

Former Quaker Oats Factory

## Southall

## Ealing, Greater London

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## Galliard Homes

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# Quaker Oats Factory, Southall, Ealing <br> <br> Historic Building Investigation and Recording 

 <br> <br> Historic Building Investigation and Recording}

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## Summary

Oxford Archaeology was commissioned by Galliard Homes, via RPS CGMS to investigate and record the former Quaker Oats Factory in Southall, Ealing, west London. Among the many products produced at this site was Sugar Puffs and therefore the complex is known locally as the Honey Monster Factory. The site provides a good example of a particular type of industrial complex from the first half of the $20^{\text {th }}$ century known as a 'daylight factory' comprising a main multistorey range with a reinforced concrete-frame and a non-loadbearing curtain wall with extensive glazing to ensure plentiful natural light. As a building type the daylight factory originated in America in the first decade of the $20^{\text {th }}$ century and the earliest example is acknowledged to be a range constructed in 1903 by Ernest Ransome at the Pacific Coast Borax Refinery in Bayonne, New Jersey. Other early examples which are perhaps better known are several car plants in Detroit including Henry Ford's Highland Park which was laid out between 1908-10 using the principles of the architect Albert Khan

Although daylight factories continued to be built throughout the interwar period their heyday, when they were seen as modern and innovative, was relatively brief. In the 1920s other types of factory were becoming more common such as the so-called 'by-pass factory', with low sprawling manufacturing sheds behind a prominent office range (often highly decorative). The advantages of natural illumination brought by the daylight factory were becoming less important due to the spread of electric lighting.

The 'daylight factory' form of the Honey Monster factory would therefore have been a relatively conservative design for 1936 and it is also austere for an industrial complex of this period, particularly for a national market product such as this where architecture could be used as advertising. The complex was first constructed in 1936 and it was subsequently expanded in several phases prior to its closure in 2016. Athough the site is best known for producing Quaker Oats and Sugar Puffs (rebranded Honey Monster Puffs in 2014) various pet foods and other products were also manufactured here.

Although it is austere it is a carefully designed building and aesthetics were of importance. Great care has been taken to match the secondary ranges to the 'house style' of the original building but there seems to have been no attempt to give the building pizzazz or make it architecturally glamorous like the nearby Hoover Building. It is likely that the building was designed to follow the style of other Quaker Oats factories in America.

The complex comprises a main processing range, a lower office range, a huge bank of grain silos and various other warehouses. The interior of the multi-story mill is dominated at each floor level by a grid of concrete columns, with mushroom shaped heads, forming a large openplan space in which various processing and packaging operations took place. The site is currently proposed for a major redevelopment which will see the demolition of all the buildings on the site. The current programme of recording has been requested by the local authority and it will document for posterity this large complex which has been a large local landmark for much of the $20^{\text {th }}$ century.

## 1 Introduction

1.1.1 Oxford Archaeology (OA) has been commissioned by RPS CgMs, on behalf of Galliard Homes and Cain Hoy, to investigate and record the former Quaker Oats Factory, Bridge Road (UB2 4AB), Southall, London Borough of Ealing. The complex is widely known as the Honey Monster Factory due to its most famous product Sugar Puffs (rebranded Honey Monster Puffs in 2014).
1.1.2 A planning application is currently being prepared for the redevelopment of the site and the demolition of all the main buildings on the site. The Local Planning Authority (Ealing) has indicated that they would require historic building recording, looking at the existing factory buildings, prior to the start of demolition or development works.
1.1.3 The factory is unlisted but it is of some heritage interest, partly due to its prominence which makes it a local landmark but also as a good example of a particular type of industrial building known as a 'daylight factory'. These originated in America in the first decade of the $20^{\text {th }}$ century, particularly in the car plants of Detroit, but they were also built in large numbers in Britain.
1.1.4 In 2017 RPS CgMs produced a detailed Statement of Significance which discusses the history of the site, the surviving buildings and the wider origins of the 'daylight factory'.
1.1.5 In February 2019 OA produced a Written Scheme of Investigation for the proposed recording and this was approved by Ealing Council.

### 1.2 Aims and objectives

1.2.1 The overall aims of the project were:

- to investigate and record for posterity the various ranges of the former Quaker Oats Factory;
- the help place the building within the context of $20^{\text {th }}$-century factory design;
- to enhance the overall understanding of the complex and how the functions of the different ranges related to each other;
- to illustrate in an easily understood form how the complex grew and how it functioned;
- to make the record publicly accessible through a report (a public document) and a project archive deposited with a public institution.


### 1.3 Methodology

1.3.1 The recording at the Quaker Oats Factory has been undertaken at a combination of Level 1 and 2 as defined by Historic England in Understanding Historic Buildings: A Guide to Good Recording Practice. The main buildings were recorded at Level 2 while the later ranges of more limited interest (eg the 1970s-80s warehouse) were recorded at Level 1.
1.3.2 The EH guidance document defines Level 2 Record as a descriptive record... Both the exterior and interior of the building will be seen, described and photographed. The examination of the building will produce an analysis of its development and use and the record will include the conclusions reached, but it will not discuss in detail the evidence on which this analysis is based. A plan and sometimes other drawings may be made but the drawn record will normally not be comprehensive and may be tailored to the scope of a wider project.
1.3.3 Level 1 is defined as 'essentially a basic visual record, supplemented by the minimum of information needed to identify the building's location, age and type. This is the simplest record, not normally an end in itself but contributing to a wider aim. Typically it will be undertaken when the objective is to gather basic information about a large number of buildings - for statistical sampling, for area assessments or historic landscape characterisation, for a pilot
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project, to identify buildings for planning purposes, or whenever resources are limited and much ground has to be covered in a short time'.
1.3.4 The recording has utilised a very useful metric survey by Greenhatch Group that has recently been produced including full sets of plans and elevations. Annotations have been made to this survey to explain the complex.
1.3.5 The site work was undertaken on 14-15 February 2019. Access was restricted to some limited areas, due to filming for a television programme being undertaken here, but further photographs were provided subsequently by RPS CgMs including some for these areas.
1.3.6 The Statement of Significance by RPS CgMs included detailed historical research and this has fed into the current recording report. No historic architectural plans for the building were found in any archives but a considerable number of very useful historic photographs and other documents were found on site within one of the buildings. These greatly helped with understanding the evolution of the buildings. As Quaker Oats was an American company (and remains so as part of the Pepsico empire) it may be that the original architect's drawings are held in an archive in the USA.
1.3.7 General secondary sources relating to twentieth century industrial architecture and daylight factories have also been consulted to place the site in its wider architectural context.

## 2 Evolution of The Daylight Factory

### 2.1 Introduction

2.1.1 The Honey Monster Factory forms a distinct type of industrial building or complex commonly known as a daylight factory which originated in the United States and was constructed in large numbers, particularly in the first quarter of the 20th century, but was rapidly replaced by other architectural forms.
2.1.2 The daylight factory was essentially a multi-storey, reinforced concrete frame building without load-bearing external walls but instead with the grid of the frame expressed externally and with large expanses of glazing between. The extensive glazing maximised the natural light entering the building and the tall, multi-storey nature of the factories allowed gravity to be used as part of the production process with raw materials gradually moving down through the building from one stage to the next. The concrete frame made this type of building immensely strong so they were well suited to manufacturing complexes and another important factor was their fireproof qualities.

### 2.1.3 Development of reinforced concrete in Europe

2.1.4 The use of concrete as a constructional material gradually developed during the 19th century, particularly in a mass form as a foundation material, and as early as 1855 Francois Coignet was issued with a patent in France for a method of strengthening concrete by embedding metalwork within it (ie a crude form of reinforced concrete).
2.1.5 Among the most important figures in the development of reinforced concrete in the last quarter of the 19th century was Francois Hennebique, who had been working in France during 1880s and in 1892 he patented a new system of concrete framing with posts, beams and columns all cast in one monolithic form.
2.1.6 Hennebique is a particularly well known figure in this field because he was a hugely successful businessman and promotor of his system, collaborating with other important firms who acted as agents for him. The first reinforced concrete buildings in Britain used this system; the earliest being Weaver's Mill in Swansea, constructed in 1897 and a modest number of others followed in the following decade. Other similar methods by various individuals including Edmond Coignet (son of Francois) and by Auguste Peret in the early years of the 20th century. These all essentially used concrete in forms that to some extent followed older post-and-beam approaches

### 2.1.7 Contemporary developments in the United States

2.1.8 Important technological developments were also being made in the United States in the later 19th century, most notably by the pioneering architect Ernest Ransome who had begun working in this field in the 1870s and had patented a system of ferro-concrete with twisted metal rods in 1884. In 1897 he designed a new concrete framed building at the Pacific Coast Borax Refinery in Bayonne, New Jersey and in 1902 this survived an intense fire remarkably well. This greatly strengthened the fire-resistant credentials of reinforced concrete.
2.1.9 In 1903 following the fire Ransome constructed a new building to extend the Pacific Coast Borax Refinery and this is the world's first building to be recognisable as a genuine 'daylight factory'. It also formed the start of an intensely productive period both for Ransome and more widely in the evolution of the daylight factory. Another seminal building of this period by Ransome was the United Shoe Machinery Company Plant in Beverley, Massachusetts.
2.1.10 The architectural critic Reyner Banham's 1986 publication A Concrete Atlantis analysed the importance of the daylight factory in terms similar to the analysis of a movement in art history.

In this he suggests that the period prior to c .1905 was an intermediate phase in the development of the daylight factory, with Ernest Ransome as the most important figure, and this was followed by a classic or 'high' phase between c.1905-1914 when the movement reached its finest expression. This was then followed by a late or 'decadent' phase from c. 1914 until the mid 1920s.
2.1.11 Perhaps the most important figure of the classic phase was the architect Albert Khan who, together with his brother Julius formed the Trussed Concrete Steel Company (or Truscon) and designed several iconic buildings using their system of prefabricated reinforced concrete buildings. Among the earliest and most important of these are the Packard car plant in Detroit, particularly Building 10 on which construction began in 1905.
2.1.12 Albert Khan's most famous building is the Old Shop at Henry Ford's Highland Park car plant in Detroit (1908-9) although an element of the fame is due to its associations with Henry Ford and the Model T rather than it forming the pre-eminent daylight factory. Reyner Banham considers it 'not in the same class' architecturally as some other early structures such as the RST Building of the Larkin Company in Buffalo (1910-11).

### 2.1.13 The flat slab and mushroom column

2.1.14 The earlier reinforced concrete buildings developed by Hennebique and others had reinforced concrete columns, beams and joists with clear similarities to timber framed buildings but the archetypal daylight factory is usually understood to have had a flat concrete slab supported by 'mushroom' columns with flared heads rather than transverse beams. This allowed greater expanses of glazing and gave the buildings a new aesthetic which reflected the particular qualities of concrete rather than aping older forms of post-and-beam construction.
2.1.15 The flat concrete slab with mushroom columns appears to have been developed independently on either side of the Atlantic; in America it was developed by CAP Turner, an engineer from Minneapolis, while in Europe a similar design was also created by Robert Maillart, an engineer from Zurich. Turner published his ideas in 1905 and applied with mixed success for various patents while Maillart was granted a worldwide patent for his system in 1909. The two approaches were distinct from each other although they both saw columns with flared heads supporting flat slabs.
2.1.16 It is also perhaps worth noting that the flat slab was an important element of the architectural ideas advanced by architectural pioneers of the modern movement, particularly by Le Corbusier in his domino house prototype in 1915. Indeed, the European modern movement, led by Le Corbusier and Walter Gropius, was heavily influenced by the structural forms of the daylight factory.

### 2.1.17 Daylight factories in the UK

2.1.18 In comparison with the United States and Europe architecture in the UK was relatively conservative in the first decade of the 20th century. Moritz Khan (brother of Albert and Julius) brought the Khan system to the UK, forming a subsidiary of the Truscon Co in 1907 and in 1912-13 a Truscon works was constructed in Trafford Park Manchester. Among the notable early daylight factories in the UK were the Arrol Johnston car factory in Dumfries, the Wallace Scott Tailoring Institute in Glasgow (1914), the Birmingham Small Arms Factory (1915-6) and the Bryant \& May match factory in Garston, Liverpool (1918-21). Another building to mention is a depository for Harrods constructed in 1912 with mushroom headed columns.
2.1.19 Manufacturing complexes continued to be constructed in Britain throughout the inter-war period using the principles of the multi-storey daylight factory; notable examples include the Shredded Wheat Factory constructed in 1925 in Welwyn Garden City (now Grade II listed), the

Wrigley Factory in Wembley (1926), the Bata Shoe factory in East Tilbury, 1936-38 and the Kellogg's Factory at Trafford Park 1937-8.
2.1.20 However, as an architectural movement the hey-day of the daylight factory was already over by the 1920s. Some of the essential drivers behind the original constructional form, such as the need to maximise natural light into the building, were becoming less critical due to the development of electric lighting. New industrial complexes were laid out with very large single storey manufacturing sheds and highly developed transport networks to move goods horizontally rather than vertically. These complexes, which became known as 'by-pass factories' were often located along new arterial roads out of the large cities and sometimes had visually striking office blocks at their front to act as a form of advertising. The most celebrated example is the art deco Hoover Building in west London.

