

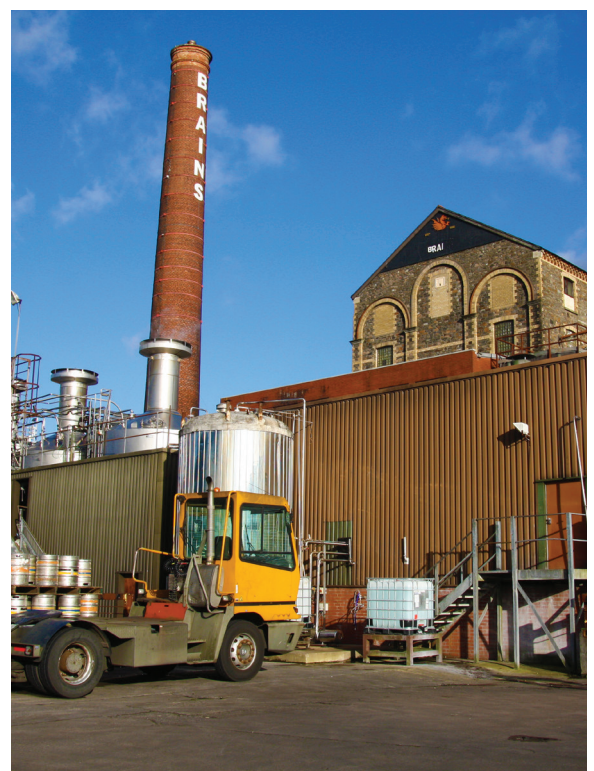
Brains Brewery Heritage Record

JULY 2018

Crawshay Street, Cardiff



LICHFIELDS



Brains Brewery Heritage Record

Rightacres Property Ltd.

3 July 2018

LICHFIELDS

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1.0 Introduction

- 1.1 This report has been prepared by Lichfields for Rightacres Property Ltd. It is a study of the existing buildings and processes found on the site currently owned by Brains Brewery, at Crawshay Street, Cardiff. It has been prepared to provide a descriptive record of the current site, its buildings and the processes which occur within them. It does not provide an assessment of the significance of any buildings within the site boundary.
- 1.2 The report is based upon a site visit conducted on 23 August 2017, archival research and information gathered from other secondary sources. Information and drawings from RCAHMW and NMRW: Welsh School of Architecture Collection have been used to inform the study, together with plans provided by the site's current owners.
- 1.3 The report provides a brief history of the site, drawing upon archive material and historic Ordnance Survey mapping. Illustrative drawings provide the locations of the various elements within the site and rooms within the buildings, providing a reference for the photographic record included at the end of the report. A number of brewing processes were witnessed during the visit, and these have been recorded on video and form part of the material presented for archive.

Figure 1.1 Aerial View of Brains Brewery



Source: Google Maps

2.0 Brains Site

- 2.1 The following section describes the development of the brewery site and provides a brief insight into the history of brewing on the site. It also describes the current site and notable buildings within it. The Site Orientation Plan (IL31544/001-007) within Appendix 2 illustrates the various building components on the site.

History of the Site and Cardiff Brewing

- 2.2 Reference should be made to the following Ordnance Survey Plans within Appendix 1:
- IL31544-01-004 Historic Plans 1880
 - IL31544-01-004 Historic Plans 1901
 - IL31544-01-004 Historic Plans 1920
 - IL31544-01-004 Historic Plans 1941
 - IL31544-01-004 Historic Plans 1954
 - IL31544-01-004 Historic Plans 1977
- 2.3 The 1880 OS plan shows the site as an undeveloped area of salt marsh to the eastern side of the river and south of the Great Western Station. With the first brewery being established on the site in 1889.
- 2.4 This brewery was purchased and redeveloped in 1894 by William Hancock & Co. Ltd. 'Hancocks' originated in Somerset in 1807 and began brewing in Cardiff in 1883 after acquiring the first of eight Welsh breweries which Hancock's eventually bought. A separate company, called William Hancock and Co Ltd, was established in 1887 to cover the rapid expansion in South Wales.
- 2.5 Brains, the current site owners, began their business in 1882 in a small stone brewery on St. Marys Street. Its founders were Samuel Arthur Brain and Joseph Benjamin Brain. The St. Mary Street brewery expanded in 1887.
- 2.6 By 1901 the OS plan shows a brewery, cake factory, joinery works, and coach and wheel works on the current site. The residential terraces of Crawshay Street, Harpur Street and Percy Street had also been constructed, and the railway network had been extended to the eastern side of the site. Development was constrained to the west by the poor land and mud flats adjacent to the river.
- 2.7 There is little evidence of change between the 1901 and 1920 OS plans, other than the construction of a building on the land now occupied by the 'Batemans' building.
- 2.8 The greatest change on the 1941 OS plan is the redevelopment of a larger building to the eastern side of the site (part of the coach and wheel works). A line, parallel to the riverside suggests the start of land reclamation works between the river and brewery buildings.

Figure 2.1 Brains Brewery (1945-1950)



- 2.9 By 1954 the brewery is named as Hancocks and there have been extensions to the west of the main Brewhouse, within the area of reclaimed land. The Bass Charrington brewery acquired William Hancock and Co Ltd in 1968, and created a new company called Welsh Brewers.
- 2.10 Significant changes are evident between the 1954 and 1977 plans. A further area of land has been reclaimed and there have been substantial changes in the scale of development to the south western site boundary. A number of residential properties have been demolished in Crawshay Street and Harpur Street, together with several buildings within the site boundary.
- 2.11 Brains closed The Old Brewery (now 'The Yard') in 1999 and moved to the former Hancock's and Welsh Brewers site at Crawshay Street.
- 2.12 The Site Evolution Plan (IL31544/001-008) within Appendix 3 illustrates the evolution of the brewery site, based upon the information available from historic Ordnance Survey Plans.

Present Brewery Site

- 2.13 The present day site is dominated by the five storey Brewhouse and adjacent 150ft chimney, which provides a landmark on Cardiff's skyline due to both its height and large white letters advertising the brewery's location. Drawings dated 1938 prepared by R.B.Hilton Ltd (refer to Appendix 4) illustrate the design for the 150ft red brick chimney with reinforced concrete raft foundation and pressure piles.
- 2.14 The western side of the Brewhouse has seen extensive change. The additional buildings have all but screened the existing elevations of the Brewhouse, with the exception of some of the upper storeys. The resulting collection of buildings and structures are functional rather than aesthetically pleasing, each with its own specific use, and some with none as the brewing process changes and outgrows elements of the site. Further information on the evolution of the Brewhouse is included within Section 4 of this report.
- 2.15 The former Directors Block is located to the east of the gatehouse, close to the main entrance. It is essentially three conjoined buildings; the front is a two-storey brick flat roof structure with a projecting pitched porch and glazed canopy, which are later additions. The middle section is an older single story red brick building with a twin sectioned frontage. It has a flat and glazed left wing to front, while the right hand side is a slightly projecting and hipped with a large arched front central window surmounted by pediment brick gable with finial. The rear section of the building is of contrasting buff coloured brick with random windows and an added glazed pitched porch. The roof is hipped and pitched. To the rear of this is a further building which was once separate, but is now joined at ground floor level.

- 2.16 The office block immediately to the north of the gatehouse comprises a two/three storey flat roofed red brick structure with a symmetrical front elevation that probably once housed the main entrance. The two storey central section is now glazed at ground floor level and is flanked to either side by three storey fenestration. This elevation has string courses and banding at first floor level with some decorative brick moulding just below the parapet. The side entrance now sits within a later porch, below a later glazed canopy. The remainder of the building comprises a 1970's rear extension with rendered elevations and brick window surrounds.
- 2.17 The former use of the Bateman building, adjacent to Harpur Street to the southern end of the site, is not certain however it seems reasonable that it may once have provided stabling for the horses which would have drawn the drays. The single and two storey red brick building has contrasting black and cream brick detailing running throughout its elevations. The 'bullnosed' northern end of the building turns the corner from what was once an extension of Harpur Street into, what would have been Percy Street. At the south eastern end of the building is a small yard and, to the south of this a two storey red brick, hipped roofed building steps up to slightly larger buff brick two storey structure with contrasting red brick detailing. The ground floor openings of the larger building have been blocked up between red brick pilasters.

3.0 The Brewing Process

3.1 On average beer is brewed 3-4 times per week and from the start to finish the process takes 2-3 weeks. The brewery only produces keg/cask beer, there is no bottling facility on site. The brewery does package beer which has not been brewed on the premises.

3.2 The following description briefly sets out the key brewing processes, many of which take place within the original five storey Brewhouse.

Fourth Floor: Milling

3.3 Originally hauled up, and latterly transported by lift, nowadays the malt/grain is blown from the malt store to the fourth floor of the main Brewhouse building.

3.4 The grain is fed into the mill within the Mill Room. Four rollers within the mill tear open the grains to produce 'grist' - crushed malt/grain.

3.5 The hot liquor header tank, containing water heated to around 82°, is located on the fourth floor (refer to Brewhouse Building Analysis Plans location ref B4(b), Appendix 5).

Third Floor: Grist Store

3.6 The grist is fed via hoppers into the grist cases (storage vessels) on the third floor. The grist is held here until it is required for the next phase of the brewing process. Generally it takes around 20 minutes to drop 3 tonnes to the floor below.

3.7 Bags of speciality malt are also stored on this floor, for use in the craft brewing process.

3.8 The heat exchange system (for recovering the heat from the liquor) is located on the third floor.

3.9 Much of the southern end of this floor is not now in productive use (refer to Brewhouse Building Analysis Plans location refs B3(e) – B3(g), Appendix 5) although previously it has been used as a laboratory and storage.

Second Floor: Mashing

3.10 The second floor accommodates three large and one smaller 'mash tuns' – large vessels used in the mashing process.

3.11 Grist is fed into the mash tuns via hoppers from the grist cases on the third floor. The hot liquor (blended with colder water to reduce the temperature to 70-76 °) is added and allowed to stand for an hour, beginning the process of converting the starch into sugars.

3.12 A 2.5 hour separation process then begins, drawing off the liquid, known as 'hot wort' (unfermented beer) and leaving a sweet malt extract, a by-product of the process which is sold off for use in cattle feed.

3.13 The Brewers' office is located on this floor, as are numerous unused open fermentation tanks, lined with aluminium and stainless steel.

First Floor: Fermentation

3.14 The hot wort is transferred from the mash tuns, and cooled via the heat exchange system, prior to the fermentation process.

3.15 Oxygen and yeast are injected into the hot wort before it reaches the fermentation tanks.

- 3.16 The closed fermentation tanks are located to the southern end of the first floor. There are also numerous large fermentation tanks to the south of the main Brewhouse. The fermentation process takes seven days during which time the brew is tested daily. During the fermentation process sugars are converted into alcohol and CO₂.

