Internally the body of Building 5 was largely open plan, divided only by a brick wall running through the centre of the building from front to back and temporary modern partitions. Access was afforded between the two sides by an open, double width doorway in the centre (Plate 44). The full length of the building was spanned by a pair of 12” by 4” (0.3m by 0.10m) universal steel I-beams similar to those seen in Building 2. These were carried by a series of vertical I-beam columns, interspersed with brick columns. The lengths of ceiling beam joined to the vertical steel columns by riveted steel brackets and were stamped with the company name of Dorman Long (Plate 45. The ceiling comprised a concrete slab and incorporated a pair of ridged rectangular skylights positioned either side of the centre wall and fluorescent electric lighting (Plate 46).

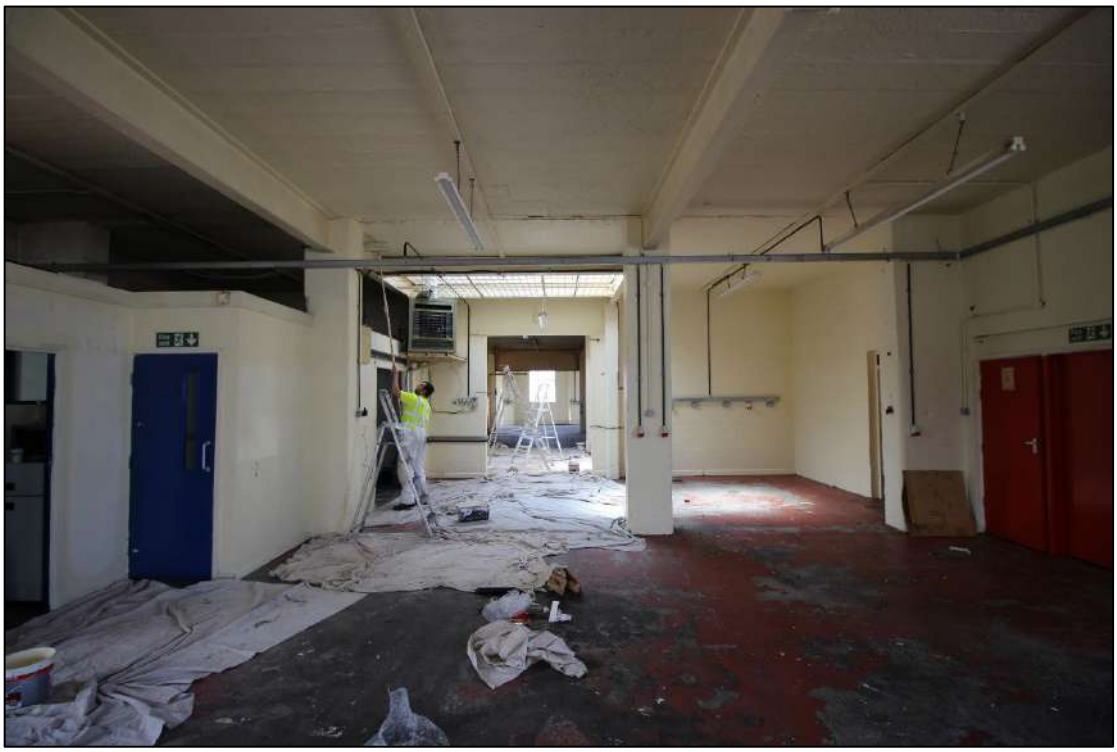


Plate 44: Interior of Building 5, looking north-east towards the centre wall

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Plate 45: Detail of junctions between ceiling beams and columns, in north-east end of Building 5, looking south-east

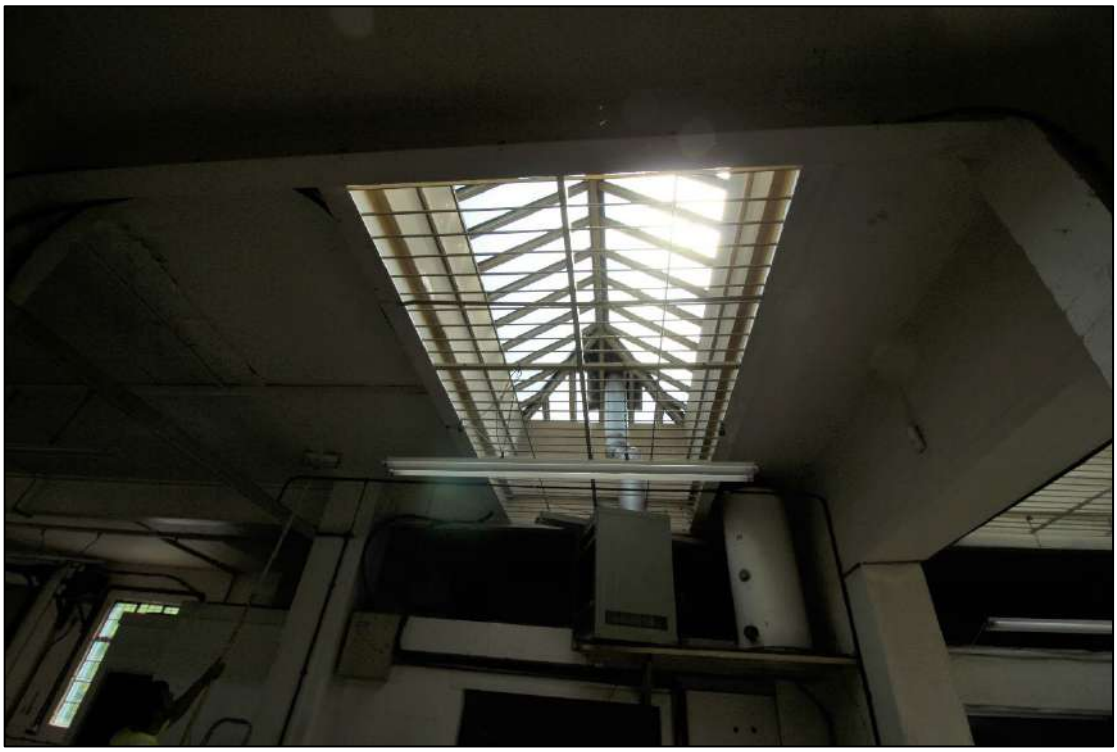


Plate 46: Ridged skylight adjacent to centre wall within ceiling of Building 5

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As seen externally, the outer walls were lined with vertical rectangular windows, which housed eighteen-light steel framed window frames. Both end walls comprised a row of the three window bays, divided by projecting brick buttresses which carried the ceiling beams (Plate 47). Three window bays were located on either side of the lean-to area at each end of the rear north-west wall. Within the front south-east wall, a vehicle entrance was located in the middle bay at each end, between two window bays.