## 3 Historical background to Quaker Oats Factory, Southall

### 3.1.1 Introduction

3.1.2 The account below of the development of the Ouaker Oats Factory is largely based on information contained in the RPS CgMs Statement of Significance which itself relied heavily on a very useful set of photographs, some within a bound scrapbook, found on site within the building.

### 3.1.3 Industrialisation of Southall

3.1.4 In the medieval and early post-medieval periods Southall was a largely agricultural area but it began to grow in the $19^{\text {th }}$ century, partly stimulated by the opening of the first section of the Grand Junction Canal in 1796 and then also by the Great Western Railway in 1838. A number of works were established in the vicinity of the current site in the last quarter of the $19^{\text {th }}$ century, including a large margarine factory which was subsequently acquired by Maypole Dairies and was at one time used to manufacture Walls Sausages. The industrialisation accelerated in the early decades of the $20^{\text {th }}$ century and the Southall arm of the Grand Junction Canal was opened in 1913. Residential neighbourhoods were also laid out in tandem with the new works. Southall is also located mid way between the two great arterial routes into the city from the west, the Great West Road and the A40, which particularly stimulated suburban development in this general area in the inter-war period.

### 3.1.5 Quaker Oats Factory

3.1.6 The firm of Quaker Oats was established in Ravenna, Ohio, USA in 1877 and before the end of the century a subsidiary company had been formed in the UK. Small plants were established in Ware and Rotherhithe after the First World War and then in the 1930s it was decided to build a large new factory at Southall to consolidate and expand its UK operations.
3.1.7 The site was chosen for its excellent transport connections, being located adjacent to both the Southall arm of the Grand Junction Canal, opened in 1913 and the Brentford branch of the Great Western Railway, opened in 1859. This allowed for the easy import of grain via the canal and the despatch of finished products by rail. An interesting newspaper cutting was found on site which states that the company had spent two years looking for a suitable site and that when it was complete the works would be among the largest in the district (Middlesex Gazette, Feb $29^{\text {th }} 1936$ ). The cutting also refers to the clean air being important to the company as well as the good rail, road and canal links.
3.1.8 Construction of the new factory at Southall commenced in 1936, with a ceremonial pouring of concrete for the foundations on 24 March, and works clearly progressed rapidly because the mill commenced operations in January 1937. At this stage the factory had an L-shaped plan with a 10-bay main mill (Block A1 in current work) orientated east to west and a five-bay office/warehouse range (B1) orientated north to south ${ }^{1}$. Bays 1-5 in the western half of the mill (Block A1) were three storeys tall (plus basement) while bays $6-10$ in the eastern half was seven storeys tall (with basement). At this stage the five-bay office range (Block B1) was two storeys tall.

[^0]3.1.9 These ranges were constructed with a reinforced concrete frame, expressed externally with largely glazed infill panels, following the 'daylight factory' model initially developed in America in the pre-First World War period (detailed above). It is also worth noting that the buildings have a clear resemblance to other Quaker Oats plants such as those at Cedar Rapids, Iowa (rebuilt 1908-1927), St Joseph, Missouri (1927-29) and Peterborough, Ontario (1917-20). It seems likely that the Southall factory was intended to follow a formal Quaker 'house style' or that the senior management who signed off the designs for the Southall Factory were reflecting their familiarity with their other plants.
3.1.10 One of the advantages of the modular, concrete frame construction is that it allowed for the easy expansion of the factory and the first such enlargement took place in 1938 when the lower section of the main mill (Bays 1-5) was raised from three storeys tall to seven storeys to match Bays 6-10. This expansion comprises Block A2 in the current study. In addition, in the same phase of works the office range was extended to the north by a further four singlestoried bays (Block B2) and this structure incorporated a roof garden. This phase in 1938 is illustrated by a pair of historic photographs contained in a scrapbook found on site and included in the Statement of Significance. The earliest of these is dated 4 February 1938 and it shows the form of the original 1936 factory together with preparations for the enlargement of Blocks A and B. The later photograph is from 2 August 1938 and at least the external shells of the extensions (Blocks A2 and B2) appear to be complete.
3.1.11 It is interesting to note that the February 1938 photograph suggests that the west side of Block $B$ and the north side of Block A were open fronted and had a cantilevered awning extending around these two sides, apparently to provide cover for trucks to pull up alongside and unload into the building. The concrete frame and non-loadbearing external walls would of course easily allow for such an arrangement. This photograph also shows a set of rail tracks curving around from the north-west to terminate beneath a further set of awnings adjacent to the western end of Block A. Indeed, the photograph shows a set of wagons here beneath this awning. Clearly this track would have allowed for loading and unloading via rail.
3.1.12 During the Second World War the basement of the building was used as an air raid shelter for staff at the factory and the building itself was camouflaged.
3.1.13 In 1948 a warehouse to the north-west of the main site, which had originally been constructed for the adjacent Maypole Dairies during or around the First World War, was acquired by Quaker Oats. Short sidings connected this warehouse, which was called Block C in the site's block referencing system, to the rail network.
3.1.14 Between 1952 and 1954 a large silo (Block D1) was added to the east of the mill to store 10.500 tons of grain and it included a three bay element at the western end for grain cleaning. This grain cleaning element broadly followed the structural form of the original mill, with a concrete frame and non-loadbearing external panels but the internal columns had a different form (square section and without mushroom heads) and the main silos had solid external walls of reinforced concrete. The new silos range (Block D1) was originally detached from the main mill but they were aligned, presumably in anticipation of being linked at some point in the future. It is worth noting that these silos were the first ones constructed at the site so from 1936 until 1954 the factory had somehow managed to cope without any.
3.1.15 The Office Range (Block B) was then raised in height in 1955 to form a consistent three storey tall range; one storey was added to the southern half (Bays 1-5) and two storeys were added to the northern half (Bays 6-9). Constructional details in the new range closely matched those in the original 1930s blocks and in the current report this 1955 extension is referred to as Block B2.
3.1.16 A boiler house was also constructed in 1955, close to Block C (former Maypole Dairies warehouse) and away from the main Quaker Oats Factory.
3.1.17 In 1956 a further set of silos (Block $E$ ) were constructed to supplement the ones constructed two years earlier. These were to the east of the earlier silos but detached by one bay away from them and similarly to the earlier structures their south side was immediately adjacent to the canal.
3.1.18 In 1957 the 1952-4 silo block (Block D1) was connected to the main original mill (Block A1) by the construction of a new three storey (plus basement) Feed Warehouse (Block F1) and around the same time the ground floor of the Office range (Block B) became a feed mill. Historically the site was best known for producing rolled oats but in 1957 the company began production of Sugar Puffs (rebranded to Honey Monster Puffs in 2014) and in the same year it diversified into pet foods, initially with Ful-O-Pep dry dog food. The company also later produced Chunky canned dog food (from 1967) and Felix dry cat food (from the early 1970s).
3.1.19 A very useful site plan was found on site from 1959 showing a number of features of interest and providing information on how the site functioned. It shows that the 'raw material intake' was centred on the north side of the main mill and silos (Blocks D, F), the 'cased goods shipping' area was located on the north and west sides of Block A1 and the 'feed shipping' area was located along the north and east sides of Block B. The plan also shows a 'cyclone house' for unloading grain on the south side of the silos, adjacent to the canal, and a molasses tank on the north side of Block F.
3.1.20 The new Feed Warehouse (Block F1) was then raised in height to seven storeys to match the rest of the mill range, probably in the early 1960s, and around the same time the two silo blocks (Blocks D1 and E) were connected by the infilling of the previously empty bay.
3.1.21 In the 1970s and/or early 1980s the site underwent a substantial phase of remodelling and investment, including the move to road transport for all deliveries. The tracks and other rail facilities were removed and a huge new warehouse was constructed in c.1981, to the designs of Raymond C Price RIBA, on the west side of the site between Blocks A and B. This partly overlay the line of some of the former rail tracks and it incorporated regular loading bays for lorries to back up to.
3.1.22 A new entrance foyer was constructed at the same time at the west end of Block A, also partly where the rail tracks had recently been removed, and new stair tower was constructed immediately adjacent to this.
3.1.23 In 2001 Quaker was bought out by Pepsico and the scale of the operations at the site began to be reduced. Analysis of Google Earth images in the Statement of Significance suggests that the Finished Feed Warehouse (Block J) fell out of use between 2002 and 2003 and that this building was cleared at some point between December 2006 and September 2008. The site closed in 2016.
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## 4 Overall Description of Site

### 4.1 Introduction

4.1.1 The Quaker Oats Factory is a large complex which has grown in a series of phases and it can now be divided into four principal elements:

- East-west multi-story 'daylight factory' (Block A \& F, 1936-early 1960s);
- Large silo block (Ranges D \& E, 1952-early 1960s);
- Office warehouse range (Range B, 1936-1960s);
- New warehouse (Late 1970s-80s).
4.1.2 The referencing system used to distinguish the different ranges at the site (ie Blocks A-F) are outlined in the Statement of Significance and it appears to have been in long-standing use at the site because the blocks are referred to with these letters on several of the historic photographs found on site. As referred to above the block referencing has been refined slightly to indicate at least some of the distinct phases within each block; so the 1936 element of the main mill is Block A1 and the 1938 enlargement is Block A2.
4.1.3 It should be noted that the attempt to retain the pre-existing referencing system has led to some awkward areas, particularly the grain cleaning element of the silos (part of Block D) which aesthetically looks like it should be described as part of the main mill range but it's actually part of the silos.
4.1.4 The original range from 1936 closely followed the model of the 'daylight factory' pioneered in America in the first decade of the $20^{\text {th }}$ century, and the main phases of subsequent enlargement (at least prior to the 1970s) followed this model. This comprised a modular reinforced concrete frame, largely with mushroom shaped columns and non-loadbearing external walls that incorporate large expanses of glazing. As well as following a standard structural form the main phases also closely followed a single aesthetic or 'house style' with external infill panels largely of red stretcher bond brick with a regular pattern of black header bricks in every fifth course. The overall character of the ranges appears very similar to that of Quaker Oats Factories in America and presumably this was an intentional desire to follow a company style. The similarity of design gives the site a unified character but it also makes it hard to easily understand the distinct constructional phases.
4.1.5 The final main phase of development was undertaken in 1980-81 to the designs of Raymond C Price RIBA and focussed on the western side of the complex ${ }^{2}$. This comprised a large new single storey warehouse adjoining the older ranges together with a stair tower and foyer, both at the west end of the main mill, and a boiler house.
4.1.6 The table below, which is based on information in the Statement of Significance, summarises the different ranges and the overall phasing of the complex.

