Report 1958



nau archaeology

The Old Telephone Exchange, Spalding, Lincolnshire:
An Historic Building Record

Amended





Fiona Wooler

February 2009

BAU1958

© NAU Archaeology







www.nps.co.uk

NAU ARCHAEOLOGY PROJECT CHECKLIST				
Project overseen by	Andrew Hutcheson			
Draft completed	Fiona Wooler	19/12/2008		
Graphics completed	Michael Feather	15/01/2009		
Edit completed	Richard Hoggett	19/01/2009		
Signed off	David Whitmore	20/01/2009		
Amended	Richard Hoggett	05/02/2009		
Signed off	Jayne Bown	06/02/2009		

NAU Archaeology

Scandic House 85 Mountergate Norwich NR1 1PY

Contents

COI	itents		
	Summa	ry1	
1.0	Introduction1		
2.0	Planning Background3		
3.0	Previous Work3		
4.0	Historical Background3		
5.0	Results of the Survey11		
	5.1 Th	e Old Telephone Exchange – Exterior11	
	5.2 Th	e Old Telephone Exchange – Interior13	
6.0	Conclus	sion18	
	Acknow	vledgements47	
	Bibliogr	aphy47	
Figu	ıres		
Figu	ire 1	Site location	
Figu	ire 2	Site plan	
Figu	ire 3	Ordnance Survey 1888	
Figu	ıre 4	Ordnance Survey 1904	
Figu	ire 5	Ordnance Survey 1931	
Figu	ire 6	Plan of Building	
Figu	ure 7	Elevations of Buildings	
Figu	ure 8	Section diagrams of Telephone Exchange	
Pla	tes		
Plat	te 1	Woolwich Exchange in 1927	
Plat	te 2	North-west (main) elevation as seen from Gore Lane	
Pla	te 3	North-west elevation	
Pla	te 4	'1938 Telephone Exchange' in brickwork, north-west elevation	
Pla	te 5	Post Office notice, north-west elevation	
Pla	te 6	Main entrance into the telephone exchange	
Pla	te 7	Detail of one of the windows in the single-storey extension	
Pla	te 8	Detail of one of the ventilation holes, north-west elevation	
Pla	te 9	Detail of the rain water hopper, north-east facing elevation	
Pla	te 10	View looking south-east of the north-east elevation	
Pla	to 11	Detail of bricked-up holes in north-east elevation	

Plate 12	Detail of windows at first and second floor level, north-east elevation
Plate 13	Single-storey extension against the south-west elevation
Plate 14	Single-storey extension against the south-west elevation
Plate 15	South-east elevation of the Old Telephone Exchange
Plate 16	Remaining electrical equipment in the Electrical Intake Room
Plate 17	Door to stairwell from main entrance
Plate 18	Base of stairs in entrance hall showing partly tiled wall and stairs
Plate 19	Heating pipe located beneath the floor of the entrance hall
Plate 20	Light shade, ground floor
Plate 21	Detail of metal handrail and balusters of staircase
Plate 22	Detail of staircase showing surviving section of brass handrail
Plate 23	Former doorway to office as seen from the base of the stairs
Plate 24	Detail of site of former floor mat and sign to machine room
Plate 25	View looking south-west of the interior of the ground floor hall
Plate 26	Surviving edges of a former parquet floor, ground floor large hall
Plate 27	Concrete cable channel in ground floor hall with wooden hatches
Plate 28	Detail of some of the wooden hatches over the cable channel
Plate 29	Detail of one of the radiators, ground floor hall
Plate 30	Fan unit casing, ground floor hall
Plate 31	Concrete feature and remains of parquet floor, ground floor hall
Plate 32	Length of ducting, ceiling of ground floor hall
Plate 33	Square holes in the ceiling of the ground floor hall
Plate 34	Door at north-east end of ground floor large hall
Plate 35	Sign on Battery Room door
Plate 36	Interior of Battery Room
Plate 37	Door to the Retiring Room
Plate 38	Detail of door knob and lock, first floor
Plate 39	Detail Art Deco architrave, first floor office
Plate 40	Stairs and doors to Operating Room
Plate 41	Meter Room door
Plate 42	View looking south-west of the Operating Room
Plate 43	View looking north-east of the Operating Room
Plate 44	Detail of one of the radiators in the Operating Room
Plate 45	Detail of Fire Alarm, Operating Room
Plate 46	Post Office clock, Operating Room

Plate 47	Detail of Dictaphone, office on second floor
Plate 48	Second floor office, showing coving
Plate 49	Access ladder to roof
Plate 50	One of the two water tanks in the small building on the roof
Plate 51	Small building on roof which houses the water tanks
Plate 53	View looking north from the roof
Plate 54	Detail of lead ties, parapet
Plate 55	Detail of one of the drainage holes at the base of the parapet
Plate 56	Detail of one of the rainwater hoppers as seen from the roof

Location:

The Old Telephone Exchange

District:

South Holland

Grid Ref .:

TF 2468 2265

Date of Fieldwork:

1 December 2008

Summary

In December 2008 a Level 3 Archaeological Building Survey was undertaken ahead of the demolition of the redundant telephone exchange on Gore Lane, Spalding, Lincolnshire (NGR: TF 2468 2265). The telephone exchange was constructed in the 1930s and represents a typical example of a purpose-built communications hub for that period.

The building survey revealed that the telephone exchange on Gore Lane was constructed in 1938, as shown by a date stone, and is an example of a brick-built structure with flat roof designed to house the Main Distribution Frame and Strowger switches to provide a modern telephone system for the town of Spalding and its hinterland. The building also provided accommodation for switchboard operators and associated facilities, such as toilets, kitchen, offices and boiler room. The exchange was constructed to replace a smaller version which had been located within the Post Office on Sheep Market, but by the 1980s it had been superseded by a newer building on Winsover Road.

The Old Telephone Exchange on Gore Lane, despite its utilitarian nature, contains subtle architectural detail such as Art Deco balusters and handrail in the stairwell, architrave and door fittings. The building appears to have been constructed to a high standard with parquet flooring and good quality tiling.

1.0 Introduction

In November 2008 the Heritage Conservation Services at Lincolnshire County Council requested that a programme of historic building recording be undertaken on the Old Telephone Exchange, Gore Lane, Spalding, prior to its demolition. The building is located in the centre of the town, at the south-eastern end of Gore Lane, a street which opens into Sheep Market at its north-western end (Figs 1 and 2). Immediately to the south of the Old Telephone Exchange is Abbey Path, and to the northern side are the rears of properties facing onto Hall Place. Land to the south-east is presently a car park. The Old Telephone Exchange is located within Spalding Conservation Area.

The telephone exchange was constructed in the 1930s and represents a typical example of a purpose-built communications hub for that period. Such structures are now dwindling in number, not least because of the specialist nature of the building and its relative lack of adaptability to new uses.

The objective of this historic building recording project is to make a record of the historic building prior to its demolition. A Level 3 archaeological building survey, as prescribed by English Heritage (2006), was undertaken by Fiona Wooler on 1 December 2008.

