ENGLISH HERITAGE

ROMFORD FACTORY

ELVET AVENUE

GIDEA PARK

LONDON BOROUGH OF HAVERING

GREATER LONDON

NBR INDEX NUMBER: 106386

NGR: TQ 535 896

Surveyed October 2000
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SUMMARY

This complex of former industrial buildings has at its core two solidly constructed brick-and-iron ranges and an engine house, also of brick, built in 1841-2 as locomotive workshops for the Eastern Counties Railway. Two rows of workers' housing (demolished in the 1960s), named Factory Terrace, were built nearby in 1843 to serve the site. The complex had only a short period of use before it was superseded by a new railway works in Stratford opened in 1848. Conversion into a tarpaulin sheet and sack factory for the railway company then followed by *c*1854. This activity continued for just over a century, ensuring the survival of much of the original fabric of the former workshops with only piecemeal alterations. This is significant because the Gidea Park buildings date from the early railway period when there was no established pattern of layout for railway works; the types of structures required for such a facility being at formative stages of development. Furthermore, the two-tier cast-iron frame of the south range has constructional and functional interest as an early galleried engineering workshop.

Other functions were subsequently relocated to the site, which was augmented by a large brick provender store, built some distance to the west of the main factory in 1902 (destroyed by fire *c*1965). Other additions occurred *c*1913-4, when two brick ranges containing a grease factory and sponge-cloth laundry, were built to the south of the existing buildings. These works were carried out by the Great Eastern Railway Companuy, successor to the Eastern Counties. The final addition to the sheet factory was made in 1920-1, when a sheet drying shop, an early example of a building entirely walled with exposed concrete blocks, was put up on the eastern side of the site. By the 1970s Romford Factory, as the site was commonly known throughout its operational life, had been leased as warehousing to Railstore Ltd. This firm erected a large goods shed to the west of the original blocks, designed in 1974-6. In 2000 the complex was the subject of a redevelopment scheme, retaining the original listed ranges for conversion to residential use.

PREFACE

This report arises from the casework of the English Heritage Architectural Investigation Section. We gratefully acknowledge the co-operation of Fairview New Homes plc, most particularly Stephen Gough, for facilitating our survey. We are also indebted to John King and Railtrack plc, and Alan B. Webb and Michael Senatore of the Great Eastern Railway Society for their help and assistance. Figures 5,6,7,8,9,10,11,12,13,14,15 are ©English Heritage. Figure 4 is © Railtrack plc.

SITE DEVELOPMENT

The Eastern Counties Railway Company (ECR) had been brought into being by an Act of Parliament in 1836, for the purpose of constructing a railway line from Shoreditch, just to the north of the City of London, to Norwich or Yarmouth, via Colchester and Ipswich. One of the moving forces behind the company was the engineer John Braithwaite (1797-1870), who had prepared the prospectus for the company and who was subsequently appointed its Engineer in Chief. He oversaw the construction of the line, with the first section from Mile End to Romford opening in 1839. This had proved more difficult and expensive to construct than had originally been anticipated, but the work became easier once the line reached the Essex countryside and the next section of track, from Romford to Brentwood, opened the following year. From 1839 to1842 the company was also engaged in the construction of its London passenger terminus, Shoreditch Station (later incorporated into Bishopsgate Good Station), to Braithwaite's designs.[1]

Work on the locomotive workshops at Hare Street or Squirrels Heath, as the Gidea Park locality was then known, commenced in 1841.[2] At this date no railway company manufactured its own locomotives but these early privately built train engines required considerable upkeep and had a fairly limited operational range.[3] Initially the repair of the ECR locomotives was probably carried out in temporary premises at Stratford. However, any expansion of these facilities was apparently constrained by the presence of the North and Eastern Railway (N&ER), which shared the site. Prior to the construction of its line the ECR had been obliged to purchase the Hare Hall estate in Essex, one mile to the east of Romford. The house, a Palladian mansion by James Paine built in 1768-9, was given rent-free for Braithwaite's use, and it was decided to use part of the estate, separated by the railway line and bounded by a stream on its east side, for a locomotive repair works (Fig.1). A contract for the building works was awarded to a Mr Jay in February 1841, at a cost of £13,943, and construction began immediately. Construction took longer than anticipated but by October the roof and ironwork were complete.

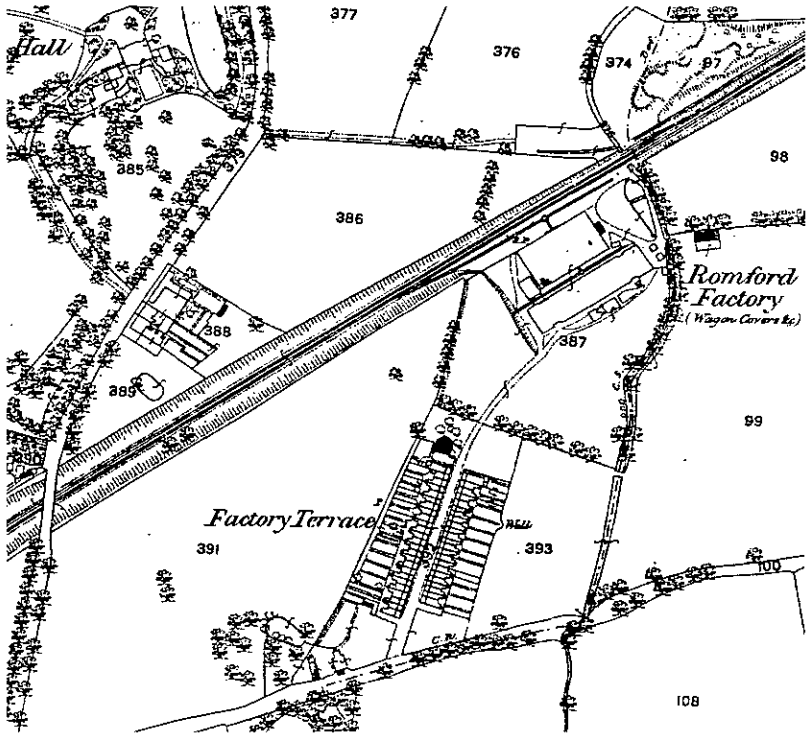


Fig. 1 Hare Hall, Romford Factory and Factory Terrace in 1871 (Ordnance Survey Map).