[^1]| Main Block | Part of | Date | Sub Block | Bays/element |
| :---: | :---: | :---: | :---: | :---: |
| A | Main Mill. East-west multistorey daylight factory | 1936 | BLOCK A1 | Bays 1-5 as 3 storeys (plus basement) |
|  |  | 1936 | BLOCK A1 | Bays 6-10 as 7 storeys (plus basement) |
|  |  | 1938 | BLOCK A2 | Bays 1-5 raised to 7 storeys |
|  |  | 1980-81 | BLOCK A3 | Bay 0, New foyer and stair tower |
| B | Office/Warehouse range | 1936 | BLOCK B1 | Bays 1-5 as 2 storey (plus basement) |
|  |  | 1938 | BLOCK B2 | Bays 6-9 as 1 storey extension |
|  |  | 1955 | BLOCK B3 | Bays 1-5 raised to 3 storeys and Bays 6-9 raised to 3 storeys |
|  |  | Early 1960s | Block B4 | Bays 10-11 added (3 storey extension) |
| C | Maypole Warehouse | c.1914-18 (acquired by Quaker 1948) | - | Now demolished |
| D | Main Mill (silos and grain cleaning) | 1952-4 | Block D1 | Bays 17-25 (detached structure) |
|  | Main Mill (silos and grain cleaning) | $\begin{aligned} & \text { Mid 1970s/ } \\ & \text { early 1980s } \end{aligned}$ | Block D2 | Bays 17-19 New loading canopy |
| E | Main Mill (silos) | 1956 | - | Bays 27-30 (detached structure) |
| F | Main Mill (Feed warehouse) | 1957 | BLOCK F1 | 3 storeys plus basement |
|  | Main Mill (Feed warehouse) | Early 1960s | BLOCK F2 | Raised to 7 storeys |
| J | Finished feed warehouse | 1964 | - | Now demolished |
|  | New warehouse and boiler house | 1980-81 |  | New adjoining structure to west to designs by Raymond C Price RIBA |

4.1.7 The main elements of the complex (pre-1970s) are arranged with a T-shaped plan: the tall mill orientated east-to-west and the lower office/warehouse range projecting to the north. The main mill is located immediately alongside the Grand Junction Canal (Southall Branch) and access to the site is via a bridge over this to the south-west of the complex.
4.1.8 Other than on the canal side the factory buildings are now largely surrounded by hardstanding reflecting the later phases of the complex's arrangement when materials were brought to site and finished products removed from site by road. As referred to above the site was formerly linked into the rail network by lines passing the north end of Block B and extending to the west end of Block A. There was also a turntable to the north-east of the complex and a further line which extended south towards the silos. Ordnance Survey maps show that these lines were removed at some point between 1973 and 1985.
4.1.9 One issue which may cause some confusion is that the floor numbering, including various signs around the building, follows the American model of calling the floor at ground level the first floor, presumably because it was an American company. In the current report it has been decided to use the UK model of having ground floor, first floor etc and this is also used in the metric survey of the building produced separately.

## 5 Main multi-storey ‘Daylight Factory’ (Blocks A \& F)

### 5.1 Introduction

5.1.1 The largest range, and the one which dominates the overall factory, is the main mill or the principal 'daylight factory' (Block A) 3. This is a rectangular plan range, orientated east to west, and it is c .95 m by 22 m (17 bays long by four bays wide). It also includes a square plan stair turret which steps northward above Block B and allows access to the flat roof on the range. Most of the range is seven storeys tall but the stair turret is eight storeys. The main entrance into the factory is at western end of this range. The bay numbering runs from west to east.
5.1.2 As detailed above this range has grown in a number of phases: the central five bays (including the turret) formed part of the original 1936 factory while the western five bays were added in 1938 (although the lower part of this section was also 1936) and the eastern part was constructed in the early 1960s.

### 5.2 External description

### 5.2.1 General

5.2.2 The external elevations of Block A are articulated by a consistent reinforced concrete frame grid, infilled with horizontal panels of glazing above brickwork. The brickwork is red other than a subtle decorative motif in each panel comprising black headers every fifth row. The survival of historic windows varies across the range, depending on the sub-phase of the specific structure and perhaps the different uses of different parts of the building.

### 5.2.3 North elevation (PI.1-18)

5.2.4 The north elevation of the main mill is 17 bays wide ( $\mathrm{No}^{\prime} \mathrm{s} 0-16$ ) and it can be divided into three elements reflecting the phasing of the structure. The visible part of Bays 1-5 date from the 1938 phase (ie Block A2. Plate 15); the lower three storeys of this area are earlier, dating from 1936 (Block A1), but they are now largely hidden externally by the c. 1981 warehouse.
5.2.5 The windows in Bays 1-5 are largely metal framed and original (19 out of a total of 25 windows), while there are two clearly modern PVC windows and four windows at $6^{\text {th }}$ floor which appear to be secondary but still metal framed (possibly 1970s). The original windows have also been modified slightly; those in Bays 2-6 would originally have had four sets of 16 lights (so 64 lights in total) with the central four lights in each block of 16 forming a casement that pivoted horizontally. In each case the 4-light casements have been replaced, largely with horizontally set louvres, while the other fixed original lights largely survive. Bay 1 is slightly narrower and consequently the original windows here are slightly different; these would have had three rather than four pivoting casements, with six lights in each, and they have again been replaced by a combination of slat louvres and fixed glazing. Historic photographs have confirmed the original form of all these windows.
5.2.6 The brick panels have a relatively consistent character but it is noticeable that those at $5^{\text {th }}$ floor level are painted, albeit still with the black-header motif. Several historic photographs from the 1950s to the 1970s show the reason for this: at this level there was a large band across the building (presumably rendered) with the lettering 'Quaker Oats Limited' written on (Appendix

[^2]Plate 23 \& 29). Brick coursing in this band is visible from the ground in the current building but this may well be entirely fake brickwork, painted on a rendered panel after the lettering was removed.
5.2.7 Another interesting feature to note in this part of the building is that either side of Bay 2 the concrete columns incorporate large projecting corbels just beneath each floor slab. The same features are not present on the corresponding part of the southern elevation and it seems most likely that they were to allow for the possibility of a future wing extending to the north; a proposal which was never realised (PI. 15 \& 17).
5.2.8 The grid of the concrete frame is again expressed in the north elevation of the stair turret (Bay 6) but there is no glazing here (PI. 16 \& 18); the panels are entirely filled with brickwork (again red with black headers every fifth course). Bay 7 also has a solid brick infill panel at each floor level (PI. 13) and historic photographs suggest this was the original arrangement.
5.2.9 Bays 8 to 10 survive from the original 1936 range (Block A1), although only the upper four storeys are visible above the adjoining Block $B$, and the 12 metal-framed windows all appear to be primary ( PI .13 ). The form of these windows matches those referred to above in Bays 15. In 1936 Bay 10 formed the end of the original building so this bay is slightly narrower than the others and would have had three horizontally pivoting 6 -light casements while Bays 8 and 9 had four 4-light pivoting casements. These casements have all now been replaced by slat louvres or fixed lights. The brick panels at $6^{\text {th }}$ floor level appear to be painted and similarly to the area further west this must have been due to the former lettering here for 'Quaker Oats Limited'.
5.2.10 Bays 11 to 15 (Block F) are a later infill block constructed between the main mill and the grain silos (PI. 1-3); the lower three floors were constructed in 1957 and then it was raised to seven storeys, probably in the early 1960s. The windows here are almost entirely PVC secondary replacements although the uppermost window in Bay 11 is original (metal framed). In Bay 14 there are PVC windows at $6^{\text {th }}$ floor level but beneath this the historic arrangement has been recently replaced by crude plywood doors at the five floor levels above ground floor. These were not loading doors from when the factory was operational and instead they were installed as a temporary measure after the closure of the factory when the historic windows and panels were removed from this bay to allow for the removal of any reuseable plant from within the building (Rob Kinchin-Smith pers comm). Any internal walls near these were also removed at the same time.
5.2.11 At ground level in Bays 13 to 15 there are roller shutter doors and a canopy for loading and unloading by truck under cover ( $\mathrm{Pl} .8-9,11$ ). There is also a taller canopy and plant immediately to the east of this but this is in front of Block $D$ (silos) so is described in the relevant section below.
5.2.12 South Elevation (PI. 34-48)
5.2.13 The south elevation of the main mill is located alongside the Southall branch of the Grand Junction Canal and there is a large canopy against the elevation, above ground floor level, which cantilevers out to provide cover for both a small wharf immediately next to the building and the adjacent section of canal (PI. 34). This canopy is c. 60 m long and extends alongside Block A1 (constructed in 1936) and A2 (constructed in 1938). It comprises a series of half trusses constructed from L-section steel members bolted together and fixed to the main concrete frame of the building. It is of a typical form for the mid $20^{\text {th }}$ century.
5.2.14 Beneath the canopy there is a guard rail along the canal side, a set of roller shutter doors in one bay and various chain-link fence enclosures housing electrical gear (switchgear and transformers).
5.2.15 The main elevation above the loading canopy again comprises a reinforced concrete grid with glazing between and brick infill panels. The windows in Blocks A1 and A2 (1936 and 1938) are largely PVC replacements although those at first, second and third floor in Bays 1-4 are older, metal framed and presumably original. These windows match those described above in the north elevation.
5.2.16 It is interesting to note that the windows in Bay 0 are also metal framed and similar in character to the historic windows but this is the stair projection known to have been constructed in c.1981. It is also interesting that the brick panels in the stair projection are lighter in colour than the others and there is a visible break in the parapet at the top of this block, between the earlier section and the later.
5.2.17 The windows in Block F (Bays 11-16) constructed in 1957 and then the early 1960 s appear to be entirely metal framed and primary to this part of the building. They match the windows in the north elevation detailed above.
5.2.1 Further to the east alongside the canal there is further evidence of unloading plant for the grain (cyclone House marked on historic plans) but that is adjacent to the silos so it detailed in the relevant section below.
5.2.19 West elevation (PI. 32-33)
5.2.20 The west elevation of the main mill is seven storeys tall by four bays wide, not including the original 1930s stair turret which steps to the north. The lower three bays (Block A1) formed part of the original complex constructed in 1936 but the upper four floors were added in 1938 (Block A2). The detailing between the two 1930s phases is essentially identical, with glazing immediately beneath each floor slab and brick panels beneath this with red brick and black headers every fifth course. The panels at fifth floor level are however different as they are painted with a brickwork pattern (with the red and black attempting to match the arrangement in other panels). Similarly to the north elevation the reason for this is that there was formerly a horizontal band at this level rather than brickwork with 'Quaker Oats Limited' written on. This is shown on a number of photographs found on site dating from the 1950s to the 1970s.
5.2.21 All the original windows in this elevation have been replaced with relatively recent pvc glazing, possibly even from the $21^{\text {st }}$ century. An undated photograph found on site, probably dating from the 1980s, shows the elevation with a previous set of windows although earlier photographs appear to show a still earlier set of metal-framed windows to the elevation.
5.2.22 At sixth floor there is a large vent in the elevation and to the north of this are two patches of infilled brick which are from former similar vents (shown on photograph mentioned above probably from 1980s).
5.2.23 At ground floor this elevation incorporates a largely glazed foyer, set in front of the main elevation, dating from a series of alterations undertaken in c.1981, and now forming the main entrance into the building. Prior to these changes a set of rail tracks curved around from the north-west and terminated immediately adjacent to this end of the building to allow easy loading and unloading. The ground floor is raised above ground level here (presumably to have eased the transfer to and from the wagons) and now the entrance is reached via a set of steps.
5.2.24 This c. 1981 phase probably also included the construction of a full height stair tower which projects by a bay from the southern edge of this elevation. The external detailing of this tower broadly matches that of the original building with expressed concrete frame and red brick panels with blue headers every fifth course.
5.2.2 The west elevation of the primary stair turret also expresses the reinforced concrete frame and there are metal-framed windows within brick panels.
5.2.26 East elevation: the east side of the main mill is adjoined by the silo blocks so there is no external elevation here.