A hanger clamp, fitted with a lifting hook, was attached to one of the ceiling beams, aligned with the south-west vehicle entrance, suggesting a possible loading position (Plate 48).



Plate 47: Windows within south-west end of Building 5, looking south-west

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Plate 48: Vehicle entrance at south-west end of front, south-east wall with hanger clamp attached to ceiling beam, looking south-east

Although the interior of the front lean-to had been modified to provide the current access into the building, the rear lean-to remained largely undeveloped as a through passage, with a double doorway located at the south-west end (Plate 49) and an entrance infilled with cinder block at the north-west end (Plate 50). A single, central doorway with chamfered reveals, which previously afforded access from the lean-to into the main building had been blocked, leaving one larger internal entrance to the north-west.

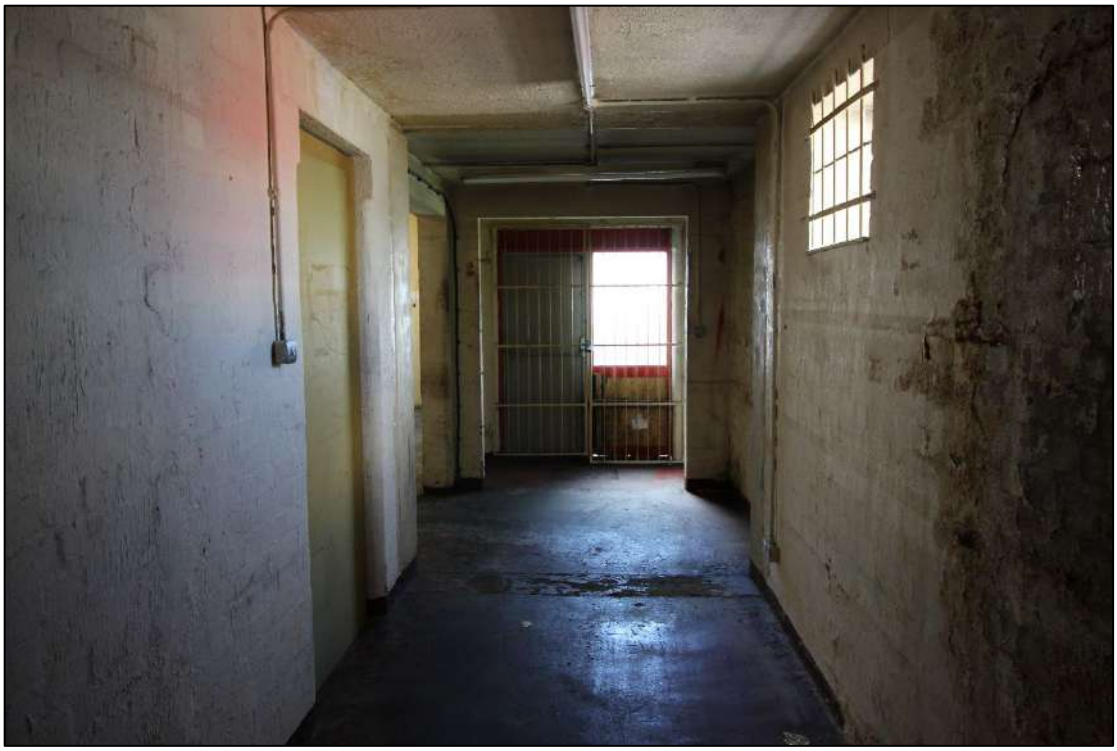


Plate 49: Interior of rear lean-to, looking south-west towards double doorway

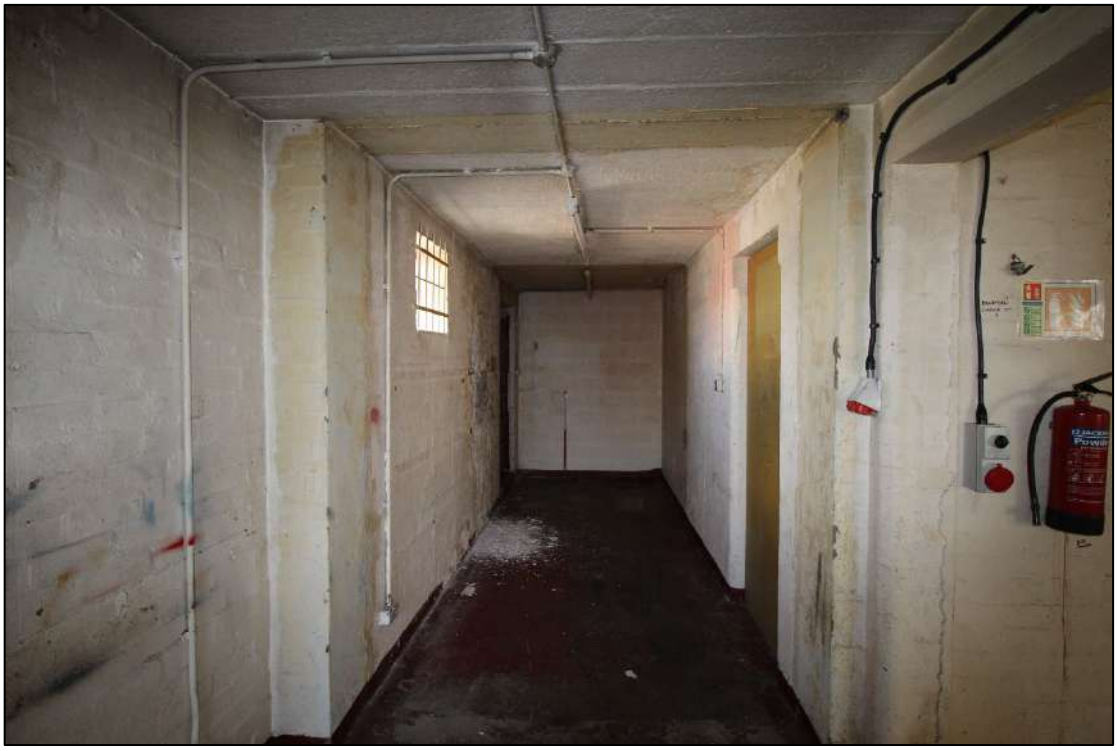


Plate 50: Interior of rear lean-to looking north-east towards infilled entrance

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5.7 Building 6

Building 6 faced Buildings 5 and 7 across the north-east/south-west access road through the Site. The building was orientated south-west/north-east, parallel to Building 5 and Bridge Road (Fig 13). The form of the building was distinct from the others present on the Site, being rectangular in plan with no side lean-tos, and smaller in size (78ft/23.77m long by 27ft /8.26m/ wide by 3.15m/10 ft high). Building 6 was constructed of machine-made brick laid in a five stretcher English Garden Wall bond, with all the external elevations painted white. The concrete roof was flat and felted, with brick parapets rising at each end (c.0.40m high).