It was only after the workshops had been finished that attention was given to accommodating the workforce, necessary because the works were surrounded by open countryside, with only the small rural settlements of Squirrels Heath and Hare Street nearby. In 1843 a Mr Markwick entered into a contract to build 30, later increased to 48, houses to the south of the works, thereafter known as Factory Terrace. The

two rows of houses, demolished in 1964, flanked the road entrance, now known as Elvet Avenue, into the site. It has been estimated that the ECR employed around 72 repair staff, most of whom would have been based at the Romford Factory.[4] Perhaps the largest job undertaken here was the conversion of the ECR's rolling stock from its initial gauge of 5ft (as determined by Braithwaite) to a new standard general gauge of 4ft 8 ½in (as recommended by Robert Stephenson).

In 1844 the ECR took over the running of the N&ER's line and acquired control of the workshops at Stratford, permitting an expansion of facilities there. This called into question the necessity for the Romford works and in 1845 the decision was taken to move its functions to the east London site. The transfer into newly built premises at Stratford was carried out in 1847-8, prompting a compensation claim from Mr Markwick in 1850 for his now empty cottages at Squirrels Heath .

In 1846 and 1848 ratings assessments of the site noted the presence of a railway engine house, stations and buildings, a manufactory, smiths and carpenters shops and a depot for carriages and engines.[5] These functions were seemingly all contained within the three parallel buildings that still form the heart of the complex (Fig.2). The north range adjoined the main railway line, with a longer block to the south; almost abutting this was an engine house with a central chimney stack. To the east of the north range was a large irregularly shaped water reservoir. Sidings with turntables would have been necessary to move the locomotives and wagons through and between the buildings. By 1871 there were sidings running to the north of the main range and between the two workshop buildings, linked by a track through the north block with turntables at either end, but these may have been less extensive in the 1840s.

The locomotive workshop was designed during Braithwaite's period of office, which lasted until May 1843, and were under erection only a short distance from his residence at Hare Hall. However, no original drawings appear to survive. The buildings' reuse, initially as a sheet and sack factory and latterly as warehousing, means that little evidence of the original processes have survived. The buildings must have contained tools and machinery, perhaps a small foundry for casting metal, as well as cranes for lifting the heavy parts. The southern engineering workshop has an internal cast-iron frame, forming a 'nave', open to the top-lit roof, and side aisles, floored to provide first-floor galleries on four sides. This arrangement was to become the common pattern for such type of buildings in the later nineteenth century. A comparable structure, a carriage shop of 1839-40, built to designs of Francis Thompson in association with Robert Stephenson for the North Midland Railway at Derby, has a similar arrangement of a tall single storey with galleries on four sides.[6] However, it appears that this building may have been originally two-storeyed throughout, and that the central portion was removed later in the 19th century for a travelling crane.

Following the opening of the Stratford Railway Works in 1848, the Gidea Park site was mothballed, consideration being given in 1851 to auctioning it along with the Hare Hall estate. Instead it was decided to reuse the buildings for a tarpaulin and sheet factory.[7] Some degree of modification to the existing structures would have occurred as a result, and a new siding was provided in 1852. The factory seems to have been in operation in 1854, when it was ordered that the cottages be obtained as residences for its operatives.[8] The principal activity was the manufacture of canvas sheets to protect goods in wagons and trucks, coated in boiled linseed oil (the 'tar' in tarpaulin being a misnomer) to make them waterproof. Sheets were also repaired and, from 1857, the manufacture and repair of sacks was substantially increased after the chaff-cutting department moved here from Brick Lane in east London. Chaff

was cut hay and straw used for feeding the company's horses, which increased in number during the latter half of the 19th century as goods traffic increased. In addition to delivering parcels and heavy goods horses were also required for shunting the trains. The relocation of the chaff-cutting department to the Romford Factory necessitated the relocation of the works' school, which had been housed in an upper room of the north range, to a cottage in Factory Terrace. The Eastern Counties Railway became the Great Eastern Railway (GER) in 1862. When the site was mapped by the Ordnance Survey in 1871 (Fig.2) it showed relatively few additions to the complex, these being a small block adjoining the north range and several small sheds spread around the eastern side of the site.

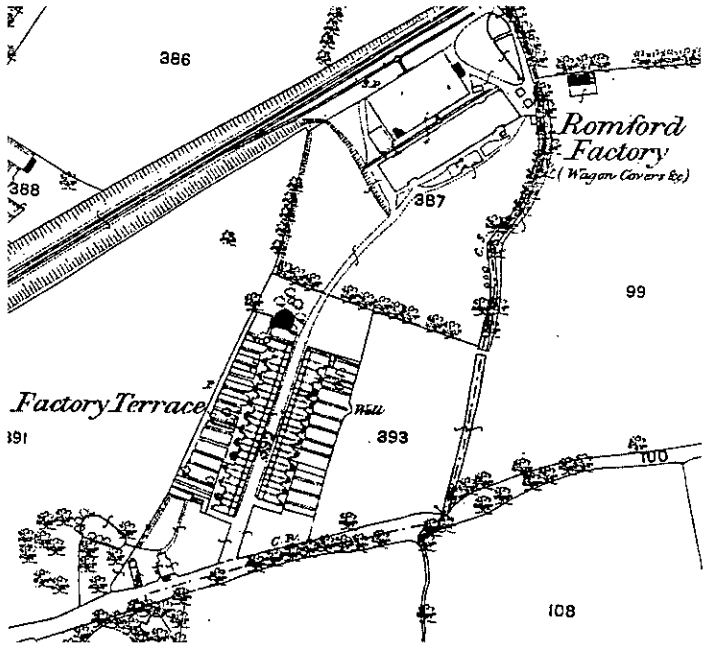
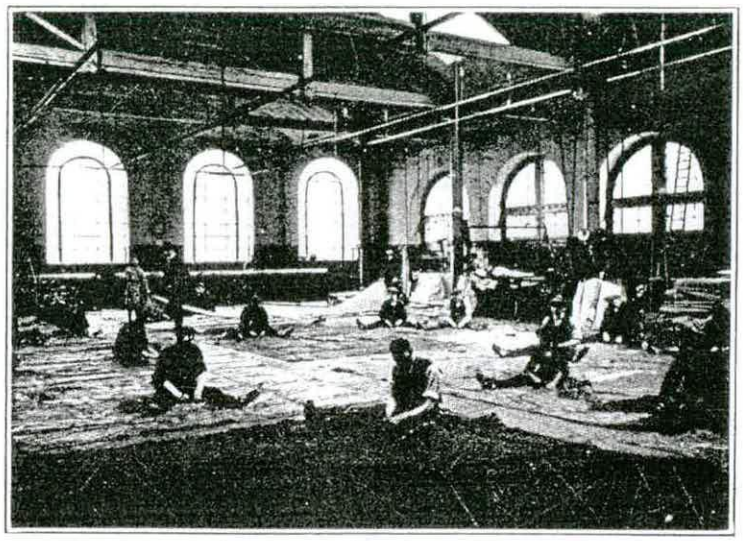