### 5.3 Internal description

### 5.3.1 Introduction and general structural arrangement:

5.3.2 The main multi-storey mill (Blocks A \& F) is constructed with a reinforced concrete frame cast in-situ with five east-to-west rows of columns supporting a flat deck at each floor level. The columns around the edge of the building are rectangular in section, with a single inner splay (or joggle) to the head, while those in the three internal rows are octagonal in section and with a 'mushroom' head that splays out to provide additional support for the concrete slab. This 'mushroom' removes the need for concrete beams (or downstands) between columns and allows the practical and aesthetically pleasing flat slab.
5.3.3 Although there are no 'downstands' there are slightly lowered square panels to the underside of the slabs at the top of most of the mushroom heads as well as a small number of areas where these lowered panels extend between columns. Presumably these indicate areas where further reinforcement was required; for example, the eastern and westernmost rows of mushroom columns in Block F (ie between 11 \& 12 and 15 \& 16) are connected at each floor level by lowered panels extending north-to-south across the full width of the building. There are also similar but shorter lowered panels at several floors between columns in Block A, between Bays $6 \& 7,8 \& 9$ and $9 \& 10$. There is some variation in this and it is discussed further below.
5.3.4 The framing is very similar in areas that form part of the original 1936 factory (Block A1) from the later Block F (lower three floors added in 1957 and the upper four in the 1960s). However, the division between the blocks can be seen, most clearly in the surviving north-to-south rows of rectangular, square faced columns between bays 10 and 11 at each floor level which would originally have formed the external western face of the building with infill panels of brick and glazing (Pl.68, 70, 76, 138).
5.3.5 The octagonal columns gradually reduce in thickness towards the top of the building (discussed further below) and they are 6.1 m or 20 ft apart (centre to centre). There is a consistent ceiling height between the second and fifth floors but it is higher at ground floor and sixth floor and lower in the basement.
5.3.6 The concrete in the columns and the underside of the flat slab is all exposed and painted in this block although there is some difference in the shuttering marks between the original block and the later extensions.
5.3.7 The internal frame makes the structure immensely strong, a character which contrasts to the largely glazed and relatively light external form. The grid also provides a flexible space for relatively ephemeral processing and packing plant which could be changed intermittently.
5.3.8 One of the interesting features of the building is the continuous-belt 'man lifts' towards the eastern end of Block A, close to the junction with Block B, which would have provided easy access between floors. This comprises a pair of vertical stanchions, each of which supports a belt ( $c .35 \mathrm{~cm}$ wide) on a continuous loop; one side going up the building through a series of circular holes in each floor and the other side going down through a further set of similar holes. The belts, which have simple brackets for people to stand on and projections to hold onto, have warnings stating 'Hold handle, face band, carry nothing'. Some have another warning sign stating 'pull rope to stop elevator'. The holes which staff would have passed
upwards through have a funnel shaped guard to prevent things becoming snagged and there is a modern metal guard around the whole mechanism.
5.3.9 There is another similar 'man-lift' in Block D (silos and grain cleaning area).
5.3.10 The main historic staircase to provide access between all the floors is located in the turret on the northern side of Block A (projecting into Block B). This also includes a goods lift with concertina doors and both of these are probably primary. At the south-western corner of Block A is a set of fire stairs within a brick enclosure, probably added in c. 1981 and there's also a secondary fire-stair projection to the south-east corner of Block A. There are also staircases at the eastern end of the range but they are in Block $D$ so referred to below.

### 5.3.11 Basement (PI. 53-54, 56-57)

5.3.12 The basement of the main mill is essentially a single space with the adjacent Block B, and at this level the two structures are contemporary with each other, having been constructed in 1936. There is a striking difference however in the character of the two areas because whereas the mushroom columns in Block B are relatively slender (as detailed below) those in Block A are considerably thicker and they have pyramidal buttresses against their base. The bases are largely painted red. The greater strength of the columns in Block A compared to Block B clearly reflects the greater height of this range. The row of columns between Blocks $A$ and $B$ are square in section rather than octagonal and they also have the pyramidal buttresses.
5.3.13 Bays $1-10$ all form part of the original 1936 factory and they are now largely an open plan space with storage bays marked on the floor. There are several separate rooms in the western bay and also others along the southern edge of the range. At the south-eastern corner is a square modular room with tiles to the floor and walls and a drain.
5.3.14 At the eastern end of the main range, at the central opening between Blocks F and $D$, there is a large sliding fire door, clad in steel plates and hung with three rollers from a sloped steel bearer above the door (PI.58). The door, which would have been opened by means of a weight set on a rope and pulley wheel, has a makers' plate showing that it was manufactured by Mather \& Platt Ltd of Manchester in March 1957.
5.3.15 Ground floor (PI. 64-75)
5.3.16 At ground floor level Bays 1-10 all date from the original factory constructed in 1936 (Block A) while Bays 11-16 (Block F) were added in 1957 as part of the Feed Mill which was initially three storeys tall. The columns here are 80 cm wide (considerably thicker than the ground floor columns of the adjacent Block B) but they have a relatively slender character due to the higher ceiling than on most other floors.
5.3.17 This part of the building would at least partly have been an area where pallets and finished products awaited despatch. As referred to above there is a plan from 1959 showing that 'cased goods shipping' was undertaken along the northern and western sides of this range. Fork lift trucks would have moved goods around this area and a number of the columns have an additional concrete shield around their lower third to provide some protection from accidental damage from the trucks. These are particularly in Block F.
5.3.18 Other evidence relating to former use includes markings on the floor to indicate truck routes, low, protective steel barriers fixed to the floor to mark a particular area and a modern sign indicating an 'Allergen Storage Area'.
5.3.19 In Block A there are several chutes for the transfer of products from the floor above; the main ones are two large curved chutes in Bays 9 and 11 and a vertical, circular section chute in Bay 8 which has a raised walkway or platform around it.
5.3.20 One of the more historic features is a large metal-clad sliding door in the central bay between Blocks A and B (PI. 71-73). This heavy-duty door is hung by three pulley wheels from a sloped bearer fixed above the door opening; gravity would slide it shut but it is held open by a weight on a cable. The door, which is an orange/red colour is very similar to another fire door in the basement, referred to above, which has a dated makers plate from 1957. It is worth noting that 1957 was also the date that the lower three floors of Block F were constructed so the addition of these doors (or perhaps the replacement of earlier fire doors here) may have formed part of this wider phase of alterations.
5.3.21 The ground floor is largely open plan but there are a number of separate rooms, largely with concrete block walls. Towards the south-western corner of Block A there is such an area with three rooms with tiled walls, tiled floor and what appear to be industrial ovens. A sign above the entrance to this area shows that it housed the 'Research and Development Pilot Plant'. The westernmost room has sinks, cupboards and a first aid sign on the door.
5.3.22 Opposite this area, on the north wall of the original building there are four bays which would originally have been external, with brick panels beneath metal-framed windows, but they have now been enclosed by the construction of the $c .1981$ warehouse range. The original brick panels survive but the windows have been removed and 1980s brickwork added to infill the rest of the each bay. A brick soldier course marks the division between the original 1930s brick and the c .1981 addition. There is also a roller shutter doorway in the western of these bays to allow access to the warehouse.
5.3.23 There are several concrete block partitions in the eastern part of the main mill (Block F) including a loading bay against the north wall. The three bays here each have roller shutters and there is an external canopy here to provide cover for lorries to load or unload.

### 5.3.24 First floor (PI. 84-90)

5.3.25 This floor was largely a manufacturing and packing area and although the main machinery has been removed there are some remnants of former conveyors and evidence of other operations. The western half of the area is largely open plan, with a number of offices or other small rooms along the northern edge formed from modern partially glazed partitions. The eastern half has been more subdivided with a series of rooms created by a series of partitions (mainly concrete block) and an office area in the north half with suspended ceiling and plasterboarding around columns. The columns and walls in the western open-plan area have painted ginger colour 'skirtings' but in the eastern half these 'skirtings' are painted black.
5.3.26 A sign over the opening into Block F from Block D shows that when the factory closed this was where 'Harvest Chewee Cereal Snacks' were manufactured and another sign above a smaller room further west shows that this was the 'Harvest Chewee Choc Chip Room'.
5.3.27 The main open-plan processing areas have a hard rubberised resin floor but there are also several areas, especially in the southern half of the range which have a slightly raised and tiled floor with a curb around the edge. These areas also incorporate drains, with the floor sloping gently down towards them. The walls and columns in these area are also tiled up to the level of the window sills. It may be that meat was processed in these areas for the pet food that is known to have been produced by Quaker Foods from the 1950s.
5.3.28 Towards the centre of the range there are two curved S-shaped ducts which pass down from the floor above and continue to ground floor level (as noted above). These are towards the spine of the building and in Bays 9 and 11. These hollow metal ducts are c .60 cm wide by c. 30 cm tall and presumably they were for transferring durable items or items such as packing boxes which could be slightly damaged (not finished goods) down to the floors below. Each duct has an open section with a sloped conveyor where items could be added for transfer.

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### 5.3.29 Second floor (PI. 100-106, 108)

5.3.30 At second floor level Block A (ie Bays 1-10) is almost entirely a single open-plan industrial space with a set of offices or store rooms at the western end. The open-plan area extends eastwards into Block F up to Bay 13 where a north-to-south concrete block wall divides the range. The columns and walls in this area are painted a light beige colour with a darker beige 'skirting' band at the base and the floor is covered with a rubberised resin typical for factories. At this level the columns are 77 cm wide. Various bays are marked on the floor and there are warning notices on the wall referring to pallet trucks operating in these areas.
5.3.31 A large sign featuring the Honey Monster, located towards the junction with Block B, confirms that this open-plan area was largely or entirely for Sugar Puffs packing; and towards the east end there is a board on the wall with 'packing performance indicators' marked.
5.3.32 Similarly to elsewhere much of the machinery has been removed but there are a number of conveyors in the packing area, some with rollers and some with continuous moving tracks. In the two bays at the east end of Block F there are three columns with modern I-section steel posts clamped around them and contemporary steel joists just below ceiling level. These may have related to a former hoist.
5.3.33 Third floor (PI. 115-124)
5.3.34 The third floor of this range has a more complex phasing than the floors below; at this level Bays 6-10 is the only section that forms part of the original factory constructed in 1936 while Bays 1-5 were added in 1938 and this part of Block F (Bays 11-16) were added in the early 1960s. As throughout the building there is clear evidence of Block F being a secondary addition, in the form of formerly external squared columns between Bays 10 and 11, but there is no similar feature between Bays 5 and 6 to show that this section was added.
5.3.35 The character of the third floor is broadly similar to that of the floors below being largely an open plan area with fragmentary evidence of former plant and a small number of subdivided rooms, largely with concrete block walls. The floor is again covered in a rubberised resin with various bays or routes marked and the walls are painted a cream colour with light beige painted skirting bands. The floor of the open plan areas also incorporates a series of slightly raised curbs, painted yellow, to mark distinct areas as well as low tubular metal barriers.
5.3.36 There are a number of concrete bases (especially in the western area) which would have supported plant and close to the centre of the floor there are several partially surviving sections of conveyor. These are nearby what appears to be milling machinery and adjacent to a vertical duct which extends through the floor. Also towards the centre there is an illuminated information panel which refers to a 'coating plant' on the $3^{\text {rd }}$ and $4^{\text {th }}$ floors. The panel suggests that the main coating plant is on the $4^{\text {th }}$ floor and the materials are then checked and further processed below.
5.3.37 Within Bay 5 there are two separate rooms with tiled walls and floor and a very large circular hole (c.2.5m diameter) in each ceiling, supported by I-section steel joists. These may have related to processing meat for pet food. The holes in the concrete slab each have a metal lining and there is a corresponding circular feature in the ceiling of the floor above together with four smaller holes within it.
5.3.38 There are a number of large overhead ducts, some of which are for ventilation and connected to extractors at the external windows.
5.3.39 At the south-west corner of Block $F$ there is a metal staircase in a brick enclosure which is almost certainly primary to this range (1950s).
5.3.40 Fourth floor (PI. 129-139)
5.3.41 The fourth floor is another largely open-plan area with some smaller rooms to house particular processes, as well as with various other subdivisions such as slightly raised curbs or low yellow barriers in the floor. Similarly to the third floor the western five bays were secondary additions, being constructed in 1938 but there is no clear evidence of this phasing inside the building. The walls in Block A are painted a cream colour with chocolate brown skirting bands while the walls in Block $F$ are painted white. The octagonal columns here are 72 cm wide.
5.3.42 A large Honey Monster sign towards the main staircase on the northern side confirms that this is 'Fifth Floor Processing' (the fifth floor being from the American system used at the factory). Another small sign elsewhere indicates that 'Aldi Chewy' was manufactured here.
5.3.43 At the western end of the block there is a workshop smelling of oil with benches, light tools and work cabinets. Adjacent to this along the north wall there are a series of further small rooms with concrete block walls and to the south of the workshop there is an empty room with a route to the fire escape marked on the floor. Indeed there is heavy wear in the northern part of this room, apparently from forklift trucks or trolleys, but much less in the southern half where pallets may have been stored.
5.3.44 In the two bays to the east of the workshop there is a line of five circular holes in the floor, now sealed by metal caps, and a sloped conveyor aligning at the eastern end. Just to the east of this there is a large bank of electrical switches/instruments and in the bay to the east of this (Bay 5) there are two square plan rooms with concrete block walls and large circular holes (c. 2.5 m diameter) in the floor. These holes were noted in the description of the floor below and it is likely that they would have housed large cylinders up to the fourth floor ceiling. The rooms have large vents in the walls and a barrier around the hole.
5.3.45 Further to the east in Bay 7 there is another north-to-south row of holes in the floor with a frame over and to the east of this an area with a tiled floor and raised curbing. As with other similar areas the tiled areas may have been used for processing meat for pet foods.
5.3.46 In Block F the floor of the southern bay is slightly raised, with a ramp up to it and a curb between the columns.
5.3.47 As elsewhere it is noticeable that the shuttering marks on the underside of the ceiling in Block F suggests that large boards were used to form the concrete while in Block A the concrete surface was rougher and the imprint from the boards closer together.

