusually thick (7mm thick), designed to endure the vibration caused by railway traffic.

5.2.4 There was a plain brick cornice that stepped out twice, beneath a parapet of multi-coloured stock brick of fabric 3034[10], mixed with brick of fabric 3035.

5.2.5 Projecting from the cornice beneath the parapet, on both the north and south elevations, were 18 Cast iron I beams (Plate 4), that had originally supported the water tank. They were set at approximately 1.22m centres and have had curved ends. Their curved ends and profiles are shown in Figure 11.

5.2.6 The first floor was divided into five rooms that will nominally be referred to here as Rooms 1-5, from west to east.

5.2.7 Room 1 occupied the western bay and was created by the insertion of a brick partition wall across the width of the water tower. It had a door leading onto the railway track and there was a blocked internal doorway that would have formerly given access between Rooms 1 and 2 (see fig 6). The doorway was blocked with yellow bricks of fabric 3035, laid in stretcher bond. The floor was of concrete and there was a timber framed plank ceiling, suspended just below the tops of the window opening. The door onto the track was recessed from the south elevation and was therefore inserted into a former window opening. It did not reach the full height of the original window opening, and timber planking filled the space above

[10] Fabric 3034 is purple, with yellow speckled surfaces. The bricks are hard, permeated with voids and inclusions with silt lensing through the clay matrix.

the door. Internal wrought iron fittings included a hook hung centrally above the door and, just to its south, a protruding strap. An iron plate with a hole was fixed into the ceiling by the north window. It probably held a pipe although the course of the pipe could not be traced. The eastern end of the room was separated off by railway sleepers stacked to waist height and shelves had been attached to the east wall. An electricity box by the door would have controlled the lighting.

5.2.8 Room 2 was the longest of the five recorded at the time of the survey, occupying two bays to the east of Room 1. Its east wall consisted of the original central wall that continued up from the pier between the two lower level arches. The former doorway onto the track in the south west of the room, was covered in timber boards, which covered a brick blocking. Within the tympanum of this former arched opening there was a ventilation pipe. The three windows had undergone some re-glazing and repair. The scar, splash back and base of a sink was located in the south west corner of the room, and gas and electricity had also been installed, with two sets of piping. A concrete floor had been laid and a filler joist concrete ceiling inserted. Two small tie plates held with hexagonal bolts were fitted onto the west wall and there was a vent beneath the window facing the track.

5.2.9 The original wall that would have separated Rooms 2 and 3 had been knocked through and a wide opening had been built centrally. The bricks inserted to finish the opening were of fabric 3035. The opening had a timber lintel.

5.2.10 Room 3 was the same dimensions as Room 1, occupying a single bay. Its southern window was boarded over. Each wall, except the partition wall to Room 4 was covered with a thick layer of plaster with a chamfered top at dado height. The filler joist ceiling had exposed beams. These appear to have been formed of reused lengths of railway track.

5.2.11 Room 4 was a lobby. The door onto the track was still in place and there was no inserted ceiling to disguise the original structure above. Part of the concrete floor had been damaged exposing a brick floor underneath.

