An Archaeological Watching Brief at The Button Factory, Willow Road, Bromsgrove, Worcestershire

A report for David Payne Homes Ltd

April 2005

Project: PJ 131

WSM: 34320

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Mercian Archaeology
Flat 1 Malvern House
7 Malvern Road
Worcester WR2 4LE

Martin Cook
Tel: 07850 918755
E-mail: mjcook@globalnet.co.uk

Paul Williams
Tel: 01905 420087
E-mail: paulwilliams@mercianarchaeology.co.uk

Fax: 01905 420087

www.mercianarchaeology.co.uk

1. Project Background

1.1. Location of the Site

The Button Factory, as it is locally known, is located in Willow Road, which is around 0.5 kilometres to the west of Bromsgrove town centre (NGR SO 9536 7094), just off the A448 Bromsgrove to Kidderminster road (Figure 1).

1.2. Development Details

A planning application was made to Bromsgrove District Council by David Payne Homes Ltd, to demolish existing buildings and convert a 3-storey former factory building to provide domestic accommodation (reference B/03/0525). The planning process determined that the proposed development was likely to affect a building listed on the County Sites and Monuments Record (WSM 19672). As a result, the Planning Archaeologist, Worcestershire County Council, placed a 'Programme of Building Recording and Analysis' planning condition on the application, for which a brief of work was written (WHEAS 2003). The building recording was carried out in October 2003 by Mercian Archaeology, for which a report was produced (Mercian Archaeology 2003). Following the results of the building recording, the Planning Archaeologist determined that there were grounds for further archaeological work on the site. A second brief was produced outlining the requirements for an archaeological watching brief (WHEAS 2004). This report focuses on the results of the subsequent on-site watching brief.

1.3. Reasons for the Watching Brief

The results of the historic building recording determined the fabric development of the buildings from its origins in the late 18th century as a mill, through its conversion to a button manufactory in the early 19th century and its subsequent 20th century development. However, an existing record of 'water leats into on the site' (WSM 19673-4) possibly suggested an earlier industrial occupation of the site (WHEAS 2004). The powering of the machinery in the 18th -19th century mill was also questioned and it may be that evidence for this remained buried beneath the surface of the later 20th century buildings that were built onto and around The Button Factory following its partial demolition after a series of fires.

A watching brief is defined as:

A formal programme of observation and investigation conducted during any operation carried out for non-archaeological reasons. This will be in a specified area on land, inter-tidal zone or underwater, where there is a possibility that archaeological deposits may be disturbed or destroyed (IFA 1999).

A watching brief at the site was proposed in order that a record of any archaeological remains or deposits encountered during excavations associated with the development may be made and placed into context using our current archaeological knowledge of the area.

The watching brief was therefore instructed to record any remains observed that may relate to the use of water power to drive machinery or evidence for earlier activity on the mill / factory site.

2. Methods and Process

2.1. Project Specification

The project was designed to follow the following guidelines and specifications: -

- Mercian Archaeology Service Manual (2003).
- Institute of Field Archaeologists Guidelines for an Archaeological Watching Brief (1999)
- Worcestershire County Council requirements and guidelines for archaeological projects in the county.
- The record archive will be offered to the appropriate museum after discussion with the curator.
- The Code of Conduct of the Institute of Field Archaeologists (1997)
- The Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology, Institute of Field Archaeologists (1997)
- Guidelines for Finds Work, Institute of Field Archaeologists (1999)
- Planning Policy Guidance: Archaeology and Planning (DoE, PPG 16 1990).
- Institute of Field Archaeologists 'Standards and Guidance for Archaeological Desk-Based Assessment
- *Guidelines for the Preparation of Archives for Long-Term Storage* (Walker 1990) and *Standards in the Museum Care of Archaeological Collections*, Museum and Galleries Commission (1992)
- *Conservation Guidelines No 2,* United Kingdom Institute of Conservation.

- *Management of Archaeological Projects*, English Heritage 1991

- Environmental Archaeology and Archaeological Evaluations: Recommendation Regarding the Environmental Archaeology Component of Archaeological Evaluations in England, Association for Environmental Archaeology Working Paper Number 2 (1995)

2.2. Aims of the Project

The watching brief aimed to:

- Use the results of the archaeological work to produce a report highlighting: -

    1. The survival and location of any archaeological deposits.
    2. Make an analysis and interpretation of all identified natural and cultural deposits

- Based on the above, establish the significance, survival, condition and period of the archaeological remains and place them within context at local, regional or national level where relevant.