Ground Floor:

- 3.17 After one week the excess yeast is removed and stored. The beer is transferred to the conditioning plant where it is stored prior to being filtered.
- 3.18 Following filtration the liquid is known as 'bright beer'. This is stored in a 'bright tank' to further mature, clarify and carbonate prior to kegging.
- 3.19 The ground floor of the original Brewhouse contains craft fermentation tanks and storage, yeast storage and pitching tanks, and the sample cellar.
- 3.20 To the western side of the original footprint is the cask packaging area, containing the cask washer, cask 'carousel' and tanks feeding the cask filling equipment.

Conditioning Plant

- 3.21 The fermented beer is transferred to the conditioning plant, to the south of the Brewhouse. Here it is filtered, with the resultant product known as 'bright beer'. Maturation occurs within cold storage tanks before the beer is transferred to the cask packaging area.

4.0

The Brewhouse

- 4.1 The Brewhouse is 'L' shaped in plan, with the northern most end rising to five storeys. Constructed in stone, individual bays are depicted with contrasting stone and brickwork detailing, providing both vertical and horizontal definition to the visible elements of the facades.
- 4.2 The Brewhouse Evolution Plan (IL31544/001-009) within Appendix 5 illustrates the evolution of the Brewhouse and adjacent buildings, and is based upon the information available from historic Ordnance Survey Plans.
- 4.3 The tallest element of the Brewhouse comprises a block that has a northern elevation of five bays, and is three bays wide. The three bay gable ends have arched detailing, with the central arch rising the full five storeys. Early (undated) drawings of the western elevation illustrate arched headed window openings to the two side bays, and an arched louvered opening to the central bay (refer to Appendix 4). These have since been blocked up with contrasting materials. There is an 1889 date stone set within the stonework of the eastern gable.
- 4.4 A large signage board advertising 'Brains – The Cardiff Brewery' sits below the stone corbelled eaves on the northern elevation. The roof is a simple pitch. Plans produced in 1962 (refer to Appendix 4) by JW Attree, the brewery surveyor, indicate that this roof originally had a lantern element included within it, as did the adjacent light brick element above the hot liquor tank. Both roofs appear to have been simplified since this time, and a black painted Brains advert now adorns the top of the north western gable.
- 4.5 The remaining part of the Brewhouse is four storeys in height and runs southwards from the taller element. Constructed in the same stone, thought to have been imported as ballast into Cardiff docks, it also has contrasting brick and stone detailing depicting seven bays along its length. These seven bays comprise two different widths. The four bays adjacent to the taller element of the Brewhouse appear to be of a narrower width to those three to the southern end of the building. Detailing between the block of four bays and the three, wider bays to the southern end suggests that this may have been an addition, as there is a slight setback in the elevation of the two and an additional pilaster (refer to photo P8230227_DxO.jpg).
- 4.6 As with the taller element, the roof sits above stone corbelled eaves. The roof is of slate with a contrasting red ridge tile. There is evidence of many of the original openings having been blocked up over time, including openings which may have been doors with canopies above (possibly for winching up grain supplies) towards the north eastern end of the block.
- 4.7 The southern elevation is two bays wide. The contrasting stone arches spring from stone and brick pilasters, and have stone keystones. Above the arches are two windows surrounded in light brick and with an additional rectilinear detail surrounding them, lining through with the keystones. Within each bay there are two openings, both of which are glazed and have brick detailing their surrounds.
- 4.8 The ever changing requirements of the brewing process and subsequent expansion of the brewery has resulted in numerous additions to the original Brewhouse building including:
 - A four storey stair tower profile sheet clad stair tower to the north eastern elevation
 - Flat roofed red brick yeast room to the south eastern elevation
 - Ancillary lean-to element clad in profile sheet between yeast room and stair tower
- 4.9 In order to determine the extent and form of the original Brewhouse, Lichfields has undertaken a study of historic plans, drawings and recent survey data prepared by Hywel John Surveys.

- 4.10 Given the building's structure and the rhythm of the bays running along its elevations, a series of plans were prepared highlighting where it was likely that there were openings/ there may have been openings in the past. This was based on the premise that the original Brewhouse was designed with symmetry and formality to the forefront, with openings to the centre of the grids formed by the pilasters, and a uniformity of approach to the placing of openings. These drawings were then used by Lichfields to assist in a visual inspection of the building, to test the validity of our assumptions.
- 4.11 The Brewhouse Building Analysis Plans within Appendix 5 illustrate the main body of the original Brewhouse; show existing openings; indicate openings which have been infilled, and; highlight areas where it was anticipated that there may have been openings, but there was no obvious indication of one. The plans are annotated and should be read in conjunction with the following text.
- 4.12 For the purpose of this analysis the key elements of the Brewhouse are referred to as follows:
- Block A: Five storey northern block
 - Block B: Four storey by four bay block
 - Block C: Four storey by three bay block
 - Block D: Sample cellar and fermentation

Ground Floor

- 4.13 The ground floor is approximately 1.26m above the external ground level. The exception to this is the western half of Block A which sits 2.39m below the remainder of the first floor (1.13m below ground level). The indicative section through Block A (refer to Appendix 5) illustrates that there would've been the potential for a cellar under the eastern half of Block A, and details on the external northern wall appear to support this theory. Further information on this is included within paragraphs 4.21 – 4.24.
- 4.14 Openings in Block C are generally in accordance with the building's structural grid. This three bay block has two obvious openings to the eastern side, and three to its western side – albeit that two of the openings on the western side have been blocked up. There is no evidence of an opening on to the central eastern bay, although it should be noted that this wall underwent extensive work during the construction of the Yeast Room to the east.
- 4.15 The western wall of Block D has four openings, two of which have been infilled, one is a door and the other a window. Their position mirrors what might have been expected on the eastern elevation of Block B. However a visual survey of Block B confirmed the location of three openings within the eastern façade, and only one opening between Block B and Block D.
- 4.16 All of the ground floor within Blocks A-D is finished with red square quarry tiles.

First Floor

- 4.17 There is limited evidence of the location of any original openings on the first floor. Within Block C the walls are clad with stainless steel above the fermentation tanks and externally the eastern elevation is screen by the Yeast Room block and lean to structure between that and the stair tower. Two infilled openings are visible externally on the western side of Block C. No openings are evident within Block B, and within Block A there are only openings on the western wall – one of which accommodates a set of stairs and the other two are openings into the later addition to the north west. There is no evidence of there having been an opening allowing access between the external stair tower and the first floor.

Second Floor

- 4.18 The second floor comprises four main spaces within the Brewhouse and access to a later, brick built, addition to the north western end of the building. As plan IL31544/01-10 Third Floor (Appendix 5) illustrates, the original openings sit centrally within the arched grid. Whilst many of these have been blocked up, their positions are clearly visible on the external elevations. The exception to this is one area to the western elevation (2a). It would seem likely that there was originally an opening at this point however this has yet to be confirmed as the area is screened by a building externally and stainless steel cladding internally. We surmise that the doorway (2b) which accesses the external staircase to the north eastern corner of the Brewhouse may once have been a window – completing the symmetrical appearance of the façade. The doorway (2c) to the northern elevation appears to be a later addition, truncating the pilaster applied to the wall above.

Third Floor

- 4.19 The third floor has fewer openings than the lower ones. An element of the ‘central’ window (3a) remains, and it is likely that this window previously extended across part of the wall which now accommodates the lift doors. As with the doorway (3b) on the second floor, this may have originally been a window. The detailing of the window (3c) to the northern elevation is in keeping with others. The buff brick soldier arch sits fractionally above the horizontal double brick banding. Unusually this window is adjacent to the pilaster, rather than elsewhere where windows are located centrally between them. The reasoning for this anomaly is not apparent. Window 3d also has the buff brick surround and header detail, however the horizontal banding does not extend to the elevation – neither does the pilaster extend around to the elevation. Instead double brick buff quoins wrap around to the Brewhouse’s north western façade. Windows 3e and 3f, which are both blocked up internally, are not visible externally due to the pitch of Block D.

Fourth Floor

- 4.20 The fourth floor comprises the upper floor of Block A and the adjacent brick built structure accommodating the hot liquor tank. The original louvered panels (as illustrated on JW Attree’s 1962 plan) surrounding the hot liquor tank have since been replaced with windows. The three openings on the western end of Block A have been blocked in with contrasting brickwork. The ‘side’ window (4a) and elevation are treated in the same way as on the floor below. An element of the ‘central’ window (4b) has been blocked up (evident externally), and it is likely that this window previously extended across part of the wall which now accommodates the lift doors. Whilst there is now a door accessing the staircase at 4c it seems likely that this was once a window opening, in keeping with the symmetry of the elevational treatment elsewhere on the building.

Northern Wall

- 4.21 The northern wall of the Brewhouse provides clues to the changes that the building has undergone since its construction.
- 4.22 On the external side of the northern wall there are three large arched openings (now infilled with brick) with brick surrounds and stone cills, sitting above a loosely coursed stone plinth. An RSJ has been inserted across two of the openings, at the height from which the arches spring. These openings would've provided access to the lower area of Block A, however there is no obvious evidence of them internally now. There also appears to be a much smaller, but less well defined arch adjacent to the western most infilled opening (refer to Figure 4.1 below).

Figure 4.1 Infilled openings to northern facade (stitched photo)



- 4.23 The pilasters to the northern elevation finish at a capital above the third floor (refer to Figure 4.2 below). The corner pilasters extend beyond the capital up the full height of the building, stepping in to the stone corbel detail at the eaves. The remaining four pilasters extend down to just above the second floor level where, with the exception of one which has been further truncated as a result of the insertion of a doorway, they stop at a header course of red brickwork. The incorporation of a line of brickwork at this level suggests that previously there may have been a structure attached to the northern wall at this point. This may have been the point at which a roof once abutted the original Brewhouse, although it seems likely that the pilasters once extended to ground level. The 1901 plan does show a building adjacent to the northern wall, but this is no longer in evidence by the time that the boiler house and chimney are constructed in 1938.

