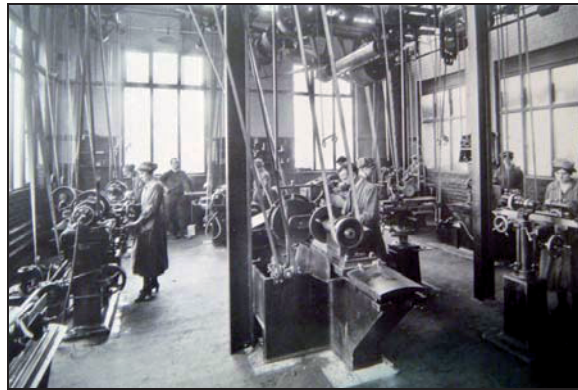




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Project Report 1199.1 (2)

Archaeological Building Recording at Loughborough Technical College, Loughborough, Leicestershire



November 2008

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Loughborough Technical College, Greenclose Lane,
Loughborough, Leicestershire

National Grid Reference: SK 5342 1972 (centred)

Planning Application P/07/3371/2

Archaeological Building Recording

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OASIS SUMMARY FORM

PROJECT DETAILS		
OASIS identifier	arcus 2-4466	
Project title	Loughborough Technical College, Greenclose Lane, Loughborough	
Short description of the project	<p><i>This report describes a programme of archaeological building recording at the former Loughborough Technical College, Greenclose Lane, Loughborough, Leicestershire. A small workshop lies to the north of the building fronting Orchard Street; this was also included within the programme of archaeological recording.</i></p> <p><i>The building at Loughborough is fairly unique in its character. Although it can be argued that the building is typical as an industrial unit it is clear that there are many features relating to the educational nature of the building. The decorative frontage and ornamental entablature for the building clearly outlines the building as not merely a factory unit but also an important educational establishment. Internally the inclusion of a mezzanine observation floor and glazed partitions throughout would have been key in enabling observation of work taking place both for students and staff. The partitions are also of note as a feature indicative of education as they divided the space up for different processes which is unusual within a typical industrial unit where ease of movement of materials, machinery and goods is focussed upon.</i></p> <p><i>The building fronting Orchard Street (building 2) is of little historic interest. Little evidence remains relating to its purpose apart from evidence for the garage but it is likely that the building acted as a small scale workshop. It appears to have no link to the technical college building.</i></p>	
Project dates	May 2008- June 2008	
Previous/future work	ARCUS report 1088.1 (1)	
Monument type and period	Twentieth-century college building/instructional factory	
Significant finds (artefact type and period)	n/a	
PROJECT LOCATION		
County/Parish	Leicestershire	
Site address	Greenclose Lane, Loughborough, Leicestershire	
Site co-ordinates	SK 5342 1972	
Site area	510m approximately	
Height OD	42m	
PROJECT CREATORS		
Organisation	ARCUS	
Project brief originator	ARCUS	
Project design originator	O.Jessop	
Director/supervisor	n/a	
Project manager	O.Jessop	
Sponsor or funding body	Watkin Jones Ltd.	
PROJECT ARCHIVES		
Archive Type	Location/Accession no.	Content (e.g. pottery, metalwork, etc)
Physical	n/a	n/a
Paper	Leicestershire County Record Office, Leicestershire HER, NMRC	Report, photographic record, original field drawings and notes
Digital	Leicestershire County Record Office, Leicestershire HER, NMRC	pdf. of final report
BIBLIOGRAPHY		
Title	Archaeological Building Recording at Loughborough Technical College, Greenclose Lane, Loughborough, Leicestershire	
Report no	1199.1(1)	
Author	J.Barnes	
Date	June 2008	

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NON-TECHNICAL SUMMARY

This report describes a programme of archaeological building recording at the former Loughborough Technical College, Greenclose Lane, Loughborough, Leicestershire. The site (centred on SK 5342 1972) is bounded to the north west by Greenclose Lane and to the north east by Orchard Street. The south of the building is still in use and occupied by Kings Church. A small workshop lies to the north of the building fronting Orchard Street; this was also included within the programme of archaeological recording.

The only previous archaeological survey within the site boundary was an archaeological desk-based assessment undertaken by ARCUS (report no.: 1088.1(1)).

The building on Greenclose Lane was opened in 1918 as an expansion to the Loughborough Technical College (formerly known as Loughborough Technical Institute but often referred to as the Institutions factory). The main were originally located on the corner of Ashby Road and Greenclose Lane in a building, built in 1877, which had formerly been offices and a library for the local authority. This building has since been demolished for the building of a supermarket.

Dr Herbert Schofield was principal of the college from 1915-1950 and is attributed with the success of the expanding college and it was he who, to support the First World War effort, remodelled the institute into an 'Instructional Factory'. Alongside normal teaching the college trained over 2000 men and women on the production of munitions.

The building at Loughborough is fairly unique. Although it can be argued that the building is typical as an industrial factory from the 1910s, but with many features relating to the educational nature of the building. The decorative frontage and ornamental entablature demarks the building as not merely a factory unit but also an educational establishment. Internally the inclusion of an internal mezzanine observation floor and glazed partitions throughout would have been key in enabling observation of work taking place both for students and staff. The building was doubled in size in 1937 with the construction of 'the Schofield building' although this was not examined during this survey.

A selection of archive photographs have been located that illustrate the former use of the technical college and have proved invaluable in understanding the original room layout and subsequent development.

The building fronting Orchard Street (building 2) has less historic interest than the technical college. Little evidence remains relating to its original purpose, prior to it being converted to a garage, but it appears to have been a small scale workshop.

1 INTRODUCTION

This report describes a programme of archaeological building recording at the former Loughborough Technical College, Greenclose Lane, Loughborough, Leicestershire (**Illustration 1**). A planning application has been submitted by Watkin Jones Ltd. (Planning Application P/07/3371/2) to demolish parts of the former technical college building, retaining the buildings Greenclose Lane façade and the northlight roof structure to be incorporated into a number of studio apartments. In addition a small workshop to the north end of Orchard Street is planned for demolition and has been recorded.

The only previous archaeological survey undertaken within the site boundary was an archaeological desk-based assessment undertaken by ARCUS in 2007 (Stenton, 2007).

As part of the planning consent Charnwood Borough Council required a programme of archaeological recording. A written scheme of investigation (WSI) was prepared by ARCUS (Jessop 2008) and agreed in accordance with government guidance as set out in Planning Policy Guidance Notes – Archaeology and Planning (PPG15 and 16) by Richard Clark of Leicestershire County Council (LCC).

2 AIMS AND METHODOLOGY

2.1 Aims

The aims of the archaeological recording were as follows:

- to identify, wherever possible, the original form, spatial layout and purpose of each room, any earlier decorative schemes and any changes which have subsequently taken place within the building.
- to compile a comprehensive and high quality record of the building, including both the elevations and internal spaces, with an appropriate level of analysis and interpretation of any historic features in relation to any available archive material.
- to create a high quality, fully integrated archive suitable for long-term deposition in order to 'preserve by record' the building prior to demolition.

2.2 Methodology

The drawn survey comprised measured floor plans at 1:100, for the basement, ground, mezzanine and upper floors. Three cross sections were drawn at 1:50, being short sections through bays 1 & 2 of the building, and a long section of the main span of the building. Watkin Jones Ltd. provided measured floor plans for the survey and all additions to the plans and production of the drawings were measured using laser distance measurement and hand-tape measurements. The drawings formed the basis for phased site plans and photographic location plans. A written record was compiled in the form of note annotations on the drawings.

The photographic record included the external elevations, with viewpoints selected to provide the greatest amount of coverage of any historic fabric. In addition a general external photographic record was made, to demonstrate the structural relationship between the individual elements of the building and to show the building

within its current setting.

A general internal photographic record was made, comprising photographs of each historic room, or discrete space, to record the general appearance, form and internal arrangement. A graduated photographic scale was used wherever possible.