steel beam

light

0 4 12 Feet
0 2 4 Metres

Figure 8
North-east (Front) Elevation
1:100

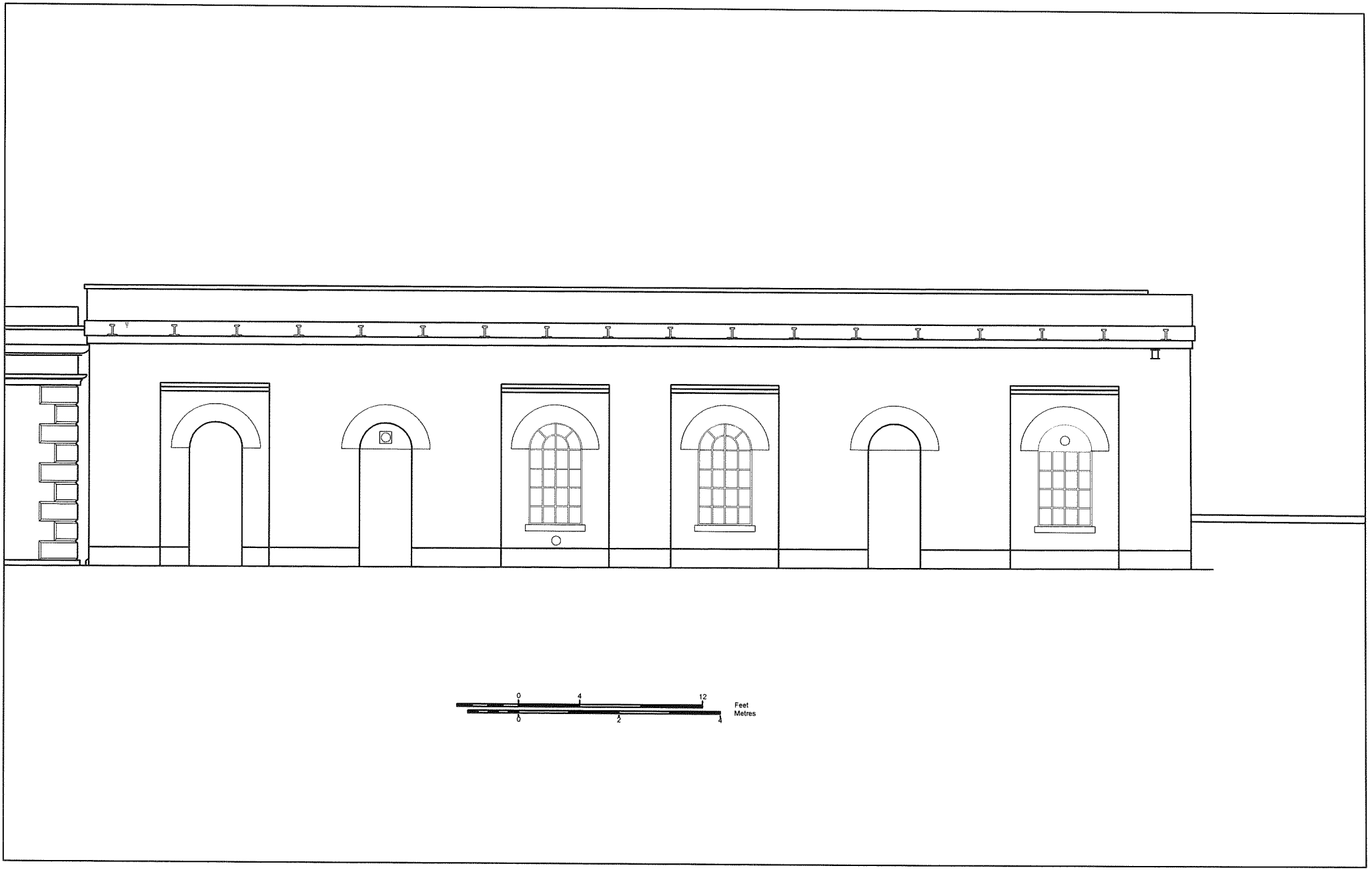


Figure 9