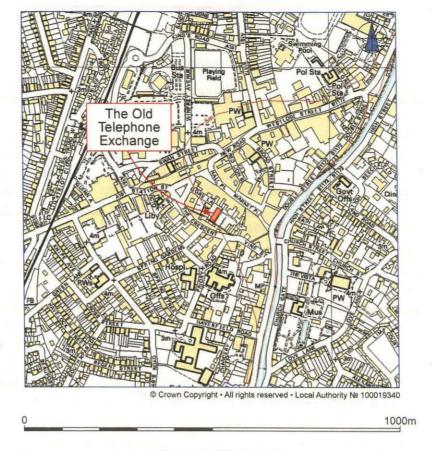


Figure 1 Site location

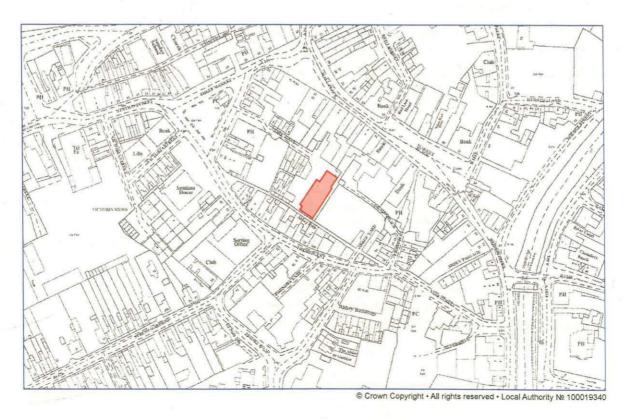


Figure 2 Site plan

2.0 Planning Background

The current work arose as a result of a planning application submitted by South Holland District Council requesting permission to demolish the former Telephone Exchange, Gore Lane, Spalding (Planning Ref.: H16/0136/08). Permission was approved on 03/09/2008 and an archaeological condition requiring a primarily photographic building survey was placed on the work.

A second archaeological condition, requiring the preservation or recording of any archaeological deposits disturbed by the demolition falls outside the scope of this report. Similarly, the archaeological condition placed on a linked application to turn the site into a temporary car park (Planning Ref.: H16/0627/08) also falls outside the scope of this report.

3.0 Previous Work

The Lincolnshire HER was examined for information regarding previous archaeological work within a 500m radius of the Old Telephone Exchange, Gore Lane, Spalding. No previous archaeological work appears to have been undertaken within the immediate vicinity of Gore Lane. The Old Telephone Exchange is not presently recorded on the Lincolnshire HER, and it does not appear to have been the subject of previous archaeological work.

4.0 Historical Background

The earliest Ordnance Survey map available at Lincoln Record Office, which was only available for printing from microfiche (hence the poor quality) is the large-scale 10.56 feet to 1 mile scale surveyed in 1887 and published a year later. This map shows the site of the Old Telephone Exchange as laid out gardens, to the north-west side of the properties of 'Crescent Gardens' (Fig. 3). The site remained undeveloped in 1904, as shown by the 25" to 1 mile scale Ordnance Survey map of that date (Fig. 4).

By the publication of the 3rd Edition Ordnance Survey map in 1931, a large building had been constructed on the site of the Old Telephone Exchange, although this structure was thinner and slightly longer than now. The function of this earlier building on the site was not revealed from historical mapping or searches of the Record Office, Lincoln Central Library or Spalding Library (Fig. 5).

The 1930s was an interesting decade for the town of Spalding. It was reported in the Nottingham Journal on Friday 27 March 1936, under the headline *Spalding Plans*:

It is almost safe to say that there is no town of its size in the country which has made greater strides in building enterprise than has Spalding during the past few years, and it is still progressive in this respect. New estates have appeared on the outskirts of the town, and during the past year steps have been taken by the Spalding Urban Council for the layout of a new housing estate in the town itself.