### 5.3.48 Fifth floor (PI. 141-148)

5.3.49 As with the floor below Bays 6 -10 (Block A1) are the only part of the fifth floor which formed part of the original 1936 factory; Bays 1-5 (Block A2) were added in 1938 and Bays 11-16 (Block F) were added in the early 1960s. The fifth floor comprises a combination of open-plan processing areas, smaller distinct rooms which also formed part of the manufacturing and various offices.
5.3.50 A sign over the doorway into this area from the main stairs (tower against the north wall) shows that this floor housed the 'cereals processing plant'. There is relatively little processing plant surviving in-situ although there is much evidence of the former plant including electrical control panels.
5.3.51 To the west of the main stair tower (north side of Bay 6) there is an area of offices; the largest of these is at the north-western corner of the range (PI. 147) and to the east of this is a series of smaller rooms. All of these have square lino-tiles on the floor, partially glazed fibreboard partitions and modern tiles to the ceiling. A sign on one of the doors shows that this was a 'Southall Plant Training Room' while other rooms have air conditioning with electrical panels
inside. The southern bay of Block A2 has a solid wall along its northern edge to form a single long room but with little clear evidence of former use.
5.3.52 Block A1 (Bays 6-10) has a large area in the southern half with a raised, tiled floor, surrounded by a low curb while in the north half there is an area divided by a mid-height wall and a further set of small rooms with electrical controllers. The labels on these include for 'puffed wheat rotary valve', 'dryers', 'coolers', 'coaters' etc.
5.3.53 The eastern area (Block F) is more open plan, but with two rooms formed by concrete block walls, each containing a large circular hole in the ceiling.
5.3.54 The walls and columns in most of this floor are painted a cream colour, with light beige skirting bands, but towards the western end the skirtings are painted an ox blood colour.

### 5.3.55 Sixth floor (PI.151-158)

5.3.56 The sixth floor is the uppermost storey for Blocks A and F of the main mill. The central section of this floor (Bays 5-11) forms a large distinct area, with concrete block walls to either side, and housing a mass of surviving machinery or plant. Indeed, across the whole factory this is the area where processing plant survives the most intact. It is not within the scope of the current project to fully understand this plant but it comprises numerous steel pipes, ducts, cylindrical tanks, heaters, fans, conical shaped vessels. One piece of plant which has the form of a horizontal deck has a sign showing that it is a Rotex Screener (ie to sieve or sort products). The sign looks relatively old (1960s?) and the character of all the machinery at this level suggests that it has not been used for many years (PI. 157).
5.3.57 This area also has the top of one of the 'man lifts' which extends vertically through the full building. At this level the continuous belt can be seen extending over the top of a drum supported by a simple steel frame and operated by an electric motor.
5.3.58 To the west of the processing area are four open-plan bays, with a separate bay to the south divided off by a concrete block wall. These areas are relatively empty, with little evidence of former use, and may have been for storage. A number of bays are marked on the floor. The walls in this area are an off-white colour with ox blood colour skirting bands.
5.3.59 As previously mentioned in the eastern part of this range (Block F) there are two large holes in the floor (visible from beneath), each of which is in a separate room and with a tubular steel guard rail around it. The octagonal columns at this level are 61 cm wide.

### 5.3.60 Seventh floor (roof level)

5.3.61 Although Blocks A and F are seven storeys tall a brief mention should also be made of the flat roof above this which can be accessed from the primary 1936 stair tower (to north) as well as from the taller Block $D$ to the east which was constructed in 1952-4. The phasing of the blocks is at least partially visible here in the form of raised parapets between Block A1 and Block F as well as between Block F and Block D.
5.3.62 There is a large concentration of plant on the roof of Block A1, clearly relating to the mass of processing machinery here on the floor below which includes vents, fans, cowls and modern sets of vertical steel pipes the project vertically and feed down into conical funnels or hoppers at roof level (PI. 168). There is a sliding fire door in the south wall of the projecting stair turret against the north wall and a makers plate shows that it was manufactured by Bolton Fireproof door (dated 20/6/69). The door is hung from two rollers set on a sloped bearer.
5.3.63 The storeys above this point are discussed with the Silos (see Section 7, below)

## 6 Office/Warehouse Range (Block B)

### 6.1 Introduction

6.1.1 Block $B$ is a rectangular plan, three-storey range which projects northwards from Block $A$ and has a flat roof. It is 12 bays long by 5 bays wide ( c .73 mx 30 m ) and the numbering of the bays runs from south to north. The ground floor largely comprises warehouse space but the upper two floors form offices.
6.1.2 Although the construction appears relatively consistent this range has grown in a number of phases similarly to the main mill. When the factory was first constructed in 1936 Block B was six bays long and two storeys tall (Block B1) but in 1938 a further four single storey bays were added (Block B2) and in 1955 these 10 bays were all raised to three storeys (Block B3). Then in 1955 a further two 3-storey bays were added to extend the block to the north.
6.1.3 The earliest photograph of this range is from February 1938 (Appendix PI.5) which shows the west side open fronted at ground floor, with a canopy adjacent to cover over lorries to pull up alongside and apparently sash windows at first floor. The same photo shows the north elevation with crittal-type windows at ground floor and sashes above. A further photograph from August 1938 shows the east elevation with crittal-type windows at ground floor for the full newly extended 10 bays (including new extension) and the north elevation (Appendix PI. 6). Clearly from the outset the ground floor was an 'industrial' area and the first floor was an office. At this time the loading and unloading into the range appears to have been entirely by trucks on the west side but in 1948 a spur rail line was constructed to pass by the north end of Block B. At this time the north elevation was altered to become open fronted (initially this end was only single storied), similarly to the west elevation and with a loading canopy over. When the range was raised to three storeys in 1955 the new areas had sash windows and were clearly offices.
6.1.4 As referred to above a plan from 1959 shows that the areas to the north and east of Block $B$ were for 'feed shipping' (Fig 4). A site plan originally produced in 1960 shows the further two bays at the end of the block enclosing the east-to-west rail tracks which had formerly been external (Fig 6). This suggests that these bays had been constructed by this date but there are also several notes on the plan referring to amendments made between 1960-64 so these bays may have been slightly later.
6.1.5 An OS plan from 1973-4 also shows the tracks passing through these bays (Fig 7).

### 6.2 External Description

### 6.2.1 General

6.2.2 Block B comprises a reinforced concrete frame with the structural grid expressed externally, similarly to Block A. However, the overall character of the external walls and the arrangement of fenestration does not follow that of the classic daylight factory; instead it comprises regular, relatively small openings within a brick wall which could be of traditional loadbearing form, if it wasn't for the visible concrete grid. The ground floor elevations are higher than those at first floor, partly reflecting the fact that the ground floor slab is raised.
6.2.3 East elevation (PI. 20-24)
6.2.4 The east elevation of Block $B$ is 12 bays long and as detailed above it has grown in four main phases (1936, 198, 1955 and early 1960s) although it is difficult to distinguish between some of these phases. The elevation comprises a reinforced concrete frame with relatively wide vertical posts and slender horizontal slabs.
6.2.5 The general arrangement of the elevation at first and second floor level is relatively regular and little altered from the historic arrangement although the windows (three per bay) have been very largely or entirely replaced. They are now largely single-light casements although there are some variants towards the southern end. An historic metal framed window does survive at ground floor in the third bay from the south which could be original (although much altered) or it may have been reused from elsewhere in the building.
6.2.6 At ground floor level the elevation has been more altered, partly by the addition of a large canopy against Bays 5-9 to provide a covered space for loading and unloading. This was almost certainly added in the later 1970s or early 1980s and is clad in profiled metal. It is supported from above by raking steel struts fixed to the concrete columns above. This covers over rollershutter loading doors in Bays 6\&7 and various other secondary windows and doors in the other bays.
6.2.7 The only visible elements of phasing in the concrete frame are towards the northern end, relating to the fact that Bays 11 and 12 were added in the early 1960s. One piece of evidence is that fact that there is a double post (ie two immediately adjacent to each other) between bays 10 and 11 while another is the fact that the main vertical post between Bays 11 and 12 is only present at first and second floor levels. It rests on a deep concrete beam (thicker than the main floor slabs) spanning both of these bays and beneath this there is just an off-centre concrete post. The different arrangement here clearly relates to the fact that two sets of rail tracks formerly passed through here. These bays are now infilled with brickwork which clearly post-dates the removal of the tracks in the late 1970s or early 1980s but retains the in-house motif of red brick and black headers every fifth course.
6.2.8 Bay No. 2 from the south is now covered by a projecting fire escape covered in modern corrugated cladding.
6.2.9 North elevation (PI. 24-25)
6.2.10 The north end of Block B is five bays wide by three storeys tall and as stated above this end of the building was constructed in the early 1960s when two bays were added to enclose the railway lines which passed here. The concrete frame is expressed externally with six regular columns and relatively thin, horizontal concrete slabs above first floor and second floor heights. The horizontal beam above ground floor is much deeper however, matching the width of the verticals, and this reflects the different internal construction of this area without mushroom columns.
6.2.11 The upper two storeys of the north elevation have regular, single-light windows which probably replaced the original sashes in the 1970s or 80s. At ground floor level the elevation is largely brick, with various openings (roller shutter doors in central bay and 'up and over' type door in northern bay). The pattern of the brickwork at ground floor matches that in the upper floors (red with black headers every fifth course) but the colouring looks slightly different and it is likely that at this level the brickwork all post-dates the removal of the rail tracks in the late 1970s or early 1980s. The brick bonding suggests that the garage-type 'up-and-over' doors in the northern bay are a secondary insertion, as are the openings in the adjacent bay (two windows and a door) but the opening with the roller shutters in the central bay appears primary to this section of wall.
6.2.12 At the western edge of this elevation is a modern steel fire escape and doors have been inserted into the elevation at first and second floor to allow access to this.

### 6.2.13 West elevation (PI. 19)

6.2.14 The west side of Block B is largely obscured by the c .1981 new warehouse, although the upper floors are partly visible from a section of flat roof. The visible parts of the elevation share the
same detailing as the east elevation with regular single-light casement windows within red brick panels which incorporate black headers every fifth course. The concrete frame is expressed as elsewhere.

### 6.3 Internal Description

### 6.3.1 Introduction and general arrangement

6.3.2 The internal structural arrangement of Block $B$ broadly follows that of the main range (Blocks A-F) with reinforced, cast in-situ octagonal-section concrete columns creating a series of flexible spaces. The structural grid is 12 bays long ( $\mathrm{N}-\mathrm{S}$ ) by five bays wide ( $\mathrm{E}-\mathrm{W}$ ) and the internal columns all have mushroom shaped splays to their heads matching those in Block A, other than the row which divides Bays 10 and 11 which have a square section. This difference is partly due to this forming the end of the building prior to the construction of the two-bay extension in c. 1960 and particularly because at ground floor Bay 11 had to be wider than the standard bay width because sets of covered east-to-west rail tracks passed through here. Other than this there is little evidence internally to distinguish the various phases in which the range grew.
6.3.3 The columns around the edge of the building are rectangular in section, with a single inner splay (or joggle) to the head, and where visible they also have chamfered corners with a stop detail just beneath their head ${ }^{4}$. The floor slabs are essentially flat, without transverse downstands, although immediately above each mushroom column there is a slightly dropped square concrete panel. Where visible these square panels appear to be more consistent than in Block A where there are several longer dropped panels between columns.
6.3.4 The principal staircase serving the offices is towards the centre of the range and against the west wall but the stairs in the tower against Block $A$ are also easily accessible and there is also an external fire escape against the north wall. There is also another simple flight of stairs within the open plan offices at first and second floor level. These offices appear to have been heavily refurbished in the later $20^{\text {th }}$ century (probably 1980s) as part of wider improvements at the factory.