The north-west elevation represented the principal façade of Building 6, with three entrances arrayed along its length (Plate 51). A double doorway was recessed into a porch area at the north-east end of the elevation. The porch opening (7ft/ 2.1m by 5ft/1.5m) had a concrete beam lintel and was fitted with steel framed outer gates. The inner double doorway had been refitted with a uPVC doorframe. A vehicle entrance was located to the immediate to south-west of the porch and doorway between brick pilasters. The larger entrance measured 8ft / 2.5m high by 7ft/ 2.1m and was spanned by a recessed, flat concrete lintel which extended to the roofline. The entrance was fitted with a galvanized steel roller shutter on the internal face.

Three equally spaced window openings (13ft / 4m apart) were located within the elevation to the south-west. The original apertures in the brickwork measured 6ft/1.8m by 4 ½ ft/ 1.4m but had all been reduced in size to accommodate shorter, modern uPVC, four-light window frames.

A double doorway recessed within a porch was located at the far south-west end of the elevation, mirroring the doorway present at the north-east end.

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Plate 51: Front, north-west elevation of Building 6, looking south-east across access road

Both openings within the south-west elevation looked to have been remodelled. A horizontal window opening located within the centre of the end wall had been reduced in width. The aperture had a 2.25m wide concrete lintel which spanned a 1.4m wide window aperture (0.90m high), with the full original width infilled on either side with newer brick. The remodelled opening housed an eight-light steel framed window with an asymmetric double height light on the lower south-east side (Plate 52).

A single width (0.80m) doorway was positioned to the south-west of the window, spanned by a concrete lintel beam and infilled with brick.



Plate 52: Remodelled openings with south-west elevation of Building 6

The rear, south-east elevation of Building 6 comprised three, vertical window openings positioned in alternating bays to those on the front, north-west façade. The windows extended to the roofline and retained the tall, eighteen-light steel window frames as seen on Buildings 3, 4, 5 and 7 (Plate 53).

A concrete lintel positioned toward to the north-east end of the elevation, beside the north-easternmost window, suggested the previous location of another brick-infilled single doorway.

The north-east end elevation was plain with the exception of a concrete lintel located in the upper south-east corner (0.90m wide). Junction lines in the coursing below the lintel suggested that a square opening (c. 0.50m^2) had been latterly infilled with brick (Plate 54).



Plate 53: Rear, south-east elevation of Building 6, looking north-west from verge of Bridge Road



Plate 54: North-east elevation of Building 6

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The interior of Building 6 was open plan, with the exception a timber partition wall at the north-east end and an inserted toilet room and entrance foyer at the far south-west end. The steel ceiling beams were arranged across the width of the building in contrast to the arrangement of the other buildings on the Site, where the beams spanned their length. A series of eight 12" by 4" (0.3m by 0.10m) universal steel I-beam spanned the building from north-west to south-east, spaced 8ft/ 2.5m apart, bearing the rolling stamp name of Dorman and Long Co. Ld. The beams were carried by brick buttresses (0.44m by 0.23m) which projected from the side walls, either side of the window bays. The buttresses had square corners at the top but transitioned to rounded corners, utilising bullnosed bricks, at head height (Plate 55).

Within the north-west wall window bays were positioned in the 2nd, 4th and 6th bays from the south-west end with the vehicle entrance and the double doorway located in the 8th and 9th bay respectively. All three of the windows had been refitted with modern uPVC window frames which were c. 0.35m shorter than the original brick aperture (Plate 56)

Within the rear south-east wall, window openings were positioned within the 3rd, 5th and 7th bays from the south-west end and thus not in alignment with those on the opposite north-west wall. All three of the windows within the rear wall retained original eighteen-light, steel-framed windows which were all enclosed by steel grates affixed to the interior window reveals (Plate 57).



Plate 55: Interior of Building 6, looking south-west toward modern partition wall

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Plate 56: Remodelled windows with the front, north-west wall, looking north-west



Plate 57: Tall, steel framed window within rear, south-east wall

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5.8 Building 7

Building 7 was located on the south-west side of the Site and mirrored the position, in relation to the central access road, as Building 3 on the north-east side. As with Building 3, Building 7 was orientated north-west/south-east, perpendicular to its nearest neighbour, Building 5 (Fig 14 and Plate 58). Building 7 also matched the dimensions of Building 3, measuring 122 ft /37.4m long by 38 ft/ 11.6m wide and 12ft / 3.65m/ high with lean-to projections to each side.



Plate 58: Recent UAV view of south-west site of the Site with buildings indicated, looking south-west

The south-west elevation of Building 7 functioned as the principal façade, facing onto the roadway which branched through the Site (Plate 59).

Although the white painted brickwork was largely exposed across the building, the north-west end had been clad in corrugated steel sheeting, which extended to the lean-to on the south-west elevation and encompassed a vehicle entrance at the north-west end. Access was afforded to the interior of the building by double doorway, recessed within covered porches at each end of the lean-to. A single doorway was located in the centre of the south-west elevation of the lean-to, accompanied either side in the upper section of the wall by a small, square four-light window.

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The exposed south-east end of the elevation was divided into three bays, separated by brick pilasters, with a window opening to each bay (Plate 60). The concrete lintels above the windows of Building 7 were distinct from those seen across the rest of the Site, bearing the extra embellishment of a keystone moulding in the centre of each lintel. Each vertical window opening (6ft/1.8m by 4 1/2 ft 1.4m) housed an eighteen-light steel framed window with the upper four lights to each side opening outward in an awning style.



Plate 59: Oblique view of front, south-west elevation of Building 7, looking east

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Plate 60: South-east windows bays of south-west elevation of Building 7, looking north

The south-east end elevation comprised two further such windows, accompanied by a vehicle entrance on the north-east side which was served by a ramp from the service road (Plate 61).