Fig. 2 Romford Fatory in 1871 (Ordnance Survey Map).

This changed in 1902 when a large factory building was built some distance to the west of the existing works to house the chaff-cutting and watch and clock repair departments. Commonly known as the Provender Store, as it produced horse fodder, this large brick structure was destroyed by fire in the 1960s. Additional functions were moved to the complex around 1913, when planning for a grease factory and sponge-cloth laundry on the south west of the site was underway. The job was awarded to J Parnell & Son, who submitted a tender of £3,834, and the work may have been completed by the following year.[9] This new addition comprised two, brick-built structures. The western block contained the grease factory and laundry, with external filter beds and oil pits, whilst the east range housed a grease store.[10] A siding was provided on the north side, with a circular crane at the east end to serve a loading dock adjoining the grease store. The existing engine house was extended at the east end at the same time. Around 1913 an additional siding and turntable were provided, entering the north range on the west side; soon after this section of the building was raised and rebuilt, perhaps as a consequence of a fire in 1916.[11]

In 1920 Romford Factory was described for the Great Eastern Railway Magazine. [12]Although imprecise as to exact locations, this account gives a broad indication of the processes involved in the manufacture and repair of truck sheets and sacks. The buildings, set in the 'beflowered greenery of Gidea Park', were described as 'unfactory-like', being 'clean, pleasant and handsome, having many large windows well adapted for viewing the fresh meadows before them'. At this date the 160 workers (60 of them women) were producing about 18,000 truck sheets and 100,000 sheets a year and repairing some 85,000 sheets and 725,000 sacks. A long upper floor room housed the sewing machines, powered by an electric dynamo in an adjacent shed, itself driven by a steam engine. Here the sheets were cut and sewn together (each sheet measured 21ft by 14ft 4in and was made up of five pieces) and given metal-edged ring holes. On the floor below the sheets were collected together in batches of fifty and folded into trolleys or carriers (17ft long, 3ft 1in wide, 1ft 7in deep), that ran along narrow gauge rails that traversed the shop, and moved into a dressing room. Here the sheets were fed

through a machine that coated the canvas with a mixture of boiled linseed oil, 'vegetable black' and 'dryers'. This liquid was mixed in a 6ft-deep circular iron pit and then pumped into an elevated reservoir and then along three troughs, passing over and in front of the dressing machine. In the last trough, a 17ft roller was coated in the oil dressing, which was then transferred by brushes to the sheet as it passed through the machine. These activities appear to have taken place in the south range. The newly dressed sheets were then hung up to dry for a fortnight, before being coated a further two times, a week apart, and finally hung for a fortnight. Suspended from heavy posts connected to huge beams, the sheets were hung by the shorter sides (as many as 2400 a time) swaying slightly in the wind, 'practically non-dripping unless one happens to pass beneath with a new hat'. A 'large shop' was devoted to repairing sheets, by necessity a well-lit space. Here the sheets were laid out on a huge floor and the male repairers sat on them, legs apart, hand stitching the holes and tears (Fig 3). Presumably for reasons of propriety, female repairers stood over large wooden drums, over which the sheets were draped. The contemporary account concludes with a description of the sack making and repairs sections, located in the upper floors of the northern range.



REPAIRING TRUCK SHEETS.

Fig. 3 Repairing truck sheets in 1920 (Great Eastern Railway Magazine).

Soon after this account was published, but before the GER was merged into the London and North Eastern Railway in 1923, another substantial addition to the factory was made. Erection by the Unit Construction Co Ltd of a large rectangular building for drying sheets to the east of the north range for £9,625 was approved in September 1920.[13] By 1922 the building was standing.[14] It was built of exposed concrete blocks, a building material that was being used in an innovatory housing development at Braintree at this time.[15] The spur for such experimentation was the shortages of labour and materials during and after the war.

The tarpaulin factory continued to operate until *c*1960 and by the early 1970s the buildings had been leased to Railstore Ltd.[16] This firm erected the large shed, warehouse 'H', on the west side of the site. Designs for the building were produced by R S Chesher in 1974-5 and it was presumably built soon after. A coeval detached canopy to the north of the shed is of identical construction to a canopy abutting the north range and former sheet drying shed.

The complex of buildings at Gidea Park is presently the subject of plans for residential redevelopment. The developer, Fairview New Homes plc, are proposing to refurbish and convert the listed north and south ranges and engine house and demolish the other structures on the site and replace them with apartment buildings.

BUILDING DESCRIPTION

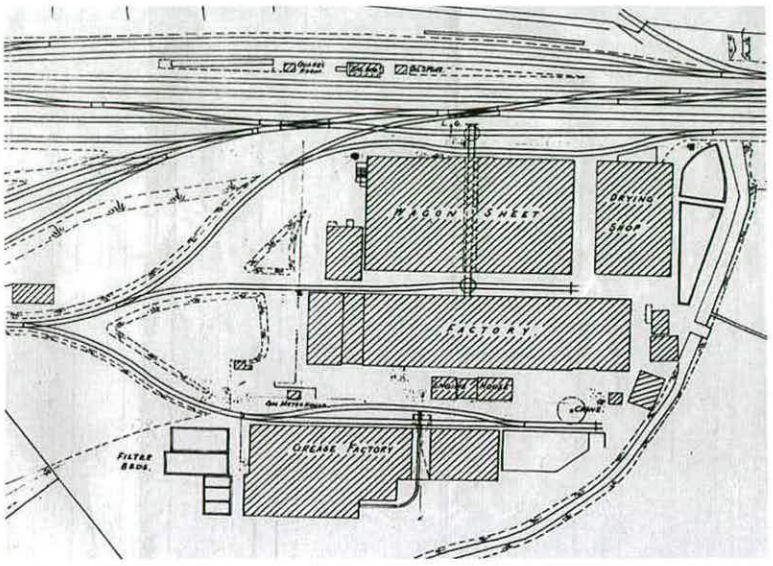


Fig. 4 Romford Factory, 1922 block plan (Railtrack plc).