South-west (track-side) Elevation
1:100

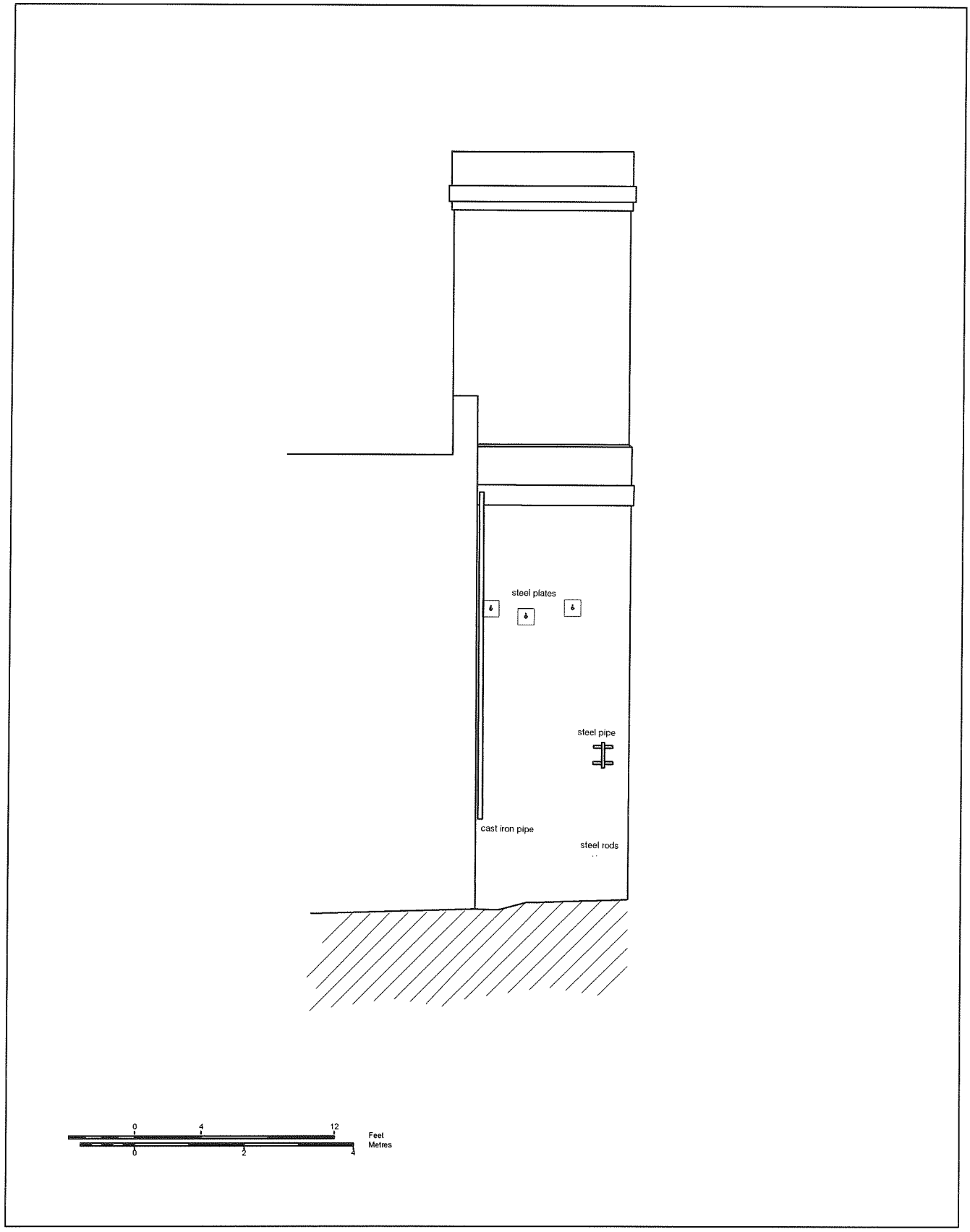
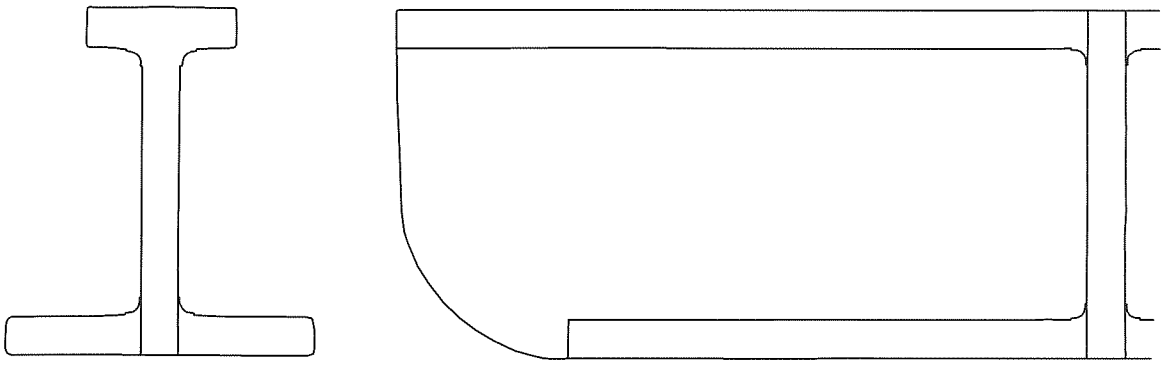
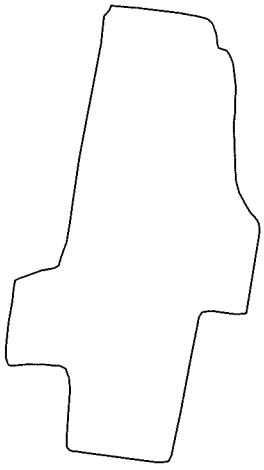