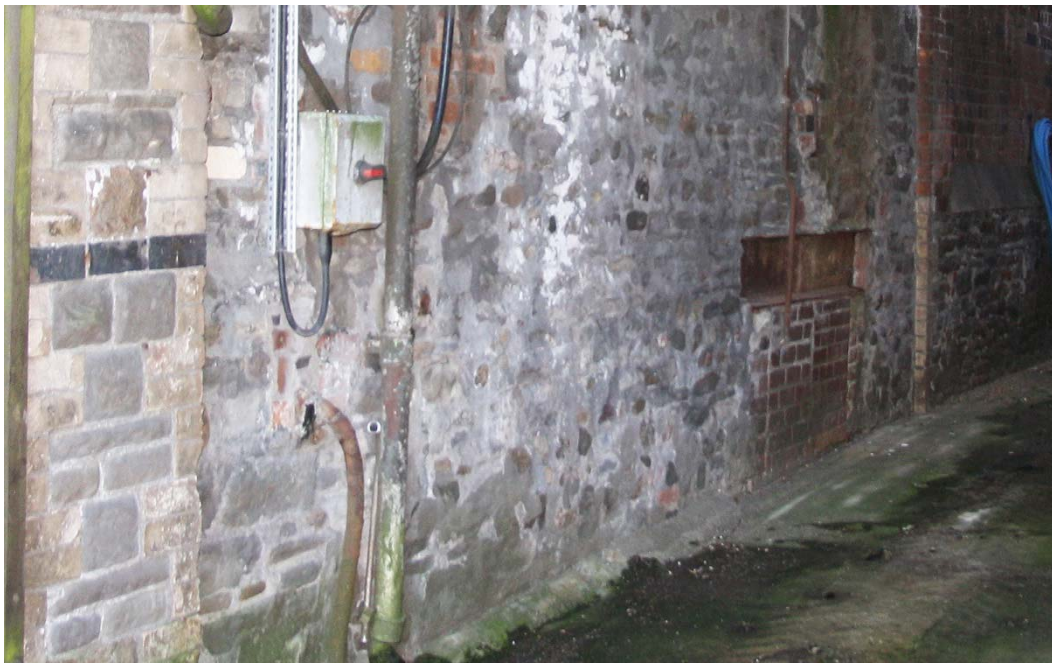
Figure 4.2 Pilasters to northern facade



4.24

The eastern end of the northern wall appears to have undergone numerous changes, evidenced by areas of patches of brick infill. The most significant area of brickwork is below a large RSJ set into the wall (refer to Figure 4.3 below). It is likely that an opening here would have provided access into an area below the ground floor, perhaps a cellar.

Figure 4.3 Infilled opening on northern facade



5.0

Photographic Record

5.1

The following photographic record provides an overview of the Brewery site, incorporating a series of external images of the complex and key buildings within it. A thumbnail image of key elements of the building/ process is included within the various tables below. It is referenced to plans appended to the report and, where appropriate explanatory text is included. Higher resolution versions of these photographs are to be archived a part of the study, together with video clips.

5.2

The tables should be read in conjunction with the following plans:





- IL31544-01-011 External Photo Viewpoints Plan (Appendix 2)
- IL31544/01-10 Brewhouse Building Analysis Plans* (Appendix 5)







**Note: the floor plans have been based upon a set prepared by Hywel John Surveys Ltd in January 2018. They are intended to be used to illustrate the location of the rooms within which the various photographs below have been taken.*







5.3







Table 3.1: External Images below is to be read in conjunction with plan IL31544-01-011 External Viewpoints Plan (Appendix 2).





Table 5.1 External Images

EXTERNAL IMAGES			
Location	Photo. Reference	Thumbnail	Description
1	P8230271_DxO_DxOV P V1		View towards Brewhouse from north east corner of site
2	P8230272_DxO_DxOV P V2		As view 1 above – zoomed in
3	P8230273_DxO_DxOV P V3		View from north along eastern side of Brewhouse
4	P8230281_DxO_DxOV P V4		View towards Brewhouse from north west corner of site

5	P8230286_DxO_DxOV P V5		View towards Brewhouse from location close to western boundary
6	P8230292_DxO_DxOV P V6		View along southern boundary of Brewhouse
7	P8230293_DxO_DxOV P V7		Southern end of Brewhouse
8	P8230299_DxO_DxOV P V8		Brewhouse's southern elevation
9	P8230301_DxO_DxOV P V9		Southern elevation of Directors block/ pub
10	P8230305_DxO_DxOV P V10		South eastern corner of Directors block/ pub

11	P8230306_DxO_DxOV P V11		Central south eastern elevation of Directors block/ pub
12	P8230310_DxO_DxOV P V12		North eastern corner of Directors block/ pub
13	P8230316_DxO_DxOV P V13		Directors block/ pub viewed from north
14	P8230319_DxO_DxOV P V14		North western elevation of office block
15	P8230321_DxO_DxOV P V15		Central western elevation of office block
16	P8230325_DxO_DxOV P V16		South western elevation of office block








17	P8230329_DxO_DxOV P V17		Oblique view towards Directors block/ pub from gatehouse
18	P8230248_DxO V18		South eastern end of Batemans building
19	P8230249_DxO V19		South eastern end of Batemans building
20	P8230253_DxO V20		North eastern end of Batemans building
21	P8230256_DxO V21		Northern end of Batemans building
22	P8230257_DxO V22		North western end of Batemans building






23	P8230259_DxO V23		South western end of Batemans building
24	P8230225_DxO V24		Brewhouse date stone – viewed from fermentation tanks
25	P8230226_DxO V25		Brewhouse– viewed from fermentation tanks
26	P8230227_DxO V26		Brewhouse– viewed from fermentation tanks

5.4

Table 5.2: Brewhouse: Ground Floor below is to be read in conjunction with IL31544/01-10 Brewhouse Building Analysis Plans (Ground Floor) Appendix 5.

Table 5.2 Brewhouse: Ground Floor





BREWHOUSE: GROUND FLOOR			
Location	Photo. Reference	Thumbnail	Description
BG(a)	P8230164_DxO.jpg		View through BG(a) towards BG(b) with yeast pitching tanks and craft beer fermentation tank visible
BG(a)	P8230167_DxO.jpg		View through BG(a) towards BG(b) with yeast pitching tanks in view to either side
BG(b)	P8230170_DxO.jpg		Yeast storage tanks and control panels within BG(b)
BG(d)	P8230175_DxO.jpg		Sample cellar
BG(d)	P8230178_DxO.jpg		Small kegs in sample cellar
BG(d)	P8230184_DxO.jpg		View through towards BG(a) – sample cellar to right of photo
BG(f)	P8230196_DxO.jpg		Cask packaging





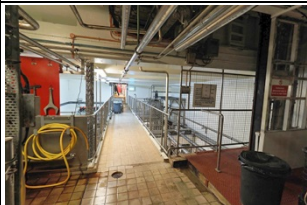
BG(f)	P8230197_DxO.jpg		Cask packaging (cask washer beyond windows in background)
YR	P8230199_DxO		Yeast room
YR	P8230200_DxO		Yeast room
YR	P8230201_DxO		Control panels in yeast room
FT	P8230206_DxO		Base of large fermentation tanks

5.5

Table 5.3: Brewhouse: First Floor below is to be read in conjunction with IL31544/01-10 Brewhouse Building Analysis Plans (First Floor) Appendix 5.

Table 5.3 Brewhouse: First Floor







BREWHOUSE: FIRST FLOOR			
Location	Photo. Reference	Thumbnail	Description
B1(f)	P8230141_DxO.jpg		Closed fermentation tanks (exterior)
B1(f)	P8230144_DxO.jpg		Closed fermentation tanks (interior)
B1(c)	P8230147_DxO.jpg		View down to small fermentation vessels on ground floor
B1(c)	P8230148_DxO.jpg		View down to yeast pitching tank and (2x) craft beer storage on ground floor
B1(c)	P8230149_DxO.jpg		Paternoster lift (no longer in use)





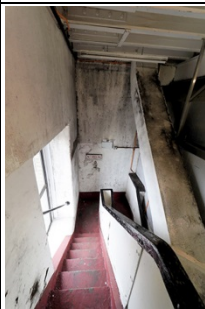
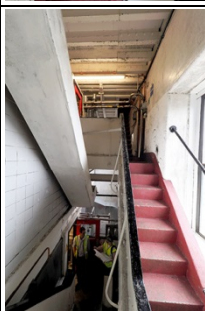
B1(c)	P8230152_DxO.jpg		Heat exchange
B1(c)	P8230153_DxO.jpg		General view
B1(c)	P8230155_DxO.jpg		Oxygen injection system
B1(c)	P8230157_DxO.jpg		Heat exchanger
B1(c)	P8230159_DxO.jpg		General view (southwards from northern end of Brewhouse)

5.6

Table 5.4: Brewhouse: Second Floor below is to be read in conjunction with IL31544/01-10 Brewhouse Building Analysis Plans (Second Floor) Appendix 5.

Table 5.4 Brewhouse: Second Floor






BREWHOUSE: SECOND FLOOR			
Location	Photo. Reference	Thumbnail	Description
B2(b)	P8230109_DxO.jpg		Inside mash tun
B2(b)	P8230114_DxO.jpg		Mash tuns
B2(a)	P8230117_DxO.jpg		Mash tuns
B2(a)	P8230119_DxO.jpg		Mash tuns
B2(b)	P8230120_DxO.jpg		Mash tuns
B2	P8230124_DxO.jpg		Spanners – found throughout the brewery and still in use



B2	P8230127_DxO.jpg		Equipment for regulating process
B2(g)	P8230129_DxO.jpg		Redundant open fermentation tanks – lined with aluminium and stainless steel
B2(g)	P8230130_DxO.jpg		Redundant open fermentation tanks – lined with aluminium and stainless steel
B2(e)	P8230134_DxO.jpg		Redundant open fermentation tanks – lined with aluminium and stainless steel
B2(h)	P8230136_DxO.jpg		Stairwell between second and ground floors (southern end of Brewhouse)
B2(h)	P8230137_DxO.jpg		Stairwell between second and ground floors (southern end of Brewhouse)

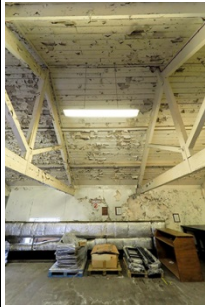


5.7

Table 5.5: Brewhouse: Third Floor below is to be read in conjunction with IL31544/01-10 Brewhouse Building Analysis Plans (Third Floor) Appendix 5.

Table 5.5 Brewhouse: Third Floor

BREWHOUSE: THIRD FLOOR			
Location	Photo. Reference	Thumbnail	Description
B3(b)	P8230071_DxO.jpg		Conveyor
B3(a)	P8230072_DxO.jpg		Grist cases – feeding hoppers
B3(a)	P8230074_DxO.jpg		Grist cases – feeding hoppers
B3(a)	P8230075_DxO.jpg		Grist cases – feeding hoppers
B3(d)	P8230079_DxO.jpg		Heat exchanger and storage
B3(d)	P8230080_DxO.jpg		Heat exchanger







B3(e)	P8230082_DxO.jpg		Unused/store – strip timber flooring
B3(e)	P8230084_DxO.jpg		Unused/store – strip timber flooring
B3(e)	P8230086_DxO.jpg		Unused/store with paternoster lift room visible to right hand side
B3(f)	P8230092_DxO.jpg		Warning signs for paternoster lift
B3(f)	P8230093_DxO.jpg		Paternoster lift
B3(f)	P8230095_DxO.jpg		Screens to paternoster lift

B3(g)	P8230099_DxO.jpg		Unused/ storage to southern end of Brewhouse
B3(g)	P8230102_DxO.jpg		Unused/ storage to southern end of Brewhouse
B3(g)	P8230105_DxO.jpg		Unused/ storage to southern end of Brewhouse

5.8

Table 5.6: Brewhouse: Fourth Floor below is to be read in conjunction with IL31544/01-10 Brewhouse Building Analysis Plans (Fourth Floor) Appendix 5.