### 6.3.5 Basement (PI. 55, 63)

6.3.6 The basement is 10 bays long (north-to-south) and does not continue beneath the northern two bays of the range where the rail tracks formerly passed at ground level. At this level the columns in Block B are more slender than the thick columns in the adjacent basement of Block A and also without the pyramidal buttressing at the base. The concrete columns and underside of the floor slabs are all exposed at this level with shuttering marks visible and fluorescent lights throughout.
6.3.7 The basement is divided into two main areas by an east-to-west concrete block wall with a central opening which has a large sliding fire door. There is no makers' plate to this door but it is similar to that between Blocks F and D which is known from its makers' plate to date from 1957 (referred to above).
6.3.8 The two main areas to either side of the east-west wall are largely open plan (although there is a set of smaller rooms towards the south-western corner) and they were clearly used for goods storage. There are regular numbered bays marked on the ground and there is a central

[^3]route marked along the spine of the building for fork lift trucks and pedestrians. This continues through the central opening with the sliding fire door.
6.3.9 The columns in the northern area either have a high black band painted around their base or a protective yellow and black striped hazard shield while the columns in the southern area have a much simpler painted red skirting band.
6.3.10 At the north-eastern corner of the southern room there is a loading door and a ramp up to the ground surface, beneath the loading canopy against the east elevation. At the south-western corner of Block B there are several rooms divided off, largely with concrete block walls, and at least some of which were used for records storage. The northernmost room has a set of sliding doors formed from vertical boards.
6.3.11 Each of the two open-plan areas has a simple, steel, single-flight staircase, towards their northwestern corners, up to ground floor level.
6.3.12 Ground floor (PI. 76-80)
6.3.13 As detailed above the ground floor of Block B appears to have been a warehouse and despatch area from the original construction of the building.
6.3.14 The southern half of this area is largely open plan with various elements of packing machinery and marked bays for goods to be despatched. This area partially corresponds with the end of the original 1936 building and at this point there is an east-to-west line of rectangular section columns.
6.3.15 To the north of this are a series of small rooms or offices with light partitions and an overhead track curves around in this area to an external loading door. The northern five bays of the ground floor also comprise a series of compartmentalised space and a sign over the door into this area shows that it was the 'Engineering Dept'. Some of the spaces have chain-link fences while others have concrete block walls. At least some of this area has been used most recently as storage and props for the filming company which has used the factory.

### 6.3.16 First floor (PI. 93-97, 99)

6.3.17 The first floor of Block B comprises the main company offices, canteen, WCs etc. The main historic staircase is located towards the centre of the western side of the range and has metal balusters and a wooden handrail. The hallway with the stairs has a terrazzo-style lino covered floor. However the access to the offices from the main 1980s entrance at the western end of Block A is along a long L-shaped corridor on the west side of Block B and the north side of Block A. At the western end of this (within Block $A$ ) is a dog-leg staircase probably dating from the 1980s. The first floor offices comprise a main open-plan area with a series of smaller rooms around the edge. At the time of the recording access into this area was limited due to filming. The WCs were to the south of this and the canteen/kitchen was to the south again.
6.3.18 Second floor (PI. 109-114)
6.3.19 As detailed above the whole of the second floor of Block B was constructed in 1955, other than the outer two bays (No.11-12) which were added in c.1960. This area housed offices from its outset and it remained in this use until the closure of the factory.
6.3.20 The majority of this floor (Bays 7-12) comprises a modern open-plan office area with small office rooms around the edge. It was clearly modernised in the later $20^{\text {th }}$ century (1980s?) when carpet was laid, new suspended ceiling panels were added with ducting above, and the mushroom columns were clad in panelling (chipboard with plastic surface).
6.3.21 It is interesting to note that an historic photograph of this area was found on site showing the newly built 'third floor of new offices' in December 1955. The photograph shows that this
area had the archetypal character of an American office from the 1950s with chequerboard covered floor, rows of regular closely spaced desks, a central open-plan area surrounded by glazed office rooms and fluorescent lights. The mushroom concrete columns were exposed but the ceiling was clad in square panels.
6.3.22 A small section of the modern carpet has been lifted exposing the chequerboard floor tiles shown in the photograph (green marble effect), and some of the modern ceiling tiles have also been removed to expose the earlier ceiling tiles. These square tiles are fixed to simple battens and they are formed from fibreboard with small holes in.
6.3.23 At the south-western corner of the office area there is hallway with a staircase and terrazzostyle lino floor. This hall formerly extended slightly further west to the windows in the external wall but a secondary partition has truncated it. The staircase has metal balusters and a wooden rail.
6.3.24 The terrazzo-style lino flooring continues from the hall, southwards along a corridor towards Block A. On the west side of this corridor are a number of further small offices while on the east there are a series of locker rooms, changing rooms, stores and WCs. These rooms have all been substantially modernised and refurbished in the later $20^{\text {th }}$ century although the room plans, door frames, plain architraves and skirting boards appeared to be original.

## 7 Silo Range (Blocks D \& E)

### 7.1 Introduction

7.1.1 At the eastern end of the main range of the factory are the silos (Block E and part of Block D) where grain would have been stored, together with adjacent bays (the other part of Block D) which housed facilities for cleaning the grain and raising it to the top of the silos. Together these comprise Bays 17 to 30 of the main east-to-west range. All the silos are secondary additions and it seems remarkable that the factory coped without any silos from 1936, when the site was first constructed until the mid 1950s. Presumably the site relied on regular deliveries of grain and the storage of that grain in sacks, delivered by barge and unloaded by hoist.
7.1.2 The earliest part of the silos block are bays 17 to 25 (six bays of silos and three of grain cleaning) and it is important to note that this structure was originally detached from the main mill; the two were only linked in the early 1960s when the feed warehouse (Block F) was constructed. This initial part of the silos block was constructed between 1952-4 and then in 1956 a further four silo bays were built. These were also originally detached from the earlier silos and the link (Bay 26) was only constructed in the early 1960s. Presumably there were constructional reasons why it was easier to erect the 1956 silos as a free-standing structure and then connect them together rather than simply extending the existing structure.
7.1.3 Several historic photographs were found in the building showing the silos under construction (Appendix PI. 13-15, 24-25) in the 1950s as well as short newspaper clippings showing that the reinforced concrete was continuously poured, day and night (PI. 16). An image from 1953 shows the bin slab of the original set of silos with each bin apparently comprising a main chute (upturned pyramidal form) and a smaller square opening in the deck. A similar image from 1956 of the silos extension under construction shows the silo deck (or base) with 20 square chutes (upturned pyramids).
7.1.4 One of the photographs from the 1950s (c.1954, before the construction of the later silos) shows that there was a large 'Quaker Oats Limited' sign on the north side of the new structure.
7.1.5 As with any similar mill or large grain processing plant the silos form something of an iconic structure at the factory, with a distinct form to the other ranges and illustrating the processes or function within.

### 7.2 Exterior

7.2.1 The external form of Blocks $D$ and $E$ divide into the grain cleaning elements, which follow the overall 'daylight factory' aesthetic of the site, and the concrete silos themselves (PI. 1-2, 4-5). The external walls of the silos element are solid reinforced concrete although the divisions between the 11 bays are expressed by vertical concrete piers. The walls of the silos are flat, unlike the cylindrical silos in many large $20^{\text {th }}$-century American factories (see Banham, 1986). There is nothing visible in the main silo walls to clearly distinguish the 1952-4 silos from the 1956 addition (or the further bay added in the 1960s).
7.2.2 At 7th floor level, above the concrete silos, there is a single storey from where the bins would have been fed, and here the external walls have metal glazing, brick panels (red brick with black headers as elsewhere) and expressed reinforced concrete frame. At this level there are some subtle differences between the 1952-4 structure and the 1956 addition. One of these differences is the fact that the concrete piers between the bays are wider on the later structure, and also there are double piers either side of the early 1960 s infill bay. Also, the
infill panels between the piers are slightly narrower on the later bays and this results in a slightly different arrangement to the glazing.
7.2.3 On the north side of Bays 16 and 17 there is a two-storey tall cantilevered canopy with modern profiled cladding and this would have covered trucks as they loaded or unloaded. Beneath the canopy there is a set of steps and small pedestrian doorway adjacent to a large metal hatch presumably to a huge below-ground storage bin. A vertical duct extends out of the top of this to connect with further pipes and hoppers above. There is a nearby sign stating that there was a 'Grain Intake Sampling Point' here although historic plans (1959 and others) show that there was also a molasses tank in this area. Although in the factory's later phases trucks would have loaded or unloaded here historic maps show that there was a set of rail tracks here before they were removed in the late 1970s so they would also have unloaded grain here.
7.2.4 At the base of the south side of the silos there is a single storey brick building by the canal with a flat roof. This is broadly in the location of the Cyclone House shown on the 1959 plan (and others) but its construction is suggestive of a later date and there is a 1950s photograph showing a taller structure here with modern cladding. There are also several concrete bases in this area from former plant (presumably grain intake plant).

### 7.3 Interior

### 7.3.1 Introduction

7.3.2 Similarly to the exterior the interior of the silos range divides into the grain cleaning bays (Bays 17 to 19) and the main silos themselves (Bays 20 to 30). The structure of the grain cleaning bays (Block $D$ ) comprises a reinforced concrete frame but it is distinctly different to that of the main mill to the west which has octagonal columns and mushroom shaped heads. Instead the columns in Block D are of rectangular section and support north-to-south beams (or 'principal downstands') which themselves support east-to-west 'secondary downstands'. This structural form is in the tradition of reinforced concrete construction strongly promoted by Francois Hennebique from the late $19^{\text {th }}$ century and although the concrete is cast in a single pouring the structure has the appearance of a traditional timber post-and-beam construction. In contrast the columns with mushroom shaped heads explore more fully the new forms possible with poured concrete.
7.3.3 The main internal features of the grain cleaning bays are four pairs of vertical metal ducts which rise through the full height of the building from the basement to the $9^{\text {th }}$ floor. Glazed panels at ground floor level show that each pair of these ducts encloses a continuous loop of scoops to carry grain to the top of the building.
7.3.4 The grain cleaning block also incorporates a staircase the full height of the building at the north-east corner and a lift with a concertina type door at the south-east corner. Between the ground floor and the sixth floor this lift opens to the west, this is to allow it to be accessed from the main mill and because it is built against the west side of the silos structure. Above this level however, from the seventh to the ninth floor it opens to the east because this is above the height of the silos. In the basement the lift opens to both sides.
7.3.5 The interior of the main silos is not accessible and therefore the internal structure has not been recorded in the current project. Fortunately there are a small number of historic photographs showing the structure under construction (see Appendix).

### 7.3.6 Basement (Pl. 58-62)

7.3.7 At basement level, as throughout the silos range the reinforced concrete frame varies between the western three bays (feed elevators) and that beneath the main silos to the east. In both sections the structure essentially comprises a grid of square (or rectangular) section columns
supporting a floor slab above without downstands (unlike the main structure above basement level) but the grid is more closely spaced beneath the main silos. In addition, whereas the underside of the slab is entirely flat beneath the main silos, in the western three bays there is a slight 'coffering' (ie slightly dropped panels between columns). Some evidence of the phasing of the silos range is visible in the fact that the columns either side of Bay 26 are considerably larger. These marked the formerly external ends of the silo blocks above.
7.3.8 The floor of the bay immediately west of the main silos is clad in metal plates and there are a number of hatches and ducts extending down beneath this, possibly to then connect with further ducts to grain intake plant by the canal.
7.3.9 Within this area of metal plate flooring there are pairs of vertical feed ducts which continue up through the full height of the building as well as the western end of horizontal ducts which extend eastwards beneath the silos, suspended from the concrete ceiling. These would have been fed from above by metal lined, pyramidal shaped hoppers at the base of each silo although these only partially now survive. These horizontal ducts only partially survive but presumably there would have been six, one beneath each row of silos. Those that do survive have a wheel handle to operate the hopper control mechanism.
7.3.10 At the south-western corner of Block $D$ there is a small store room with 4-panel double doors which are likely to date from the 1950s construction of this range.
7.3.11 Ground floor to sixth floor (PI. 81-83, 91-92, 124-128, 139-140, 149-150, 159-163)
7.3.12 As referred to above between the ground and sixth floors the only accessible part of the silos range are the three grain cleaning bays and as they are similar at each level it is appropriate to describe them in a single section.
7.3.13 Each floor is divided by the concrete grid into three east-to-west bays and four north-to-south bays. The columns are rectangular in section and they support what has the appearance of being a conventional floor (albeit in a single monolithic casting) with north-to-south principal joists between posts and smaller intermediate joists (or binders) spanning east-to-west between the principals. The concrete is all exposed (painted) and the floor surfaces are of a rubberised resin with curved edges and painted skirting bands.
7.3.14 As referred to above the main surviving plant in this part of the building are four pairs of vertical ducts which are grain elevators to raise the grain to the top of the silos but there are some other pieces of plant at individual floor levels. This includes a large metal diamond shaped vessel at second floor which funnels down to a chute through the floor slab and which had a door hatch in the upper part. At third and fourth floor there a number of vessels with what appears to be small grinding or milling machinery and in the same area there are overhead ducts which pass down to second floor level.
7.3.15 Between the first and third floors there is a vertical, modern pallet lift.
7.3.16 At second floor (and possibly elsewhere) there are a number of surviving light switches which are probably primary, dating from the 1950s phase of this building.