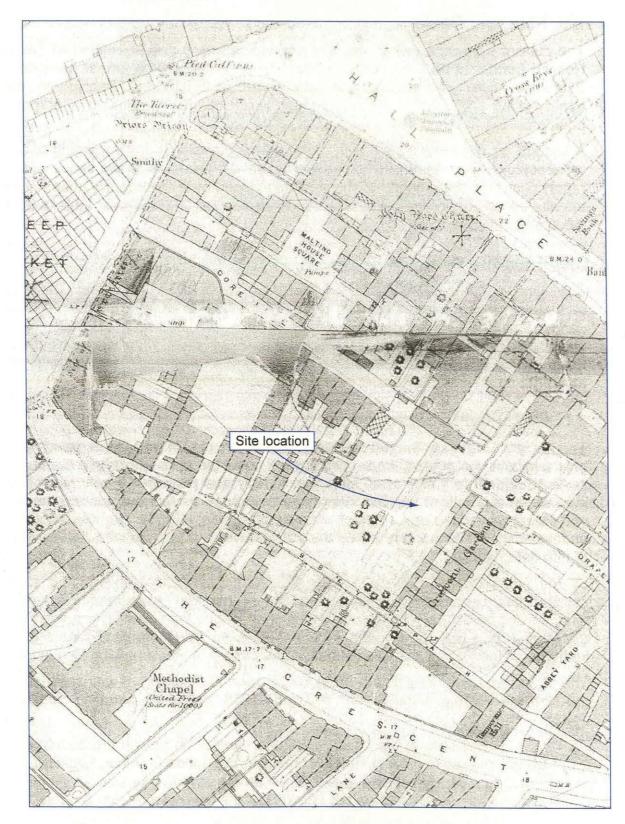


Figure 3 Ordnance Survey 1888 Scale: 10.56ft to 1 mile

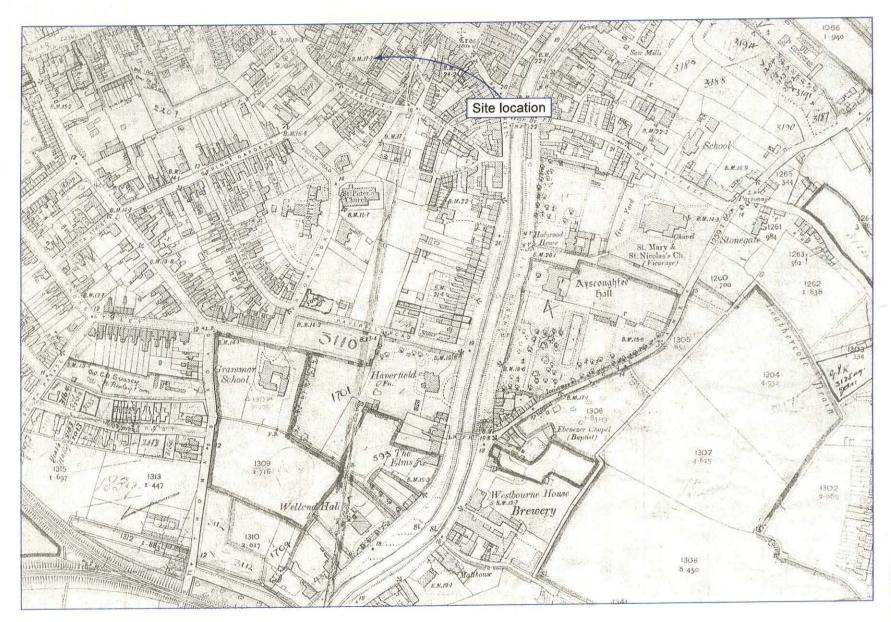


Figure 4 Ordnance Survey 1904 Scale: 25" to 1 mile

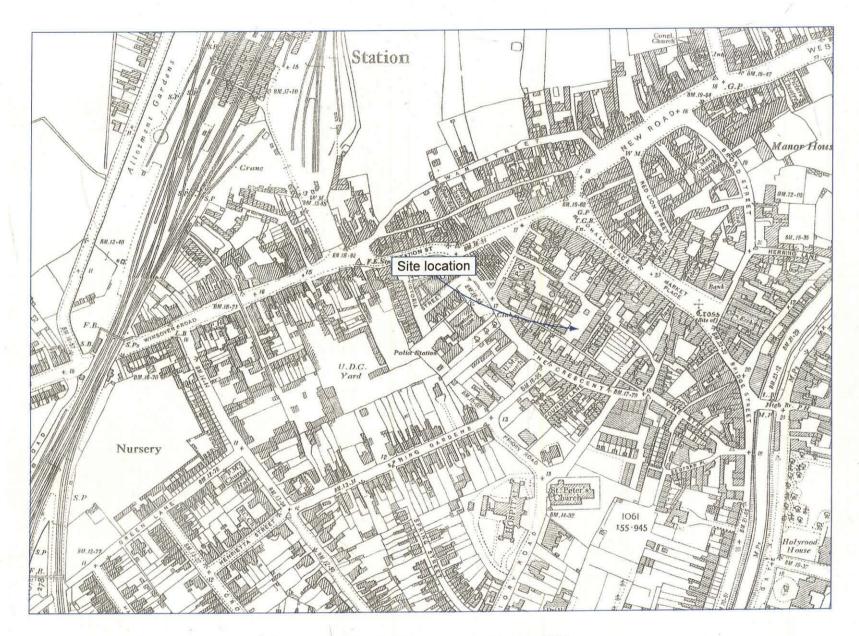
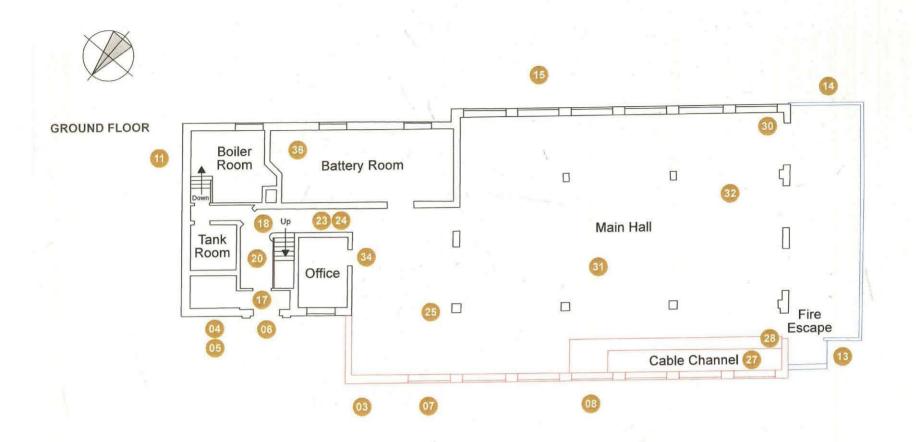
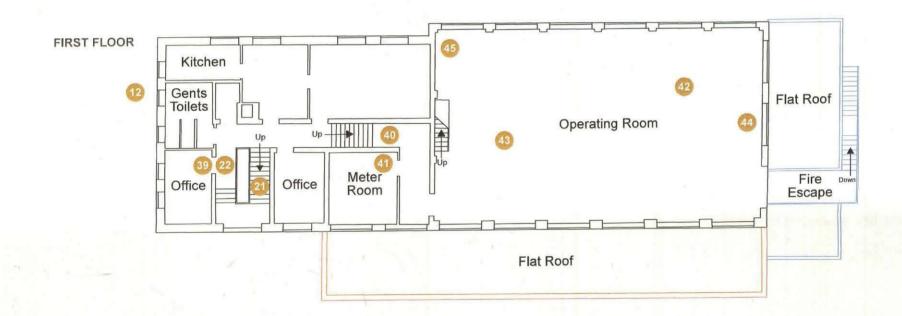
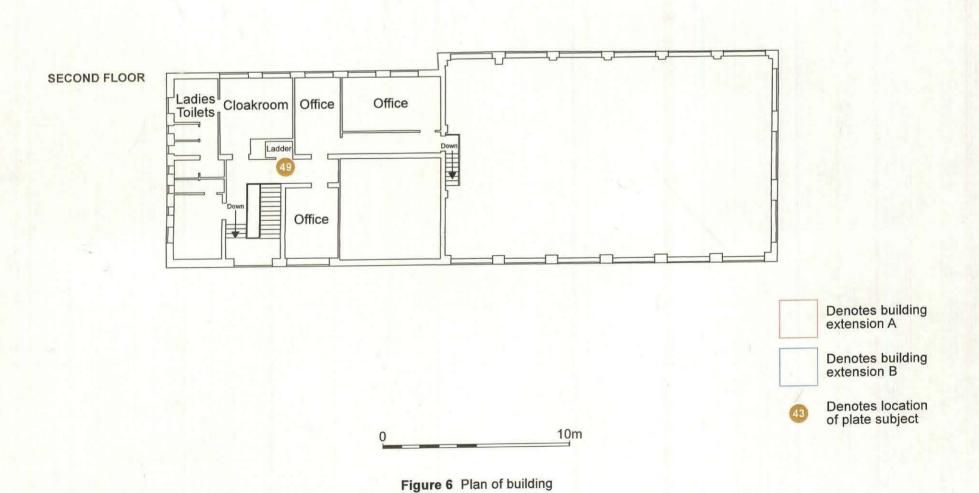


Figure 5 Third Edition Ordnance Survey 1931
Scale: 25" to 1 mile







As well as the demolition and rehousing of displaced tenants under the Slum Clearance Scheme, municipal enterprise included the construction of elaborate showrooms for the Spalding electricity and gas departments, a new fire station, a new cattle-market scheme, new public conveniences (resembling a Swiss cottage), a Land Settlement Scheme which provided small-holdings for the unemployed, several road widening schemes and the replacement of dangerous bridges. According to Gooch (1940, 551–3), Spalding in 1940 was twice the size it had been in 1918, with around 3,800 houses and a population c.15,000. This increase in population and rapid modernisation in the 1930s may have prompted the construction of the Telephone Exchange on Gore Lane in 1938.

The outbreak of the Second World War also placed a great strain on the existing telephone infrastructure. An estimated 15% of the telephonic workforce, some 73,000 individuals, joined the armed forces, where their engineering and communication skills were in great demand. The war also brought with it an increase in investment in infrastructure to aid in the coordination of the war effort and also to preserve the telecommunications network in the event of bombing or invasion. It is likely that all of these factors were also important in the Spalding's decision to invest in a new telephone exchange in the late 1930s.

There was already a telephone exchange in Spalding prior to the 1930s; it was located within the Post Office on Sheep Market, and is believed to have begun operating c.1909. The telephone exchange at the end of Gore Lane was constructed in 1938, only to be gradually superseded by the British Telecom building on Winsover Road, which had been constructed on the site of Willesby's School in the mid-1960s (Lincolnshire Free Press, 14 May 1991). The Telephone Exchange on Gore Lane ceased to operate in the 1980s (Mr Mike Chapman, pers. comm.).