At the time of recording in 2000 the site comprised three parallel ranges of yellow stock brick, all built in 1841-2. Later structures flanked the north range - to the east was a large shed dating from 1920-1 with a *c*1970s extension while to the west was a modest building of mid-to-late 19th century date. The south of the site was occupied by two ranges of *c*1913 date. On the west side of was a large *c*1975 shed.

The Sheet and Sack Factory

The North Range

This range is in two distinct parts. The northern half is of two storeys with hipped roofs, raised up above a central pediment to form a square tower that was once topped by a clock tower, removed by the late 1920s. This tower is out of proportion to the rest of the building and is less architecturally detailed than the elevation and may therefore be a later addition. The lower, southern half of the building is of one storey with a hipped roof and a central wooden louvred lantern.

The symmetrical 11-bay north elevation has a modest classical treatment, given corner pilasters with low parapets, a tall central archway with a semi-circular stone arch and iron key-block, and a raised pediment. Flanking the arch on the ground floor are windows with cast-iron tripartite frames in gauged brick arches. The other ground-floor fenestration is formed of similar, but larger, windows, linked by a continuous stone band at sill level. Those to the east side of the elevation have been altered to form doorways to serve an inserted platform, subsequently removed. A 1970s canopy of corrugated asbestos panels carried on steel joists now obscures the upper part of the façade, which has gauged-brick, flat-headed windows with tripartite casements, and a stone cornice. The canopy also covers an ornamental stone plaque to the centre.

The east and west elevations are in two parts. The returns of the northern section of the range continue the same arrangement of the north elevation. Doorways exist at the first-floor level on both elevations, that to the east presently served by a later fire escape, whilst the west side has lost its wooden stair, reduced to a wooden platform. The east and west sides of the southern one-storey section of the building have five-bay elevations with round-headed windows and plainer corner pilasters. The west side has undergone some alteration, its roof line has

been raised and its northernmost window enlarged to form a large doorway that at one time served a railway siding (Fig.5).

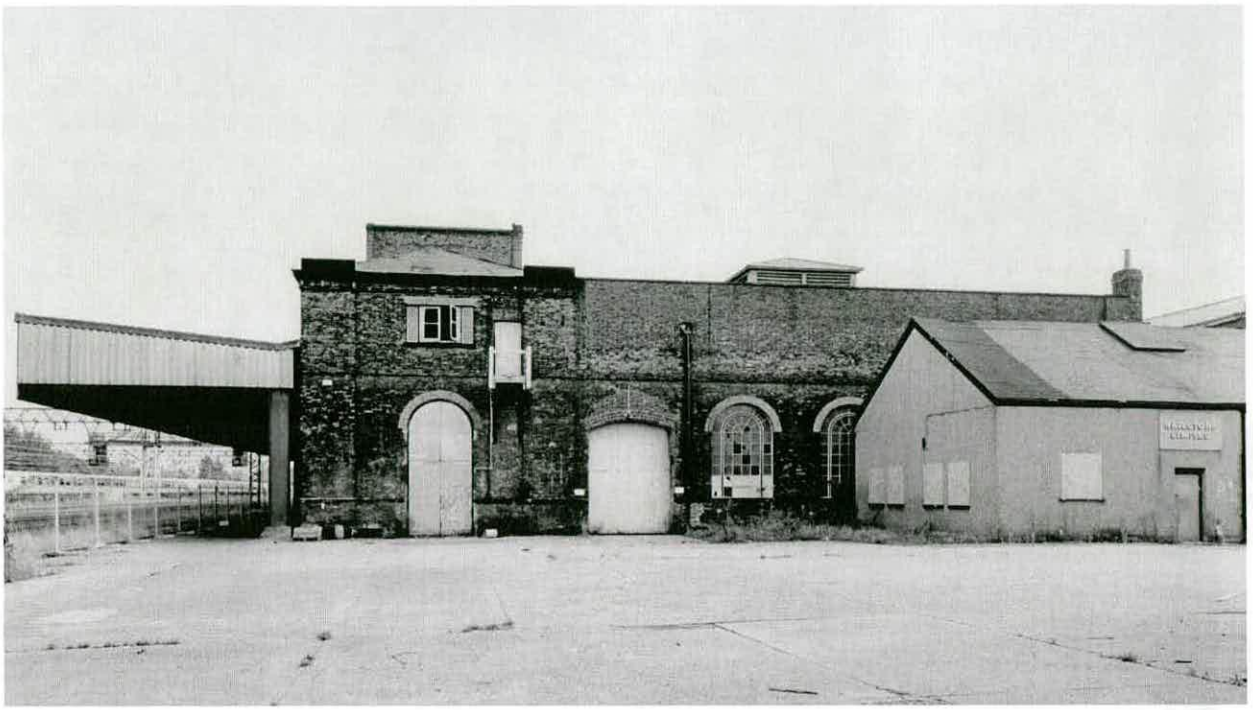


Fig. 5 The north range from the west (English Heritage BB009383).

The south elevation has arched openings with stone keyblocks and impost bands, each with double-hung wooden doors and glazed heads. It is likely that these openings were originally open to allow for ventilation. The siding between the north and south ranges still survives, but the centrally-placed turntable has been removed or concreted over. A covered walkway, of wooden construction, has been inserted between the north and south ranges passing over the central doorways.