2.3. Background Research

Prior to the commencement of fieldwork all the relevant available cartographic sources were consulted (NB: *This work was carried out prior to the building recording and is included with additions below*).

A former worker at the button factory was also interviewed to draw on his recollections (see below).

Documentary research was carried out at Worcestershire Record Office (WRO) and Bromsgrove Library (BL). The following sources were specifically consulted and were of use:

Cartographic Sources

Source	Reference Number
Tithe Map and Apportionment of the Parish of Bromsgrove (1840)	WRO BA1572/46 f 760/46 WRO BA 1572/45 f760/45
Ordnance Survey 2nd Edition 25". Worcestershire Sheet XV.16 (1903)	WRO
Ordnance Survey Revised 2nd Edition 25". Worcestershire Sheet XV.16 (1927)	WRO
Ordnance Survey 3rd Edition 25". Worcestershire Sheet XV.16 (1937)	WRO

XV.16 (1937)	
Plan of the Streets and Houses of Bromsgrove (1830)	From *Bromsgrove Now and Then*, Richards, A and S (1988), The Bromsgrove Society. (BL)

Other Sources

Source	Reference Number
Bromsgrove's First Factory Rebuilt	Trades and Industries folder: Sanders and Sons, 16:1, Bromsgrove Library. Original in Bromsgrove Messenger 25 October 1958
Newspaper article	Bromsgrove Messenger article: August 20th 1997
Newspaper article	Bromsgrove Messenger article: June 26th 2002
Newspaper article	Birmingham Post article: March 9th 2002

Other sources used are referenced within the report.

2.4. The Fieldwork Methodology

The watching brief was undertaken between on 6th and 21st April 2005.

The methodology adopted and the favourable working conditions meant that the aims and objectives of the brief could be fully met and the fieldwork was successfully concluded.

3. The Documentary Research

3.1. Background

Bromsgrove is a market town with its roots in the medieval period. It had long been a coarse cloth and linen-manufacturing centre. Its later economic prosperity was based on a metals based industry. Bromsgrove is famous for its nail making and needle scouring workshops, but perhaps less known for its button making industry.

The Button Factory, also known locally as 'Button Castle', was originally a cotton mill called Sidemoor Mill. It is recorded that a steam engine, likely to have been a Boulton and Watt engine, was installed at the mill in the late 18th century (Richards 1984, 11). This suggests the possibility that an undershot waterwheel may have provided earlier power, although this is an assumption. The mill was at that time owned by Richard Collett, a linen producer. During the early 19th century, Collett's business fell into decline and by 1810 he had been declared bankrupt (Richards 1984, 103). The reason for the bankruptcy may have been twofold; a general decline in the linen trade coupled with over investment in infrastructure at this time. The mill became redundant and was left empty for several years.

At the end of the 18th century Worcester born Benjamin Sanders was forced to leave his retirement home in Denmark when Nelson's fleet laid siege to the Danish fleet in Copenhagen harbour. Unfortunately, Nelson's bombardment also destroyed Sanders' home (Bromsgrove Messenger 1958). Sanders returned to England and set up a button making business in Birmingham, which at this time was the largest producer of buttons in Britain. It had a pedigree in the metal trades and metal buttons had become very popular. Sanders began making and selling buttons in Birmingham and soon developed an iron-shanked button covered in silk, based on an idea pioneered by one Mr Ainsworth, a Birmingham button maker (Leadbetter undated, 98), although it is also argued that Sanders invented the process himself whilst living in London during the late 18th century (Bromsgrove Messenger 1958).

In 1821 Sanders moved to Bromsgrove (Birmingham Post 2002), after he had he inherited some property situated off Bromsgrove High Street, from his cousin James Wilkinson (Richards 1984, 103). He founded a small button works utilising the property and soon began production. It is argued that he moved from Birmingham to avoid industrial espionage, which was rife at the time (*ibid*). His mechanical device for covering the buttons in cloth had forced the item price down and his cloth covered buttons proved to be very popular. His early button manufactory soon became too small and in 1829 he purchased the redundant Sidemoor Mill building from John Ward and John Collett together with 'outhouses and buildings and a steam engine house, the steam engine of which, was lately sold' (Birmingham City Archives: MS 3532/Acc 1935-054 / 444203) and so The Button Factory was born.