Initially, every call had to be connected via an operator. Upon lifting your handset, a signal would be sent to the local telephone exchange to which you were a subscriber or customer. This would operate a lamp or indicator (on the manual switchboard) to bring to the operator's attention that you wished to make a call. He would then plug into the jack associated with your line and ask 'Number Please?' and proceed to connect your line via another jack to the required number.² By the late 1920s, the UK exchange system was becoming more automated, based on Strowger switching. This meant a change in the role of telephone operators. Before this, they had handled the mechanics of every call, finding out which number the caller wanted, and then actually making the connection by placing jack plugs into sockets on the board. But with automation, the operator became a person of last resort on local calls and more of a 'long distance' specialist and problem solver. As the system expanded, more operators were needed for directory enquiries, for person-to-person and reverse charge calls, and giving assistance in difficulties.³

² www.lightstraw.co.uk/ate/main/swrm/operators1.html. Accessed 10/12/2008.

¹ http://www.britishtelephones.com/histuk.htm

³ www.connected-earth.com/Galleries/Shapingourlives/Livingonthenetwork/Usingphoneservices/. Accessed 10/12/2008.

The United Kingdom telephone service in its early period from 1878 was provided by private sector companies such as the National Telephone Company (NTC), with the General Post Office (GPO) soon in competition. In 1986, the GPO took over the NTC trunk telephone service, and by 1912 it had become the monopoly supplier. Following the Post Office Act 1969, the Post Office ceased to be a government department, as became a public corporation, with the Act giving the PO the exclusive privilege of running telecommunications systems. Post Office Telecommunications was renamed British Telecom in 1980, although it remained part of the Post Office. In 1984, British Telecom was privatised when more than 50% of the shares were sold to the public.⁴

⁴ www.btplc.com/Thegroup/BTsHistory/History.htm. Accessed 10/12/2008.

5.0 Results of the Survey

5.1 The Old Telephone Exchange - Exterior

Vehicular access to the Old Telephone Exchange is only possible from the Sheep Market and via Gore Lane. The property is effectively hidden from view from the main streets of the town, as it is located to the rear of buildings which front Hall Place and The Crescent. Due to restrictions on space surrounding the Old Telephone Exchange it was not possible to obtain parallel photographs of all the main external elevations, apart from that facing the car park to the south-west, which was partly obscured by a low wall.

The Old Telephone Exchange is a three-storey building with flat roof, and is rectangular in plan with single-storey extensions to the north-west and south-west elevations (Fig. 6). The building is constructed of brick laid in alternating courses of headers (short side of the brick) and stretchers (long side of the brick), known as Flemish Bond.

The main elevation of the Old Telephone Exchange faces Gore Lane (Plates 2 and 3; Fig. 7). To the northern end of this elevation is a slightly recessed panel which contains the date '1938' (with a crown between the numbers) and the inscription 'E vi R, Telephone Exchange' (Plate 4). This date stone, along with the second floor windows, are set between two rows of string courses consisting of thin concrete blocks; this provides some architectural detail to the building. Fixed to the wall beneath the date panel is a notice from the Post Office which reads (Plate 5):

Post Office Premises Trespass Prohibited

Post Office vehicles and vehicles authorised to enter on business only. All other vehicles prohibited. The Post Office will not be liable for any loss, damage or injury (whether due to alleged negligence or fault or howsoever caused) to unauthorised persons or vehicles.

It is interesting to note that, given that Post Office Telecommunications became known as British Telecom in 1980, none of the signage on the exterior or within the building contains any reference to British Telecom, which suggests that the Old Telephone Exchange was probably effectively redundant by 1980.

The main entrance into the building is located in the north-west elevation facing Gore Lane. The double-doorway is protected by a concrete lintel and a single concrete jamb to the right-hand side, and the brickwork surrounding the door is decorative. There is a letterbox to the left side of the door, which is now boarded over (Plate 6). Above the main entrance is a large window consisting of 18 panes set in a metal frame which lights the main staircase (Plate 2).

The single-storey, flat-roofed, extension located against a majority of the north-west elevation has seven large windows with metal frames, containing seven panes of glass (Fig. 6, Extension A). The present metal frames appear to be of

aluminium, although the originals may have been steel. Steel windows were inexpensive and readily available in a wide selection of sizes and styles. Their use in all forms of architecture became prolific following the First World War, in keeping with the new fashions and demands for low-cost, light, airy and well ventilated buildings (Clement 1997). As with the second floor windows along this elevation, those in the single-storey extension are also contained within two rows of string courses (Plate 7). Below the windows in the single-storey extension are two decorative ventilation holes constructed form thin bricks (Plate 8). In the northeast facing wall of the single-storey extension is a hole within the brickwork which allows water to drain into a hopper and downpipe from the flat roof hidden behind the brick wall (Plate 9).

The north-east elevation of the telephone exchange was difficult to photograph due to the proximity of other buildings (Plate 10; Fig. 7). At ground level, this elevation has evidence for former apertures, which appear to have related to the former Tank Room (Fig. 6; Plate 11). At first floor level there are five windows, three of which have ventilators at the top; these light the gents' toilets (Plate 12). At second floor level, there are two similar windows which flank five thinner, three-pane windows; four of these light individual toilet cubicles (Fig. 6). As with the single-storey extension, this elevation contains two holes close to the top of the wall which allow water to drain from the flat roof into the hoppers and downpipes. The location of these holes and rain water hoppers provides an indication of the level of the roof behind the brickwork.

The south-west elevation of the Old Telephone Exchange has a single-storey, flatroofed extension which has more recently provided a means of escape from the ground floor and the second floor switchboard room, but which may not be an original feature as it appears to partially block one of the windows of the northwest elevation (Fig. 6, Extension B; Plates 13 and 14). Internally, this extension simply provides extra space for the ground floor large hall; therefore it is possible that it was constructed to comply with changing fire regulations.

The south-east elevation faces the car park to the rear of the property (Plate 15). This elevation clearly shows a separation between the two sides of the building; the larger, south-west section has windows which light the ground floor large hall, and at the upper level the windows which, presumably, lit the original open-plan switchboard room, with no floor between. The north-eastern end, however, has three floors which housed the offices, toilets, kitchen, boiler room, and ancillary accommodation. The separation between the two ends is shown not only in the fenestration, but also by the fact that the southern end projects slightly from the rest of the building.

The rows of string course already noted on the other elevations is repeated on the larger, south-west section of the building, but only the upper level of the north-east end; this is presumably because the spacing and size of the windows did not allow for a string course at the lower level to continue around the whole building (Plate 15). It is interesting to consider the significance of the size and location of windows in a building; the large multi-paned windows which lit the ground floor hall (where it is presumed machinery was housed) and the second floor switchboard room would have provided plenty of light and ventilation into rooms which were undivided internally, thus allowing for regularly-spaced fenestration. On the other hand, the north-east end of the building contains individual rooms serving different

functions such as offices, toilets and cloakrooms. The two slightly smaller windows at the north-east end of the south-east elevation, for example, lit the ladies' cloakroom; therefore it is possible that they are smaller in comparison to other windows on the same level, due to a need for hanging space on the walls.

It is noticeable on the south-east elevation, although it occurs on the other elevations, that the colour of the parapet at the top of the walls is redder in colour than the rest of the brickwork. It is possible that the walls have been heightened at some point, but it may also be due to weathering.

5.2 The Old Telephone Exchange - Interior

Access to the interior of the Old Telephone Exchange was possible via the double doors in the north-west elevation, as shown on Plate 6. The entrance opens into a small lobby which has to its left-hand side the former Meter Room, a sign on the door still displays the original lettering 'Meters', with a later sign above which says 'E.L & P Switch Room' (Plate 16; Fig. 6).