The interior of the north range is divided laterally by a brick wall with round-headed openings to the ground floor. The northern section, of two storeys, is itself divided into three parts. The central bays are open on the ground floor, originally to allow for engines or wagons to enter the building from a siding to the north. This open area is flanked by narrow rooms, lit on three sides. Above the 'carriageway' is a room that is open to the roof. This has been reduced in size and its wooden floor removed at the northern end. Originally this first-floor room was heated on the east side, and may therefore have been used as an office. At the head of the tower room, below the roof, is a metal water tank, fed by pipes that rise up the east wall. An electric friction hoist, carried on steel joists, was inserted in 1947 in the spacious area below the tank.

The areas to the east and west have wooden floors supported by cast-iron transverse girders spanning about 29½ ft (9m), each with two cast-in sockets for longitudinal timber beams. The use of iron girders was presumably to allow for greater floor loading, although the eastern floor was subsequently strengthened with rolled steel joists around 1931.[17] On the east side there are remains of a later line shaft on the ground floor at the west end. The western bays have a conveyer lift at the east end, of modern construction, serving a floor opening and therefore likely to have replaced older machinery serving the same function. The upper floors

are well-lit spaces, with windows in both the north and south walls, and have simple timber roof trusses, with wrought-iron king rods, reinforced by wooden braces and wrought-iron bolts. Part of the first floor of the north range was briefly in use as a schoolroom in 1850s until the chaff-cutting department was relocated here; later sack manufacture and storage was carried out in these spaces.[18] Certain features such as the first-floor doors/loopholes and an opening in the floor presumably relate to these changes of use.

The southern half of the north range formed the workshop area of the building. This space is now divided by a central high-level walkway, of perhaps early 20th century construction.[19] The eastern bays have the original arrangement, with two parallel rows of hollow cast-iron columns, forming a wide central bay with narrow aisles (Fig.6). These columns support the three bays of the W-profile roof, which is hipped at the east end. The central bay has heavy composite queen-post roof trusses, spanning 40ft (12m), supporting a central lantern with louvred sides, suggesting the need for strength and ventilation. Good lighting is supplied by the skylights in the roof bays and windows in the east and south walls, the latter formed in the heads of door openings. The western bays have been rebuilt and raised, reputedly after a fire, between 1911 and 1928.[20] Three rows of tall sturdy timber posts (27cm or 10½ inches square) create four aisles, the outer two corresponding to the cast-iron columns but with an additional row in the centre (Fig.7). These posts support the original roof trusses and central lantern, into which railway rails have been introduced as longitudinal stiffeners. This section of the building was possibly used to dry the sheets, hence the need for extra height. The building once had a railway track running across the centre, later supplemented by a track entering from the west side of the building, but all evidence of these has been effaced by a modern concrete floor.

Fig. 6 East side of the north range (English Heritage BB009388).

Fig. 7 West side of the north range (English Heritage BB009394).

The South Range

The building is in three parts, a dominating two-storey central section, with one-storey gabled end pavilions and one-storey linking bays. The higher middle portion is detailed in the same manner as the north elevation of the north range and a hipped, slate-covered roof in three parts with a full-length gabled lantern at the centre. The north elevation mirrors the south elevation of the north range on the ground floor, with arched openings with timber doors in each of the 13 bays (Fig.8). However, it differs in having tripartite casement windows, with flat gauged-brick heads at the upper level.

Fig. 8 Former siding between the two ranges, looking east, and the north elevation of the south range (English Heritage BB009417).

On the south side the ground-floor windows are round-headed and set within gauged-brick arches, two of which have been reworked to form doorways. Between the window heads there are oblong cast-iron plates, some removed, with a single large rectangular plate to west of the centre doorway. These relate to power transmission having held internal brackets for line transmission. Later alterations include the enlargement of one of the first floor windows at the east end to form a doorway, accessed by an external cast-iron stair.

The gabled end pavilions are linked to the central section by recessed bays, with two flat-headed gauged-brick windows. The south side of the east link has been subsequently raised. The pavilions have tall round-headed windows. These originally had projecting eaves to the roofs, now gone, but both retain weatherboarded lantern lights.[21] The east elevation is blank with only an inserted doorway whilst western side has undergone greater alteration, including the insertion of several windows, which have subsequently been blocked, and a doorway.

Fig. 9 Central section of the south range viewed from the east (English Heritage BB009401).

Internally the central section is an impressive open space, having a church-like appearance with a 'nave', open to the roof, and galleried aisles, formed by two parallel rows of hollow circular-section cast-iron columns, on two levels (Figs.9,11). The lower level of columns (11⅜in/29cm in diameter) carry longitudinal cast-iron beams, of complex section (Fig 10), moulded as if to form an architrave, and transverse cast-iron beams of cruciform section. The junction of the columns and beams is effected through a 'box' arrangement, comprising square sections on which the smaller (7½in/19cm) upper columns rest. Flanges from the transverse and longitudinal beams are bolted to these boxes. This arrangement allowed the hollow columns to function as down pipes, draining the roof valleys. At the east and west ends the longitudinal beams are used transversely to give the frame greater strength and rigidity and to allow for galleries on all four sides. The ironwork is given a simple decorative treatment, with moulded capitals to the columns and mouldings on the beams. The transverse beams have a hog-backed profile above the flange, and central cast sockets that interrupt the flange, to house longitudinal timber floor joists. This arrangement is now fully exposed on the north side of the building where the gallery floor has been removed (Fig.12). The purpose of this cast-iron frame was to support the machinery that would have been present in the workshop, whilst allowing for light, space and ventilation. This represents the application of advanced iron-framing techniques to a relatively new and still evolving type of structure. For the heavy lifting it would have been necessary to use cranes, but it is interesting to note that there is no evidence of an overhead travelling crane having ever been installed in the building. Such cranes were an increasingly common feature of engineering workshops by the 1840s although the railway locomotive builders (which included John Braithwaite) were relatively slow to introduce them into their works.[22]