The mill was apparently extended soon after being purchased by Sanders and by the 1830's it employed around 300 people (Richards 1984, 99). The Tithe Apportionment Map of 1840 showed that by this time Benjamin Sanders owned a house and garden and factory on the site (Figure 2). The map shows a detached building just to the north, which may have been Sanders' house. He also owned much of the land surrounding the manufactory. A photograph dating from around 1890 shows the extent of the three-storey building by this date (Plate 1).

The first edition Ordnance Survey map of 1883 shows a large pool on the west side of the mill building, which appears to have been fed by leats from the north east and the north west, (Figure 3). This pond does not appear on the detailed Tithe Map, suggesting it was created between 1840 and 1883 and was not a millpond, but more likely a reservoir to supply water to the later steam engine(s) that would have powered the machinery at the factory. The pond has gone by the time of the second edition in 1903 and is shown as an area of marshy ground (Figure 4).

In 1915 the northern end of the factory burned down and replacement single storey machine shops were built (Bromsgrove Messenger 1958). These are shown on the revised Ordnance Survey plan of 1927 (Figure 5). Further buildings had also been added on the west of the site, in place of the much-denuded pond.The marshy ground was by now confined to the northern

end of the site. Ten years later, according to the Ordnance Survey 3rd edition, the marshy ground had gone and there were additional ancillary buildings attached to the site (Figure 6).

In the 1930's John Nicholls took over the factory and continued button production until he retired (*John Nicholls died in 1997 at the age of 88*).

In 1958 the southern end of the original mill building burned down (Bromsgrove Messenger 1958).Production carried on in temporary sheds until a replacement building was butted onto the remaining central portion of the old mill. This took less than a year. Apparently, the roof had to be painted brown by order of the local council, rather than the natural green of the asbestos (Bromsgrove Messenger 1958).

Sadly, the Button Factory closed down in the early 1990's closing the book on over two hundred years of social history. Many of the former workers look on the dilapidated buildings with open fondness. One such worker was Ernest Abedenigo Waldron, former toolsetter at the factory from the 1940's until it finally closed its doors. Mr Waldron kindly gave us an interview in which he recalled some of his reminiscences. These are recorded below.

3.2. Later History: Based on an Interview with Ernest Waldron

Mr Waldron worked at the Button Factory for 47 years, beginning his working life as an errand runner after leaving school, before progressing to become a toolsetter. He remembers the brook that ran down the eastern side of the building, referring to it as slow flowing except when in flood. Interestingly he refers to a second watercourse culverted under the factory, but could shed no light on there ever being water power at the site.

The Button Factory was to a great extent self-sufficient. Power to drive the machinery and lighting was supplied by a single diesel engine connected to huge dynamos. The power supply was supplemented by a reserve mains supply, which was used when there were internal supply problems. The power train involved a complex series of drive shafts, belts and pulleys running the complete length of the factory. It was clear from the interview that John Nicholls, the factory proprietor during the half-century that Mr Waldron worked there, was a shrewd and frivolous businessman. Water for kitchen and sanitary usage was pumped from three wells below the factory floor into a large tank, from where it was distributed. Thus power and water costs were kept low. The wells and culvert are apparently still below the factory floor.

The 1950's brought a decline in the button industry, when for example, the armed forces that were supplied with metal buttons from the Bromsgrove factory, changed to buttons made from other materials. After the fire of 1958 the top floor of the old mill building was hardly used as production wound down. By the early 1960's the situation had deteriorated. It was then that the company first diversified and entered the badge and emblem market, although John Nicholls had earlier argued that 'anything other than buttons would be made over his dead body!' New tooling was made for badges and samples sent out, this gave the factory a new lease of life. The first badge to be made was for the RSPCA and soon a wide range followed (Plate 14). The 1966 football World Cup proved to be a boom time for the factory, with thousands of 'World Cup Willy' badges produced. The factory then employed many outworkers to keep up with demand, especially for a thriving export market. The factory never operated a shift system. Mr Waldron assumes that this was due to Mr Nicholls' strong religious beliefs.

After the badge boom the company hit another period of decline and the Button Factory closed for production in the early 1990's, the firm taking smaller premises at Charford. The local

authority took over the building, using the southern end of the building as a store and distribution centre for wheelchairs. The central portion, the old mill building, had been proclaimed unsafe and was secured. Today the buildings stand empty. Apart from, according to Mr Waldron, a ghost that has frequently been heard walking up the stairs of the old mill.