Upon entering the building, the small lobby leads into the base of the stairwell through a plain door with four horizontal glass panels (Plate 17). The floor of the entrance hall and the lower half of the walls are covered in square creamy brown tiles, which match the tiles of the staircase treads (Plate 18). Along the back wall of the stairwell, set beneath the floor, is a heating pipe which could be accessed by lifting up one of the sections of floor (Plate 19).

Leading off the entrance hall is a short corridor with a door numbered '15' which provides access to the former Tank Room and Boiler Room (Fig. 6). The Tank Room may have been used to house a diesel (or some other form of fuel) tank to power a generator in case of loss of electricity. The only feature of note here was the survival of what may be an original enamel light shade (Plate 20).

The staircase handrail and balusters are constructed from metal strips reflecting the Art Deco style of architecture of the period in which the building was erected. The handrails, where sections have not been stripped away, were of brass and when complete would have given a high quality finish to the stairwell (Plates 21 and 22).

At the base of the staircase is a short corridor which provides access to the large hall on the ground floor, which it is presumed housed the machinery. A break in the tiling and a change in paint provides evidence for a former doorway which would have allowed access into a former office from the entrance hall (Plate 23). The double doors leading into the large hall has a sign 'Apparatus Please Wipe Your Boots', and set in the floor is an area where a floor mat was formerly located (Plate 24). This sign indicates that the area beyond the door, where the machinery was located, was to be kept relatively clean.

The main hall at ground level is a large open space with two rows of columns down its length, and is where the MDF (Main Distribution Frame) was presumably located (Plate 25). The flooring of the hall has been stripped away, with only sections remaining around the edges (Plate 26). This is unfortunate as the surviving remains indicate that it was a good quality parquet floor laid on top of concrete. Along part of the north-west wall is a concrete pit which retains its wooden hatches with 'ring pulls' (Plates 27 and 28). This pit, or cable channel, may have been the point where external cables came into the exchange and

terminated in the MDF. Along the long edges of this large hall are radiators, six along the south-west wall and three along the north-west wall (Plate 29). Two fan unit casings remain *in situ* in this hall; these would possibly have been used to provide some form of ventilation, and may not be original features (Plate 30). Set widthways across this room is a linear concrete base, the blocks of which have been set in a wooden surround with metal strips between each block (Plate 31). The function of this feature is unknown; it may have supported the weight of a particularly heavy piece of equipment. In the ceiling of this large room is ducting which terminate in 'ball joints'; these may have been used to ventilate the machinery, and their location in the ceiling may hint at the number of rows formerly present in the room, in this case five (Plate 32). Also in the ceiling are two square holes, which may have allowed for wires or ducting between the ground floor and the switchboard room above (Plate 33).

It has been mentioned to the author by an ex-British Telecom employee that the room in a telephone exchange which housed the MDF was an incredibly noisy place to work. It is also necessary to consider that there would have been a need for fairly constant maintenance of the equipment, and therefore engineers would have been required on site.

At the north-east end of the room is a doorway into a featureless room (Plate 34; Fig. 6), which appears to have originally also been accessed from the entrance hall, as shown by the blocked doorway in Plate 23.

In the corner of this large ground floor hall, on the left-hand side upon entering, is what as shown on the Ground Plan (Figure 6) as the 'Battery Room'. On the door into this room is the sign shown in Plate 35 which reads:

Prevent Cell Explosions No Smoking No Naked Lights Use Protective
Clothing

The Battery Room, as its name suggests, was where batteries were housed, possibly as a means of back-up should the electricity supply fail. This room at the time of survey was relatively featureless apart from a wash hand basin and cupboard at one end (Plate 36).

The first floor of the telephone exchange was accessed by the main staircase, up two flights of stairs. At the top the stairs on the first floor eight separate rooms; two offices, a gent's toilet, cleaners room, kitchen, retiring room and engineers room (Figure 11). Each of these rooms originally appear to have had numbers on the doors, for example the Retiring Room is No.9 (Plate 37). Many of the doors retain their original door knobs and locks (Plate 38). Some of the door surrounds on the first floor also retain their Art Deco architrave (Plate 39).

From the corridor at first floor level, there is a short staircase which provides access up to the Meter Room and the Operating Room (Fig. 6). The double doors at the top of this staircase have the No.11 (Plate 40), and the Meter Room is No. 13 (Plate 41). The Meter Room is where the small individual meters for each phone would have been located, to allow the customer to be charged.

NORTH-WEST ELEVATION B

6.00m OD

Fire Escape

B-

SOUTH-WEST ELEVATION

Main Entrance



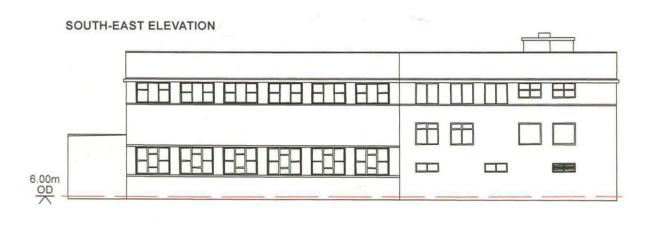




Figure 7 Elevations of building

In the opposite wall to the Meter Room are double doors which provide access to the Operating Room, where the switchboards would have been located. This is a large open space (Plates 42 and 43), which has radiators along three sides, each with a ledge over (Plate 44). The presence of the radiators, if original features, would have presumably prevented the switchboards from being located against the walls, as was the case at Woolwich (Plate 1); consequently the switchboards may have been located centrally. Along the three external elevations of this large room, windows are located in the upper half of the walls; this would have made opening the windows rather awkward, and it is possible that this was done by the use of a pole with a hook, as sometimes seen in schools.

The floor of the Operating Room was formerly laid in parquet but this has been taken up to reveal the concrete floor. At the north-eastern end of the room is a metal staircase which provides access to rooms at second floor level (Fig. 6; Plate 43). To the right-hand side of this staircase a fire alarm casing remains *in situ* which has the word *Transcal* at the base (Plate 45). A Post Office clock remains *in situ* on one of the walls (Plate 46).

The second floor, which could be accessed via either the metal staircase seen on Plate 43 or the main staircase at the front of the building, contains several rooms including a Ladies Toilet and Cloakroom, Gent's Cloakroom and WC, and three offices (Fig. 6). It is interesting to consider if the offices at this level housed the management of the telephone exchange, who could observe switchboard operators from the top of the metal staircase, and who in turn could be easily seen by the employees.

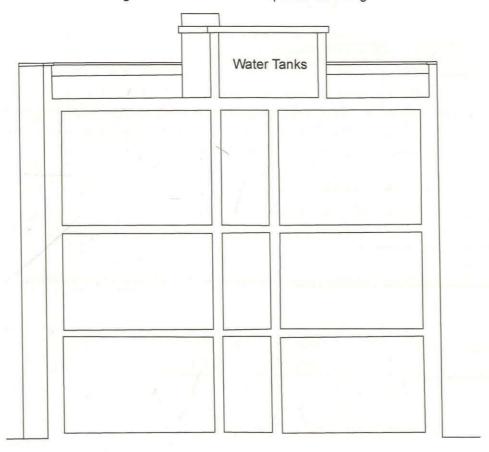
In one of the offices an old Dictaphone remains plugged to the wall (Plate 47). Some of the offices at this level have had suspended ceilings inserted, but where a section has come away it was possible to note the plain, but decorative coving of some of the rooms (Plate 48).