Table 5.6 Brewhouse: Fourth Floor

BREWHOUSE: FOURTH FLOOR			
Location	Photo. Reference	Thumbnail	Description
B4(a)	P8230054_DxO.jpg		Mill room
B4(a)	P8230055_DxO.jpg		Mill room
B4(c)	P8230056_DxO.jpg		Mill room
B4(c)	P8230057_DxO.jpg		Top of grist cases
B4(b)	P8230060_DxO.jpg		Hot liquor tank
B4(b)	P8230062_DxO.jpg		Hot liquor tank – temperature gauge

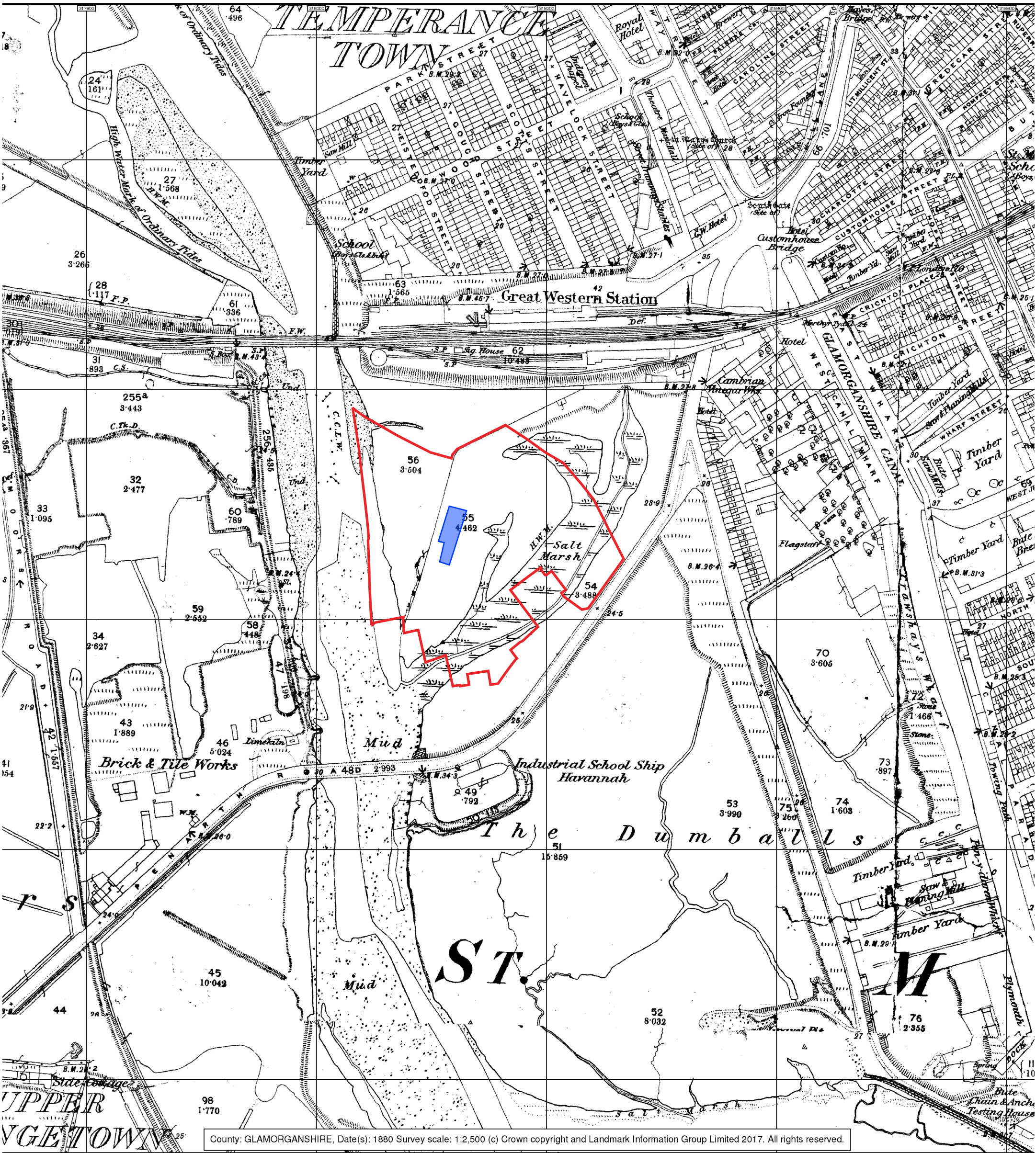
5.9

Table 4.7: The position of the Conditioning Plant can be identified on the Site Orientation Plan (IL31544-007) within Appendix 5. Within the table below 'ff' refers to first floor and 'gf' to ground floor.

Table 5.7 Conditioning Plant

CONDITIONING PLANT			
Location	Photo. Reference	Thumbnail	Description
CP (ff)	P8230211_DxO		Casks on first floor of conditioning plant – filtration tanks beyond
CP (ff)	P8230212_DxO		Casks on first floor of conditioning plant – maturation tanks beyond
CP (ff)	P8230213_DxO		View between maturation tanks
CP (ff)	P8230215_DxO		Control equipment
CP (gf)	P8230219_DxO		Ground floor laboratory
CP (gf)	P8230221_DxO		Ground floor laboratory

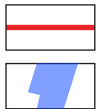
Appendix 1: Historic Site Plans



Key

Site Boundary

The Brewhouse



Project Brains Brewery, Cardiff

Title Site Evolution

1880 Site Plan

Client Rightacres Property Ltd.

Date 17.08.17

Scale NTS

Drawn by SG

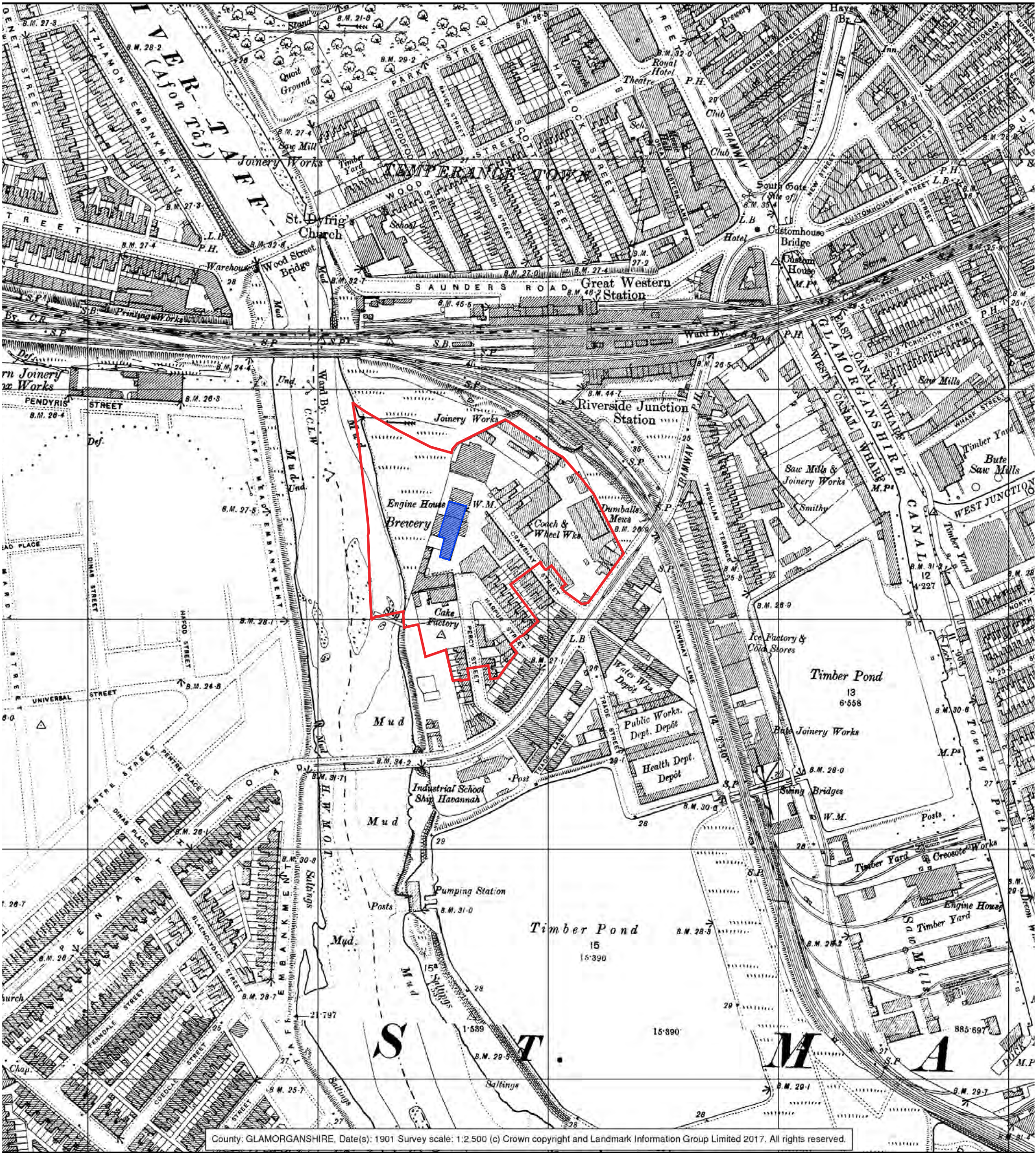
Drg. No. IL31544/01-004

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LICHFIELDS



Key

Site Boundary



The Brewhouse



Project Brains Brewery, Cardiff

Title Site Evolution
1901 Site Plan

Client Rightacres Property Ltd.