Figure 10
South-east Elevation
1:100



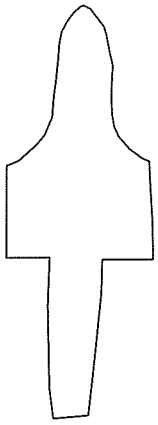
Girder

Scale: 1:5



Window frame

Scale: 1:1



Window mullion

Scale: 1:1

Figure 11
Details of cast-iron beams,
window frame and window mullion
1:5 and 1:1

6 THE HISTORIC SEQUENCE

6.1 The water tower had two main phases of use. Its original design was as a tower that supported a water tank, with rooms below the tank at upper level that housed the building's operators and their equipment. The structure was reused after the water tower ceased to function. Some alterations were made to the circulation of the building and a new roof was added so that it could be used as office space and mess rooms.

6.2 c. 1887 -1900

6.2.1 The water tower is likely to have been built in or soon after 1887, to replace the previous water tank on the south side of the viaduct, that can be seen on the first edition of the 25 inch Ordnance Survey, of 1872 (fig 2).

6.2.2 Except for the absence of the water tank the original construction of the building was much as it survived just prior to demolition, with two lower level arches and six bays at upper level. A central transverse wall rose from the central pier between the two lower level arches to support the tank and divide the building into two rooms at upper level. Between the lower level arches and the floor of the upper level there were two cavities to the north and south of this central wall. They were filled with coke, gravel and sooty waste material, which provided bedding for the upper level's brick flooring. From the base of these cavities, iron grilles capped stoneware drainpipes that ran down within the lower level piers to drains beneath the ground. The bricks of these cavities were covered with a thick accretion of tarry material that might have been painted on to waterproof the structure. It is likely that the drainage system was used when it the tanks were emptied. This may have occurred during maintenance work. The pipes may also have drained excess rainwater from the flat roof of the tank.

6.2.3 The upper level was divided in two by the wall that rose from the central abutment. The pattern of recessed openings and non-recessed openings on the trackside elevation indicate that the location of the original doors. Each room (or group of rooms) had three north windows while the south wall had two windows either side of a central door opening onto the railway track. Unlike the windows, the doors were not recessed.

6.2.4 The original floors were partly revealed during demolition. Further divisions were implied, within the two halves of the upper level, by the different floor surfaces that were exposed. In the far west of the building, a red brick floor was seen. One of the bricks had a distinctive maker's mark reading: WARDS IMPROVED, but with the 'D' of Wards reversed. These bricks were laid against a row of yellow stock bricks. This was only one course high and one brick thick. This wall may show the position of an original wall that was demolished fairly early in the history of the water tower. To the other side of this wall two phases of concrete flooring were seen. It is possible that the earlier of these was the original floor surface (characterised by the inclusion of clinker and brick fragments), although it is also possible that the early concrete floor replaced a timber floor. A similar change was seen to the east of the building, where the far reaches of the building were floored with red brick, but the area closest to the central wall was floored in concrete. The original structure may, therefore, have had two rooms at each end.

6.2.5 Visible from the surface of the brick floor in the western room was a large cast iron pipe. It curved southwards, extending down though the screed, the original wall of the water tower and through the railway viaduct.

6.2.6 The cast iron beams would have directly supported the water tank. As with all cast iron beams the bottom flanges were wider than the top flanges to provide adequate tensile strength. The beams also had web stiffeners towards each end that were positioned to be hidden within the masonry. These would have helped support the weight of the iron tank and would have prevented the beams from moving when the tank was first erected.

6.2.7 A cast iron pipe at the east end of Room 5 may have supplied the water tank.

6.4 Late 19th to mid 20th century

6.4.1 The earliest alteration of the building was the demolition and rebuilding of the internal partition walls, although it is thought that the central wall remained intact at this time. The wall that was inserted between Rooms 1 and 2 originally had a door to connect the two rooms.

6.4.2 The doorway between Rooms 1 and 2 was blocked with bricks of fabric 3035 laid in stretcher bond. This would have altered the circulation within the building, effectively cutting off the western bay from the rest of the structure. The original

southern window would have had to have been replaced by the current door at this time. The timber ceiling of this room was lower than the top of the window and would have incorporated a pipe that would have been housed in the ceiling plate that survived. This pipe would have obstructed the window. Its purpose is uncertain. It may have acted as a vent to machinery within Room 1 or may have supplied or drained the tank above.

6.4.3 The central wall was perforated, linking the eastern five bays. This may have been contemporary with the blocking of doorway between Rooms 1 and 2.