Located in the corridor of the second floor is a small room (Room No. 3) which contains a metal ladder to the tank room and the roof (Plate 49). At the tope of this ladder are two metal water tanks which would have fed the system (Plate 50). The water tanks are located within a small brick-built structure with flat roof, which has been constructed on the top of the main roof (Plate 51). Plates 52 and 53 shows some of the views obtained from the roof of the Old Telephone Exchange.

The top of the parapet which surrounds the flat roof is constructed from concrete blocks which are tied together with lead ties, reminiscent of traditional building construction (Plate 54).

At the north-east end of the roof is a hole in the base of the parapet which allows water to drain from the roof into the rainwater hopper on the north-east elevation (Plates 55 and 56).

Section A-A through north-east end of Telephone Exchange



Section B-B through south-west end of Telephone Exchange

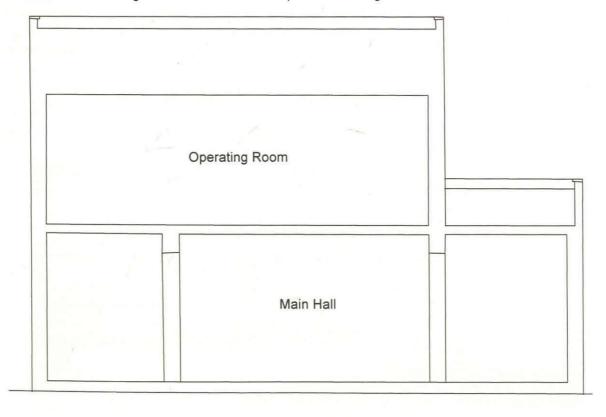


Figure 8 Section diagrams of Telephone Exchange

6.0 Conclusion

A date stone on the main elevation of the Old Telephone Exchange indicates that the building was constructed in 1938, presumably as a replacement for an earlier, smaller exchange located within the Post Office on Sheep Market. The wide-scale improvements made to the nation's communication network at the beginning of the Second World War doubtless also played a part in the establishment of the newly founded Spalding Telephone Exchange.

Cartographic sources show that the site on which the telephone exchange was constructed remained undeveloped between 1888 and 1901, but by 1931 some smaller buildings occupied the site. No documentary sources or photographs were revealed at Lincoln Record Office, Lincoln Central Library or Spalding Library relating to the construction of the telephone exchange on Gore Lane despite consulting staff at each of these locations.

The Old Telephone Exchange is a brick-built, flat-roofed building typical of a telephone exchange of this period. Its internal floor layout provides evidence for a large open space on the ground floor which would have housed the Main Distribution Frame (MDF) and Strowger system to provide the telephone network for the town of Spalding. Also on the ground floor was a Battery Room, Office, Tank Room, Boiler Room and Electrical Intake Room. At first floor level there were offices, toilets, kitchen, Engineers Room and Meter Room, as well as the large open-plan space which was presumably the switchboard (or operating) room, similar to that shown on Plate 1. The second floor contained further offices, toilets and associated accommodation.

The building, despite its utilitarian function, contains elements of architectural detail such as the Art Deco staircase, architrave, parquet flooring and quality tiling. This was a well-designed building which housed all the functions necessary for a modern telephone system. It is likely that the floor plan of the Old Telephone Exchange in Spalding was replicated up and down the country in other exchanges.

Despite the present lack of machinery or other fixtures and fittings in the building, it is interesting to consider the noise and heat that must have been generated by the MDF and Strowger system.



Plate 1. Woolwich Exchange in 1927 (Reproduced from Emmerson 1986 © Shire Publications).



Plate 2. North-west (main) elevation as seen from Gore Lane



Plate 3. North-west elevation



Plate 4. '1938 Telephone Exchange' in brickwork, north-west elevation



Plate 5. Post Office notice, north-west elevation



Plate 6. Main entrance into the telephone exchange (Scale = 2m)



Plate 7. Detail of one of the windows in the single-storey extension, north-west elevation



Plate 8. Detail of one of the ventilation holes, north-west elevation (each red and white section of the scale = 20cm)



Plate 9. Detail of the rain water hopper, north-east facing elevation of single-store extension, as seen from within the first floor office



Plate 10. View looking south-east of the north-east elevation



Plate 11. Detail of bricked-up holes in north-east elevation (Scale = 2m)

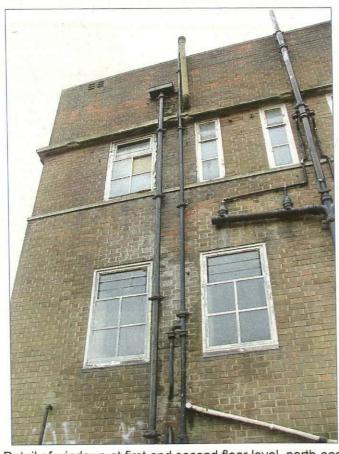


Plate 12. Detail of windows at first and second floor level, north-east elevation



Plate 13. View looking south-east showing the single-storey extension against the south-west elevation with fire escape stairs for the second floor (Scale = 2m)



Plate 14. View from Abbey Path showing the single-storey extension against the south-west elevation

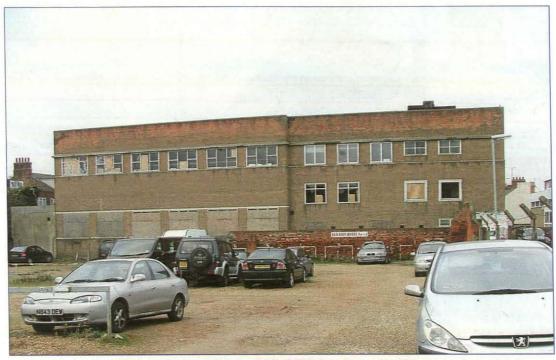


Plate 15. View looking north-west of the south-east elevation of the Old Telephone Exchange

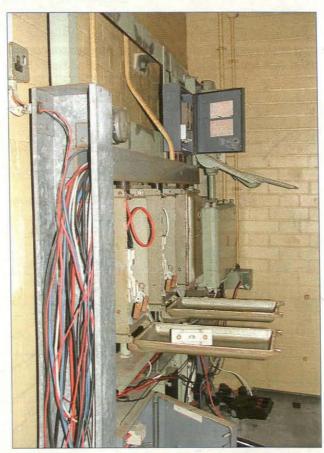


Plate 16. View of the remaining electrical equipment in the Electrical Intake Room, ground floor



Plate 17. Door to stairwell from main entrance (Scale = 2m)



Plate 18. Base of stairs in entrance hall showing partly tiled wall and stairs (Scale is in 20cm graduations)



Plate 19. Heating pipe located beneath the floor of the entrance hall (Scale = 1m)