Date 17.08.17

Scale NTS

Drawn by SG

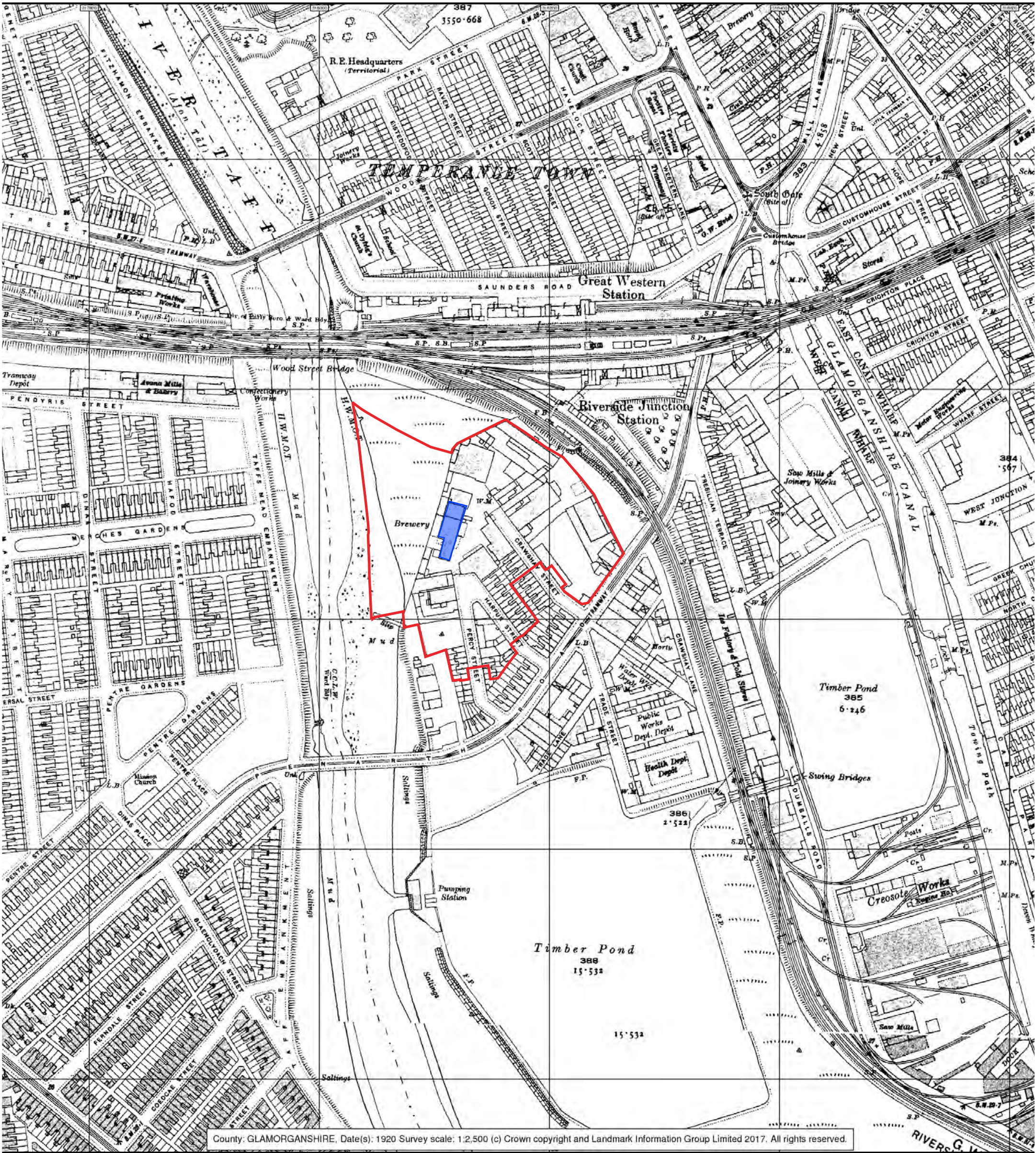
Drg. No. IL31544/01-004

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LICHFIELDS



County: GLAMORGANSHIRE, Date(s): 1920 Survey scale: 1:2,500 (c) Crown copyright and Landmark Information Group Limited 2017. All rights reserved.

Key

Site Boundary



The Brewhouse



Project Brains Brewery, Cardiff

Title Site Evolution
1920 Site Plan

Client Rightacres Property Ltd.

Date 17.08.17

Scale NTS

Drawn by SG

Drg. No. IL31544/01-004

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County: GLAMORGANSHIRE, Date(s): 1941-1942 Survey scale: 1:2,500 (c) Crown copyright and Landmark Information Group Limited 2017. All rights reserved.

Key

Site Boundary



The Brewhouse



Project Brains Brewery, Cardiff

Title Site Evolution
1941 Site Plan

Client Rightacres Property Ltd.

Date 17.08.17

Scale NTS

Drawn by SG

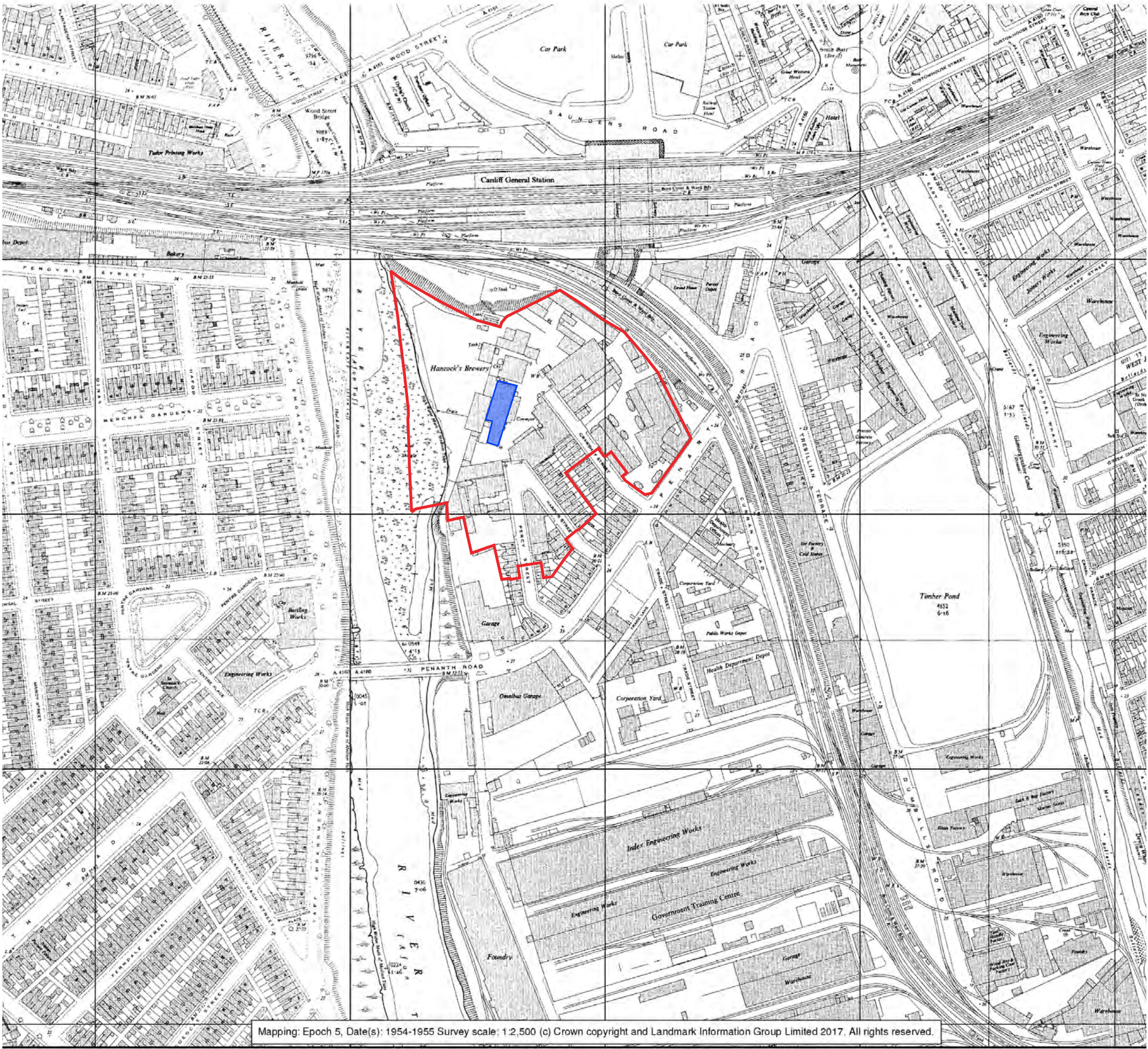
Drg. No. IL31544/01-004

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LICHFIELDS



Mapping: Epoch 5, Date(s): 1954-1955 Survey scale: 1:2,500 (c) Crown copyright and Landmark Information Group Limited 2017. All rights reserved.

Key

Site Boundary



The Brewhouse



Project Brains Brewery, Cardiff

Title **Site Evolution**
1954 Site Plan

Client Rightacres Property Ltd.

Date 17.08.17

Scale NTS

Drawn by SG

Drg. No. IL31544/01-004

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s. Date(s): 1977-1985 Survey scale: 1:1,250 (c) Crown copyright and Landmark Information Group Limited 2017. All rights reserved.

Key

Site Boundary



The Brewhouse



Project	Brains Brewery, Cardiff
Title	Site Evolution 1977 Site Plan
Client	Rightacres Property Ltd.
Date	17.08.17
Scale	NTS
Drawn by	SG
Drg. No.	IL31544/01-004

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Appendix 2: Site Orientation



Key

Site Boundary

A: Gatehouse

B: Engineering/ Technical Services

C: Offices

D: Grain silo (malt storage)

E: Directors block/ pub

F: Large fermentation tanks

G: Yeast room



H: Brewhouse

I: Batemans building

J: Conditioning plant

K: Kegging and warehouse

L: Boiler house

M: De-watering plant

N: Chimney

O: Engine House

P: Hop Store

Q: Trub house

R: Fuel store

S: Sample cellar, offices & storage

T: Cask filling and packaging

U:Tanks feeding cask filling

V: Loading area

W: Beer destruction

Project	Brains Brewery, Cardiff
Title	Site Orientation Plan
Client	Rightacres Property Ltd.
Date	23.05.18
Scale	NTS
Drawn by	SG
Drg. No.	IL31544/01-007
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Key

Site Boundary

A: Gatehouse

B: Engineering/ Technical Services

C: Offices

D: Grain silo (malt storage)