6.4.4 Steam trains gradually went out o fuse on the line out of Charing Cross in the 1950s and the removal of the water tank would have prompted the building's conversion to a mess.

6.4.5 It is not certain when the filler joist concrete ceilings were inserted in Rooms 2, 3 and 5, although they would have to have been in place by the time the building was converted to a mess in the 1950s, as they would have provided some insulation. The fact that some of the internal cast iron piping was not removed when the concrete ceiling was inserted in Room 5 suggests the ceilings' insertion predated the removal of the water tank in the mid 20th century. This would have added considerable weight to the structure and may explain the evidence of historic cracking in the brickwork and the need for additional stabilising measures (see 6.4.8 and 6.4.9 below).

6.4.6 The route of the gas pipes indicates that the gas supply to the building must have been installed after Rooms 2 and 3 were connected and probably dates to the use of the building as a mess room.

6.4.7 The parapet and current roof, consisting of a pitched roof with two valleys were inserted after the removal of the water tank. It seems is likely that the tank would have rested directly onto the cast iron beams. The fact that there is one course of bricks of fabric 3035 laid above the top of the cast iron beams, beneath the different brickwork of the parapet, suggests that the parapet has been rebuilt since the tank was removed.

6.4.8 With the weight of the water tank and constant vibration from railway traffic, the structure would have been subject to stresses and there were historic cracks visible in the brickwork of the tower. During the 20th century a system of three longitudinal tie rods was inserted through the structure to stabilise it.

6.4.9 A pair of severed steel beams were recorded high on the north elevation at its south end. These would have been added in the 20th century and formerly extended to the buildings that stood to the north, before the Royal Festival Hall was built. These, like the tie rods would have provided additional structural stability.

6.4.10 Most recently the spaces beneath the lower level arches were converted for use by the South Bank Centre. Within the viaduct arches there are pipes and scars of pipes. These relate to the use of the lower level arches and to the drainage of the viaduct itself. None of these pipes was found to relate to the operation of the water tower.

7 CONCLUSIONS

7.1 The water tower is a classical, functional building of little architectural pretension. Apart from the drainage and supply pipes to the tanks, no evidence of its operation as a water tower supplying steam engines was found. Its upper level plan was originally symmetrical with two separate groups of rooms. Its main function was as a water tower

7.2 The fact that the building was built against a viaduct pier indicates that the boilers of the steam engines were filled from alongside the structure rather than from a track at one end. No evidence of the pipes that extended over the track to supply the engines, or their method of support, survived.

7.3 During the 20th century more use was made of the internal rooms, and the plan was adapted to suit the needs of the occupants, with the additional supply of gas and electricity and the subdivision of the building into five rooms at upper level. As the uses of the internal spaces intensified, the interior was further adapted, with the insertion of ceilings, where necessary, and the construction of accommodation at lower level.

7.3 A major problem was maintaining the structural stability of a long, narrow and heavy building and steel ties and bracing beams attest to this. The filler joist ceilings would have added considerable weight in addition to the tank and te bracing on the north elevation and the steel tie rods inserted longitudinally through the building would have stabilised the structure.

8. ACKNOWLEDGEMENT

8.1 The author and PCA Ltd would like to thank The South Bank Centre for commissioning and funding the work and René Von Müllen of Bovis Lend Lease and. We would also like to thank Jones Lang Lasalle, and particularly Richard Hesketh and Taylor Woodrow and especially Mark Lyttle for facilitating the work. Thanks are also extended to Vicky Thornton of Allies and Morrison, the staff of Lambeth Local Studies Library for their archival assistance and to Mike Gearing and the staff of the Network Rail archives at Plan Arch, Waterloo. Thanks also to the demolition crew from McGee.

8.2 The author would like to thank Peter Moore for starting the project and Ken Sabel for managing it, Karl Hülka for part of the buildings survey, Cheryl Blundy for the photography and Adrian Nash for the CAD drawings. Particular thanks go to James Dixon for his assistance in compiling the final report.