3. Button Manufacture

Buttons are probably one of the items we take for granted during our everyday lives and we probably never think of the way they are produced. Today they are mainly synthetic, whereas in the past they were fabricated from various materials including copper, plated metal, silver and other materials such as horn, bone, wood, mother of pearl, jet, shell, cannel coal, leather and even paper (Rees 1972, 263). The earliest buttons made in England's button factories were stamped or cast in copper, pewter, silver or even covered in a gold wash, as commonly made in Birmingham at the end of the 18th century (Richards 1984, 11). In the 18th century John Taylor's button factory was the largest employer in Birmingham making Taylor the richest man in the town (Birmingham Post 2002). As outlined above, Benjamin Sanders moved his button manufacturing operation from Birmingham to Bromsgrove around the same time, as he feared industrial espionage. He had developed a unique mechanical method for covering his buttons in silk and these proved to be very popular, making Sanders a rich man.

4. The Watching Brief

The watching brief followed the progress of the groundwork contractors as they excavated various foundation trenches across the site. The areas monitored closely are indicated in Figure 7. The undisturbed natural (yellow / orange sand with some loose gravel mix) was noted at 0.90 metres below the disturbed upper level / recent demolition layer, with a slope to the east indicated by the natural rising up by around 0.50 metres to the east.

A layer of greyish sandy-silt subsoil remained to a maximum of 0.35 metres over the natural (Plate 4), although this had been heavily truncated by later development relating to The Button Factory. This layer appears to have slowly built up, rather than been the result of ploughing, suggesting that the area was subject to waterlogging and is likely to have been used as rough grazing prior to the 18th century. Waterlogging was in evidence in the bottom of the excavations on the eastern side of the site (Plate 5).

The western side of the pond shown on the early Ordnance Survey maps (Figures 3-6) was seen in east-west sections of the foundation trenches on the north-western side of the site (Plate 6). The pond had been excavated with 45 degree edges into the sandy-silt subsoil and had gradually silted up with a very wet dark humic silt, which contained occasional brick fragments, some degraded timber and the base of a Victorian green glass bottle. The pond was

not lined, but simply cut into the natural sand, which contained a percentage of clay / marl in this area. The thick black fill of the former pond was also noted on the eastern side of the site (Plate 7), where the ground was at its wettest. This fill had been cut into and levelled with a layer of crushed brick, before the buildings at the north-eastern end of the site were constructed. The top 50 centimetres of the site had been heavily disturbed, both during the construction works of the 1920's and also during the recent demolition of the buildings.

The foundations to the original late 18th century building were seen in several places. These were of large ashlar blocks of sandstone laid on cobbles at the top of the natural sand, with the construction of orange brick and mortar above (Plate 8). An arched brick drain was also seen running roughly north to south across the site (Plate 9). It appears that this was still in use at the end of the life of The Button Factory, as it ran directly into a manhole at the southern end of the site.

The site was noticeably devoid of pottery, even for a non-domestic industrial site. One unstratified sherd of ripple rim moulded slipware dating from the late 18th to early 19th century was identified on site. An impellor shaft from a 20th century pump was unearthed from within the backfill of the pond (Plate 10).

5. Discussion

The archaeological work produced no evidence to suggest that there was a mill, or any other development on the site earlier than the late 18th century. The watching brief was able to determine that the pond shown on the early Ordnance Survey maps was, at least in part, man made. It also appears to have been short lived, with one continuous deposit of silt marking its rapid decline as electrically powered motors began to replace steam power at the manufactory. There was no evidence to suggest that a waterwheel ever powered machinery at the mill / manufactory and the limited depth of the pond suggests it was simply a reservoir to supply water to steam engines during the 19th century, perhaps when the water flow past the site along the watercourse (to the east of the factory on the maps) became insufficient for production.

There was no sign of any leats to or from the mill / manufactory site. Close inspection of the early Ordnance Survey maps shows that the leats identified on the Worcestershire Historic Environment Record (WSM 19673-4) are actually outside the development site and represent the boundaries to the north-east and north-west. It is likely that these were in fact simply modified watercourses rather than man-made leats.