The rear north-east elevation followed the standard form of three window bays either side of the central lean-to (Plate 62). The embellished lintel design seen on the previous elevations continued to the rear façade and housed the same style of steel framed window. The doors within the rear lean-to had been remodelled at both ends, with outer doors fitted to enclose the porch area at the south-east end and the reduction in width of the doorway at the north-west to accommodate a single doorway within the porch (Plate 63)

Access to the interior of Building 7 was heavily restricted due its ongoing occupation by a sensitive business, however, a pair of steel I-beams were visible running longitudinally through the building, carried by alternating steel and brick columns, as seen throughout the Site (Plate 64).



Plate 61: South-east elevation of Building 7, looking north-west



Plate 62: Rear north-east elevation of Building 7, looking west

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Plate 63: Remodelled doorway within porch at north-west end of rear, north-east lean-to

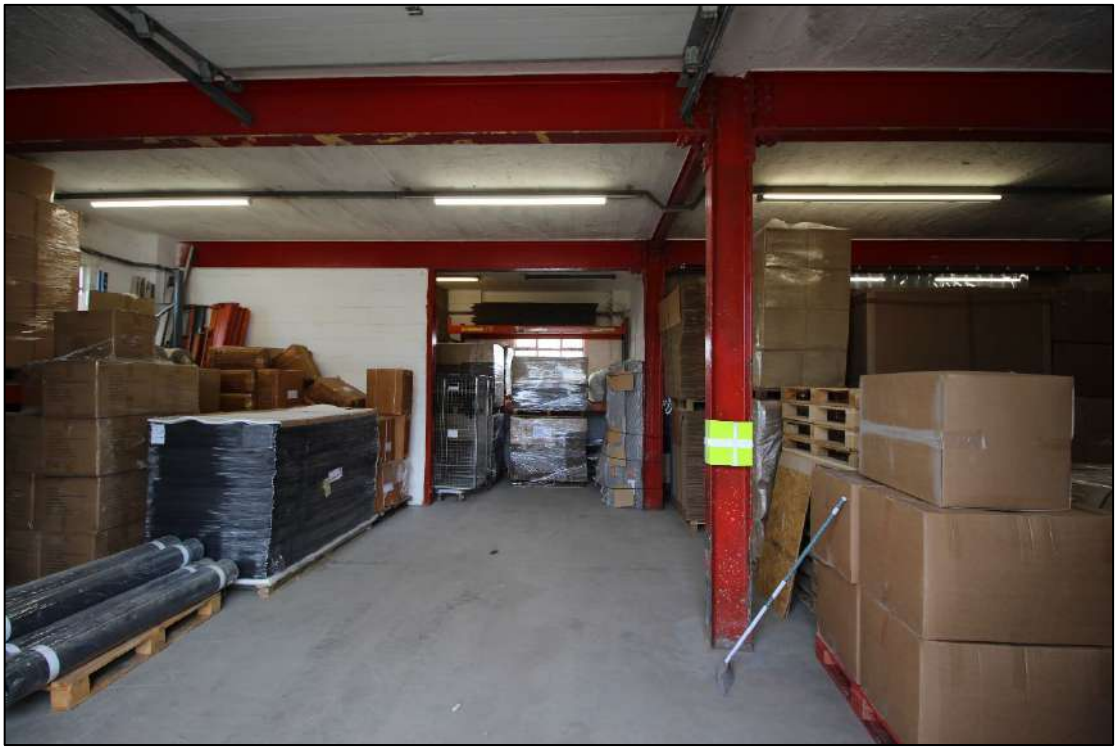


Plate 64: Interior of north-west end of Building 7, looking north-east through vehicle entrance

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5.9 Building 8

Building 8 was located within the south-west side of the Site, and faced Buildings 6 and 7 across the bend of the service road. Its position, in relation to the centre of the Site, and its north-west/south-east orientation mirrored that of Building 2 in the north-east half of the Site (Fig 15). The overall dimensions also matched Building 2, with the rectangular core measuring 122 ft /37.4m long by 38 ft/11.6m wide and the presence of lean-to projections on either side (51ft/ 15.3m long by 7½ ft/ 2.3m wide). The single storey brick building had a flat, concrete roof which was 12ft high/ 3.65m with the flat, lean-to roof level extending to 8 ½ ft /2.65m high, with brick parapets to each end (Plate 65).

The building had been latterly divided into two separate business units to which access was afforded to the south-east side from the north-east elevation, and to the north-west unit from the south-west elevation. A Double door opening (1.65m wide), below a wide, concrete lintel, was positioned south-east of centre within the north-east elevation of the lean-to and afforded access to the south-east unit in Building 8. North-west of centre, a single doorway with transom window above, afforded rear access to the north-west unit.

The north-east elevation, which faced into the Site, followed the standard form of three bays on each side of the central lean-to. The bays were divided by brick pilasters (0.68m wide) with sloped cement mouldings to the roofline at the top.

The windows at the south-east end, including three within the south-east end elevation (Plate 66) comprised plain rectangular concrete lintels, mounted flush with the wall. The window openings across all the elevations housed eighteen-light steel framed windows, of which the top outer lights opened outwards in an awning style.

An original entrance (6 ½ ft /2m high by 5.5ft /1.7m wide), spanned by a concrete beam lintel, was located within the south-east end of the north-eats lean-to. This had been infilled with brick approximately matching the coursing of the lean-to and was partially tied into the surrounding brickwork (Plate 66). A similar former entrance, located at the north-west end of the lean-to, was obscured by foliage but looked to have been blocked in the same way.

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Plate 65: North-east elevation of Building 8, looking south-west across bend of service road



Plate 66: South-east elevation and south-east end of north-east elevation, looking west

To the north-west of the lean-to and across the remaining north-west and south-west elevations, the window openings comprised raised, flat-arched concrete lintels with central keystone embellishments, similar to those seen on Building 7 and 9 (Plate 67).

The north-west end elevation comprised a row of three such embellished windows which housed the steel framed windows, all of which were fitted with an external steel grate (Plate 68).

The south-west elevation functioned as the main access into the north-west unit and comprised a vehicle entrance positioned between a pair of brick pilasters, with embellished windows on either side. A further double doorway, recessed within a porch at the north-west end of the lean-to afforded pedestrian access the building (Plate 69).



Plate 67: North-west end of north-east elevation of Building 8, looking south

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Plate 68: North-west elevation of Building 8, with examples of embellished lintels, looking south-east



Plate 69: Vehicle entrance at north-west end of south-west elevation, looking east

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Access to the occupied north-west half was limited however, it appeared to match the layout of previous buildings including the presence of the steel framework which was carried by alternating steel and brick columns (Plate 70). A rectangular, ridged skylight was located within the ceiling, adjacent to the inserted cinder block centre dividing wall (Plate 71).