The photographs were taken using both medium format and 35mm format using black/white film. Each individual shot was recorded on a photographic register, recording the film and frame number (**Section 12**). The location and direction of each photograph were also recorded on the corresponding plans of each building (**Illustrations 19-23**).

A selection of 35mm colour slide photographs was also taken to complement the black/white photographic record, particularly where colour information was deemed appropriate.

2.3 Fieldwork

The archaeological recording was carried out during May 2008 by Lucy Dawson, Oliver Jessop, Jennifer Barnes, James Thomson and Lindsey Büster. Visits to Loughborough Local Studies Library (by Oliver Jessop) and The Loughborough University Archives (by Jennifer Barnes) were made in May and June 2008, respectively.

2.4 Data Collection

The following sources were consulted for the purposes of this report:

- Loughborough University Archives
- Leicestershire Archive Services
- Loughborough Local Studies Library
- ARCUS archives.

3 SITE LOCATION

The site (centred on SK 5342 1972) is located on Greenclose Lane, in the centre of Loughborough town centre (**Illustration 1**). It is bounded to the north west by Greenclose Lane and to the north east by Orchard Street. The south of the building is still in use and occupied by Kings Church. A small workshop lies to the north of the building fronting Orchard Street; this was also included within the programme of archaeological recording.

4 HISTORICAL AND ARCHAEOLOGICAL SUMMARY

4.1 Historical Development of the Technical College

The building on Greenclose Lane was opened in 1918 as an expansion to the Loughborough Technical College (formerly known as Loughborough Technical Institute). The main buildings for the instructional factory were originally located on the corner of Ashby Road and Greenclose Lane in a building, built in 1877, which had formerly been offices and a library for the local authority. This building has since been demolished for the building of a supermarket (Clarke, *pers. comm.*).

The building on Greenclose Lane was opened in 1918 to house shops specifically for grinding, milling, turning, smithing, welding, aircraft sheet metal, and a stores department (Clarke, *pers. comm*) and to act as an instructional factory regarding those subjects. The land to the south west of the 1918 building on Greenclose Lane originally housed a number of cottages (**Illustration 3 & 4**). One by one these cottages were appropriated by the Technical College and pulled down. In 1937 the last cottage was demolished and a new three storey building was erected; construction finished in 1939 (LCPSA, 1957). On completion the end wall of the 1918 building was opened up to make integrate the two buildings (LCPSA, 1957). The 1937 building was later named the 'Schofield Building' after the principal at the time.

Dr Herbert Schofield was principal of the college from 1915-1950 and is attributed with the success and expansion of the college during these years (Clarke, *pers. comm.*). It was Schofield who, to support the First World War effort, remodelled the institute into an 'Instructional Factory'. Alongside normal teaching the college trained over 2000 men and women on production of munitions.

Between 1918 and 1939 the college branched out to other subjects but also continued to train 'on production'. In 1966 the college was granted university status and became the Loughborough University of Technology later to become Loughborough University.

4.2 Historic Photography

A wide collection of historic photographs have been retained within the archives at Loughborough University. These historic photographs include images of buildings involved with the technical college and the processes which took place within. A number of these photographs relate to the building on Greenclose Lane a selection has been included within this report (**Illustrations 8-10**). The following table summarises the historic photographs included.

Historic plate number	Modern plate number	Description
Illustration 8A	Plate 51	Room F1, looking east, women being trained as munitions workers during the First World War. Placement of machinery within this photo matches up with some of the machine base scars surveyed (Illustration 14). Line shafting also corresponds with brackets and wall boxes recorded.
Illustration 8B	Plate 69	Room F4, looking north west, junior college students being trained in woodwork. Evidence for benching still remained at time of survey however evidence for partition was not observed.
Illustration 9A	Plate 29	Room G10, looking north, men at work in the heavy lathe room. Windows and open plan layout of room still in place.
Illustration 9B	Plate 17	Room G3, looking east, men being in trained in milling shop. Wooden floor and wall boxes still in place at time of survey as well as the wooden floor, no evidence for machine bases. Window in south east wall has since been blocked.

Historic plate number	Modern plate number	Description
Illustration 10A	Plate 80	Possible view of room F5, looking south west. View of an inspection room. Illustration 7 indicates that room F5 was an inspection room with a glazed corridor as shown in the historic photograph.
Illustration 10B	Plate 67	Room F4, looking north west, man operating lathe machinery at south western end of room F4. Note windows were still in place at time of survey however wooden floor boarding had been removed leaving a concrete floor exposed.

4.3 Historic Plans

Detailed plans of the building exist from 1918 and 1931 and are kept at the Loughborough University Archives (**Illustrations 6 & 7**). These are detailed and show the position of rooms and list the processes which took place within them. The 1931 plans were drawn up to be included within the Loughborough College Calendar. The Calendars included a variety of plans and photographs which demonstrated the college's capabilities and teaching.

The 1918 plan of the building (**Illustration 6**) depicts the ground floor only but listed the various rooms and processes taking place on the first floor. These included a milling machine shop an inspection and viewing room, the air craft and sheet metal department and the oxy-acetylene welding room. On the ground floor offices were located in rooms G2 and G7, a cloakroom in G6, stores in G5, a turning shop in room G10 a grinding shop in room G3 and a smithy in room G4.

The 1931 plan (**Illustration 7**) shows all floors of the building excluding the cellar. It details a number of offices at ground and mezzanine floor level and reveals a number of changes since the production of the 1918 plan. These include the addition and alteration of a number of partitions on the ground floor the change of the grinding shop to a milling shop (room G3), the conversion of the turning shop into a heavy lathe shop (room G10).

5 BUILDING DESCRIPTIONS

Two buildings were examined during this survey, building 1 (the technical college) and building 2 (workshop on Orchard Street). For the purposes of recording and ease of reference each internal space within the buildings were assigned a room number, these are shown in **illustrations 11-14** . In addition building 1 was divided into a front range and a back range and also divided into six bays by the northlight roof (**Illustrations 12 & 14**).

5.1 Exterior – Building 1

Elevations

The original Loughborough Technical College building is a two storey, six bay, northlight building, rectangular in plan, with double height rooms. The façade of the

building fronts Greenclose lane facing north west. The division of the building into six bays is illustrated within this façade by the gables of the northlight roof and the brick piers which form the bay divisions.

At ground floor the Greenclose Lane elevation contains three large windows filling the width of one bay in the first, fifth and sixth bays of the building. The windows within the fifth and sixth bays have recently been refitted with PVC frames (**Plate 1**), however the original wooden framing remains in place within the first two bays (**Plate 20**). It can be seen that the first bay window consisted of twenty-four lights, the lower section containing eight long vertical panes and the upper section two sets of eight shorter square panes. The window in bay 2 was half the size of this, only consisting of twelve panes (**Plate 20**). Externally above the windows runs a large rendered concrete lintel and a tile sill (**Plates 2-3**). The upper storey of this façade also contains similar windows within each bay (**Plate 6**).

The second bay also contains two smaller windows one at ground floor and one at the mezzanine level (**Plate 2**) next to the larger light described above. The third bay also contains two smaller windows at mezzanine floor level as well as one smaller window at ground floor level (**Plate 8**), the window at ground floor level having been blocked. The third bay contains a pedestrian entrance into this section of the building (**Plate 2 & 8**). The door is flanked by two brick piers which are intersected by three stone blocks with a diamond motif (**Plate 8**). Over the door is a piece of ornamental stone work and the door has been recessed into the wall from the frontage (**Plate 8**). There is an arched over mantel which projects slightly from the façade.