Much of the foundation of The Button Factory was of substantial ashlar sandstone blocks. Close inspection of these indicated that they were purpose cut rather than re-used items. The size of the blocks suggests that the builders of the factory understood the potential of waterlogging at the site, which is testament to the remnant part of The Button Factory standing for over 200 years without evident subsidence.

6. Conclusion

The results of the watching brief determined that the earliest development of the site was at the end of the 18th century, as evidenced by the documentary and cartographic sources. Prior to this the area appears to have been a semi-wet area with a slow flowing watercourse to the east and ideally suited for rough grazing.

The mill / manufactory was constructed on large sandstone block foundations, indicating that the builders understood the problems of waterlogging, but the closeness of water was important to supply the earliest steam engine at the site. With increased production and expansion, it is likely that larger or more steam powered engines were required and so a reservoir was created on the western side of the buildings, fed by the watercourse, which was likely to have been scoured and straightened slightly to improve flow. This probably occurred around the middle of the 19th century and the pool is not shown on the 1840 tithe map. The pool seems to have rapidly silted up, probably over a period of around 50-60 years, when electricity replaced steam power. There was then a programme of levelling, laying down of hardcore and building on the valuable space surrounding the original structures.

7. Acknowledgements

The author would like to thank John Huggins, Paul Cartwright and Steve Parkes of David Payne Homes Ltd. Thanks are also due to the ground workers who carried out the foundation work. Thanks are extended to: David Payne Homes Ltd for supplying scaled drawings of the proposed development; the staff of Bromsgrove Library and Worcerstershire Records Office and Mike Glyde, Planning Archaeologist, Worcestershire County Council.

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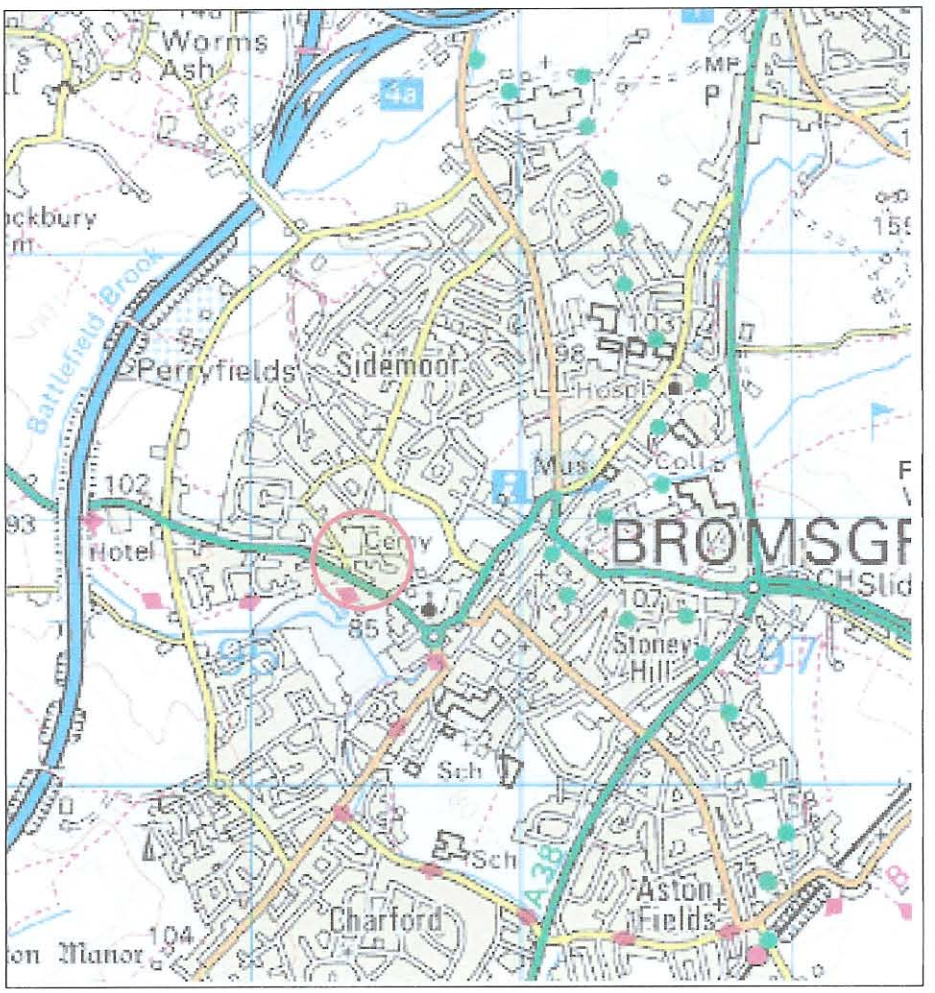
Figure 1: Location of Site