Plate 69: Interior of north-west half of Building 8, looking north-west

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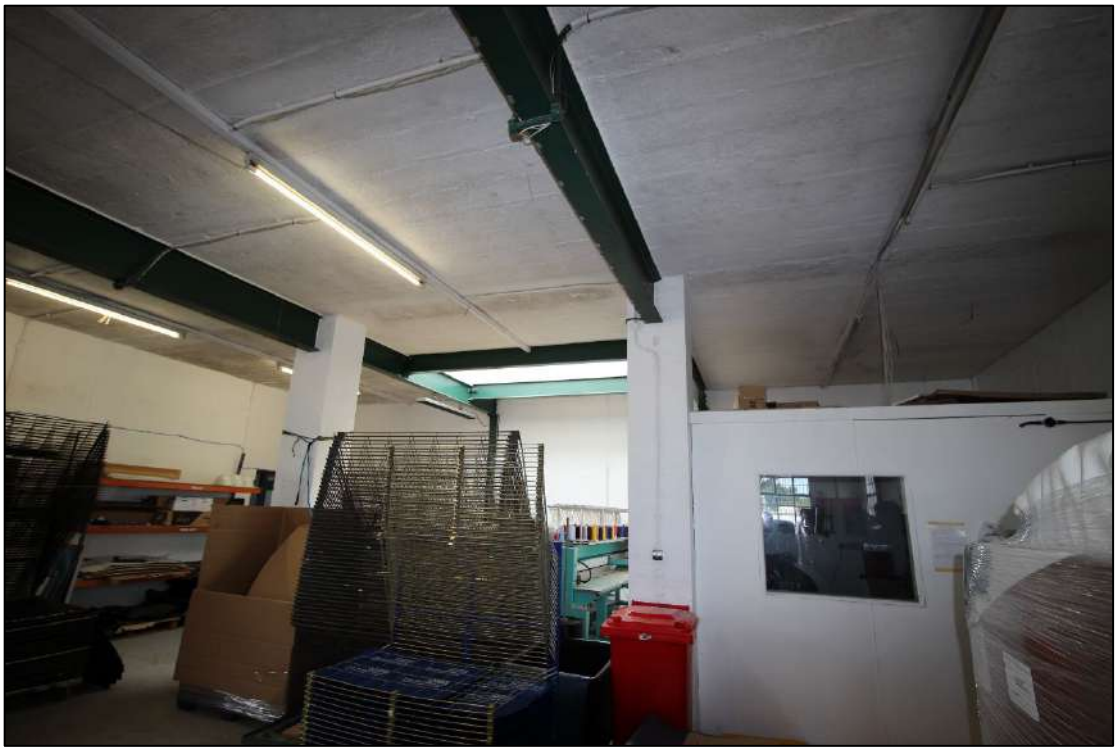


Plate 70: Interior of north-west half of Building 8, looking south-east toward centre division and skylight

The north-west/south-east alignment of two steel I-beams continued through the length of the building to the south-east half of the building, carried by alternating brick and steel columns (Plate 71). The longitudinal beams were bolted to the vertical steel beams with angle brackets and were reinforced by a cross beam at the south-east end in a similar manner (Plate 72). Further crossbeams braced the longitudinal beams below the rectangular, ridged skylight (3.45m by 1.50m) located adjacent to the central partition which mirrored the skylight in the north-west half of the building (Plate 73).

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Plate 71: South-east half of Building 8, looking north-west toward cinder block partition wall



Plate 72: Detail of bolted angle brackets between steel columns and beams

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Plate 73: Detail of ridged skylight and surrounding beams, adjacent to centre wall

A vehicle entrance, fitted internally with a galvanized steel roller shutter, was positioned within the south-east end of the south-west wall, between two window bays. Three further window bays were located within the end south-east end, adjacent to three within the south-east end of the north-east wall (Plate 74).

Although still largely open in plan, the south-east half of Building 8 had been remodelled somewhat with the addition of a series of rooms along the north-east side, contained within a rectangular cinder block structure (11.70m by 3.90m). The inserted internal rooms had a low ceiling (2.65m) which left a gap above to the main roof and the ceiling beams.

The interior of the south-west lean-to in the south-east half of Building 8 had been remodelled to accommodate toilet and kitchen facilities whilst the south-east lean-to had been repurposed as offices.



Plate 74: Interior of south-east half of Building 8, looking south-east

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5.10 Building 9

Building 9 was orientated north-west/south-east along the far, south-east boundary of the Site (Fig 16 and Plate 75) and measured 122 ft/37.4m by 31ft/9m. The building had a flat concrete roof which was noticeably taller than the other buildings within the site, measuring 13ft/3.96m high.



Plate 75: Recent UAV photograph of Building 9 (indicated) at south-west boundary of Site, looking south-west

The rear south-west elevation and rear lean-to (28ft/ 8.5m by 15ft/4.5m) were largely inaccessible due to their proximity to the boundary, however, it was evident that an original entrance within the south-east end of the lean-to, delineated by a concrete lintel, had been reduced in stages and eventually fully blocked with modern brick (Plate 76).

Two vehicle entrances were located within the south-east end elevation and comprised a slightly smaller opening on the left side (2.6m high by 2.5m wide) which housed timber panelled folding doors, and a slightly larger opening to the right (2.8m high by 3m wide), fitted externally with a galvanized steel roller shutter. The openings appeared to be original to the building rather than later insertions, with no obvious disturbance to the surrounding brick courses (Plate 77).

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Plate 76: Blocked opening in south-east end of rear lean-to, looking north-west along rear south-west elevation



Plate 77: Vehicle entrances in south-east elevation of Building 9

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The north-west elevation faced into the Site and functioned as the principal façade of Building 9, in use as a car repair garage (Plate 78). The elevation was divided into twelve bays, each of which comprised either a window or door opening. A group of three window openings were located at the south-east end of the elevation. Whilst the end pair had plain rectangular concrete lintels, the third opening comprised a flat arched lintel embellished with a central keystone moulding, which was repeated across all the subsequent openings on the façade, with the exception of the taller vehicle entrances. The three window openings housed twelve-light steel framed windows (4ft /1.2m high by 5ft /1.5m wide), of which the top, outer two lights opened outwards in an awning style. The central section of the elevation comprised two central vehicle entrances (each $9ft^2$ /$2.8m^2$), flanked on either side by two single doorway, each with transom and side windows.

The north-west end section comprised twelve-light steel framed windows in the tenth and eleventh bays and a final vehicle entrance to the end bay (Plate 79).

The north-east end elevation comprised a central twelve-light steel framed window, with a simple concrete lintel, accompanied by a larger doorway (2.5 high by 2.4m wide) fitted with a galvanized steel roller shutter.