E: Directors block/ pub

F: Large fermentation tanks

G: Yeast room



H: Brewhouse

I: Batemans building

J: Conditioning plant

K: Kegging and warehouse

L: Boiler house

M: De-watering plant

N: Chimney

O: Engine House

P: Hop Store

Q: Trub house

R: Fuel store

S: Sample cellar, offices & storage

T: Cask filling and packaging

U: Tanks feeding cask filling

V: Loading area

W: Beer destruction

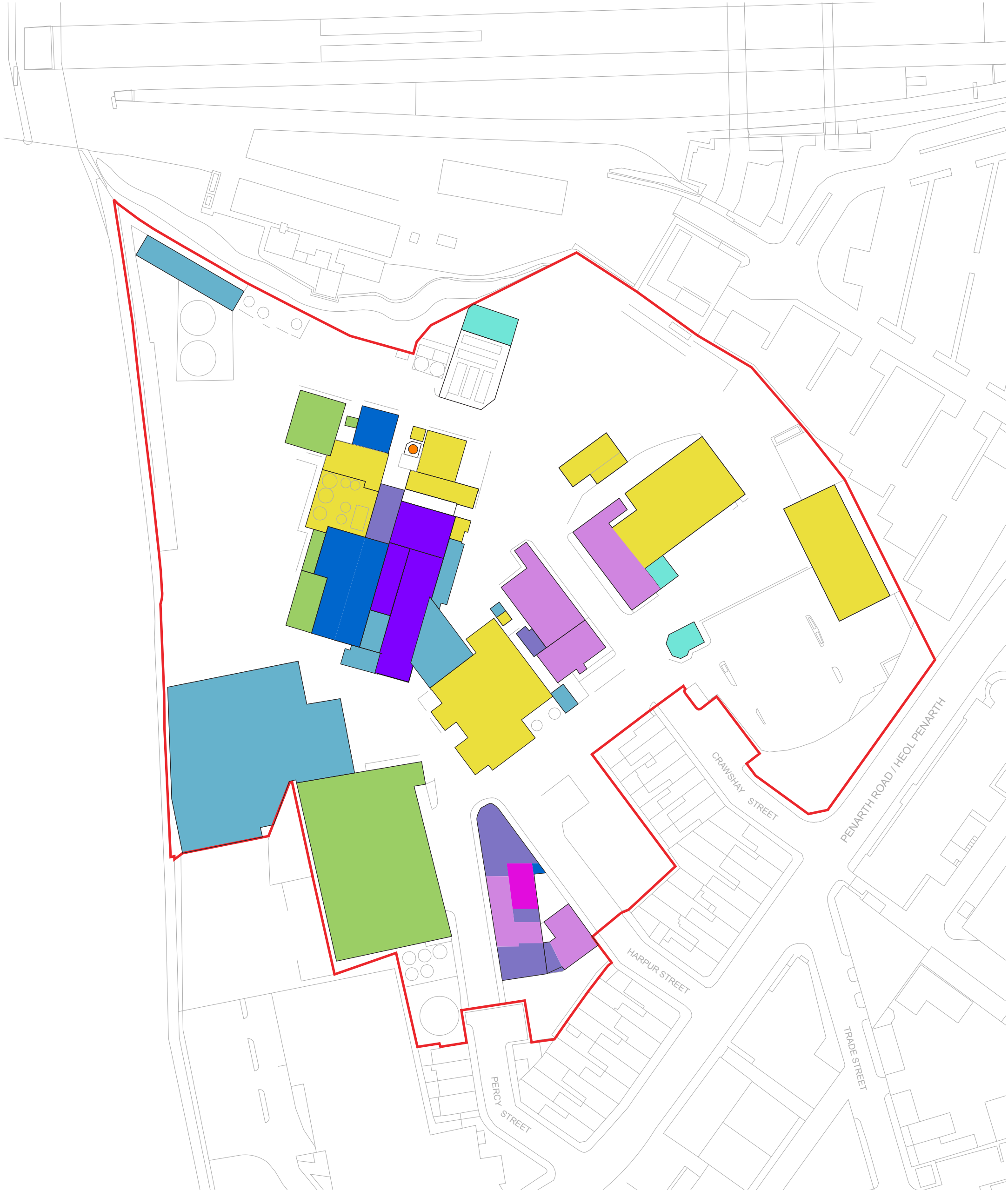
Project	Brains Brewery, Cardiff
Title	External Photo Viewpoints Plan
Client	Rightacres Property Ltd.
Date	23.05.18
Scale	NTS
Drawn by	SG
Drg. No.	IL31544/01-0011

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Appendix 3: Site Evolution



Key

Site Boundary

1889 (brewhouse)

Pre 1901

1901 - 1920

1920 - 1941

1938 (chimney)

1941 - 1953

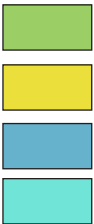


1954 - 1969

1970 - 1983

1983 - 1992

Post 1992



Project Brains Brewery, Cardiff

Title Site Evolution Plan

Client Rightacres Property Ltd.

Date 23.05.18

Scale NTS

Drawn by SG

Drg. No. IL31544/01-008

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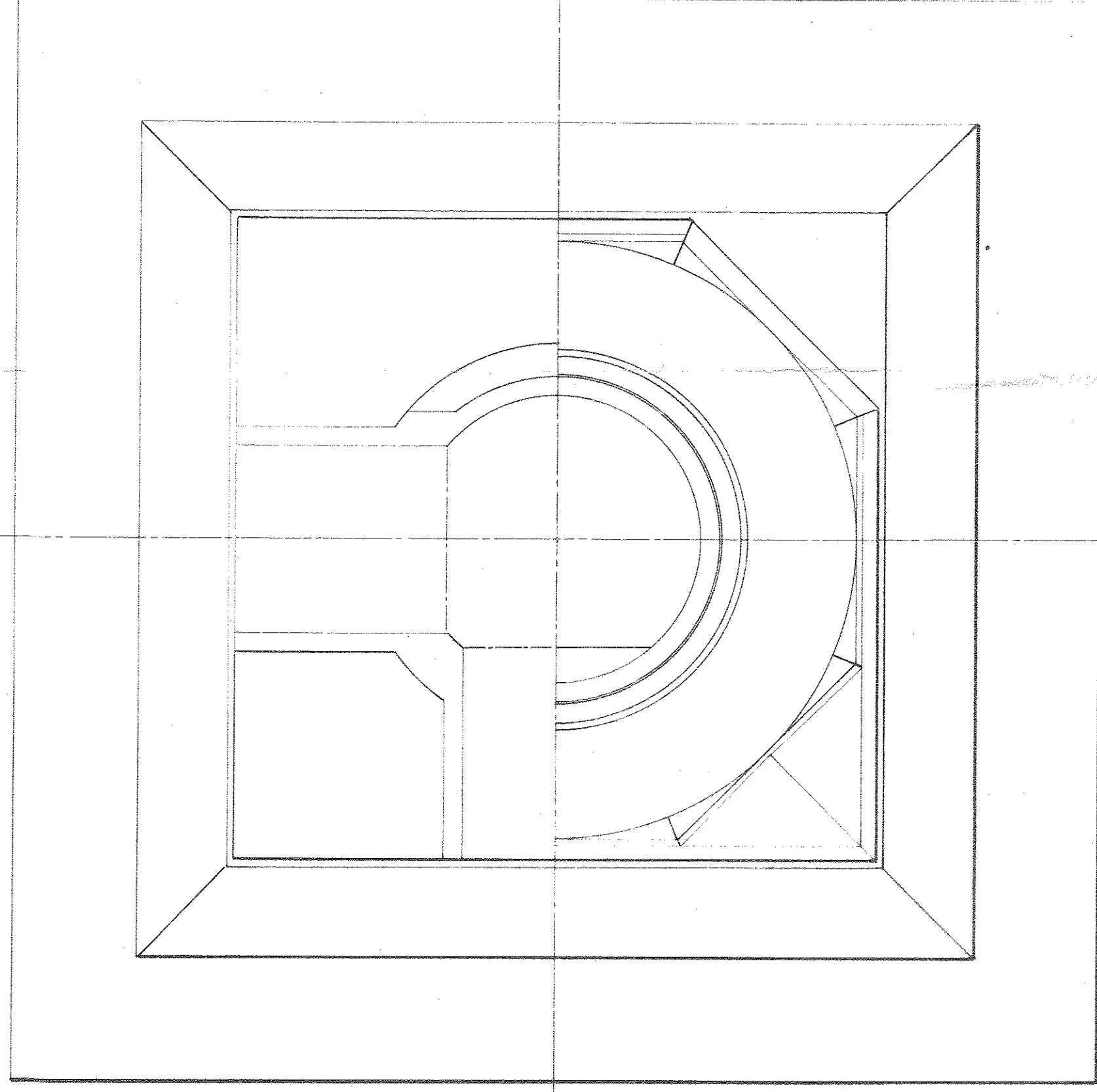
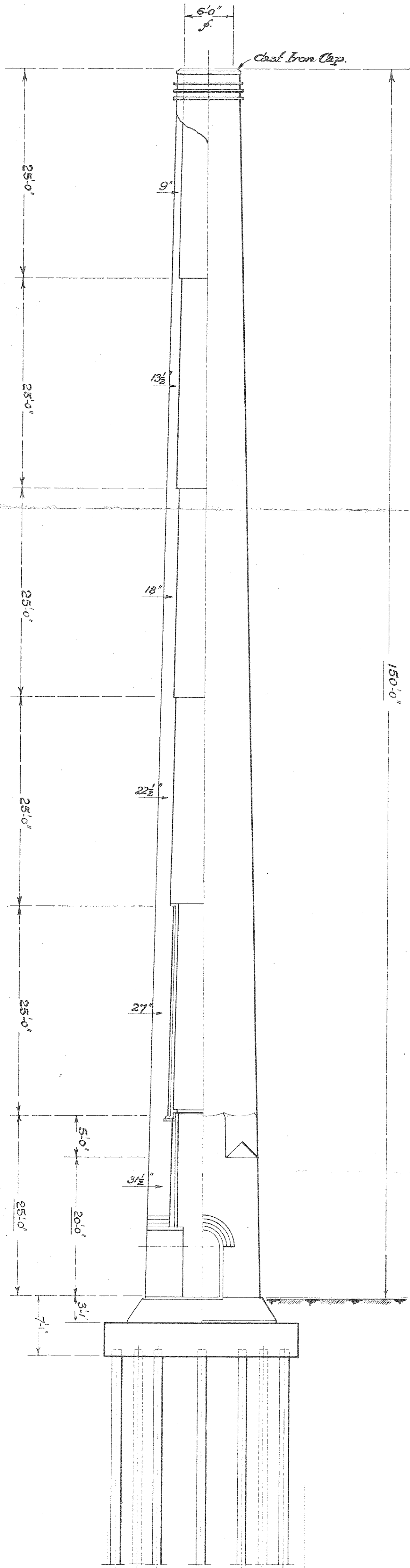