0.5 0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0 5.5

1:50,000 Kms

Location of The Button Factory,
Willow Road, Bromsgrove

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Figure 2. Extract from Bromsgrove Tithe Apportionment Map (1840)

Tithe Apportionment of Bromsgrove (1840) with location of site highlighted. Not to scale. The overlay shows a detached building to the north of the mill, this was possibly the factory owners house as referred to in the tithe apportionment.

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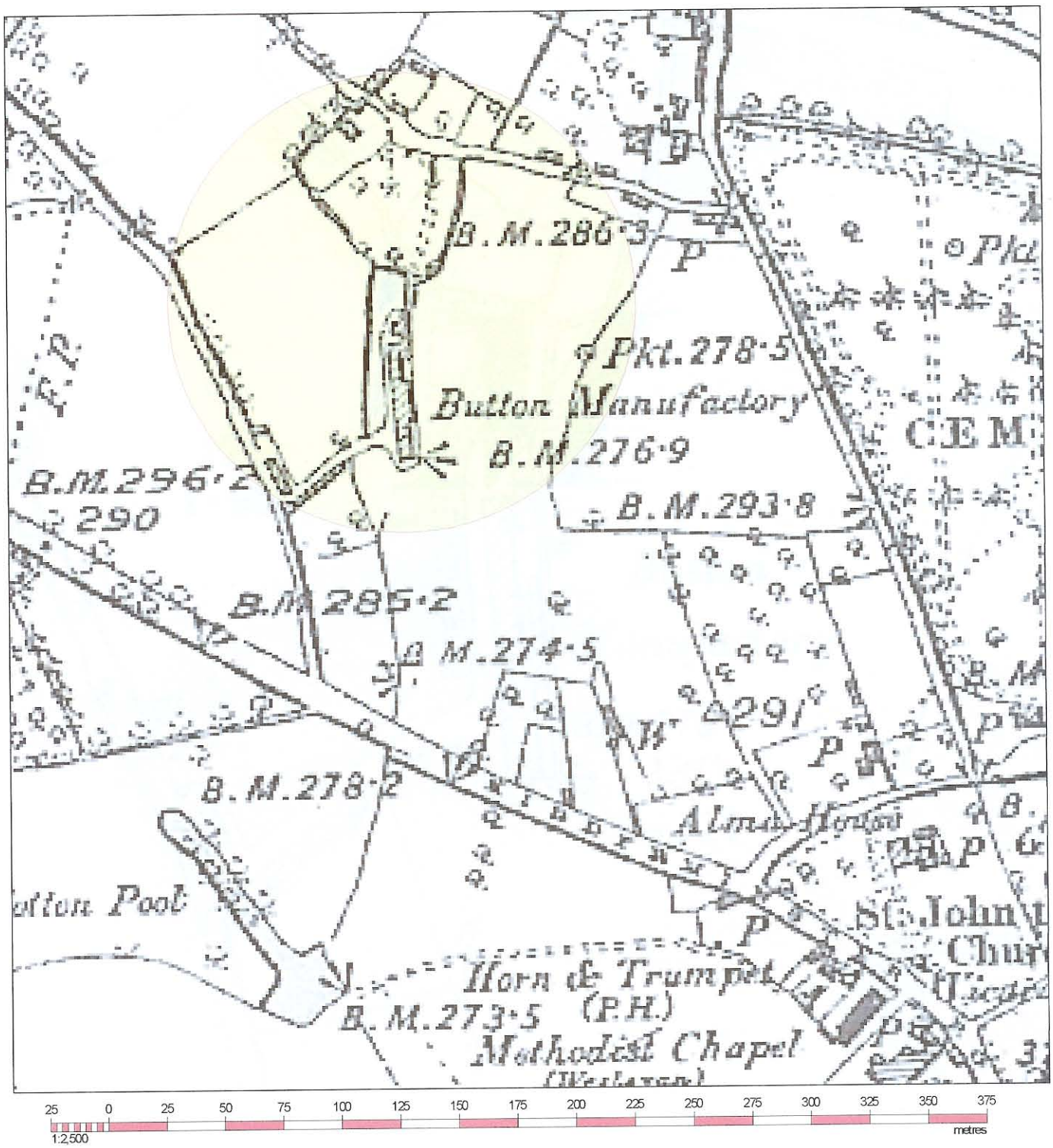
Figure 3. The Button Factory; 1st Edition Ordnance Survey (1883)



The 1st edition Ordnance Survey map shows a large pond adjacent to the western side of the factory and apparent leats swinging in from the north-west and north-east.