Plate 78: Front north-east elevation of Building 9, looking west

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Plate 79: North-west end of north-east elevation of Building 9, looking south



Plate 80: North-west elevation of Building 9, looking south-east

The interior of Building 9 had been significantly remodelled and subdivided internally to accommodate garage workshop space. This included the insertion of cinder block partition walls along the line of the supporting columns on the long axis of the building

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(Plate 81). Sections of the steel I-beam structure were visible spanning the central garage bay between two such brick columns, latterly incorporated into the internal walls (Plate 82).

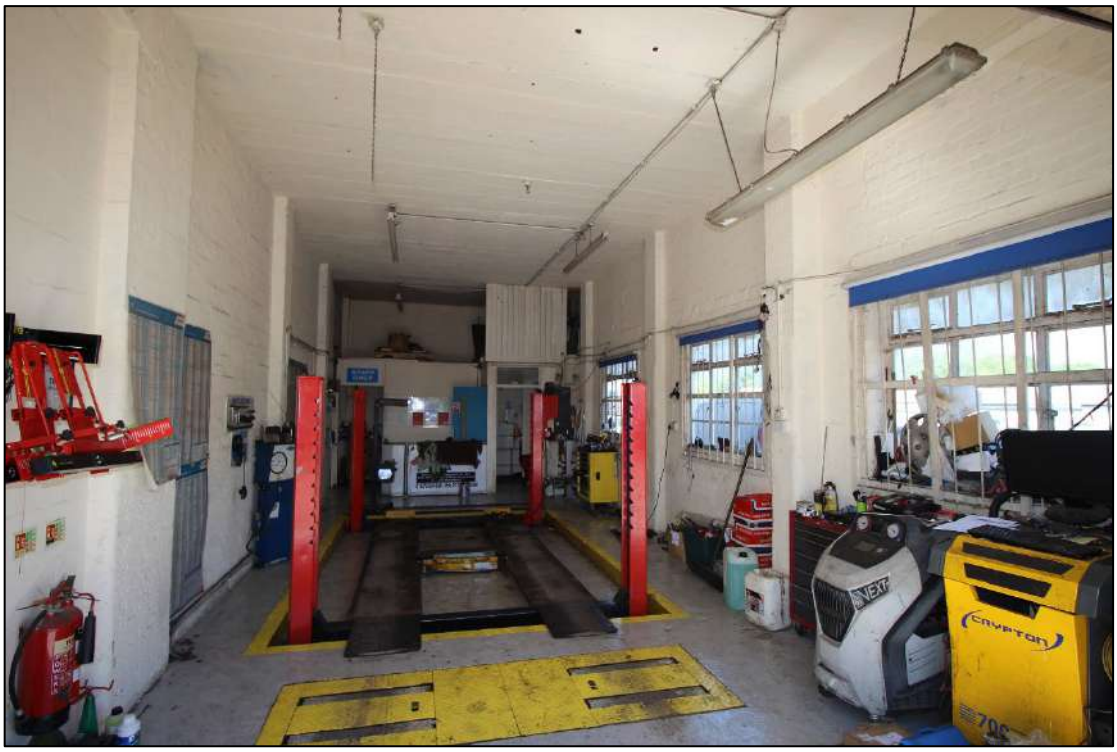


Plate 81: Interior of garage workshop at south-east end of Building 9, looking north-west

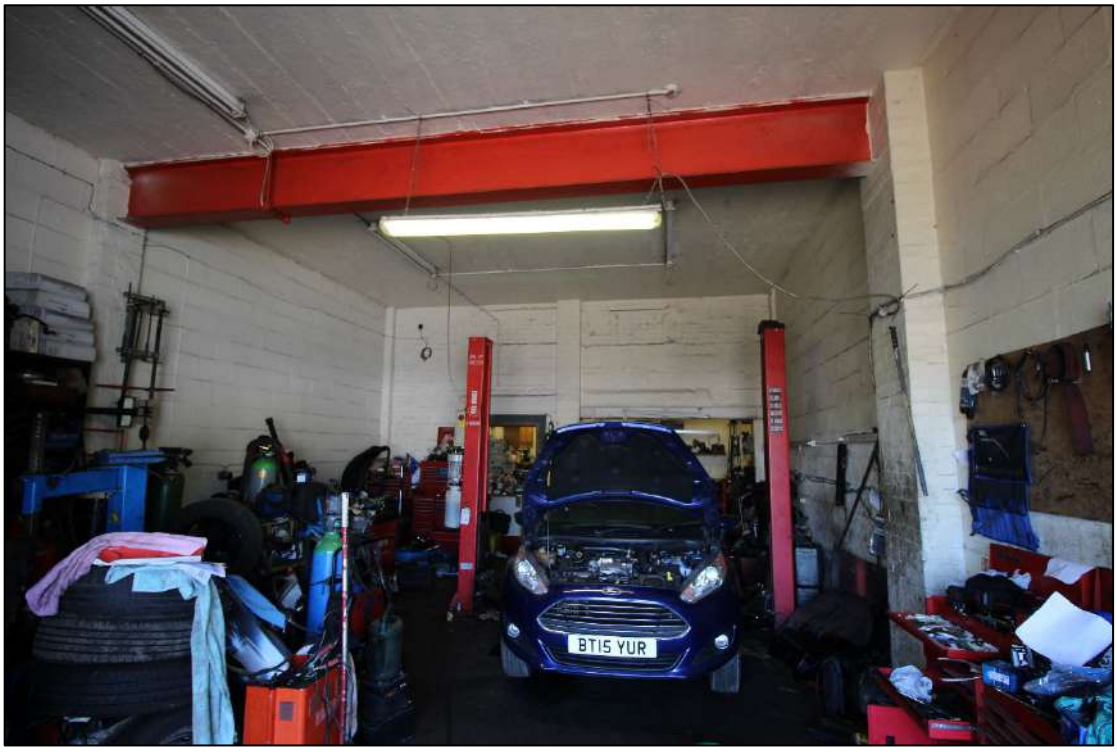


Plate 82: Interior of garage workshop in centre of Building 9, looking south-west

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6. Discussion

6.1 Introduction

The series of nine surviving, single storey, brick buildings located at The Bridgeway Centre had their origins in the establishment of the Royal Ordnance Factory Marchwiel which began production of propellants, including Cordite, in March 1941 to aid the British war effort of the Second World War. Following their closure in 1946 the works, including buildings within the Site were decommissioned and stripped of the war time functions. Following the repurposing of the wider site as an industrial estate, the buildings within the Site remain amongst the last surviving remnants of munitions works.