### 7.3.17 Seventh floor (PI. 164-167)

7.3.18 The seventh floor is directly above the concrete grid of individual silos and is a large open-plan area housing the network of ducts which fed each silo. The feed plant comprises three main horizontal metal ducts, suspended from the ceiling and extending east to west along each of the main bays. Beneath each of these there are sloped chutes (mainly pairs of 'feet') extending down to carry foodstuff into the 11 silos and various hatches (mainly circular) to allow visual access into the silos. The ducts have identifying numbers and several have modern notes on
stating that 'This is food grade Durum Wheat'. One has the date $4 / 12 / 14$ and there are several warning signs regarding the explosive danger of flour/dust.
7.3.19 At this level it is interesting to note that the different phasing of Blocks $D$ and $E$ can be seen in the reinforced concrete frame. As noted above Block D (1952-4) was constructed with a monolithic frame in the tradition of Francois Hennebique, with rectangular section concrete posts and beams (downstands), but Block E (Bays 27-30, constructed 1956) has a flat slab supported by mushroom columns with splayed heads and with slightly dropped panels between columns. Unlike in the rest of the complex however the columns are square or rectangular in section rather than octagonal.
7.3.20 At this floor Block $D$ is stepped or staggered so that the westernmost bay at seventh floor is above the easternmost bay of the grain cleaning block at sixth floor and below. This bay (Bay 19) includes the vertical elements such as the lift at the south end, the stairs at the north end and the grain elevator ducts between.
7.3.21 Eighth floor (PI. 169-175)
7.3.22 At eighth floor level Bays 19 and 20 are enclosed and house various items of plant including the pairs of vertical ducts and a large conical vessel with electric motor and possibly a small mill at the bottom. In the ceiling there is some possible evidence of former openings being cemented over, reflecting a change or rearrangement of machinery.
7.3.23 At the southern end of this area is the lift with telescopic doors, which on lower floors opens to the west (ie to serve main mill) but here opens to the east. Immediately to the east of this is a small hatch in both the floor and ceiling. In the southern half of this area is a raised chamfered concrete platform, c .10 cm tall. The square columns at this level are $40 \mathrm{~cm}^{2}$.
7.3.24 At this level the flat roof above the main silos range is accessible and it has a number of features of interest (PI. 177-181). One of these is a set of 11 regularly spaced metal fixings bolted to the top of the coping along the north wall of Block D (PI. 181). Each of these is a small bracket, c .30 cm wide, with a pair of short horizontal spurs which would have held a further element (now removed). The westernmost fixing is close to the taller part of the building and it is noticeable that they don't continue along the north wall of Block E. Approximately 2 m in from the parapet there is also a set of 11 square patches of reformed felt on the roof surface, aligning with the metal fixings and clearly relating to them (PI. 177). It is possible that they fixed some kind of simple hoist for sacks on the outside of the building. There are also a series of other small patches of reformed roof felt which may well indicate the locations of former plant although these are harder to interpret (PI. 178).
7.3.25 The basic phasing of the silos block is also visible in the form of two north-to-south curbs which marked the edges of the former free-standing blocks (ie either side of Bay 26)
7.3.26 Ninth floor (PI. 182-184)
7.3.27 Similarly to the floor below, the ninth floor comprises two enclosed bays, accessed from the staircase against the north wall. Again, at this level the lift at the southern end opens to the east and there is a hatch in the floor immediately east of this.
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## 8 New Warehouse

### 8.1.1 Introduction

8.1.2 The new warehouse was constructed $c .1981$ to the designs of the architect Raymond C Price, adjoining the north side of Block A and the west side of Block B. This was almost certainly undertaken in the same phase which saw the removal of all the rail facilities on the site and the move to road distribution by lorries. It also included the addition of the entrance foyer and stair projection at the west end of Block A and the freestanding boiler house. The date of the warehouse has recently been confirmed by an artist's impression found on site and dated Dec 1980 (See Appendix Pl. 31). Presumably this view was produced as part of the design process and therefore the main construction would have been undertaken in 1981.
8.1.3 This part of the factory is of little heritage significance and the level of recording in the current project reflects this, equating more to a Level 1 survey than Level 2 . In addition, at the time of the recording the interior was inaccessible due to filming being undertaken. Previous photographs have been provided to OA by RPS CgMs and these have been used in the current work.

### 8.1.4 Exterior (PI. 26-31)

8.1.5 The warehouse is a large roughly square plan, single-storey structure comprising four steelframed bays, orientated north to south. The roof has a very shallow M-profile with two pitched roofs over the four bays. The lower parts of the main walls are of brick construction with vertical piers of red brick and panels between which continue the wider factory 'house style' of mainly red brick with black headers every fifth course. The upper part of the elevations comprise pre-fabricated profiled metal cladding painted white.
8.1.6 At the north-west corner of the structure is a modern boiler house painted blue (some brick elements some panels) and with roller shutter doors in the west wall. To the south of this is a vertical cylindrical tank and then also a larger one that probably contains water for the factory sprinkler system. Adjacent to this tank is a small brick building with a sign labelled 'sprinkler pump room'.
8.1.7 The brick lower part of the north side of the warehouse block has a stepped (saw-tooth) profile to form 6 loading bays for lorries to reverse up to. It is clear from the brickwork that secondary adaptations have been made to each bay.
8.1.8 Also on the north side of the warehouse there is a small, detached, brick WC block and a lightweight metal materials store.

### 8.1.9 Interior (PI. 185)

8.1.10 The interior of the warehouse is essentially a single open space, other than the boiler house at the north-west corner, divided by three north-to-south rows of five steel posts (l-section). The central row of posts support a valley between the two sections of pitched roof while the other two rows support the two north-to-south ridges (deep section I-beams). There are 10 sets of east-to-west purlins supporting the pre-fabricated roof cladding.
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## 9 CONCLUSION

9.1.1 The Quaker Oats Factory in Southall is a prominent local landmark which grew steadily from its original construction in 1936 through until the 1980s and is well known as being where Sugar Puffs were manufactured. Operations on the site reduced in the early $21^{\text {st }}$ century before ceasing in 2016 and a planning application has been made for the clearance of all the buildings as part of the redevelopment of the site.
9.1.2 Although it is not listed the complex is of some heritage interest, partly due to the prominence of the main range and the recognisable nature of the Honey Monster/Sugar Puffs brand, but also due to it being a good example of a particular type of architecture known as a 'daylight factory'. This type of building originated in the first decade of the $20^{\text {th }}$ century in America and are most commonly associated with a number of landmark car plants in Detroit, including Henry Ford's Highland Park. Indeed they are often called the 'American daylight factory'.
9.1.3 They comprise multi-storey buildings with a reinforced concrete frame visible externally as a regular grid rather than traditional loadbearing walls, and extensive glazing panels between to allow as much natural light into the factory as possible. The modular reinforced concrete frame extends through the interior to create a flexible space for manufacturing and in the archetypal daylight factory the columns have splayed 'mushroom' heads supporting flat decks at each floor.
9.1.4 The earliest daylight factories were constructed before the First World War and in the interwar period new innovative types of manufacturing complex were more commonly being constructed such as the 'by-pass' factory which comprised a huge single storey shed behind a prominent (and often decorative) office block at the front. In this context the construction of the Quaker Oats Factory in 1936 would have been a remarkably late example of a daylight factory although the vertical nature of this type of building was always well suited to cereals manufacture, and the complex may have been intended to follow the architectural style of earlier Quaker Oats Factories in America.
9.1.5 Later extensions at Southall continued the basic form of the original 1930s range and these, including some from the 1960s with mushroom shaped heads, would have been even more archaic when they were constructed.
9.1.6 The current report has been requested by the local planning authority to create for posterity an archive record of the Quaker Oats Factory prior to its demolition.

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Figure 2: Extract from 1952 site plan


Figure 3: Extract from 1953 Ordnance Survey plan


Figure 4: 1959 industrial Survey plan


Figure 5: 1960 site plan


Figure 6: Extract from 1961 Ordnance Survey plan


Figure 7: Extract from 1973-4 Ordnance Survey plan


Figure 8: Extract from 1983-5 Ordnance Survey plan







Block D1
(1952-4)
$\begin{array}{lllll}5 & 16 & 17 & 18 & 19\end{array}$
$\leadsto \quad 4$ Block E- -
(1956)

Early 60s
Infill bay




\%



Datum: 20.00m.

East Elevation


Datum: 20.00m.


Datum: 20.00 m .


Datum: 20.00m.

$\qquad$

$\qquad$


Datum: 20.00 m .

Section looking West


Datum: 20.00m


Datum: 20.00 m
Elevation 1.


Datum: 20.00 m .
Elevation 2.



Datum: 20.00 m .
Elevation 3.


Datum: 20.00 m
Elevation 4.



Plate 1: General view of main mill from north


Plate 2: Main mill from north-west


Plate 3: Main mill from north


Plate 4: Silos range (Blocks D \& E) from north


Plate 5: Silos and main mill (Blocks D, E, F)


Plate 6: Blocks A \& B from north-east


Plate 7: North elevation of Block F


Plate 8: South end of east elevation of Block B

Plate 9: Loading canopy on north side of Block F


Plate 10: Loading canopy on north side of Block F


Plate 11: Loading canopy on north side of Block F


Plate 12: Stairs and plant at junction between
Blocks A \& B


Plate 13: Block A beyond Block B from north-east


Plate 14: Detail of north elevation of Block F


Plate 15: North elevation of Block A2


Plate 16: Tower on north side of Block A


Plate 17: Corbel on north side of Block A2


Plate 18: Honey Monster logo on north side of tower


Plate 19: West side of Block B


Plate 20: East side of Block B under canopy


Plate 21: East side of Block B under canopy


Plate 22: East side of Block B


Plate 24: North-east corner of Block B


Plate 25: North elevation of Block B


Plate 26: North elevation of $c 1981$ warehouse


Plate 27: Detail of loading bays on north side of new warehouse


Plate 28: North-west corner of new warehouse


Plate 29: North-west corner of new warehouse


Plate 30: Detail of west elevation of new warehouse


Plate 31: West elevation of new warehouse


Plate 32: West end of Block A and main entrance


Plate 33: Main entrance to factory (West end Block A)