A second larger entrance can be found in the fourth bay of the building (**Plate 5**). This doorway was originally for vehicular access. The opening has is a double set of doors, placed into a section of later wood panelling which fills the archway of the passage. The upper section of the panelling contains four panes of glass allowing light into the passage. The arch of the passage rests on two ashlar pads with ashlar impost blocks. The arch itself is formed by eight brick voussoirs separated by projecting red brick tile sections with an ornamental ashlar keystone (**Plate 7**). Above the archway is a decorative stone entablature, naming the building 'Loughborough College' and dating the building to 1918 (**Plate 7**). The date stone rests on red brick dentils and is surrounded by a layer of horizontally lain clay tiles. A 1919 picture indicates that the entablature has been altered from its original form and instead of dating the building to 1918 it previously named the building as the 'Loughborough Technical College Instructional Factory'.

Either side of the vehicular passage are two electric globe lights (**Plate 5**) which are recent additions and not on the 1919 photograph. Directly to the south is a small narrow light, the frame of which has been subsequently removed and boarded (**Plate 5**). At ground level are two cast iron bollards indicating this doorway was once wider to enable carts, wagons, and vehicles to enter the building.

The upper storey of building also contains additional windows alongside those previously mentioned. Within the pitches of the northlight roof are a series of small three pane windows (**Plate 6**). These are wooden framed with the first and third panes having horizontally pivoted openings. Above the windows is a row of red brick headers acting as a lintel with a clay tile hood and a tile sill below.

The south east elevation of the building (**Plates 10 & 11**) is obscured by other buildings on the ground floor however the upper floors are visible and it can be seen that the fifth and sixth bays are shorter than the other four bays (**Plate 10**). The fifth

bay at upper storey level contains two rectangular windows of four panes whilst bays 1-4 contain arched brick lintelled windows of twelve panes (six by two).

The original south west elevation of the building is obscured by the later Schofield Centre building (**Plate 9**).

The north east elevation of the building can be divided into front and back ranges (**Illustrations 12 & 14**). The front range contains four windows, two at ground floor and two at first floor (**Plate 3**). All the windows consist of six panes and are similar in style to the large windows in the Greenclose Lane façade. The windows on the first floor are taller than those at ground floor level. The back range had three windows, one at ground floor and two at first floor. Those at first floor consisted of twelve panes (two by six) and the end four panes at either side having horizontally pivoted openings. The windows again had concrete lintels and tile sills. The ground floor window corresponds to those at ground floor in the front range (**Plate 3**). An attached brick flue runs through the centre of the back range (**Plate 3**).

The Roof

The roof is constructed from six northlight roof pitches running across both the front and back ranges. The sixth and fifth bays are split due to the back range discontinuing after the fourth bay. The glazed section of the roof contains one light per range and on average eleven panes of glass per light. Evidence of internal shuttering and pulley wheels for shuttering on the northlight roofing (**Plate 66**). The roof is supported by sixteen northlight roof trusses constructed from L-section bolted steel members (**Plate 82**). Hidden valley gutters run between the pitches of the northlight roof resting on internal RSJ stantions.

5.2 Interior – Building 1

Cellar

Internally the building consists of four floors: cellar, ground, mezzanine, and first. The cellar can be accessed via the stairway in room G1/G5 (**Plates 25 & 26**) and consists of three rooms. Room C1 (**Plate 32**) has a concrete floor and exposed brick walls. The room has one light which has been expanded into the street (**Plate 34**). Room C3 can be accessed from C1. Two light wells can be found to the south western end of the cellar. Also within room C3 are two machine bases located against the south eastern wall (**Plate 35**). The wall between rooms C3 and C2 is a later insertion. Room C2 (**Plate 36**) is the largest cellar room and has a number of features within it. In the south west wall is a flue which appears to extend at a 45 degree angle back from the wall. Above this is an opening into a shaft behind the cellar wall (**Plate 37**). This is supported by a number of small brick piers and contains large amounts of pipe work (**Plate 38**). The south eastern wall again has a number of features including a recessed section opening with a vertical shaft/well from room G5 above. This shaft/well is covered with large metal plates in room G5. In the south corner of room C2 is a brick floor the western wall of which appears not to be keyed in suggesting it is a later construct. Two concrete bases lie to the west of this flue.

Ground Floor

Pedestrian access could be gained to the ground floor of the building via the entrance within bay three on Greenclose Lane (**Plate 12**). The entrance (room G1) is a simple hallway which allows access via three corridors to the surrounding rooms (**Plate 13**).

An inserted doorway gives access to room G7 (**Plate 15**) to the south of room G1. This room has a blocked door to the east leading to room G6, and a blocked window which is visible in the third bay of the Greenclose Lane façade. The room shows evidence of it formerly having been plastered. The wall between rooms G1 and G7 is of modern brick and appears to be inserted; the historic plan of the building suggests that there would have been a partition wall in place of this wall and that the room would have originally been the finance office (**Illustration 7**).

To the north of room G1 lies rooms G2 and G3. Room G2 (**Plates 15 & 16**) appears to be one of the original partitioned offices which existed within the building and is labelled as the foreman's office on the 1918 historic plan (**Illustration 6**). The partitioning is constructed from wooden panelling with glazed top sections (**Plate 16**). This glazing would have allowed the viewing of processes going on throughout the building as well as providing a view of the entrance hall G1. Room G3, adjacent to room G2 differs in nature. This room is a large open plan, double height room and would have acted as a workshop. The historic plans label this as the grinding shop in 1918 and the milling shop in 1931. A historic photograph demonstrates the original layout of the room (**Illustration 9B**). The concrete ceiling above is supported by four RSJ columns, two either side of the room and two RSJ beams running under the ceiling the northern RSJ beam is supported by a further central RSJ column. The eastern wall of the room has three recessed panels over which a large RSJ beam runs (**Plate 18**). The central recessed panel has a lower RSJ beam which would have previously acted as a lintel for the opening below and has subsequently been blocked. The southern wall has a projected bay window at first floor level (**Plate 19**). This would have provided a viewing platform from room M4 into room G3. Also within the southern wall are two wall boxes (**Plate 19**) which would have been linked with those within the northern wall (**Plate 17**). These wall boxes would have operated the line shafting seen within the historic photograph (**Illustration 9B**).

To the east of room G1 is G5 (**Plate 21**). This is again a large open plan double height room overlooked by mezzanine floor windows. The concrete ceiling above, is again supported by RSJ columns and beams. The room is lit by two large windows which originally would have been 35 panes (5x7). These would have extended to the first floor level but have since been covered or blocked (**Illustration 18**). The north western wall contained the large windows, previously discussed in the external description of the north western elevation bays 1 and 2 (**Plate 20**). The floor is covered by wooden floor boards. Underneath and surrounding the windows are four rows of truncated 'T' section bars (**Plate 24**); it is possible that these acted as brackets for shelving suggesting that at least part of the room was used for storage. **Illustrations 6 & 7** indicate that the entire room was given over to storage between 1918 and 1931. The north eastern wall of the room is blank apart from a painted 'Nottinghamshire' mural approximately three metres up from the floor (**Plate 23**). The south western wall has a protruding central section. Approximately located beneath the original access hatch from the first floor. The historic plans (**Illustrations 6 & 7**) shows that here would have once been an entrance way into the gateway passage now room G9. The room has a concrete floor

To the north of room G5 is G4. This room is similar in size to that of G5 and again has a concrete ceiling supported by RSJ columns and beams (**Plate 28**). The room is lit by two windows one in the north eastern wall as described in the external description and one in the eastern elevation similar in style to those described in G4. The blocking leading from room G3 can clearly be seen within the western wall of the room (**Plate 27**). The floor is again concrete and two sets of partitioned rooms have been set up

within the building (**Plate 28**). The height of the wooden skirting on these plasterboard and studwork partitions suggests that a later raised floor had been laid alongside these partitions. The north eastern partition hides a single pedestrian door within the eastern wall (**Illustration 18**). The 1918 and 1931 plans (**Illustrations 6 & 7**) label this room as a smithy, however little evidence remained for this at the time of survey.