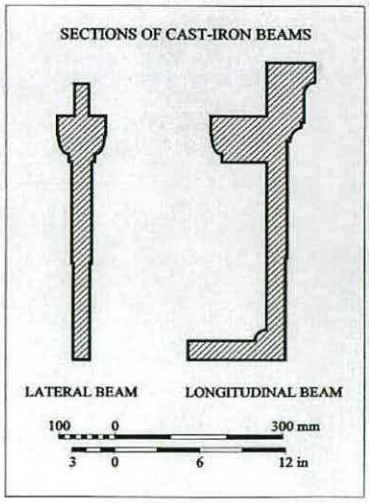
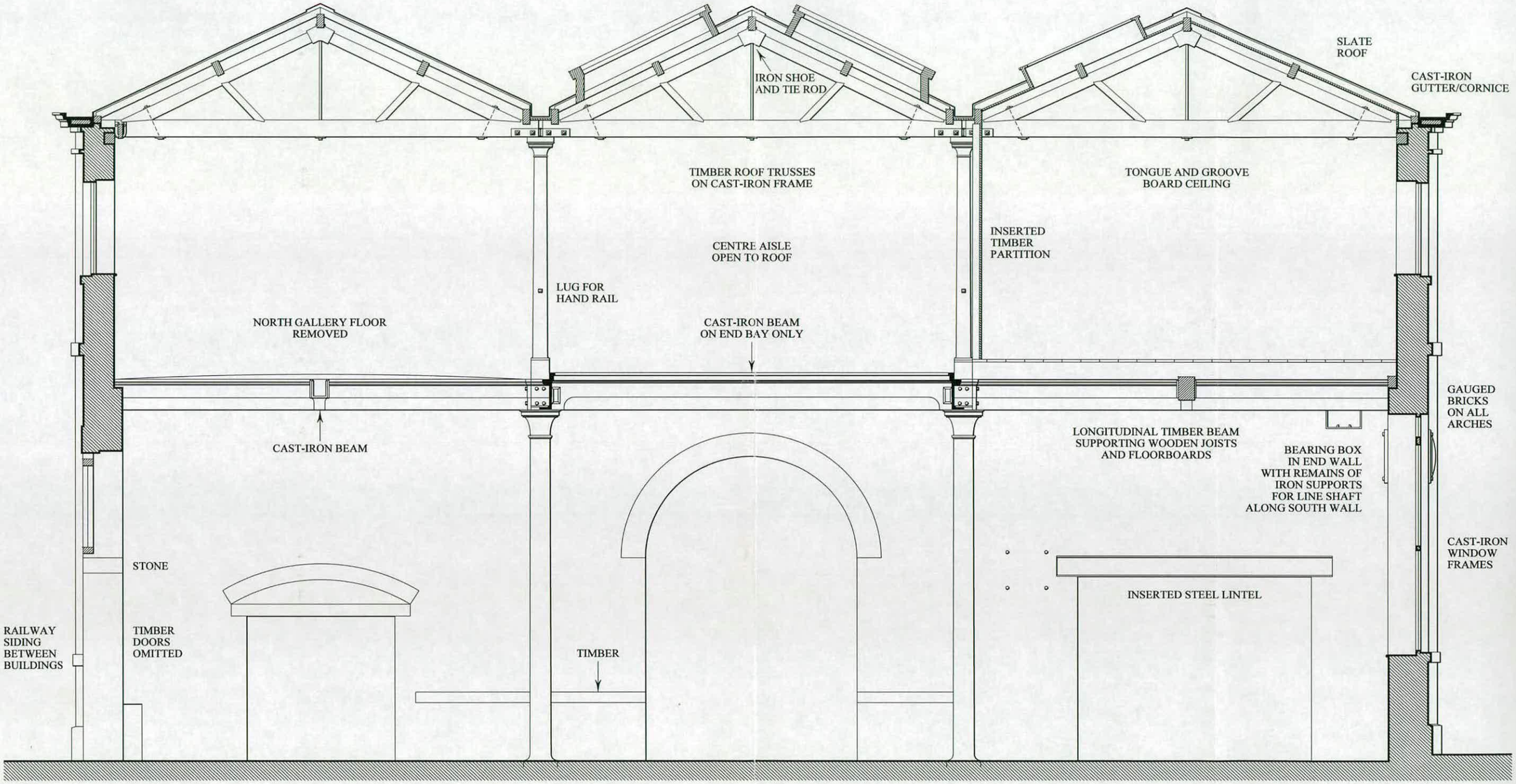


Fig. 10 Sections of beams (English Heritage, October 2000).

The south gallery of the central section remains, now enclosed by a later timber partition, returning at the west end to create an L-shaped room. In the 1920s this room was being used to sew the truck sheets.[23] However, the existence of lugs for a handrail on the upper columns indicates that the galleries were not originally enclosed. A later balustraded wooden bridge now crosses the centre of the block, continuing into the north range. The east and west brick walls have large round-headed openings in the centre bays, that to the west having been



ROMFORD FACTORY
Elvet Avenue Gidea Park

Borough of Havering
Surveyed October 2000
Grid reference TQ 535 896
Buildings index no. 106386
Drawn by A.D.

SOUTH RANGE SECTION LOOKING EAST

1 0 2 4 6 metres
3 0 10 20 feet

Fig. 10

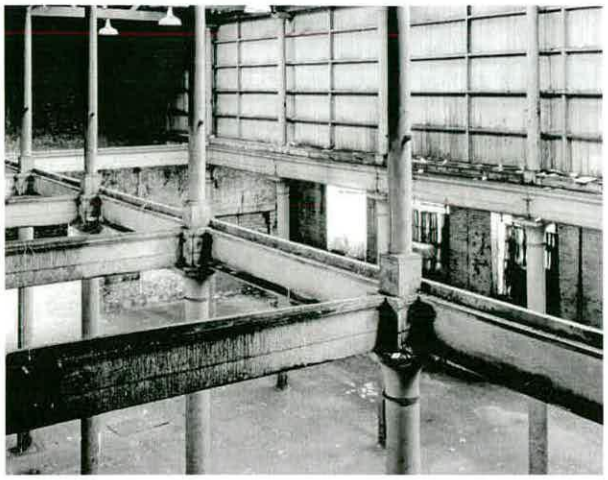


Fig. 12 Detail of the cast-iron framing in the south range (English Heritage BB009413).

blocked. These are flanked by lower openings, reworked on the east wall but unaltered round-headed openings to the west side. The block is roofed in three bays, each with identical wooden trusses with wrought-iron king rods and cast-iron shoes, reinforced by a wooden cross braces and metal bolts. These trusses are carried on the upper columns, which also support cast-iron rails used as longitudinal plates. The central and southern bays have glazed roof lights.