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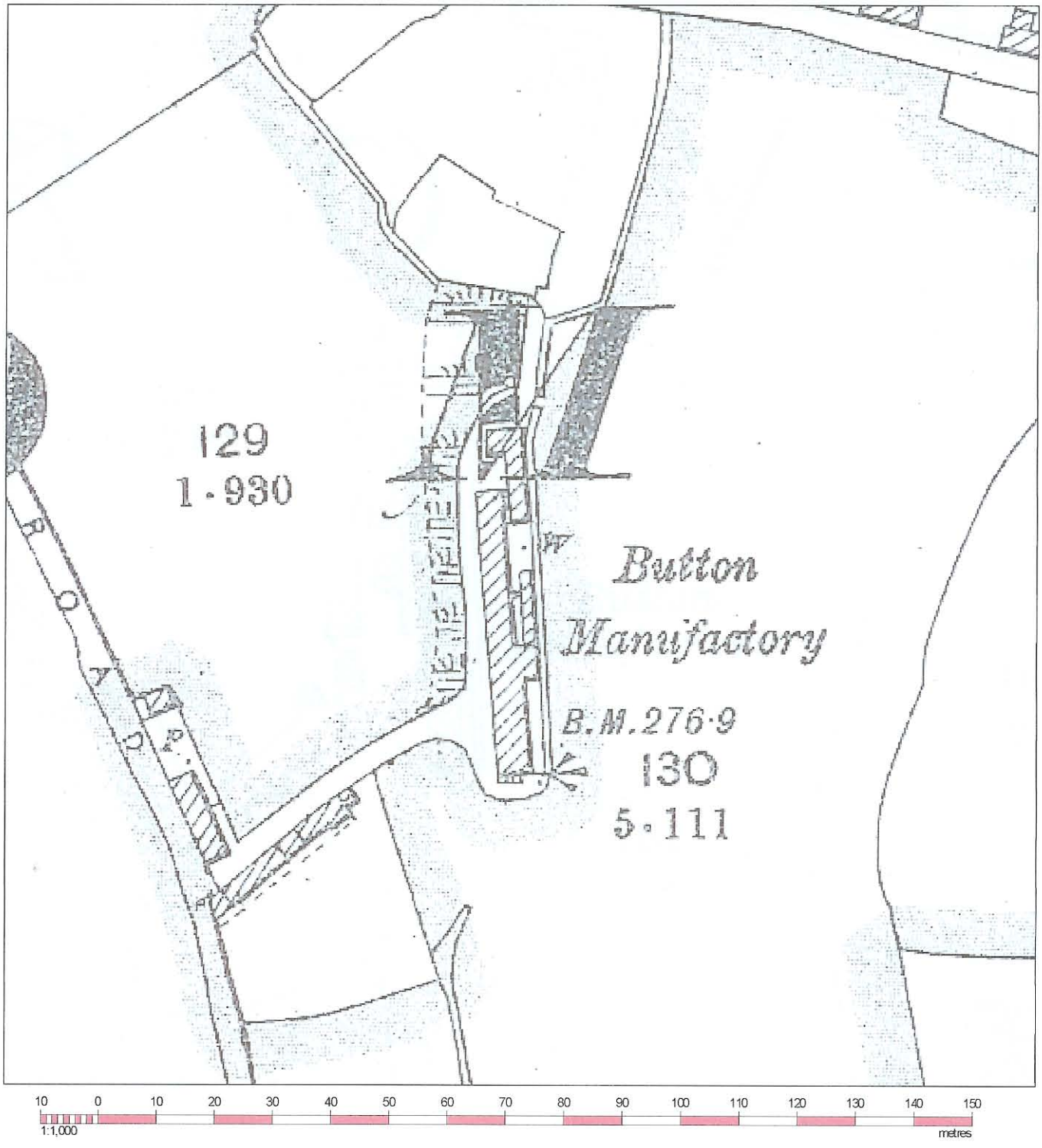
Figure 4. The Button Factory; 2nd Edition Ordnance Survey (1903)



The 2nd edition Ordnance Survey map shows the pond on the west of the factory to be disused and depicted as wetland.