The extant buildings of the ROF Marchwiel within the Site were surrounded by modern business units and had in some cases been extended and adapted for modern use (Plate 83). Despite this, many of the original structural and cosmetic features from the 1940/1 construction remained intact. All the buildings comprised a standard structural form of a steel framed building with brick infill, incorporating steel framed windows and roofed with a flat concrete slab. The steel structure of each of the building comprised 12" by 4" (0.3m by 0.10m) universal steel I-beams manufactured by steel manufacturers Dorman Long & Co of Middleborough, who had been responsible for building the Sydney Harbour Bridge in the 1920s and the second largest bridge in the world in 1937, which still stands in Denmark.

Despite the similarities in construction across all the buildings some variation was noted with regards to their size and plan, notwithstanding later remodelling. Three general styles of building were noted within the broadly symmetrical site, arranged either side of a central service road, which branched into the site from Bridge Road, a newly created artery through the ROF site.

6.2 Building Type summary

Group 1- Buildings 2,3,4,5,7 and 8

Six of the nine surviving buildings concentrated in the central area of the Site shared the same basic size and form as each other. These included Buildings 2, 3 and 4 (labelled 28/231a, b and c on the Ministry of Supply plan) to the north-east of the central access road and 5, 7 and 8 on the south-west side (labelled 28/131a, b and c). Buildings 4 and 5 were orientated north-east/south-west, aligned each side of the central access road which branched across the site in front of them. Buildings 3 and 7 were positioned perpendicular to them on the outer side forming a crescent. Buildings 2 and 8 were also orientated north-west/south-east, positioned symmetrically to either side of 3 and 7, though closer to Bridge Road.

Each of the buildings of this type measured 37.4m/122 ft long by 11.6m/38 ft wide and were 3.65m/12ft high, with a flat concrete roof. They also typically comprised lean-tos which projected from the centre of each long elevation. These measured 15.3m/51ft long by 2.3m/7½ ft wide and had a lower roof than the main building (2.65m/ 8 ½ ft

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high) with brick parapets to each end. Access to the lean-tos and ultimately to the main building looked to originally been afforded by double doors, which were recessed within a covered porch at each end of the lean-tos, though many of the these had been altered or completely infilled in later years.

The structures did not look to have been significantly altered externally from their original form, with the exception of a modern extension to Building 2 and the steel cladding which covered Buildings 2 and 3 and part of Building 7. Within this group Building 4 looked externally to have undergone the greatest alteration with the complete removal of the rear lean-to and an extension of the front lean-to.

The elevations either side of the central lean-tos were divided into three bays, with each of the end elevations comprising three bays also. Typically, the principal elevation, which faced the Site roadway, comprised two vehicle entrances (3m high by 2.7m wide), positioned in the central bay, either side of the lean-to. These looked to be original to the building, rather than later insertions. Buildings 4, 7 and 8 did display some variation of this arrangement with only one vehicle entrance present on the north-east side of Building 4 and on the north-west east side of the south-west façade of Building 7 and 8 and an additional entrance within the south-east end of elevation of Building 7.

The remaining bays across the facades comprised window openings which housed original steel framed windows, typically measuring 1.8m high by 1.4m wide and divided into eighteen lights, of which the outer top four lights opened outward in an awning style. The steel-framed windows with Buildings 2 and 3 matched the overall style as seen across the other buildings but were smaller ($1.5m^2$/ $5ft^2$) and divided into fifteen lights.

The window openings were spanned by concrete lintels which were obscured externally on the three, steel-clad buildings. Of the remaining buildings the windows of Building 2 were spanned by plain rectangular concrete lintels whilst Building 7 and 8 comprised more elaborate flat arched concrete lintels with a keystone moulding at the centre.

Internally, all the buildings appeared to have been open plan originally, spanned by a pair of steel universal I-beams along the longitudinal axis and spaced 3.65m/12ft apart, which were supported by alternating steel and brick columns. The majority of the buildings of this style, with the exception of Building 2,3 and 7 had a pair of ridged skylights positioned with the centre of the ceiling, with just a single skylight within Building 7 and none with 2 and 3. The lean-tos, where unaltered appeared to function as through passages affording indirect access to the main body of the building.

Group 2- Buildings 1 and 9

The second group included Buildings 1 and 9 at the far north-east and south-west edges of the Site and represented the building that had been remodelled the most from their original forms. Building 1 had been labelled 28/226 on the Ministry of Supply plan and Building 9 labelled 28/126 had been extensively refitted to accommodate retail units whilst Building 9 had been subdivided to house garage workshops. Both buildings matched the length of the main group of building but were slightly narrower (9.5m

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wide), and had shorter lean-to (8.5m by 4.5m) projecting just from the rear south-west elevations and not the front. The front elevation of Building 1 had been entirely remodelled so it is not known whether it also originally comprised two central vehicle entrances flanked by a number of doors like those seen on Building 9. Likewise, the window lintels on Building 1 were either no longer present or covered so could not be compared to the embellished flat arch lintels of Building 9.

Group 3- Building 6

Building 6 represented the sole remaining example of the third style building within the site (28/129A). Building 6 was the smallest of the structures (23.77m/78ft long by 8.26m/27ft wide by 3.15m/10 ft high) with double doors to each end of the front, north-west elevation and no attached lean-tos. The internal steel frame was also arranged laterally across the building in contrast to the longitudinal framework of the other building. The Ministry of Supply plan and Ordnance Survey map of 1961 shows Building 6 to have been one of four of this style of building originally positioned on each side of the site entrance.

6.3 Discussion

There are no firm indications as to the function of any of these three types of buildings within the Site. The close proximity of all buildings suggests that they were not used for the direct manufacture of volatile substances. They also lacked the distinctive protective earth bunds surrounding them like the larger units, which were originally were located to the west and south and across Bridge Road.

The buildings appeared to be arranged to allow for adequate access to the roadway that branched through the Site from Bridge Road, with many of the building comprising at least one if not more large vehicle entrances from the road. ROF Marchwiel had its own internal railway system to transport materials around the wider site which was powered by diesel engine to limit the chance of sparks igniting the hazardous substances. The high proportion of vehicle entrances and the proximity of the Site to the main arterial route of Bridge Road may suggest that the various buildings functioned as storage and loading points for the conveyance of the products by road or for receiving non-hazardous materials for distribution within the works. This is reinforced by the presence of trolley cranes and lifting hooks attached to the steel beams within two of the buildings.