The only machinery to survive in this section of the building is a modern conveyer lift against the west wall, and any evidence of the position of earlier machinery has been obscured by the modern concrete floor. However, bearing boxes survive in the east and west walls, on the south side just below the gallery floor height, that relate to the cast-iron plates in the south wall. These features indicate the previous existence of line shafting, carried via the bearing boxes into the east and west sections of the building. The power was supplied from the nearby engine house, carried either through aligned ground-level openings (now blocked but still visible in the plinths of both buildings), or possibly at a higher level, as suggested by the presence of large rectangular plates bolted through the wall.

The eastern pavilion and the linking bay are simple undivided spaces, separated by a brick party wall with a full-height round-headed opening in the centre flanked by two lower openings, as in the central section. The linking bay is roofed in three parts, a similar arrangement to the middle block, although here lower in height. The pavilion has a gabled roof, with queen-post timber trusses and a raised central lantern, into which the three roofs of the adjoining section are framed. The only surviving early feature appears to be the remnant of a metal bracket in the south wall and associated openings in the party wall that presumably relate to the line shafting.

The western pavilion has undergone more significant alteration, principally the insertion of a timber floor carried on chamfered wooden posts complete with pads and braces, all late 19th century in character. The ground floor has later partitioning subdividing the space. What appears to be a crudely made brick chimney stack has been inserted against the west wall on the north side. A later wooden stair, rising against the west wall on the south side, appears to cut into the remains of another brick stack. The first floor has been used for storage, as evidenced by a trapdoor and hoist in the south east corner and a loophole opening in the north wall. Furthermore, the original timber queen-post trusses have been modified by the insertion of central upright posts with slots, presumably for flywheels or shafting. The link bay has also undergone piecemeal alteration, including the insertion of a floor at the south end. These sections retain their original roofs, of the same arrangement as on the east side.

The Engine House

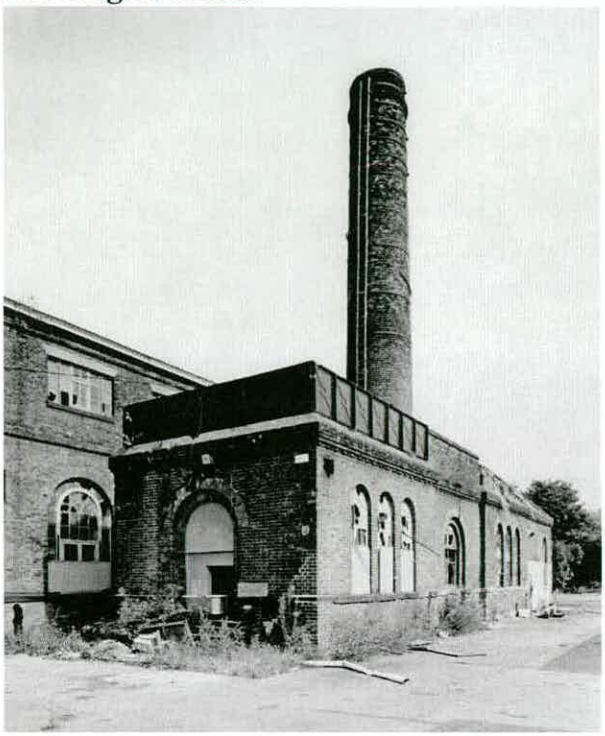


Fig. 13 The engine house viewed from the south (English Heritage BB009377).

This single-storey structure is of two phases, having been built in 1841-2 and extended to the east in *c*1913 to the east. The earliest part is a symmetrical seven-bay building, with recessed central bays, and a circular chimney stack with wrought-iron strapping rising from the centre. The west side has a metal water tank on its roof that once presumably supplied a steam engine within. There was apparently a corresponding tank on the east side that has been removed. In the 1920s the engine served both the factory and nearby provender store and powered an electric dynamo that also lit Gidea Park Station.[24] The south elevation has a round-headed window within an arched recess to the centre and round-headed windows to the outer bays. The eastern extension is in a similar style to the earlier phase, and has a hipped roof and late-20th-century double doors on the east return. The interior of the building could not be inspected.

The North West Range

This modest one-storey brick building was standing by 1871. It was latterly used as a storeroom, although in the early 1950s it was proposed to locate a mess room in the northern part of the building.[25] During the later part of the 20th century all but the south elevation were given a pebbledash render, and the window and door openings were altered. The south gable end is ventilated by openings in a diamond-shaped pattern; the northern gable was once similarly detailed but this is now obscured by the render. The building's pitched slate roof extends southward to the north wall of the south range. The interior of the building was not inspected.

The Sheet Drying Shed

Built 1920-1, this large simple rectangular two-storey building is constructed of exposed concrete blocks, 45cm by 21cm, with two blocks forming a metre unit. These blocks have not weathered well and are now quite friable. The north side has a central opening with flat-headed windows below concrete lintels to both floors and the gable. The upper part of the elevation is now obscured by a 1970s canopy that extends across this building and the north range. The western return elevation has large,

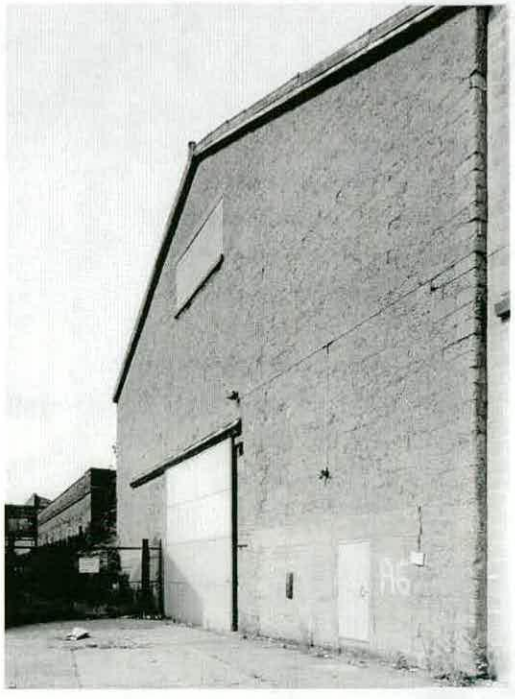


Fig. 14 South side of the Drying Shed (English Heritage BB009381).

regularly spaced windows to both floors, whilst the south side is unfenestrated except at the gable. All the openings have subsequently been filled in with breeze blocks. Although the interior of the building was not inspected it would have by necessity been simple and open, with good ventilation for the drying sheets. A simple two-storey breeze-block extension was made in the late 20th century, occupying the site of the open water reservoir.