LICHFIELDS

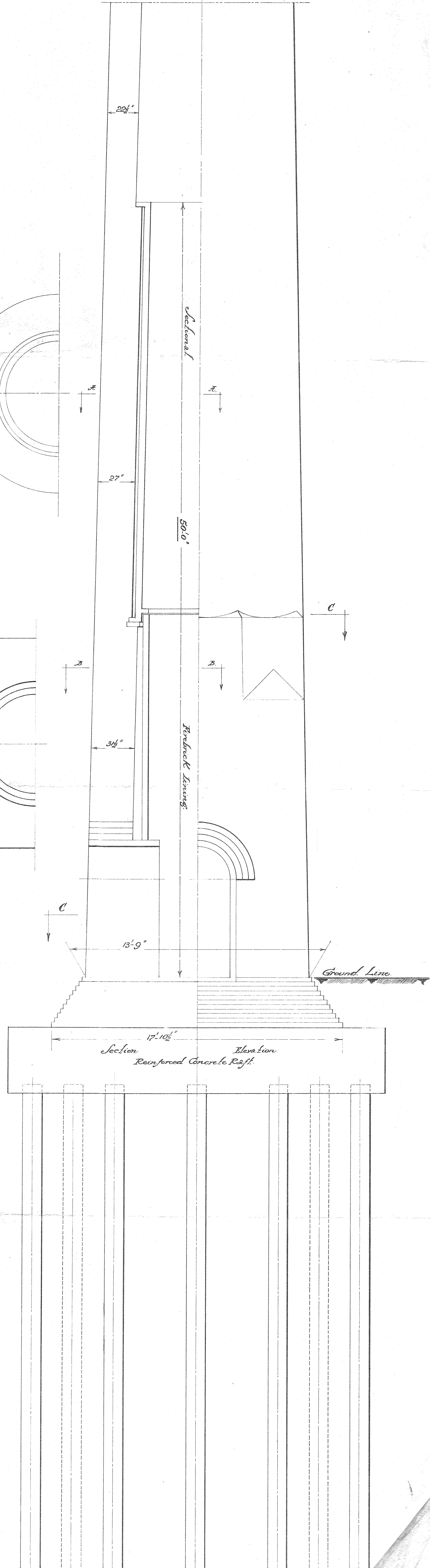
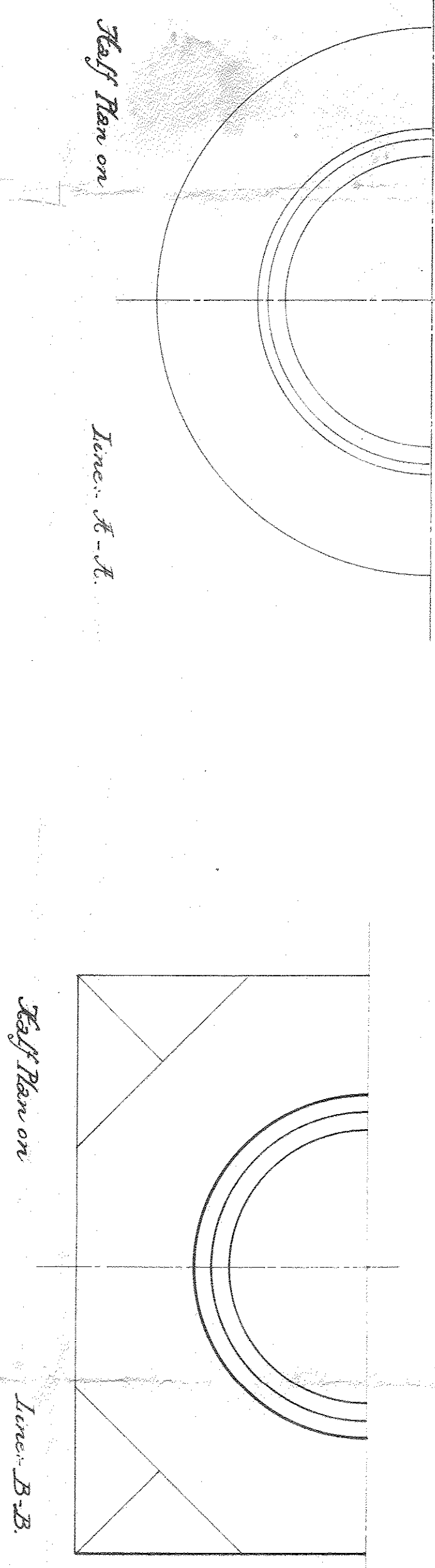
Appendix 4: Historic Building Plans

From the archive collections of the National Monuments Record of Wales (NMRW);
Welsh School of Architecture Collection

CHIMNEY SHAFT

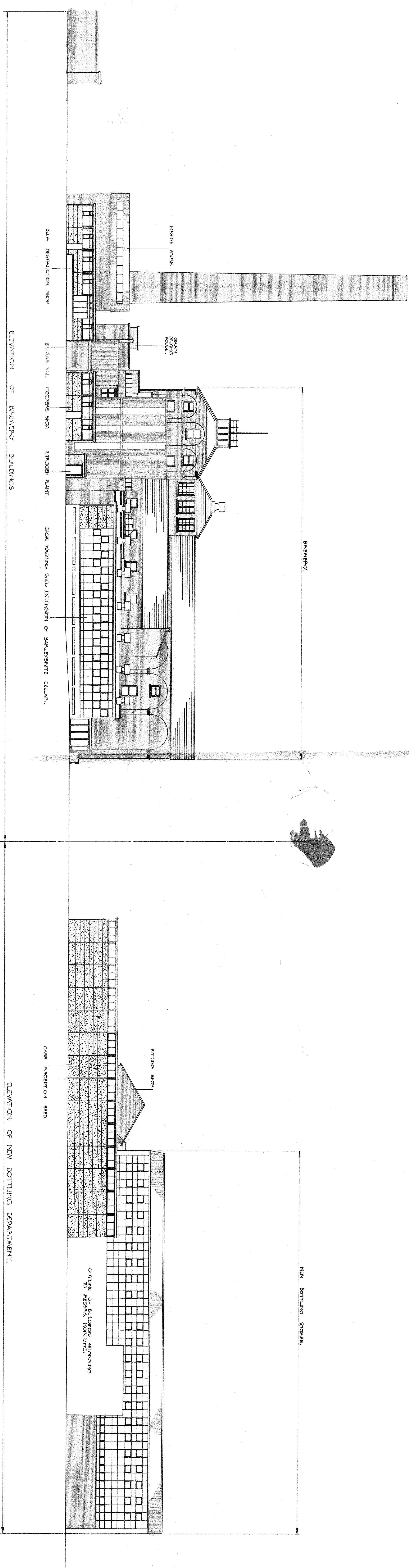


Plan on Line C-C



For details of Reinforced Concrete Raft & Pressure Ring see Drawing No 1467-1, dated 26-7-38

R. B. HILTON LTD. ENGINEERING BUILDERS & CONTRACTORS CRESSWELL PARK - BLACKHEATH - LONDON - S.E.3.	
DATE - 4-8-38.	SERIAL N° 1470.
DRAWN BY - F.B.H.	DRAWING N° 1.
REVISED - 19-8-38.	SCALES - 1/8" & 3/8" = 1'-0"



SCALE : SIXTEEN FEET TO ONE INCH.

MARCH 1962.

WILLIAM HANCOCK AND COMPANY LIMITED — RIVER BANK ELEVATIONS.

J.W. ATTREE, A.I.A.S.
BREWER'S BUILDING SURVEYOR,
CRAWSHAY STREET,
CARDIFF.



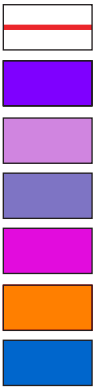
BACK ELEVATION

Appendix 5: Brewhouse Building Analysis



Key

- Site Boundary
- 1889 (brewhouse)
- Pre 1901
- 1901 - 1920
- 1920 - 1941
- 1938 (chimney)
- 1941 -1953



- 1954 - 1969
- 1970 - 1983
- 1983 -1992
- Post 1992



Project Brains Brewery, Cardiff

Title Brewhouse Evolution Plan

Client Rightacres Property Ltd.

Date 23.05.18

Scale 1:500 @ A3

Drawn by SG

Drg. No. IL31544/01-009

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LICHFIELDS

Key

Survey drawing

Beams/ trusses

Infilled openings

Paternoster lift

Structural grid

Block A

Block B

Block C

Block D



LICHFIELDS

Project Central Quay - Brains Brewhouse

Title	Brewhouse: Ground Floor Plan
-------	------------------------------

Client **Rightacres Property Ltd.**

Date 23.05.18

Scale 1:200 @ A3

Drawn by SG

Drg. No. IL31544/01-010 (Ground Floor)

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N



Key

Survey drawing

Beams/ trusses

Infilled openings

Paternoster lift

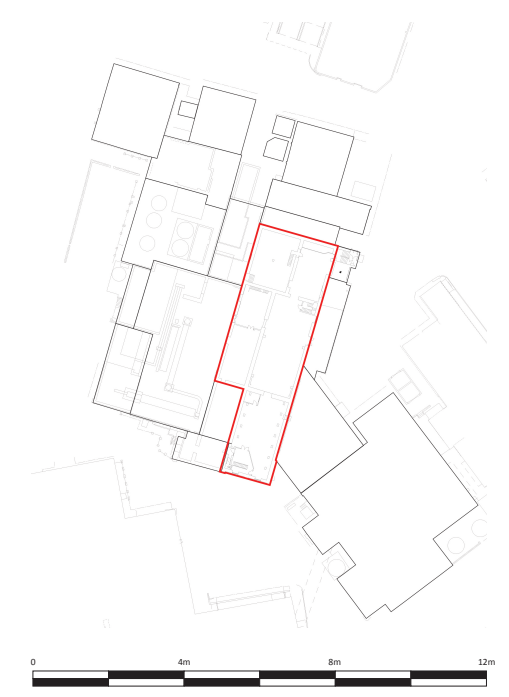
Structural grid

Block A

Block B

Block C

Block D



LICHFIELDS

Project	Central Quay - Brains Brewhouse
Title	Brewhouse: First Floor Plan
Client	Rightacres Property Ltd.
Date	23.05.18
Scale	1:200 @ A3
Drawn by	SG
Drg. No.	IL31544/01-010 (First Floor)



Key

Survey drawing

Beams/ trusses

Infilled openings

Paternoster lift

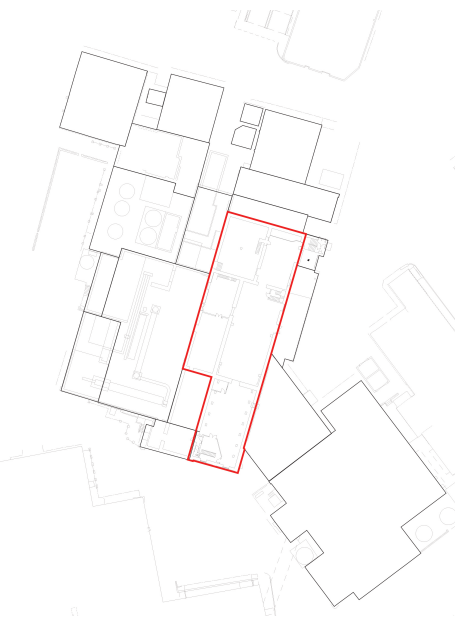
Structural grid

Block A

Block B

Block C

Block D



LICHFIELDS

Project Central Quay - Brains Brenhouse

Title Brenhouse: Second Floor Plan

Client Rightacres Property Ltd.