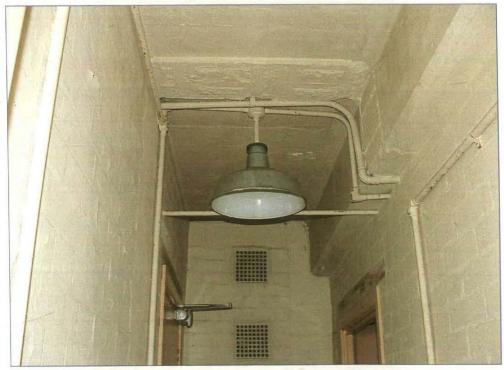


Plate 20. Light shade in ground floor corridor to the Tank Room and Boiler Room

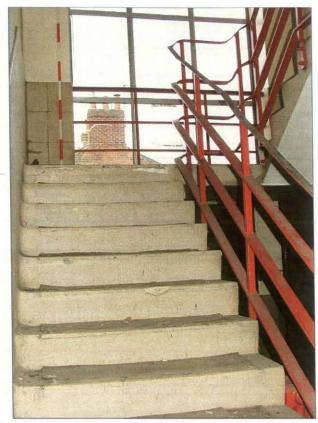


Plate 21. Detail of metal handrail and balusters of staircase



Plate 22. Detail of staircase at second floor level showing surviving section of brass handrail (Scale = 2m)

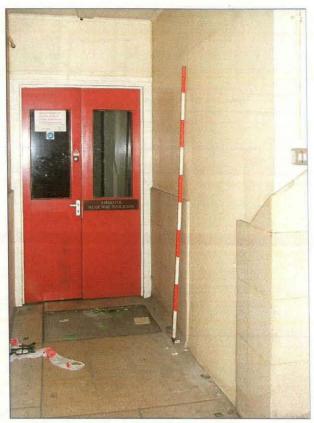


Plate 23. Former doorway to office as seen from the base of the stairs at ground floor level (Scale = 2m)

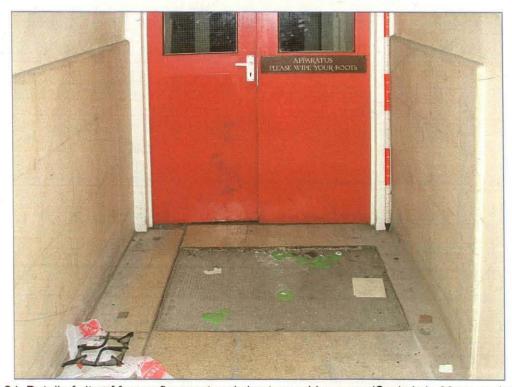


Plate 24. Detail of site of former floor mat and sign to machine room (Scale is in 20cm graduations)



Plate 25. View looking south-west of the interior of the ground floor hall (Scale = 2m)



Plate 26. Surviving edges of a former parquet floor, ground floor large hall (Scale = 1m)



Plate 27. View looking north-east of the concrete pit in ground floor hall with wooden hatches (Scale = 2m)



Plate 28. Detail of some of the wooden hatches over the pit, ground floor (Scale is in 20cm graduations)



Plate 29. Detail of one of the radiators, ground floor hall (Scale = 2m)

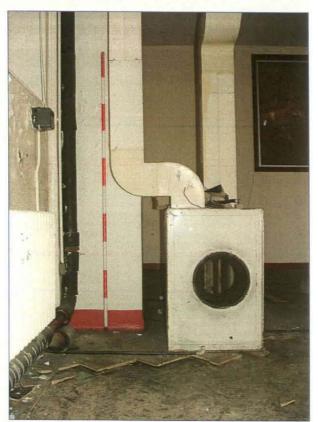


Plate 30. Fan unit casing, ground floor hall (Scale = 2m)



Plate 31. Concrete feature and remains of parquet floor, ground floor hall (Scale = 1m)



Plate 32. One of the lengths of ducting on the ceiling of the ground floor hall

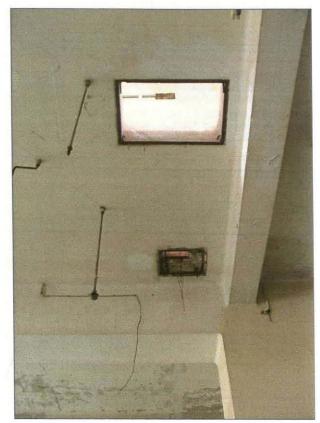


Plate 33. Square holes in the ceiling of the ground floor hall

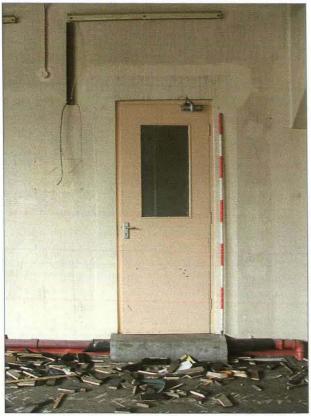


Plate 34. Door at north-east end of ground floor large hall (Scale = 2m)

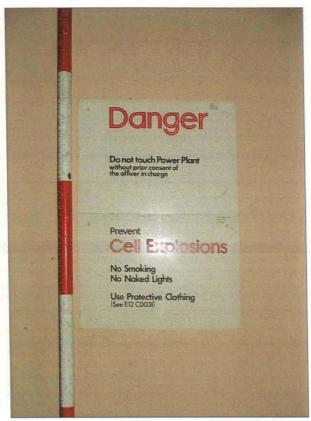


Plate 35. Sign on door to Battery Room

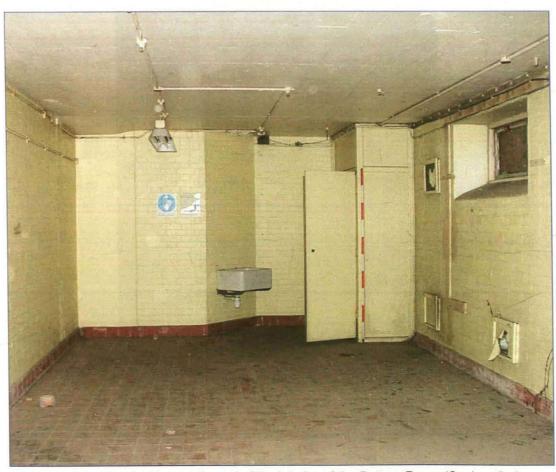


Plate 36. View looking north-east of the interior of the Battery Room (Scale = 2m)



Plate 37. Door to the Retiring Room (No.9) (Scale = 2m)



Plate 38. Detail of door knob and lock, first floor

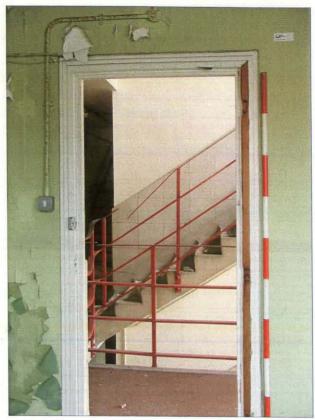


Plate 39. Detail Art Deco architrave, first floor office (Scale = 2m)



Plate 40. View from first floor landing looking towards stairs and doors to Operating Room (Scale = 2m)



Plate 41. View of Meter Room door which displays the number '13' and the sign 'Meters' (Scale = 2m)



Plate 42. View looking south-west of the Operating Room (Scale = 2m)



Plate 43. View looking north-east of the Operating Room showing metal stairs to rooms at second floor level (Scale = 2m)

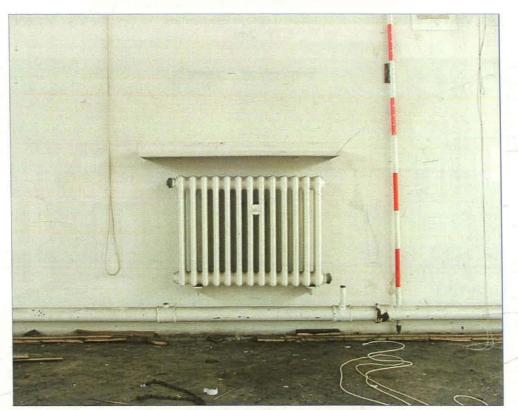


Plate 44. Detail of one of the radiators in the former Operating Room (Scale is in 20cm graduations)