The Former Grease Factory and Sponge Cloth Laundry

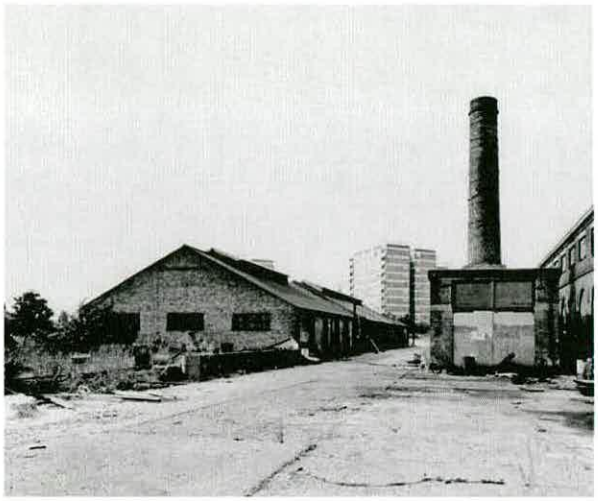


Fig. 15 Grease Factory and Laundry, view from the east (English Heritage BB009378).

This comprises two stock-brick blocks, both of one storey, that to the west being considerably larger. The western building has a two-part north elevation, the nine eastern bays with segmental-headed, metal-framed windows to each bay, separated by buttresses that have engineering brick bases. The shorter western section is stepped down, and has only a single window and no buttresses. The south elevation has a similar arrangement. The larger eastern section is roofed in two bays, both with wooden louvred lanterns, whilst the western part is roofed in three unequal sections. As a result the west end of the building has three gabled bays of different widths and heights, originally with a double-hung door in the southern bay and six windows and a door in the northern bay. Adjoining this side of the building there are filter beds and oil pits, increased in number around 1924. The smaller east block is of similar construction, with a louvred lantern to the roof, which extends to meet the west building, and buttresses to the walls. Largely unfenestrated, the building originally had a wall crane on its north wall, at the west end. A siding ran along the north side of both buildings and a loading deck was constructed to the east, with a adjoining circular crane, subsequently removed.

Internally the west block is divided into two separate parts, the northern section originally containing the grease factory, with the sponge cloth laundry occupying the southern portion. The grease was manufactured in the eastern half of the building, which had a central 4 inch drain running along the floor and oil tanks against the south wall.[26] This section was roofed with wide queen-post timber trusses. The western part of the building contained further tanks, a barrel store and a cooperage and washing house. The laundry contained washing machines and had a cistern in the roof and a drying house at the west end. The eastern block functioned as a grease store and included a weigh bridge near the main entrance on the west side.

The 'H' Warehouse

This is a functional one-storey shed, of breeze-block construction, rendered with pebbledash and clad with corrugated asbestos panels to the gables and roof. It was erected as warehousing by Railstore Ltd, probably in the late 1970s. A free-standing canopy stands to the north, covered in asbestos panels and supported on steel joists. The building was not inspected internally.

NOTES

[1] English Heritage, National Monument Record (NMR), buildings index file 94371.

[2] E J Taylor, 'The ECR's Romford Factory', *Great Eastern Railway Society Journal*, 1989. Much of the information about the early history of the site is taken from this article.

[3] J Cattell and K Falconer, *Swindon: the Legacy of a Railway Town* (London 1995), 8.

[4] Taylor, *Great Eastern Railway Society Journal.*

[5] *Ibid.*

[6] NMR, buildings index file 87991.

[7] The viability of such a facility was increased after the take over of the Eastern Union Railway in 1854.

[8] Public Record Office (PRO), RAIL 186/10, minutes of the board of directors, ECR, 1851-4.

[9] PRO, RAIL 227/130, minutes of the Way and Works Committee, GER, 1913-4.

[10] Railtrack Drawing Store, Waterloo. Drawing for the removal of Grease Factory & Laundry to Romford Factory, undated.

[11] PRO, RAIL 227/214, index to minutes, GER, 1915-22.

[12] *Great Eastern Railway Magazine,* vol 10, no 114, June 1920, 96-8.

[13] PRO, RAIL 227/130, minutes of the Way and Works Committee, GER, 1913-20.

[14] Railtrack, site plan, 1920.

[15] These were cottages at Clockhouse Way Braintree (1918-20) built on a metric grid with metal Crittal windows, *The Twentieth Century Society Newsletter*, Winter 2001, 8. Concrete block construction was also used for No. 69 Main Road, Gidea Park Another notable example of its use is the Government Offices, Bromyard Avenue, Acton (1914-22).

[16] *Victoria History of the Counties of England, Essex*, vii (London 1978), 73

[17] Railtrack, plan showing the proposed strengthening of the floor of the sack storage room, 10th January 1931.

[18] Taylor, *Great Eastern Railway Society Journal.*

[19] The bridge is supported by wooden posts similar to those used in the western section of the north range dating from its rebuilding between 1911 and 1923.

[20] This elevation is show unraised in a photograph of 1911. National Railway Museum, Windwood (Hilton) collection, neg no GR 549; PRO, RAIL 227/214, general index to the minutes, GER, 1915-22.

[21] National Railway Musuem, photographic collection, general view of Romford Factory taken 11th January 1928, neg no SX 133.

[22] R S Fitzgerald, 'The Anatomy of a Victorian Crane: the Coburg Boiler Shop Crane and its Technological Context', *Industrial Archaeology Review*, vol xxx no 2, Spring 1990,186.

[23] *Great Eastern Railway magazine*, 1920, p96.

[24] *Ibid.*

[25] Railtrack , drawings showing proposed messroom for sheet factory staff, 26th November 1951.

[26] Railtrack, drawing relating to the removal of the Grease Factory and Laundry to Romford Factory, undated.