The remainder of the building (rooms G6 & G8-G9) could only be accessed from the large wooden panelled doorway in bay 4 but originally the two halves of the building would have been open to each other. This leads into an entrance way (G8) with a second set of modern double doors leading into G9. Originally this would have been an open gateway allowing the delivery and shipping of materials from the instructional factory.

To the south of room G9 is room G10. This is a large open plan shop floor characterised by large riveted RSJ ceiling beams (**Plate 29**). These beams would have supported large amounts of line shafting as can be seen in the historic photograph (**Illustration 9A**). The historic plans label this room as a turning shop and later a heavy lathe shop (**Illustration 6 & 7**). This part of the building was still in use by the Kings Church at the time of survey. A modern brick blocking is in place in the eastern wall which the historic plan shows would have originally been an opening into room G11. The south western wall has been rebuilt as the before 1939 this would have been the terminal wall of the building and after 1939 the wall would have been opened up to connect to the Schofield Building.

To the north east of G9 lies room G6. This room has been created by modern studwork partitions, although it formerly had a brick south western wall with a glazed partition north eastern wall. It also originally had a glazed eastern wall with an entrance way looking into room G5, however this has since been blocked. The room formerly existed as a men's cloakroom in 1918 and an office and toilets in 1931 (**Illustrations 6 & 7**).

To the south eastern corner of the building are a collection of rooms. Room G14 is a toilet block and from the historic plan appears to have retained its original function. Room G11 has also retained its function as corridor between the rooms in this section of the building, but has been expanded to include the room towards the south of the building. This room has had a number of inserted exit doors, to allow access in to the Schofield Building. A cast iron door exists in the northern corner of the room (**Plate 31**). The room also contains an inserted dog leg staircase (**Plate 30**).

Rooms G12 and G13 are constructed from modern partitions. The historic plan shows that originally there would have been three small rooms along this wall in 1931 (**Illustration 7**) however no evidence remains.

Mezzanine Floor

The mezzanine floor is accessed via the same stairway in room G1/G5 (**Plates 25, 26 & 39**). The floor is roughly divided into four rooms by a series of partitions (**Illustration 13**). The partitions on this floor have been altered since the original construction of the building as a comparison with the historic plan reveals (**Illustrations 6 & 7**). However the glazed partitions within the south eastern and north eastern walls have remained the same (**Plate 40 & 48**). These glazed sections would have allowed anyone on the mezzanine floor to overlook work going on in rooms G3 and G5. Two original partition walls remain in place and these are the walls surrounding room M2 (**Plate 42, 43 & 45**). These are again glazed and would have

allowed viewing into room M3. Room M2 also contains a modern partition with an inserted shower beyond (**Plate 41**). A skirting (**Plate 44**) runs around the rooms on the mezzanine floor which is a feature absent from the rest of the building. This further substantiates the mezzanine floor as a viewing and office space rather than a workshop floor. Other such details include ornate window fixtures in room M3 (**Plate 47**) the low ceiling and the moulded panelling on the wooden partition (**Plate 43**). The frames for the windows facing out onto Greenclose Lane remain *in situ* although they have been boarded from the outside. These are plain 4 paned wooden frames with a simple moulding (**Plate 46**). Two blocked windows are evident in the south western wall of room M3 would have originally looked out into the gateway of the building.

First Floor

The first floor is accessible via the stairway leading from room M1. The first floor is largely open plan however evidence exists for a number of removed partitions. The room numbers are based upon the evidence for these partitions. No original plan exists for the first floor, however a note on the 1918 ground floor plan lists a milling machine shop, an inspection and viewing room, an air-craft sheet metal department and an oxy-acetylene welding room as being located on the first floor (**Illustration 6**).

The stairway itself is located within room F1. Room F1 (**Plates 50 & 51**) is located in the northern corner of the building it has a concrete floor within which a number of machine bases scars can be seen (**Plate 52**). The floor has been constructed using wooden timbers with a concrete fill and floorboards above, this allowed electrical wiring to be set within the floor. **Illustration 8A** shows the room when in use, a number of floor scars (**Illustration 14**) match up with the position of the machinery within this photograph. The room is lit by the two large windows in bays 1 & 2 within the north western elevation and the two windows within the north eastern elevation of the front range (**Plate 53**). Two wall boxes (**Plate 54**) can be found both north eastern in the north eastern and south western walls of the room these would have powered the line shafting running through the room (**Illustrations 8A & 14**). The room was originally enclosed by a south eastern wall. This would have had four windows from which one could see into room F1 from the corridor. This wall is still in place yet the windows have been removed and it has since been opened up (**Plate 55**). The historic photo (**Illustration 8A**) shows how this glazing would have looked.

Room F2 lies south east beyond room F1 (**Plate 55**). This again has a concrete floor containing evidence for a number of machine bases. The room would have been lit by the two small windows within the north eastern elevation back range (**Plate 57**) and two windows within the south eastern wall. In the eastern corner of the room is a brick flue. An entrance from F1 into F2 would have existed next to the stairway (**Illustration 14**). The 1931 historic plan (**Illustration 7**) indicates that both rooms F1 and F2 were used as grinding shops at this time.

Room F3 is situated directly to the south of F2. This room although now open to room F2, would have formally been enclosed by a partition wall, the evidence for which exists as a floor scar with door openings and a truncated wall extending from the south eastern wall (**Plate 64**). A bracket on the north western wall may possibly be linked to the power supply for this room (**Plate 65 & Illustration 15**). A large trap door is located at the south western end of this room (**Plates 62 and 63**) in front of a now blocked window (**Plate 62**). Another blocked window also exists directly above

this and to the south west is a blocked door which would have originally extended the corridor to provide access into room F5 (**Illustrations 6, 7 & 14**). Brick piers, truncated RSJ's and a number of tie plates for a travelling crane can also be found along the south eastern wall of both F2 & F3 although the crane has since been removed (**Plate 74**). The room is labelled as a general store on the 1931 plan (**Illustration 7**).

Room F4 is similar in many ways to room F1. It lies within the front range of the building across bays 3-6. It again has a concrete floor with evidence for a number of concrete bases. In both the north western and south eastern wall are two wall boxes (**Plate 72**) which would have supplied power to the machinery via line shafting (**Illustration 15**). The south eastern wall has again enlarged to out to allow direct access to rooms F2 & F3 (**Plate 69**) but previously would have been closed with glazing above. Unlike room F1 one of the brick piers which would have held the glazing is a flue which has since been removed (**Plate 73**). The north eastern wall has a modern brick skin in its lower section and the north western wall has evidence for a bench running the length of the room. A number of glazed doors allow access to rooms F5 & F6. The south western wall of the room like the room below (G10) has been replaced after it had been opened up to allow access to the adjacent Schofield Building. Floor scars for partitioning remains within room F4 (**Illustration 14**) however these partitions were not marked upon the historic plans (**Illustrations 6 & 7**) although there is evidence for partitioning within the historic photographs (**Illustration 8B**) shows evidence for partitioning running between the bays.

Rooms F5 and F6 remained in much the same condition as they had been built with the exception of the inserted staircases (**Plate 76 & 80**) and the blocking of the corridor which would have previously entered room F5. The door-ways and glazing looking into room F4 still remained *in situ* (**Plate 79**). The historic plans indicate that the room F5 would have been used as an inspection room (**Illustration 7**). **Illustration 10A** is a possible view of this room and shows the layout of an inspection room. Room F6 is labelled as a further store room (**Illustrations 6 & 7**).

5.3 Exterior – Building 2

The façade of building 2 fronts Orchard Street. The building is a small, two storey, square in plan building with an attached rectangular single storey garage (**Plate 84**). The façade contained a single wooden door at ground floor level and two windows one of twelve panes and one of eight panes at second storey level. The brick coursing of this elevation was Flemish bond. The façade of the garage contained only a roller shuttered door (**Plate 84**).

The north west façade of the building was blank but showed evidence for the façade of the building continuing. A blocked window could be seen within the south eastern façade (**Plate 85**).