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APPENDIX ONE: PLATES

Plate 1: A view of the tower from the north

Plate 2: The trackside (south) elevation

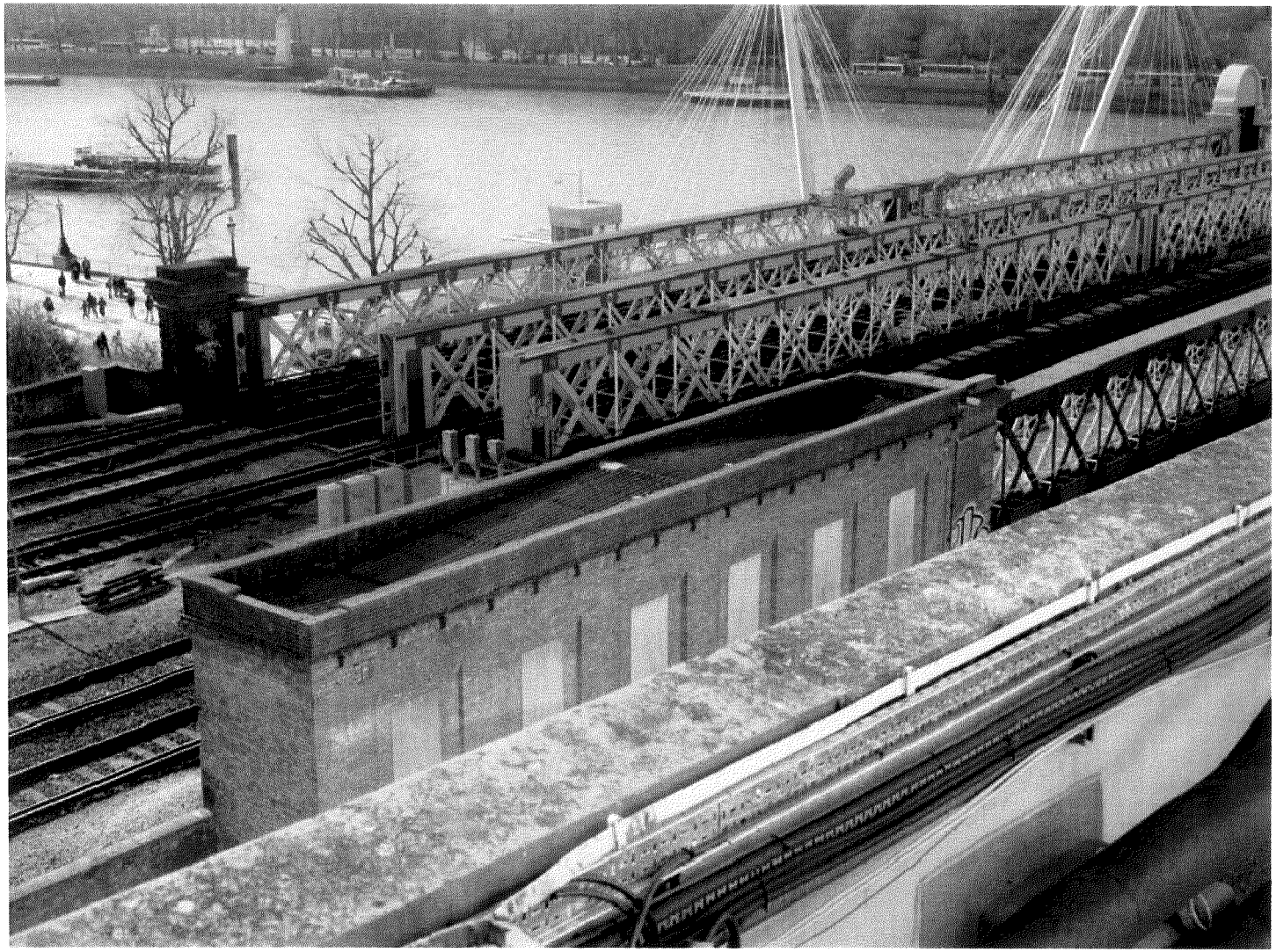

Plate 3: The building from the roof of the Royal Festival Hall

Plate 4: One of the ends of the cast iron beams

Plate 5: The system of steel tie rods

Appendix 2

PHOTOGRAPHIC RECORD

In addition to the photographs below, a number of photographs were taken on 35mm colour and black and white film and form part of the site archive.