Although ROF Marchwiel was connected to the Wrexham and Ellesmere Railway mainline through sidings at the north of the works there are also records of the finished propellants leaving the site by road. An interview carried out in 1986 by the Wrexham Museum Research Office with Mr J Clarke, a former Transport worker at Marchwiel, records some of the procedures for the shipment of liquid nitro-glycerine by road. The liquid nitro was transported in jerry cans which were padded with straw and packed according to regulations of the Explosive Act. This meant only two tons could be packed on the 18/20-ton lorries that were used which left in convoys of 8-10 vehicle spaced at a regulation distance of 70 yards apart with a pilot vehicle ahead and a motorcycle rider behind. In the case of an accident the leader could call upon the Army, Navy, RAF or police for assistance.

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The work undertaken at the site was considered 'front line duty', a phrase included on the ROF uniform badge, and the workers employed at the Royal Ordnance Factories were covered by the Official Secrets Act. Furthermore, it is believed that the bulk of the documentary material for ROF Marchwiel was destroyed shortly in the late 1940s after the site was decommissioned and effectively stripped of all distinguishing features. This has unfortunately resulted in a limited avenues for research into the function of the remaining buildings with the Site. The investigation has however, provided an invaluable opportunity to record some of the last remaining buildings from a vital wartime site in Wrexham.

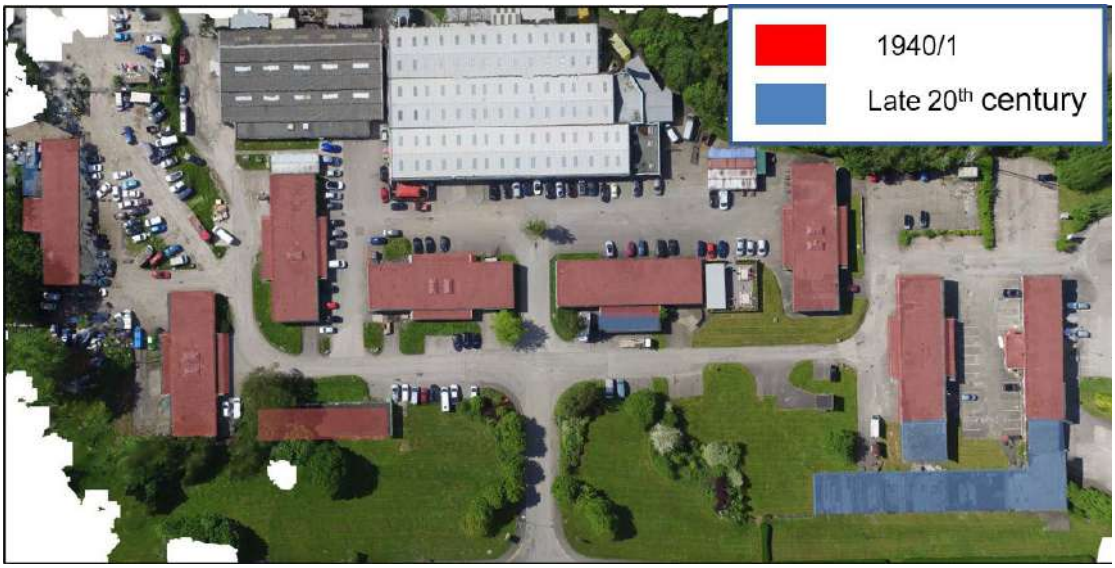


Plate 83: Recent orthographic photograph modern extensions to building within the Site

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8. Sources

Cartographic Sources

Ordnance Survey County Series, Denbighshire 1:10560, published 1879

Ordnance Survey County Series, Denbighshire 1:1056, published 1938, 3rd Revision

Ordnance Survey National Grid 1:2500 map, published 1961

Ordnance Survey National Grid 1:2500 map, published 1985

R.O.F 35, 1:5000 Layout of Site plan, Propellent Planning Department, Ministry of Supply. Drawing no WXML 2000. (courtesy of Wrexham Archive and Local Studies Service, Wrexham County Borough Museum & Archives)

Secondary Sources

Cocroft, W. 2000, Dangerous Energy: The archaeology of gunpowder and military explosives manufacture, English Heritage

Kennedy, J. 2017, Royal Ordnance, Marchwiel, (34), Wrexham: Historical Scoping Report, Townscape: Chartered Town Planning & Heritage Consultants Ltd

Williams, W.A. 2002. The Encyclopaedia of Wrexham, Bridge Books

Planning Policy Wales, Edition 11 (February 2021) Section 6.1 The Historic Environment https://gov.wales/sites/default/files/publications/2021-02/planning-policy-wales-edition-11_0.pdf

Technical Advice Note (TAN) 24 (May 2017): The Historic Environment https://gov.wales/technical-advice-note-tan-24-historic-environment

and the supporting TAN 24 (May 2017)

Newspapers

Various newspaper article and accounts held by Wrexham Archive and Local Studies Service, Wrexham County Borough Museum & Archives

including:

Interview with M J Clarke of Ponciau by a researcher from the Museum Research Office, 1 Grosvenor Road, Wrexham on February 1986

Websites

Coflein: Marchwiel Royal Ordnance Factory, Wrexham, NPRN308980 https://coflein.gov.uk/en/site/308980 (accessed June 2022)

Legislation.go.uk: Explosives Act 1875 https://www.legislation.gov.uk/ukpga/Vict/38-39/17/contents (accessed June 2022)

Wrexham History: Royal Ordnance Factory- Wrexham https://www.wrexham-history.com/royal-ordnance-factory-wrexham/ (accessed June 2022)

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The building survey was carried out by Steve Tamburello who also compiled the report. The illustrations were produced by Richard Ker. The report was edited by Lewis Stitt, who was also responsible for project management.

Appendix 1: Figures

Figure 1: Site location map

Figure 2: Site boundary superimposed onto the Ordnance Survey of 1879

Figure 3: Site boundary superimposed onto the Ordnance Survey map of 1938

Figure 4: Site boundary superimposed onto the Ordnance Survey map of 1961

Figure 5: Site boundary superimposed onto the Ordnance Survey map of 1985

Figure 6: Site Boundary superimposed on modern map

Figure 7: Exterior plate photograph number locations/directions

Figure 8: Elevations and plan of Building 1

Figure 9: Elevations and plan of Building 2

Figure 10: Elevations and plan of Building 3

Figure 11: Elevations and plan of Building 4

Figure 12: Elevations and plan of Building 5

Figure 13: Elevations and plan of Building 6

Figure 14: Elevations and plan of Building 7

Figure 15: Elevations and plan of Building 8

Figure 16: Elevations and plan of Building 9