5.4 Interior – Building 2

Internally the ground floor contained two rooms, one within the two storey building and one within the garage. A blocked window was noted in the downstairs room of the building. Entrance to the garage could be gained through an inserted opening between the two rooms (**Plates 86 & 87**). A single wooden batten door within the garage allowed access to the staircase back inside the main building (**Plate 86**).

Upstairs the building contained one room with a blocked window (**Plate 91**). A

wooden central beam spanned the room (**Plate 90**) this possibly acted as a part of a hoist to lower materials down to ground floor via a trap door located within the floor.

6 CONCLUSIONS

The Technical College building is fairly unique since although it can be argued that the building is typical of an industrial factory, there are many additional features relating to the educational nature of the building. The decorative frontage and ornamental entablature denotes that the building is not merely a factory unit but also an important educational establishment. Internally the inclusion of a mezzanine observation floor and glazed partitions throughout would have been key in enabling observation of work taking place both for students and staff. The partitions are also of note as a feature indicative of education as it divided the space up for different processes which is unusual within a typical industrial unit where ease of movement of materials, machinery and goods is focussed upon.

However although an educational establishment the building did operate as a working factory providing goods intended for market and the building still retains clear evidence for power supply and process movement throughout the building. The wall boxes visible within most rooms would have provided power to the machinery within the rooms through line shafting as demonstrated by the historic photographs (**Illustrations 8-10**). Evidence for movement of goods around the factory exists as large doorways and gaps for the movement of large loads from one room to another and the large floor hatch within room F3 leading down to room G9 which was originally a cart passage.

The survey revealed that unlike other existing college buildings at the time, such as those across the road on Greenclose Lane, the building was purposefully built to house an instructional factory. The steel frame and concrete structure was ideal for the industrial nature of work taking place and the northlight roof and large windows would have provided natural light.

Power supply across the building was also well provided for. Power would have been supplied via line shafting which would have run across the workshop rooms. The line shafting has since been removed however a number of wall boxes remain indicating where the line shafting would have run. **Illustration 15** is a reconstruction of how the line shafting may have been laid out across the building. It is likely that the building was mainly electrically powered. The concrete floor visible on the upper floor is suggestive of this as it would have been capable of carrying wiring across the building to the various pieces of machinery. The cellar of the building also provides some possible evidence as to how power was supplied throughout the building. The existence of a number of machine bases, flues and shafting for pipes suggests that the cellar acted as a boiler room, or power house.

The building is also unusual in that a detailed archive record survives, relating to the early years of the college. Due to the building being one of the first purpose built buildings for the college, which was later to become Loughborough University, the building was extensively photographed and plans of the building were produced. Plans of the building and the original layout as well as the historic photographic record are all retained within the Loughborough University Archives.

The building fronting Orchard Street (building 2) has less historic interest than the technical college. Little evidence remains relating to its original purpose, prior to it being converted to a garage, but it appears to have been a small scale workshop.

7 COPYRIGHT

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8 ACKNOWLEDGEMENTS

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10 ILLUSTRATIONS

11 PLATES

12 PHOTOGRAPHIC REGISTERS

Film 01					
Format	400 speed	Type	Medium format	Photographer	O.Jessop
Film & frame	Description	Direction	Date		
1.1	Orchard Street Façade of building 2	W	08/05/08		
1.2	Orchard Street Façade of building 2	W	“		
1.3	Orchard Street Façade of building 2	SE	“		
1.4	Orchard Street Façade of building 2	SE	“		
1.5	View looking west down orchard street	W			
1.6	View looking west down orchard street	W			
1.7	East elevation of Building 1 (technical college)	W			
1.8	East elevation of Building 1 (technical college)	W			
1.9	East elevation of Building 1 (technical college)	NW			
1.10	East elevation of Building 1 (technical college)	NW			

Film 02					
Format	400 speed	Type	Medium format	Photographer	O.Jessop
Film & frame	Description	Direction	Date		
2.1	South and west elevations of Schofield Centre	E	08/05/08		
2.2	South and west elevations of Schofield Centre	E	“		
2.3	West elevation of technical college	E	“		
2.4	West elevation of technical college	E	“		
2.5	Doors ways in West elevation of technical college	E	“		
2.6	Doors ways in West elevation of technical college	E	“		
2.7	West and north elevations of technical college	S	“		
2.8	West and north elevations of technical college	S	“		
2.9	Doors ways in west elevation of technical college	S	“		
2.10	Doors ways in west elevation of technical college	S	“		

Film 03					
Format	400 speed	Type	Medium format	Photographer	O.Jessop
Film & frame	Description	Direction	Date		
3.1	General shot of corridor between college and church	SE	08/05/08		
3.2	General shot of corridor between college and church	SE	"		
3.3	General shot into church	SW	"		
3.4	General shot into church	SW	"		
3.5	General shot of roof space in first floor room above church	NW	"		
3.6	General shot of roof space in first floor room above church	NW	"		
3.7	General shot of 1 st floor room over church	S	"		
3.8	General shot of 1 st floor room over church	S	"		
3.9	General shot of 1 st floor room over church	NE	"		
3.10	General shot of 1 st floor room over church	NE	"		

Film 04					
Format	400 speed	Type	Medium format	Photographer	O.Jessop
Film & frame	Description	Direction	Date		
4.1	General shot of room G3	E	08/05/08		
4.2	General shot of room G3	E	"		
4.3	General shot of room G3	E	"		
4.4	Shot from ground floor room looking at mezzanine floor window room G3	SW	"		
4.5	Shot from ground floor room looking at mezzanine floor window room G3	SW	"		
4.6	Shot from ground floor room looking at mezzanine floor window room G3	SW	"		
4.7	VOID	-	"		
4.8	Shot from far corner (Orchard Street end) of room G3	W	"		
4.9	VOID	-	"		
4.10	Shot from far corner (Orchard Street end) of room G3	W	"		

Film 08					
Format	400 speed	Type	Medium format	Photographer	O.Jessop
Film & frame	Description	Direction	Date		
8.1	View down stairwell towards mezzanine floor	S	08/05/08		
8.2	View down stairwell towards mezzanine floor	S	"		
8.3	View across room F1	E	"		
8.4	View across room F1	E	"		
8.5	View across room F1 looking towards stairwell	W	"		
8.6	View across room F1 looking towards stairwell	W	"		
8.7	View across room F2 & F3 looking west	W	"		
8.8	View across room F2 & F3 looking west	W	"		
8.9	View across room F2	N	"		
8.10	View across room F2	N	"		

Film 09					
Format	400 speed	Type	Medium format	Photographer	O.Jessop
Film & frame	Description	Direction	Date		
9.1	View across room F3	W	08/05/08		
9.2	View across room F3	W	"		
9.3	View across room F3 towards stairwell	N	"		
9.4	View across room F3 towards stairwell	N	"		
9.5	Detail of trap doors in room F3	SW	"		
9.6	Detail of trap doors in room F3	SW	"		
9.7	View across room F4	NE	"		
9.8	View across room F4	NE	"		
9.9	View across room F4	E	"		
9.10	View across room F4	E	"		