id	FILMTYPE	FILMNO	FRAMENO	DIRECTION	DATE	COMMENTS
73982	120COL	100	1		26/02/2004	ROOF OF WATER TOWER
73983	120COL	100	2		26/02/2004	ROOF OF WATER TOWER
73984	120COL	100	3		26/02/2004	ROOF OF WATER TOWER
73985	120COL	100	4		26/02/2004	PIER ON ROOF
73986	120COL	100	5		26/02/2004	PIER ON ROOF
73987	120COL	100	6		26/02/2004	PIER ON ROOF
73988	120COL	100	7		26/02/2004	PIER ON ROOF
73989	120COL	100	8		26/02/2004	PIER ON ROOF
73990	120COL	100	9		26/02/2004	PIER ON ROOF
73991	120COL	100	10		26/02/2004	EAST SIDE, TIES ON EAST SIDE
73992	120COL	100	11		26/02/2004	EAST SIDE, TIES ON EAST SIDE
73993	120COL	100	12		26/02/2004	EAST SIDE, TIES ON EAST SIDE
73994	120COL	100	13		26/02/2004	EAST SIDE, TIES ON EAST SIDE
73995	120COL	100	14		26/02/2004	EAST SIDE, TIES ON EAST SIDE
73996	120COL	100	15		26/02/2004	EAST SIDE, TIES ON EASTSIDE
73997	120BW	101	1	W	05/12/2003	GENERAL VIEW
73998	120BW	101	2	W	05/12/2003	GENERAL VIEW
73999	120BW	101	3	W	05/12/2003	GENERAL VIEW
74000	120BW	101	4	W	05/12/2003	GENERAL VIEW
74001	120BW	101	5	W	05/12/2003	GENERAL VIEW
74002	120BW	101	6	W	05/12/2003	GENERAL VIEW
74003	120BW	101	7	S	05/12/2003	GENERAL VIEW
74004	120BW	101	8	S	05/12/2003	GENERAL VIEW
74005	120BW	101	9	S	05/12/2003	GENERAL VIEW
74006	120BW	101	10	S	05/12/2003	GENERAL VIEW
74007	120BW	101	11	S	05/12/2003	GENERAL VIEW
74008	120BW	101	12	S	05/12/2003	GENERAL VIEW
74009	120BW	101	13	E	05/12/2003	GENERAL VIEW
74010	120BW	101	14	E	05/12/2003	GENERAL VIEW
74011	120BW	101	15	E	05/12/2003	GENERAL VIEW
74012	120COL	102	1		26/02/2004	EAST ARCH, TIES ON WEST SIDE
74013	120COL	102	2		26/02/2004	EAST ARCH, TIES ON WEST SIDE
74014	120COL	102	3		26/02/2004	EAST ARCH, TIES ON WEST SIDE
74015	120COL	102	4		26/02/2004	EAST ARCH PIPE ON WEST WALL
74016	120COL	102	5		26/02/2004	EAST ARCH PIPE ON WEST WALL

id	FILMTYPE	FILMNO	FRAMENO	DIRECTION	DATE	COMMENTS
74017	120COL	102	6		26/02/2004	EAST ARCH PIPE ON WEST WALL
74018	120COL	102	7		26/02/2004	WEST ARCH PIPE ON WEST WALL
74019	120COL	102	8		26/02/2004	WEST ARCH PIPE ON WEST WALL
74020	120COL	102	9		26/02/2004	WEST ARCH PIPE ON WEST WALL
74021	120COL	102	10		26/02/2004	WEST ARCH PIPE ON WEST WALL
74022	120COL	102	11		26/02/2004	WEST ARCH ARCHWAY OVER PIPE
74023	120COL	102	11		26/02/2004	WEST ARCH ARCHWAY OVER PIPE
74024	120COL	102	12		26/02/2004	WEST ARCH ARCHWAY OVER PIPE
74025	120COL	102	13		26/02/2004	WEST ARCH ARCHWAY OVER PIPE
74026	120COL	102	14		26/02/2004	WEST ARCH ARCHWAY OVER PIPE
74027	120COL	102	15		26/02/2004	WEST ARCH ARCHWAY OVER PIPE
74028	120BW	103	1	E	05/12/2003	WEST FACING ELEVATION
74029	120BW	103	2	E	05/12/2003	WEST FACING ELEVATION
74030	120BW	103	3	E	05/12/2003	WEST FACING ELEVATION
74031	120BW	103	4	E	05/12/2003	WEST FACING ELEVATION
74032	120BW	103	5	E	05/12/2003	WEST FACING ELEVATION
74033	120BW	103	6	E	05/12/2003	WEST FACING ELEVATION
74034	120BW	103	7	S	05/12/2003	NORTH FACING ELEVATION
74035	120BW	103	8	W	05/12/2003	EAST FACING ELEVATION
74036	120BW	103	9	W	05/12/2003	EAST FACING ELEVATION
74037	120BW	103	10	W	05/12/2003	EAST FACING ELEVATION
74038	120BW	103	11	W	05/12/2003	EAST FACING ELEVATION
74039	120BW	103	12	W	05/12/2003	EAST FACING ELEVATION
74040	120COL	108	1	E	26/02/2004	WEST FACE
74041	120COL	108	2	E	26/02/2004	WEST FACE
74042	120COL	108	3	E	26/02/2004	WEST FACE
74043	120COL	108	4	E	26/02/2004	WEST FACE CLOSE UP
74044	120COL	108	5	E	26/02/2004	WEST FACE CLOSE UP
74045	120COL	108	6	E	26/02/2004	WEST FACE CLOSE UP
74046	120COL	108	7	S	26/02/2004	NORTH FACE
74047	120COL	108	8	S	26/02/2004	NORTH FACE
74048	120COL	108	9	S	26/02/2004	NORTH FACE
74049	120COL	108	10	S	26/02/2004	NORTH FACE BRACKET AT NORTH END
74050	120COL	108	11	S	26/02/2004	NORTH FACE BRACKET AT NORTH END
74051	120COL	108	12	S	26/02/2004	NORTH FACE BRACKET AT