Date 23.05.18

Scale 1:200 @ A3

Drawn by SG

Drg. No. IL31544/01-010 (Second Floor)

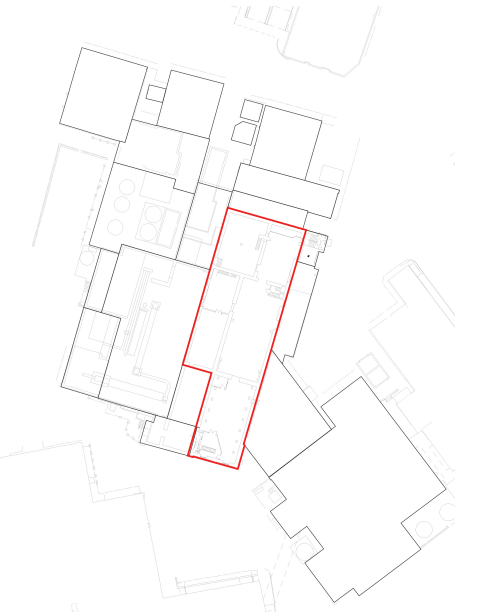
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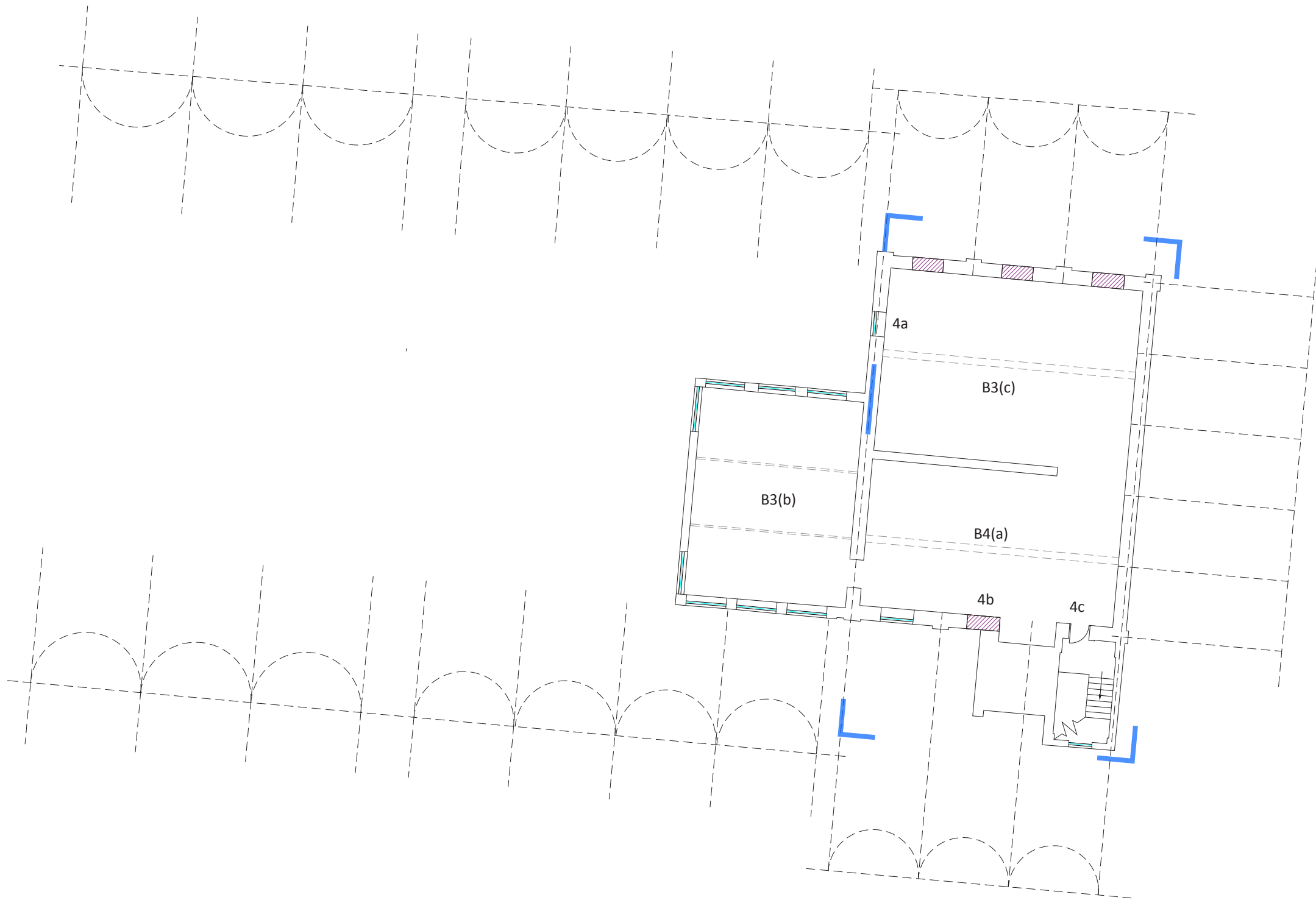
Key

- Survey drawing
- Beams/ trusses
- Infilled openings
- Paternoster lift
- Structural grid
- Block A
- Block B
- Block C



LICHFIELDS

Project	Central Quay - Brains Brewhouse
Title	Brehouse: Third Floor Plan
Client	Rightacres Property Ltd.
Date	23.05.18
Scale	1:200 @ A3
Drawn by	SG
Drg. No.	IL31544/01-010 (Third Floor)



Key

Survey drawing

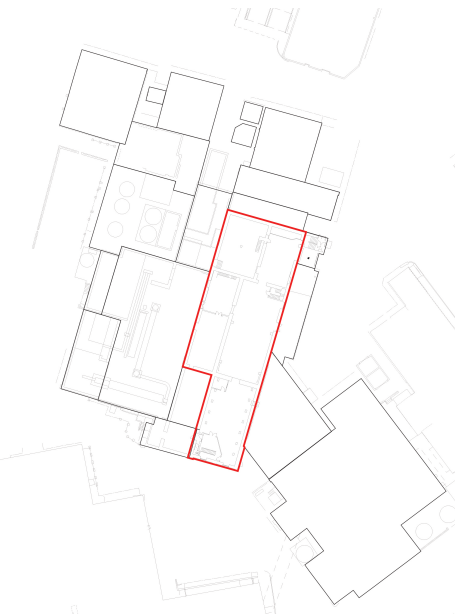
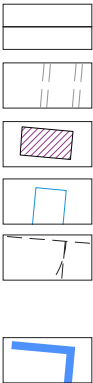
Beams/ trusses

Infilled openings

Paternoster lift

Structural grid

Block A



Project Central Quay - Brains Brewhouse

Title Brewhouse: Fourth Floor Plan

Client Rightacres Property Ltd.

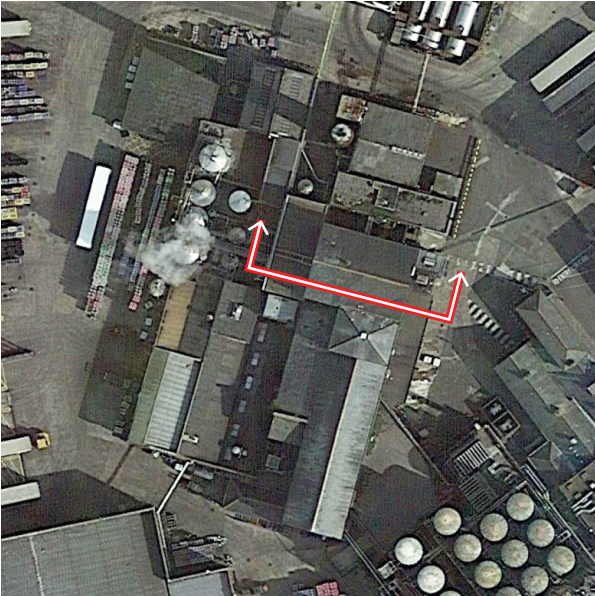
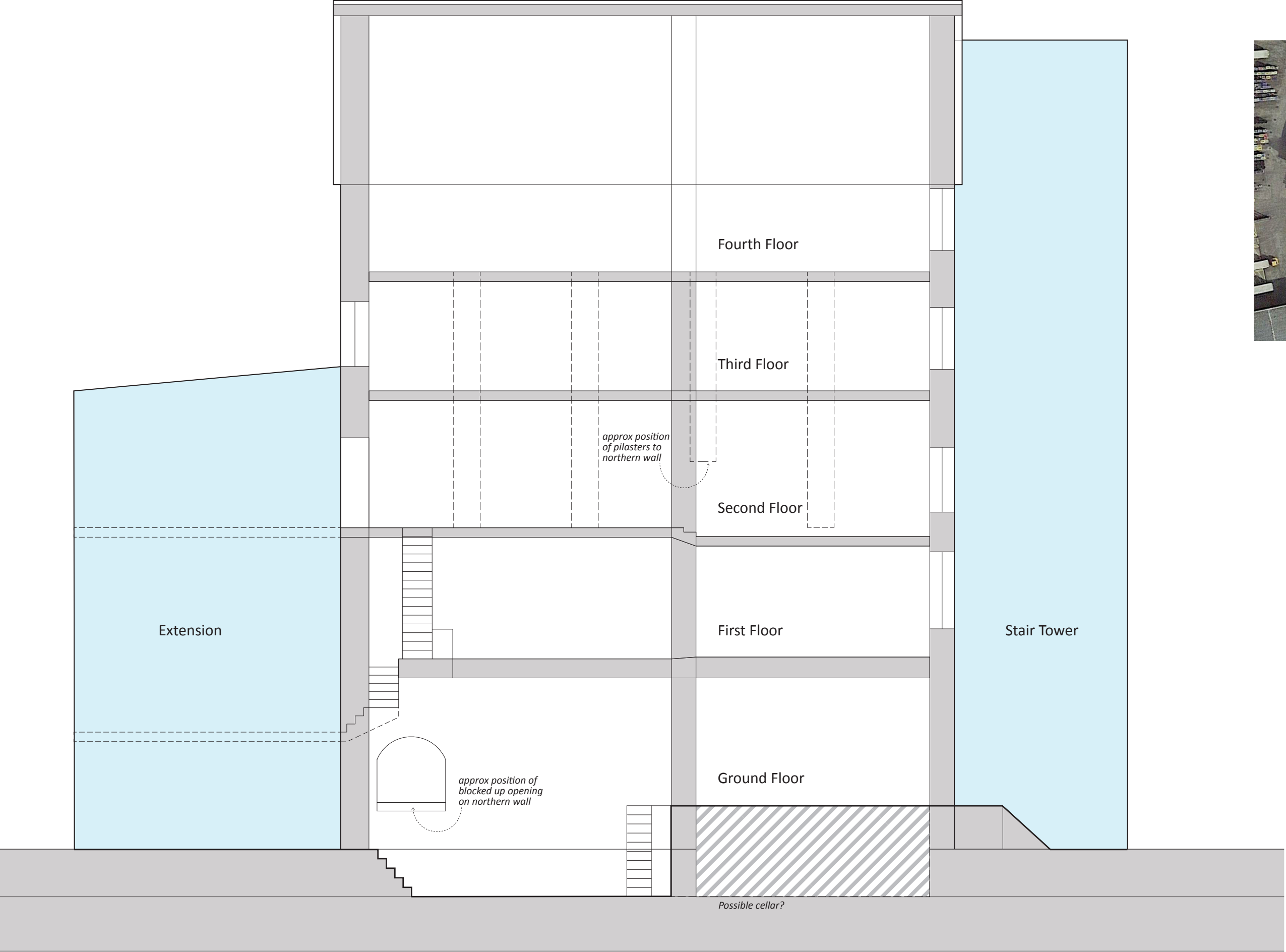
Date 23.05.18

Scale 1:200 @ A3

Drawn by SG

Drg. No. IL31544/01-010 (Fourth Floor)





Approximate line of section

This drawing is for illustrative purposes only. It should not be scaled or used for any other purpose than for its original use.



Project	Brains Brewery, Cardiff
Title	Illustrative Brewhouse Section
Client	Rightacres Property Ltd.
Date	23.05.18
Scale	1:100 @ A3
Drawn by	SG
Drg. No.	IL31544/01-012