Film 11					
Format	35mm	Type	B/W	Photographer	L.Dawson
Film & frame	Description	Direction	Date		
11.1	General shot of G5	NE	08/05/08		
11.2	General shot of G5	NE	"		
11.3	Detail of mezzanine bay window overlooking G3	SW	"		
11.4	Detail of mezzanine bay window overlooking G3	SW	"		
11.5	Detail of window within G3	NW	"		
11.6	Detail of window within G3	NW	"		
11.7	Detail of hooks in ceiling, G3	NE	"		
11.8	Detail of hooks in ceiling, G3	NE	"		
11.9	Detail of riveted RSJ and upright RSJ, G3	NE	"		
11.10	Detail of riveted RSJ and upright RSJ, G3	NE	"		
11.11	Detail of blocked wall box in northeast wall of G3	NE	"		
11.12	Detail of blocked wall box in northeast wall of G3	NE	"		
11.13	Shot of southwest wall of G3 showing blocked wall boxes	SW	"		
11.14	Shot of southwest wall of G3 showing blocked wall boxes	SW	"		
11.15	Detail of wall box and hook in ceiling, south corner of G3	S	"		
11.16	Detail of wall box and hook in ceiling, south corner of G3	S	"		
11.17	General shot of southeast wall of G3 showing blocked openings	SE	"		
11.18	General shot of southeast wall of G3 showing blocked openings	SE	"		
11.19	General shot of G3	E	"		
11.20	General shot of G3	E	"		
11.21	General shot of G3	E	"		
11.22	General shot of partitions in G2	E	"		
11.23	General shot of partitions in G2	E	"		
11.24	General shot of G2	W	"		
11.25	General shot of G2	W	"		
11.26	General shot of G2 from G1	N	"		
11.27	General shot of G2 from G1	N	"		
11.28	Detail of main doors, G1	NW	"		
11.29	Detail of main doors, G1	NW	"		
11.30	General shot towards G5 from G1	E	"		
11.31	General shot towards G5 from G1	E	"		
11.32	General shot of G7	N	"		
11.33	General shot of G7	N	"		
11.34	General shot of G7 showing blocked and inserted doorways	E	"		
11.35	General shot of G7 showing blocked and inserted doorways	E	"		
11.36	ID Shot	-	"		

Film 12					
Format	35mm	Type	B/W	Photographer	L.Dawson
Film & frame	Description	Direction	Date		
12.1	General shot into C2	S	08/05/08		
12.2	Detail of machine base in C3	S	"		
12.3	Detail of machine base in C3	S	"		
12.4	Detail of machine base, C3	SE	"		
12.5	Detail of machine base, C3	SE	"		
12.6	General shot of C3	W	"		
12.7	General shot of C3	W	"		
12.8	General shot of C1	S	"		
12.9	General shot of C1	S	"		
12.10	General shot of C1	N	"		
12.11	General shot of C1	N	"		
12.12	Detail of archway in partitioned room within G4	S	"		
12.13	Detail of archway in partitioned room within G4	S	"		
12.14	Detail of RSJ and name within G4	NW	"		
12.15	Detail of RSJ and name within G4	NW	"		
12.16	Detail of wall box within northeast wall of G4	NE	"		
12.17	Detail of wall box within northeast wall of G4	NE	"		
12.18	Detail of northwest wall of G4 showing blocked openings	N	"		
12.19	Detail of northwest wall of G4 showing blocked openings	N	"		
12.20	General shot of G4	E	"		
12.21	General shot of G4	E	"		
12.22	Detail of doorway to cellar and window of stairway, G5/G1	N	"		
12.23	Detail of doorway to cellar and window of stairway, G5/G1	N	"		
12.24	Shot of stairway and mezzanine windows overlooking G5	NW	"		
12.25	Shot of stairway and mezzanine windows overlooking G5	NW	"		
12.26	Shot of overlooking mezzanine floor within G5	W	"		
12.27	Shot of overlooking mezzanine floor within G5	W	"		
12.28	Detail of truncated 'T' bars (4 rows) within southeast wall of G5	SE	"		
12.29	Detail of truncated 'T' bars (4 rows) within southeast wall of G5	SE	"		
12.30	Detail of truncated 'T' bars (4 rows) within southeast wall of G5	S	"		
12.31	Detail of truncated 'T' bars (4 rows) within southeast wall of G5	S	"		
12.32	Detail of 'Nottinghamshire' mural on northeast wall of G5	NE	"		
12.33	Detail of 'Nottinghamshire' mural on northeast wall of G5	NE	"		
12.34	General shot of G5	N	"		
12.35	General shot of G5	N	"		
12.36	ID Shot	-	"		

Film 13					
Format	35mm	Type	B/W	Photographer	L.Dawson
Film & frame	Description	Direction	Date		
13.1	General shot of F1	E	08/05/08		
13.2	General shot of M4, showing bay window over looking G3	N	"		
13.3	General shot of M4, showing bay window over looking G3	N	"		
13.4	Detail of window fastener, M3	NW	"		
13.5	Detail of window fastener, M3	NW	"		
13.6	Detail of window, northwest wall of M3	N	"		
13.7	Detail of window, northwest wall of M3	N	"		
13.8	General shot of M3 showing glazed partition	E	"		
13.9	General shot of M3 showing glazed partition	E	"		
13.10	Detail of skirting board, corridor of mezzanine floor	NW	"		
13.11	Detail of skirting board, corridor of mezzanine floor	NW	"		
13.12	General shot of mezzanine corridor showing panelled partition	W	"		
13.13	General shot of mezzanine corridor showing panelled partition	W	"		
13.14	General shot of panelled partitions within M2	N	"		
13.15	Detail of door and partition, M2	NE	"		
13.16	Detail of door and partition, M2	NE	"		
13.17	General shot of M2	S	"		
13.18	General shot of M2	S	"		
13.19	General shot of windows on mezzanine floor overlooking G5	S	"		
13.20	General shot of windows on mezzanine floor overlooking G5	S	"		
13.21	Shot of stairway, from ground floor	W	"		
13.22	Shot of stairway, from ground floor	W	"		
13.23	General shot of southwest wall of C2 showing pipe work	S	"		
13.24	General shot of southwest wall of C2 showing pipe work	S	"		
13.25	Detail of piping within southwest wall of C2	S	"		
13.26	Detail of piping within southwest wall of C2	S	"		
13.27	Shot showing machine base and flu within C2	SW	"		
13.28	Shot showing machine base and flu within C2	SW	"		
13.29	Detail of door latch & escutcheon on door leading to C2	-	"		
13.30	Detail of door latch & escutcheon on door leading to C2	-	"		
13.31	Detail of door leading into C2	E	"		
13.32	Detail of door leading into C2	E	"		
13.33	Detail of transmission openings in northwest wall of C2	W	"		
13.34	Detail of transmission openings in northwest wall of C2	W	"		
13.35	General shot of C2	S	"		
13.36	ID Shot	-	"		

Film 14					
Format	35mm	Type	B/W	Photographer	L.Dawson
Film & frame	Description			Direction	Date
14.1	Detail of RSJ makers name, above openings between F3 and F4			NW	08/05/08
14.2	Detail of RSJ makers name, above openings between F3 and F4			NW	"
14.3	General shot of openings between F3 and F4			N	"
14.4	General shot of openings between F3 and F4			N	"
14.5	General shot of openings between F3 and F4			N	"
14.6	Detail of hatch in floor of F3			SW	"
14.7	Detail of hatch in floor of F3			SW	"
14.8	General shot of F3			S	"
14.9	General shot of F3			S	"
14.10	Detail of pulley wheels on truss of northlight roof, F2			NE	"
14.11	Detail of pulley wheels on truss of northlight roof, F2			NE	"
14.12	Detail of large bracket in wall of F2			NW	"
14.13	Detail of large bracket in wall of F2			NW	"
14.14	General shot of southeast wall of F3 showing scar in wall, window and brick pier			S	"
14.15	General shot of southeast wall of F3 showing scar in wall, window and brick pier			S	"
14.16	General shot of F2, F1 beyond			W	"
14.17	General shot of F2, F1 beyond			W	"
14.18	Detail of machine base scars in floor of F2			NW	"
14.19	Detail of machine base scars in floor of F2			NW	"
14.20	General shot of F2			E	"
14.21	General shot of F2			E	"
14.22	General shot of F1			W	"
14.23	General shot of F1			W	"
14.24	Detail of pulley wheels on truss roof truss, F1			NE	"
14.25	Detail of pulley wheels on truss roof truss, F1			NE	"
14.26	Detail of wall boxes in southwest wall of F1			SW	"
14.27	Detail of wall boxes in southwest wall of F1			SW	"
14.28	Detail of wall boxes in northeast wall of F1			NE	"
14.29	Detail of wall boxes in northeast wall of F1			NE	"
14.30	Detail of machine base scars in floor of F1			NE	"
14.31	Detail of machine base scars in floor of F1			NE	"
14.32	Detail of machine base scar in floor of F1			SW	"
14.33	Detail of machine base scar in floor of F1			SW	"
14.34	General shot of F1			NE	"
14.35	General shot of F1			NE	"
14.36	ID Shot			-	"