id	FILMTYPE	FILMNO	FRAMENO	DIRECTION	DATE	COMMENTS
						NORTH END
74052	120COL	108	13	S	26/02/2004	NORTH FACE PIER
74053	120COL	108	14	S	26/02/2004	NORTH FACE PIER
74054	120COL	108	15	S	26/02/2004	NORTH FACE PIER
74055	120BW	115	1	RF	26/02/2004	WATERTOWER ROOF
74056	120BW	115	2	RF	26/02/2004	WATERTOWER ROOF
74057	120BW	115	3	RF	26/02/2004	WATERTOWER ROOF
74058	120BW	115	4	RF	26/02/2004	PIER AND WATERTOWER ROOF
74059	120BW	115	5	RF	26/02/2004	PIER AND WATERTOWER ROOF
74060	120BW	115	6	RF	26/02/2004	PIER AND WATERTOWER ROOF
74061	120BW	115	7	RF	26/02/2004	PIER AND WATERTOWER ROOF
74062	120BW	115	8	RF	26/02/2004	ROOF
74063	120BW	115	9	RF	26/02/2004	ROOF
74064	120BW	115	10	RF	26/02/2004	ROOF
74065	120BW	115	11	RF	26/02/2004	EAST ARCH WEST SIDE PIPE AND SCAR
74066	120BW	115	12	RF	26/02/2004	EAST ARCH WEST SIDE PIPE AND SCAR
74067	120BW	115	13	RF	26/02/2004	EAST ARCH WEST SIDE PIPE AND SCAR
74068	120BW	115	14	RF	26/02/2004	WEST ARCH PIPE
74069	120BW	115	15	RF	26/02/2004	WEST ARCH PIPE
74070	120BW	115	16	RF	26/02/2004	WEST ARCH PIPE
74071	120COL	122	1	UP	06/07/2004	CAST IRON BEAMS SIDE VIEW
74072	120COL	122	2	UP	06/07/2004	CAST IRON BEAMS SIDE VIEW
74073	120COL	122	3	UP	06/07/2004	CAST IRON BEAMS SIDE VIEW
74074	120COL	122	4	UP	06/07/2004	CAST IRON BEAMS FROM BENEATH
74075	120COL	122	5	UP	06/07/2004	CAST IRON BEAMS FROM BENEATH
74076	120COL	122	6	UP	06/07/2004	CAST IRON BEAMS FROM BENEATH
74077	120BW	123	1	UP	06/07/2004	CAST IRON BEAMS SIDE VIEW
74078	120BW	123	2	UP	06/07/2004	CAST IRON BEAMS SIDE VIEW
74079	120BW	123	3	UP	06/07/2004	CAST IRON BEAMS SIDE VIEW
74080	120BW	123	4	UP	06/07/2004	CAST IRON BEAMS FROM BENEATH
74081	120BW	123	5	UP	06/07/2004	CAST IRON BEAMS FROM BENEATH
74082	120BW	123	6	UP	06/07/2004	CAST IRON BEAMS FROM BENEATH