Plate 34: Canopy by canal on south side of factory


Plate 36: South side of factory under canopy


Plate 37: Detail of canopy on south side


Plate 38: South side of Block A beneath canopy


Plate 39: South side looking west


Plate 40: Detail on south side of Block F


Plate 41: Detail on south side of Block F


Plate 42: Base of south side of silos range


Plate 43: Plant bases on south side of silos


Plate 44: Probable grain intake plant on south side of silos


Plate 45: Detail of bay on south side of main mill

Plate 46: Distant view of south side of factory


Plate 47: Distant view of south side of factory


Plate 48: Detail of south side of factory


Plate 49: Doors at top of turret


Plate 50: Detail of top of turret


Plate 51: West side of top three floors in Block $D$


Plate 52: East side of top two floors in Block D


Plate 53: Basement: Block F looking north-east


Plate 54: Basement: Block F looking north


Plate 55: Basement: Block B looking north


Plate 56: Basement: Block F looking north-west


Plate 57: Basement: Block A looking into Block F


Plate 58: Basement: Firedoors in Block D looking to Block F


Plate 59: Basement: Plant in Block D


Plate 60: Basement: Block D looking west


Plate 61: Basement: Plant in Block D

Plate 62: Basement: chutes in Block D


Plate 63: Basement: typical column head in Block B


Plate 64: Ground floor Block F looking west


Plate 65: Ground floor Block F looking west


Plate 66: Ground floor Block F looking east


Plate 67: Ground floor Block F looking north-west


Plate 68: Ground floor junction between Blocks A \& F


Plate 69: Ground floor Block A looking east


Plate 70: Ground floor junction between Blocks A \& F


Plate 71: Ground floor Block A looking north towards door to Block B


Plate 72: Ground floor fire doors to Block B from Block A


Plate 73: Ground floor fire doors to Block B from Block A


Plate 74: Ground floor: research room at west end of Block A


Plate 75: Ground floor: research room at west end of Block $A$


Plate 76: Ground floor: Block B looking east


Plate 77: Ground floor: Block B looking north


Plate 78: Ground floor: Block B looking south


Plate 79: Ground floor: north end of Block B


Plate 80: Ground floor: north half of Block B


Plate 81: Ground floor: Block D looking south-east


Plate 82: Ground floor: elevator ducts in Block D


Plate 83: Ground floor: elevator ducts in Block D


Plate 84: First floor: Block A looking east


Plate 85: First floor: Block A looking north


Plate 86: First floor: Block A looking west


Plate 87: First floor: ducts at junction between Blocks A \& F

Plate 88: First floor: Block A looking west


Plate 89: First floor: south side of Block F


Plate 90: First floor: Block F looking west


Plate 91: First floor: Block D looking west into Block F


Plate 92: First floor: concrete framing in Block D


Plate 93: First floor: Block B, main office stairs


Plate 94: First floor: Block B, main office stairs


Plate 95: First floor: office in north part of Block B. Looking north


Plate 96: First floor: office in north part of Block B. Looking south


Plate 97: First floor: canteen in Block B


Plate 98: First floor: head of stairs at west end of Block A


Plate 99: First floor: office in Block B


Plate 100: Second floor: Block F looking north


Plate 101: Second floor: west side of Block F looking into Block A


Plate 102: Second floor: Block A looking south-west


Plate 103: Second floor: Block F looking south

Plate 104: Second floor: Block A looking east


Plate 105: Second floor: machinery in Block A


Plate 106: Second floor: machinery in Block A


Plate 107: Second floor: man lift in Block D


Plate 109: Second floor: corridor at south end of Block B


Plate 110: Second floor: main corridor in Block B


Plate 111: Second floor: staircase to SW of offices


Plate 112: Second floor: offices in Block B


Plate 113: Second floor: offices in Block B


Plate 114: Second floor: 1950s floor tiles exposed in Block B


Plate 115: Third floor: Block A looking west


Plate 116: Third floor: plant bases in Block A


Plate 117: Third floor: general view looking west in Block A


Plate 118: Third floor: Block F looking north


Plate 120: Third floor: Block A looking east


Plate 121: Third floor: Room at north east corner of Block A1


Plate 122: Third floor: large hole in ceiling at south-east corner of Block A2


Plate 123: Third floor: fire stairs at south-west corner of Block F


Plate 124: Third floor: elevator etc in room at NE corner of Block A1


Plate 125: Third floor: Block D looking east


Plate 126: Third floor: Block D looking north-west


Plate 127: Third floor: Block D looking south


Plate 128: Third floor: Man lift Block D


Plate 129: Fourth floor: Block A1 looking west


Plate 130: Fourth floor: Block A2 looking north-east


Plate 131: Fourth floor: Block F looking east


Plate 132: Fourth floor: Block A2, west end


Plate 133: Fourth floor: Block A2, west end looking east


Plate 134: Fourth floor: workshop at north-west corner


Plate 135: Fourth floor: Room in Block A2


Plate 136: Fourth floor: Man lift


Plate 137: Fourth floor: Staircase at south-west corner of Block F


Plate 138: Fourth floor: Junction between Block A1 and F


Plate 139: Fourth floor, Block D looking west into Block F


Plate 140: Fourth floor: Block D, northern end


Plate 141: Fifth floor: north side of Block F looking east


Plate 142: Fifth floor: Block F looking north-west


Plate 143: Fifth floor: Block A2 looking east


Plate 144: Fifth floor: Block A2 looking west


Plate 145: Fifth floor: Block F looking east


Plate 146: Fifth floor: Block F looking east


Plate 148: Fifth floor: Rooms at north-west corner


Plate 149: Fifth floor: south-east corner of Block D looking west


Plate 150: Fifth floor: Block D looking west


Plate 151: Sixth floor: Room at west end (Block A2) looking east


Plate 152: Sixth floor: South bay of Block A2 looking east


Plate 153: Sixth floor: Block F looking south-west


Plate 154: Sixth floor: Machinery in Block A1


Plate 155: Sixth floor: Machinery in Block A1 looking west


Plate 156: Sixth floor: Machinery in Block A1 looking north-west


Plate 157: Sixth floor: Machinery in Block A1


Plate 158: Sixth floor: Block F looking east into Block D


Plate 159: Sixth floor: Block D looking north-east


Plate 160: Sixth floor: Block D looking west into Block F


Plate 161: Sixth floor: Block D looking south-west


Plate 162: Sixth floor: Man lift in Block D


Plate 164: Seventh floor: general view looking east


Plate 165: Seventh floor: general view looking east


Plate 166: Seventh floor: Feed plant above silos


Plate 167: Seventh floor: Feed plant above silos


Plate 168: Seventh floor: flat roof above main mill looking west


Plate 169: Eighth floor: milling plant


Plate 170: Eighth floor: General view of plant


Plate 171: Eighth floor: view of plant looking north


Plate 172: Eighth floor: plant looking south


Plate 173: Eighth floor: detail of concrete frame


Plate 174: Eighth floor: windows looking west


Plate 175: Eighth floor: stairs on north side of building

Plate 176: East elevation of upper two floors from flat roof


Plate 177: Features on roof above silos range


Plate 178: Roof above silos range looking east


Plate 179: Features on roof of silos range


Plate 180: Marks on roof above silos range


Plate 181: Fixings along north parapet wall by silos range


Plate 182: Ninth floor: view looking north


Plate 183: Ninth floor: plant at south end


Plate 184: Ninth floor: plant looking north-west


Plate 185: View in new warehouse constructed in c 1981


Plate 186: New warehouse added in c.1981, viewed from south-west


Plate 187: New warehouse (c.1981) to left and west side of Block A


Plate 188: West side of new warehouse with pump room and water tank


Plate 189: Sprinkler pump room on west side of new warehouse.

## APPENDIX A HISTORIC PHOTOGRAPHS FOUND ON SITE



Appendix plate 1: 1913 Excavation of the Southall arm of the Grand Union Canal in 1913, looking south from site (from folder at London Metropolitan Archives on Maypole Dairies)


Appendix plate 2: Completed Southall arm of the Grand Union Canal in 1913, looking west with site on right bank (from folder at London Metropolitan Archives on Maypole Dairies)


Appendix plate 3: View from the summer of 1936 showing the excavated basement for the new factory. Note column bases in the process of formation (from scrapbook of historic photographs found on site)


Appendix plate 4: Inauguration ceremony to mark the start of concrete pouring for the new factory, 24 March 1936 (from scrapbook found on site)


Appendix plate 5: View from north-west, dated 4 February 1938, showing the original form of Block A (centre and right) and Block B (left). The image also shows the start of works to raise Block A to seven storeys along its full length and to add a single storey extension to Block B (from scrapbook of historic photographs found on site)


Appendix plate 6: View from north-east dated 2 August 1938 showing the factory following the extensions of that year. (from scrapbook of historic photographs found on site). A further note in the scrapbook states that during the Second World War an air raid shelter was formed in the basement for staff and another area was converted to an ARP centre by the local authority. The building was also camouflaged during the war


Appendix plate 7: Retirement of Mr FH Seymour, December 31 1943, within office range (framed photograph found on site)


Appendix plate 8: View from south-east showing the additional rail sidings added in 1948 on the west side of Building A and the spur line to the north side of Building B (from scrapbook of historic photographs found


Appendix plate 9: West side of mill, probably late 1940s (from scrapbook of historic photographs found on site)


Appendix plate 10: Former Maypole Dairies Warehouse (Building C) which was acquired by Quaker Oats in 1948 (from scrapbook of historic photographs found on site)



Appendix plate 11: Two images from the visit of HRH the Duchess of Kent to Southall Mill, 16 February 1950 (from scrapbook of historic images found on site)
oxfordarchaeology $N: \backslash H$ invoice codes $\backslash H N E B A \backslash$ *The Honey Monster Factory, Southall*CAR*01.05.19


Appendix plate 12: Christmas dinner at the mill , 1951 (from scrapbook of historic photographs found on site)


Appendix plate 13: View from May 1953 showing the base of the new silos range during its construction (from scrapbook of historic photographs found on site)


Appendix plate 14: View from south-west during construction of the new silo building in 1953 (from file of loose photographs found on site)


Appendix plate 15: View from June 1953 showing the new silos range under construction (from scrapbook of historic photographs found on site)


Appendix plate 16: Two images from June 1953 showing the continuous pouring process of constructing the silos (from scrapbook of historic photographs found on site)


Appendix plate 17: View from south-east showing the New Silo Building (Building D) in mid 1955 (from scrapbook of historic photographs found on site)


Appendix plate 18: View from north-east dated 1955 showing new silos range (1952-4) and office extensions underway (from scrapbook of historic photographs found on site)


Appendix plate 19: View from July 1955 showing the extension of the office range (Block B). This raised the range to three storeys (from scrapbook of historic photographs found on site)


Appendix plate 20: View from July 1955 showing the extension of the office range (Block B). This raised the range to three storeys (from scrapbook of historic photographs found on site)


Appendix plate 21: View from 1955 showing the construction of a new boiler house. Looking west towards Building C (from scrapbook of historic photographs found on site)


Appendix plate 22: View from Dec 1955 showing the completed third floor of the new offices (from scrapbook of historic photographs found on site)


Appendix plate 23: View from April 1956 showing new extension to offices (Block B) and the 1952-4 New Silo Building (from scrapbook of historic photographs found on site)

Appendix plate 24: View from above showing the chutes at the base of the new silos range during its construction in the summer of 1956 (from scrapbook of historic photographs found on site)


Appendix plate 25: View from south-east showing the construction of the silo extension in the summer of 1956 (from scrapbook of historic photographs found on site)


Appendix plate 26: View from east in April 1957 at launch of Ful-O-Pep dog food (from scrapbook of historic photographs found on site)


Appendix plate 27: View from north-east showing north side of Building F constructed in 1957. (from scrapbook of historic photographs found on site)


Appendix plate 28: View from south-east showing south side of Building F in Nov 1957. This was subsequently raised to seven storeys (from scrapbook of historic photographs found on site)


Appendix plate 29: Undated view (probably c.1957) following completionof the 1956 Silo Extension (Block E). At this time the two silo blocks remained detached (framed photograph found on site)


Appendix plate 30: Undated view (probably c.1960) within main Mill building (framed photograph found on site)


Appendix plate 31: Artist's impression of proposed warehouse on west side of factory, December 1980. The artist is John Sharp RIBA FISA and the architect of the new development is shown as Raymond C Price RIBA (framed drawing found on site)


Appendix plate 32: Proposal axonometric drawing, probably 1980 (framed drawing found on site)


Appendix plate 33: erial photograph of site, probably very early 1980s (framed photograph found on site)


Appendix plate 34: erial photograph of site, probably very early 1980s (framed photograph found on


Appendix plate 35: Undated view from south-west, probably early 1980s showing new warehouse, new entrance to Building A and new stair tower (from file of loose photographs found on site)

## APPENDIX B Plans of Quaker Oats Factory, 1994



(ave 1 Orte 1 Reribion .


tasel ore / Rrition, 1 B






TENTH FLOOR


TENTH FLOOR ROOF

Quaker Oats Factory, Southall, Ealing

## APPENDIX C

1920


TRENCH DETAIL IN SUB-BASEMENT






## 




## Head Office/Registered Office/ OASouth

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Janus House
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[^0]:    ${ }^{1}$ The current report has continued to use the site's previous referencing system to identify the different blocks (ie Blocks A-F). These partially reflect the growth of the complex and they were set out in the Statement of Significance although they were also used in many of the historic photographs and plans found on site. However, as the main three blocks ( $\mathrm{A}, \mathrm{B}, \mathrm{D}$ ) grew in a number of phases these have been further subdivided to reflect this (eg Blocks A1, A2, A3 etc).

[^1]:    ${ }^{2}$ The architect and date of these elements of the complex have recently been confirmed by two drawings found on site which had been produced during the design process. These are an artist's impression of the proposed complex, viewed from the south-west and dated Dec 1980, together with an undated axonometric view. The artists impression was produced by John Sharp RIBA FISA. If the artist's impression was produced in December 1980 it is likely that the main construction works would have been in 1981.

[^2]:    ${ }^{3}$ At its eastern end Block $A$ adjoins Block $D$ (the silos) and although the main silos are clearly distinct the character of the western three bays of Block D matches that of the mill rather than the silos. Despite this in the current description these three bays have been included with the silos, partly to respect the pre-existing block referencing and partly because it illustrates that the whole of Block $D$ was originally detached from Block $A$.

[^3]:    ${ }^{4}$ It should be noted that in Block B large parts of the structural frame are hidden by modern ceilings and boarding so some of the description assumes that the structural detailing continues consistently.