Film 15					
Format	35mm	Type	B/W	Photographer	L.Dawson
Film & frame	Description			Direction	Date
15.1	ID Shot			-	08/05/08
15.2	External shot of northeast gable of Building 1 and northwest gable of building 2			S	"
15.3	External shot of northeast gable of Building 1 and northwest gable of building 2			S	"
15.4	General external shot of building 2, showing principal façade and northeast gable			S	"
15.5	General external shot of building 2, showing principal façade and northeast gable			S	"
15.6	General shot of principal façade of building 2			NE	"
15.7	General shot of principal façade of building 2			NE	"
15.8	Detail of doorway, principal façade of building 1			E	"
15.9	Detail of doorway, principal façade of building 1			E	"
15.10	Detail of windows and northlight roof of building 1			E	"
15.11	Detail of windows and northlight roof of building			E	"
15.12	Detail of Loughborough College decorative stone entrance entablature of building 1			E	"
15.13	Detail of Loughborough College decorative stone entrance entablature of building 1			E	"
15.14	General shot of main entrance, building 1			E	"
15.15	General shot of main entrance, building 1			E	"
15.16	Detail of pad stone and tie plat on top of brick pier (for travelling crane) within F3			SE	"
15.17	Detail of pad stone and tie plat on top of brick pier (for travelling crane) within F3			SE	"
15.18	Shot of southeast wall of F4, with F3 beyond			E	"
15.19	Shot of southeast wall of F4, with F3 beyond			E	"
15.20	General shot of F4			N	"
15.21	General shot of F4			N	"
15.22	General shot of southwest end of F4			SW	"
15.23	General shot of southwest end of F4			SW	"
15.24	Detail of southeast wall of F4			E	"
15.25	Detail of southeast wall of F4			E	"
15.26	Detail of wall box, northeast wall of F4			NE	"
15.27	Detail of wall box, northeast wall of F4			NE	"
15.28	General shot of F4			S	"
15.29	General shot of F4			S	"

13 APPENDIX I: WRITTEN SCHEME OF INVESTIGATION

Written Scheme of Investigation:

Archaeological Building Recording

Site Name: **Loughborough Technical College**

Location: **Greenclose Lane, Loughborough, Leicestershire, LE11 5AZ**

Grid Reference: **SK 5342 1972**

Planning Application No.: **P/07/3371/2**

Summary

An application has been made for the extension and refurbishment of the Schofield Centre in Loughborough to Charnwood Borough Council. This work will involve the demolition of the rear of the existing structure, whilst retaining the façade along Greenclose Lane. The historic importance of the building as one of the first purpose built Technical Colleges, built c.1918 makes it necessary for a programme of archaeological and architectural recording to be undertaken before demolition can proceed. This Written Scheme of Investigation (WSI) details ARCUS's fieldwork methodology, report programme and dissemination of the results to meet the requirements of the planning condition from Charnwood Borough Council.

1.0 PURPOSE AND AIMS OF RECORDING

- 1.1 The redevelopment of the plot which is currently contains the Schofield Centre will involve almost total demolition of the standing building which is not occupied by Kings Church and a small adjacent workshop at the north end of Orchard Street. The focus of the archaeological recording will concentrate upon the areas where historic structural fabric will be lost.
- 1.2 The primary objective of the archaeological recording is to identify, wherever possible, the original form, spatial layout, purpose each room and any earlier decorative schemes and the changes which have subsequently taken place within the building.
- 1.3 The project will compile a comprehensive and high quality record of the building, including both the elevations and internal spaces, with an appropriate level of analysis and interpretation of any historic features in relation to any available archive material. A high quality, fully integrated archive suitable for long-term deposition in order to 'preserve by record' the building prior to demolition.

2.0 ARCHAEOLOGICAL/HISTORICAL INTEREST

- 2.1 The foundation of the Loughborough Technical Institute in 1909 was part of a wider national programme to provide technical training to meet the needs of an increasingly expanding industrial sector. The extant building was part of the early expansion of the college, which ultimately formed the foundation of

Loughborough University. The training school was developed into an Instructional Factory and the building on Greenclose Lane used to train setters and fitters, gauge makers and aircraft assembly works. The institute rapidly became the third largest in the country, mainly as a result of the drive and vision of the Principal Herbert Schofield between 1915 and 1950.

- 2.2 At the northern end of Orchard Street is a small brick built rectangular building and covered over yard which also fall within the boundary of the development site. This structure has been extensively altered, most recently into a garage, but appears to retain elements of a small upper floor workshop.

3.0 EXISTING DOCUMENTATION, SURVEY AND RESEARCH

- 3.1 The only previous historical or archaeological survey which has been undertaken in relation to the site is an Archaeological Desk-based Assessment by ARCUS in March 2007. This examined the historical development of land bounded by Greenclose Lane, Orchard Street and Ashby Square and considered the wider archaeological potential of the standing structures and subsurface deposits.
- 3.2 The history of the technical institute from its foundation in 1909 and early years of the University have been written about in a number of books by Cantor and Matthews. These books provide an informative narrative to all of the early buildings within the college, illustrated by contemporary photographs depicting students using machinery and portraying the former layout of the classrooms.

4.0 METHODOLOGY

- 4.1 The archaeological recording will take the form of a programme of targeted survey to document those areas where demolition, or extensive alteration is proposed and can be subdivided into the following elements: archive research; written fabric descriptions; measured survey; record photography; reporting and archive deposition.
- 4.2 Each of these elements is detailed in the following sections.

5.0 ARCHIVE RESEARCH

- 5.1 To compliment the existing published historical accounts for the college a targeted programme of archive research will be undertaken to aid with the overall understanding of the use of the building and nature of its former spatial layout.
- 5.2 The archives within the Leicestershire Record Office will be examined to establish whether any deposited building plans exist relating to the construction of the building. This will be accompanied by an examination of any archives or photographic material held by Loughborough University relating to its early history.

6.0 WRITTEN FABRIC DESCRIPTION

- 6.1 Written descriptions will be made to describe the extant historic features within each room and to document site observations and any archaeological findings, which will be cross-referenced to the room numbering system and drawn plans to accompany photographic record.
- 6.2 Any interpretative information relating to the site observations will also be documented as part of this record.

7.0 MEASURED SURVEY

- 7.1 The building will be recorded utilising both floor plans and transverse cross sections. The existing metric floor plans for the site held by Watkin Jones will be used as a base for the survey and enhanced with archaeological information and site descriptions. These will be reproduced at a scale of 1:100 for use on site.
- 7.2 Two cross sections will be hand surveyed to document the arrangement of the differing floor and stair levels within the site. These will be located to provide details of the floor and ceiling structure and relationship of the double height class rooms and high level observation corridors and windows. Sections will be produced at a scale of 1:50.
- 7.3 Observations made will be recorded in pencil on a dimensionally secure medium, such as drafting film, as overlay sheets. These sheets will be cross-referenced to the individual elevation, sectional and room or floor plans.
- 7.4 The survey drawings will be marked up and annotated with information which is pertinent to an understanding of the original or earlier use and appearance of the building. This will include both the historic structural fabric and smaller-scale fixtures, machine bases and fittings and significant structural alterations.