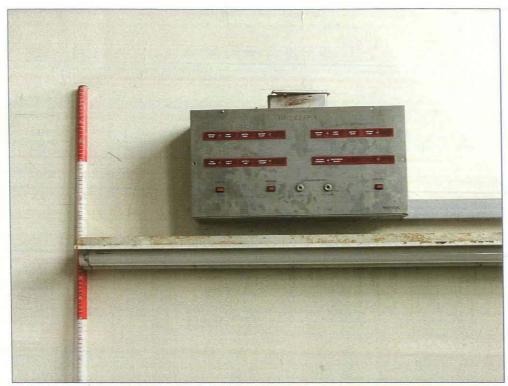


Plate 45. Detail of Fire Alarm System, Operating Room

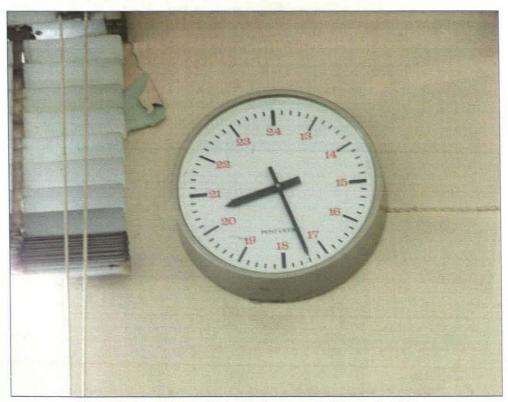


Plate 46. Post Office clock, in situ on wall of Operating Room



Plate 47. Detail of Dictaphone, office on second floor (each red and white section = 20cm)



Plate 48. Second floor office, showing coving at top of the wall partially hidden by the suspended ceiling

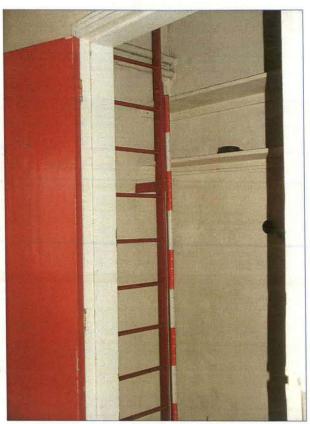


Plate 49. Metal ladder from second floor which provides access to the water tanks and roof (Scale = 2m)



Plate 50. One of the two water tanks in the small building on the roof (Scale = 1m)

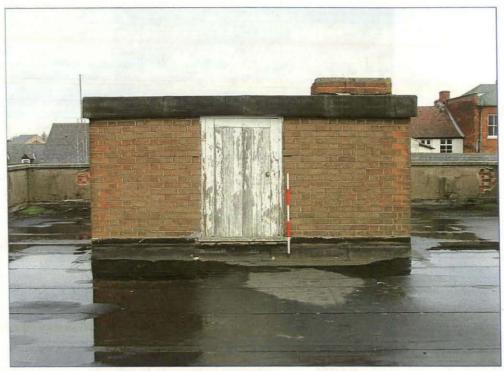


Plate 51. View looking north-west of small building on roof which houses the water tanks and access ladder (Scale = 1m)

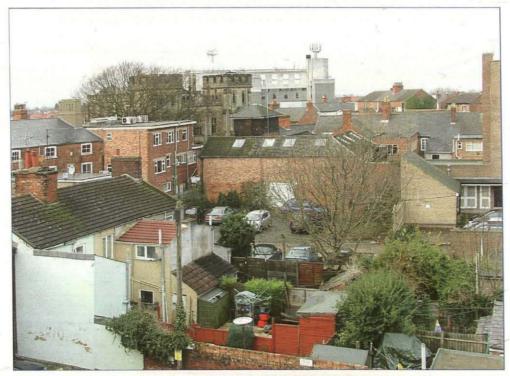


Plate 52. View looking north-west from the roof towards the concrete British Telecom building on Winsover Road which eventually superseded the exchange on Gore Lane

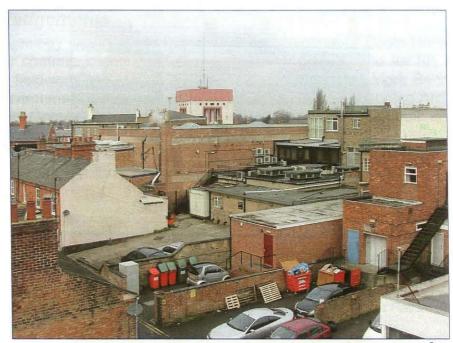


Plate 53. View looking north towards the water tower on Kings Road⁵



Plate 54. Detail of lead ties between the concrete capping stones of the parapet

⁵ The water tower (Chatterton Tower) on Kings Road was constructed between 1951 and 1955 when it was decided by the Water Department of the Urban District Council that high level water storage was needed. The tower incorporated a two-storey office building in its lower part (Wright 1973).

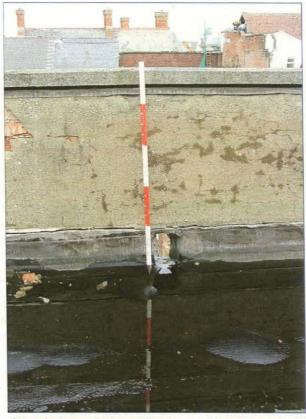


Plate 55. Detail of one of the drainage holes at the base of the parapet which allows water to drain into the hoppers



Plate 56. Detail of one of the rainwater hoppers as seen from the roof

Acknowledgements

NAU Archaeology would like to thank Mr Mike Chapman of South Holland District Council for commissioning the building recording project, and for his assistance during the fieldwork; the staff of Lincoln Record Office; and Mark Bennet, Senior Historic Environment Record Officer and Louise Jennings, Planning Archaeologist, Lincolnshire County Council. The illustrations were by the author and Michael Feather. The report was edited by Richard Hoggett.

Bibliography

Published Sources

Clement, P. 1997. *Metal Windows, The Building Conservation Directory* (http://www.buildingconservation.com/articles/metalwin/metalw.htm - Accessed 11/12/08)

Emmerson, A. 1986. Old Telephones. Shire Publications Ltd.

English Heritage. 2006. *Understanding Historic Buildings – A Guide to Good Recording Practice*. London: English Heritage

Gooch, E.H. 1940. A History of Spalding. The Spalding Free Press Co Ltd, Spalding.

Wright, N. 1973. Spalding: An Industrial History. Lincolnshire Industrial Archaeology Group, Boston

Cartographic Sources

Ordnance Survey Map 10.56ft to 1 mile scale, Surveyed 1887, Published 1888, Sheets CXXXIV.14 and CXLII.2, Lincoln Record Office (microfiche)

Ordnance Survey Map 25" to 1 mile scale, Published 1904, Sheets CXXXIV.14 and CXLII.2, Lincoln Record Office (microfiche)

Ordnance Survey Map 25" to 1 mile scale, Surveyed 1886-87, Published 1931 and 1932, Sheets CXXXIV.14 and CXLII.2, Lincoln Central Library