8.0 PHOTOGRAPHIC RECORDING

- 8.1 A high quality photographic record will be produced which will enable significant enlargements to be produced. The majority of the record will comprise black and white film, although this will be supplemented with colour transparencies. Medium format and 35mm cameras will be used and where appropriate, perspective control may be necessary. Wide angle lenses maybe required in confined spaces.
- 8.2 Additional photographs are to be taken with a 35mm camera using colour slide film. These pictures are to be used to record colour and significant architectural features and details.
- 8.3 The recording of the small brick building on Orchard Street will be recorded with photography only; the intention is to produce a suitable archive quality record of this structure.

8.4 General standards for the photographic record are as follows:

- The use of an appropriate scale(s) in a selection of photographs,
- A photographic register will be produced detailing the location and direction of each shot and a continuous numerical sequence will be used to catalogue the film numbers,
- Photographs will be bracketed to ensure photographic capture of each image,
- The position and direction of each photographic viewpoint will be recorded on a floor plan of each room at a sufficient scale so as to readily identify individual photographs,
- A colour coded system will be adopted to record types of photograph on the floor plans: medium format (black); 35mm black and white (blue); 35mm colour slide (red),
- Appropriate artificial lighting where necessary,
- All material used for the compilation of the record should be of archival quality,
- The photographic archive will contain contact prints and individual prints at 4"x5"; a selection of viewpoints may also be enlarged to 10"x8",
- Individual prints will be labelled on the reverse with a printed label detailing film and frame number, date, nature of photograph, room number and NGR,
- The archive prints and negatives will be stored in archival stable clear plastic sleeves,
- Digital copies of each photograph will also be produced and incorporated into the final survey archive.

9.0 SAMPLING AND ANALYSIS

9.1 There is no requirement for any scientific analysis during the duration of this project.

10.0 ARCHAEOLOGICAL PROGRAMME

10.1 The programme of archaeological recording will be undertaken prior to any of the demolition, or internal soft strip taking place. The work will comprise a period of archive research followed by targeted structural recording, involving both measured survey and record photography.

10.2 Once the site recording is completed a fieldwork archive will be prepared, comprising photography and survey drawings. This will then be assessed by Richard Clark. A final report will then be prepared, interpreting all findings and disseminated accordingly.

11.0 ARCHAEOLOGICAL PROJECT TEAM

11.1 The project will be under the overall direction of Oliver Jessop, ARCUS Project Manager, who will be the main point of contact for the duration of the project. Staff will be suitably experienced for their individual roles.

The building recording will be undertaken by the following as required:

- Oliver Jessop MA MIFA - Historic Buildings Project Manager
- Lucy Dawson MSc - Historic Buildings Project Officer
- Jennifer Barnes BA – Historic Buildings Archaeologist
- James Thomson MA – Historic Buildings Assistant
- Simon Jessop BA – Architectural Photographer
- Chris Breeden BA – Archaeological Surveyor / Technical Illustrator

12.0 MONITORING

12.1 Leicestershire County Council will be responsible for monitoring the archaeological work on site. This will be undertaken by Richard Clark (Senior Planning Archaeologist).

12.2 Following completion of the fieldwork programme a meeting will be arranged with Richard Clark to examine the site records and photographic archive. Once confirmation has been provided that the archaeological recording is satisfactorily, then the development programme can proceed. The final report would then follow in due course.

13.0 REPORT PREPARATION

13.1 A written report is to be produced detailing who undertook the archaeological recording, when and where the work was undertaken and why the work was required.

13.2 The written report will discuss the construction sequence of the buildings in relation to historical and archival information. The interpretation will be illustrated with photographs (black and white plates and or images taken from the 35mm colour slides), phased plans and cross sections. The interrelationship of the rooms and their associated spaces is deemed to be of interest and essential to understanding the nature of development of the college.

13.3 The final report will contain:

- an OASIS entry summary sheet
- an introduction to the origin and scope of the study
- a brief historic background of the development site as a whole
- a brief outline of the refurbishment programme

- a brief executive summary of the work undertaken and the results obtained
- the aims and methods adopted in the course of the recording;
- the detailed description and specialist interpretation of all archaeological observations recorded during the project. The report should, therefore, propose an interpretation for the phasing, dating and development of the building on the basis of the information collected during the project
- appropriate illustrative material including maps, plans, sections and drawings
- the photographic registers
- the photographic viewpoint plans
- the photographic plates
- description of the contents of the project archive and the arrangements for its long-term deposition
- a copy of this WSI bound as an appendix.

14.0 DISSEMINATION OF REPORT

- 14.1 The final report will be prepared in a bound and digital format (pdf) and will be provided to the Leicestershire County Record Office, the Leicestershire HER, the NMRC and to the client. Copies will also be retained in the ARCUS offices.

15.0 SUBMISSION AND DEPOSITION OF ARCHIVE

- 15.1 The completed archive, including both bound and digital copies of the interim reports, final report, field notes, photographs and drawings will be deposited at the Leicestershire Record Office.
- 15.2 All photographs (prints and transparencies) will be clearly numbered and labelled with the subject, orientation, date taken, name of photographer, and cross referenced (where applicable) to their film and negative numbers.
- 15.3 The project will use archive-quality recording, photographic and storage material - all negatives, transparencies and prints should be stored in archival sleeves prior to deposition.
- 15.4 All record drawings will be placed in the archive on a dimensionally secure medium.

16.0 STANDARDS AND GUIDANCE DOCUMENTS

- 16.1 ARCUS conforms to the standards of professional conduct outlined in the Institute of Field Archaeologists' Code of Conduct, the IFA Code of Approved

Practice for the Regulation of Contractual Arrangements in Field Archaeology, the IFA Standards and Guidance for Recording Historic Buildings.

- 16.2 The ARCUS Project Manager for Historic Building Survey and Analysis who will oversee and undertake part of the fieldwork recording and reporting is suitably experienced in the interpretation of buildings such as Loughborough Technical College and is a Member of the Institute of Field Archaeologists.
- 16.3 Working practices presented in the following documents will be used as guidance for the execution of the project:
- English Heritage. 2006. *Understanding Historic Buildings: A Guide to Good Recording Practice*,
 - IFA. 2001. (revised edition). *Standards and Guidance for the Archaeological Investigation and Recording of Standing Buildings or Structures*, IFA: Reading,
 - PPG15. 1994. *Planning Policy Guidance Note 15: Planning and the Historic Environment*, DOE/DNH,
 - RCHME, 1991. *Recording Historic Buildings: A Descriptive Specification* (2nd ed), London: Royal Commission on the Historical Monuments of England.

17.0 HEALTH AND SAFETY

- 17.1 All relevant Health and Safety legislation and codes of practice will be respected by ARCUS staff whilst on site.
- 17.2 A Risk Assessment will be prepared prior to commencing site work, although confirmation may also be sought from external advisors on particular issues of Health and Safety. This would occur if potentially hazardous materials were encountered during site work, including asbestos, or pigeon guano.

18.0 INSURANCES

- 18.1 ARCUS is fully insured as part of the University of Sheffield. The University currently maintains insurance cover as follows:

Employers Liability	£25 million
Professional Indemnity	£10 million
Public Liability	£25 million

19.0 COPYRIGHT AND CONFIDENTIALITY

- 19.1 ARCUS will retain full copyright of any commissioned reports, tender documents or other project documents under the Copyright, Designs and Patents Act 1988 with all rights reserved; excepting that it will provide an exclusive licence to the Client in all matters directly relating to the project as described in the Written Scheme of Investigation.

- 19.2 ARCUS may assign copyright to the client upon written request but retains the right to be identified as the author of all project documentation and reports as defined in the Copyright, Designs and Patents Act 1988.
- 19.3 ARCUS undertake to respect all requirements for confidentiality about the Client's proposals provided that these are clearly stated. It is expected that the Client will respect ARCUS's and the Institute of Field Archaeologist's general ethical obligations to disseminate the findings of archaeological fieldwork, research and interpretations of significant projects.

20.0 PUBLICITY

- 20.1 The dissemination of any information, or any other form of publicity relating to work carried out during this project would only be undertaken with the full agreement of the client.

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