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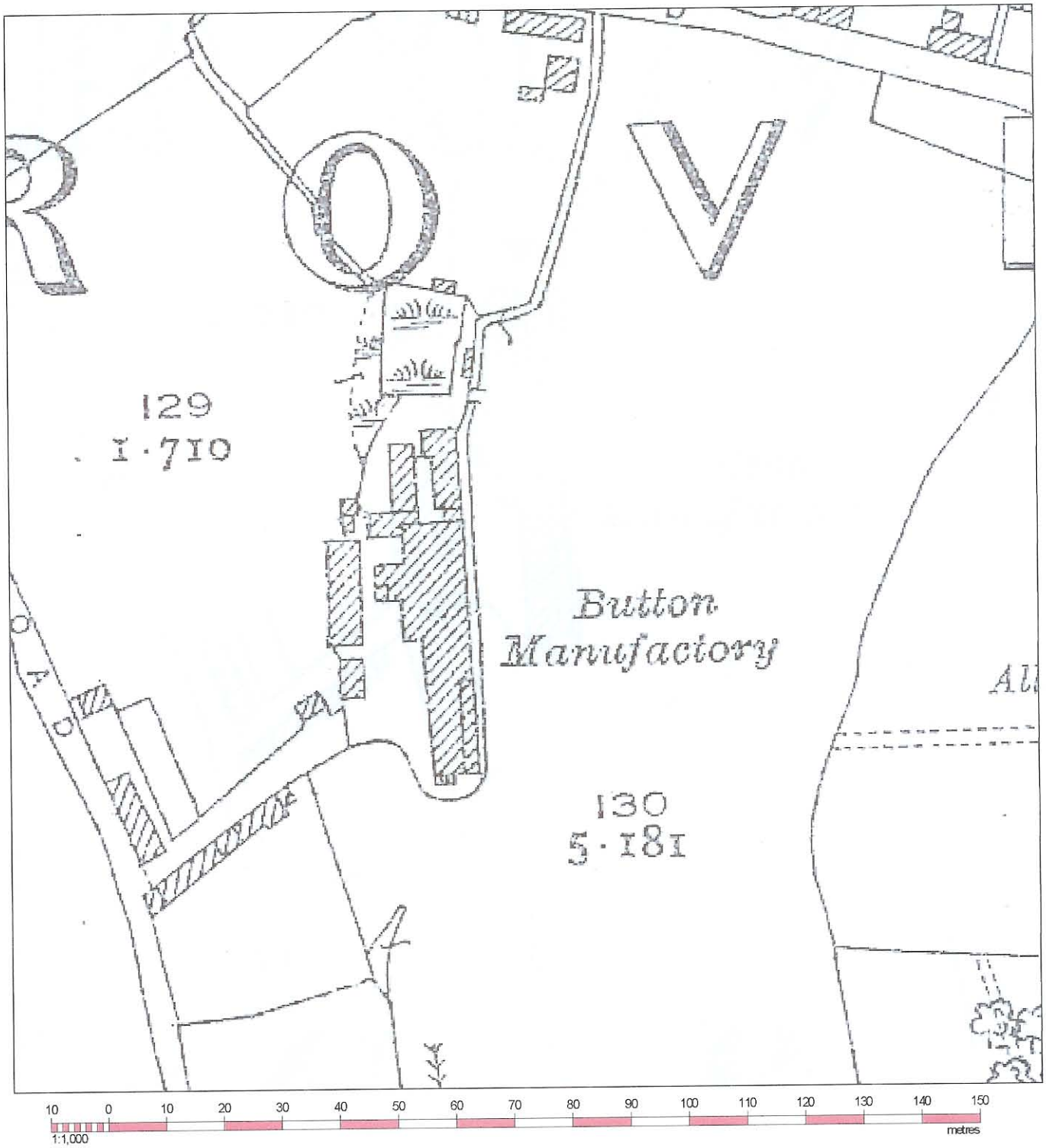
Figure 5. The Button Factory; 2nd Edition (Revised) Ordnance Survey (1927)



The revised 2nd edition Ordnance Survey map shows the pond on the west of the factory to be built over, with wetland remaining to the north.

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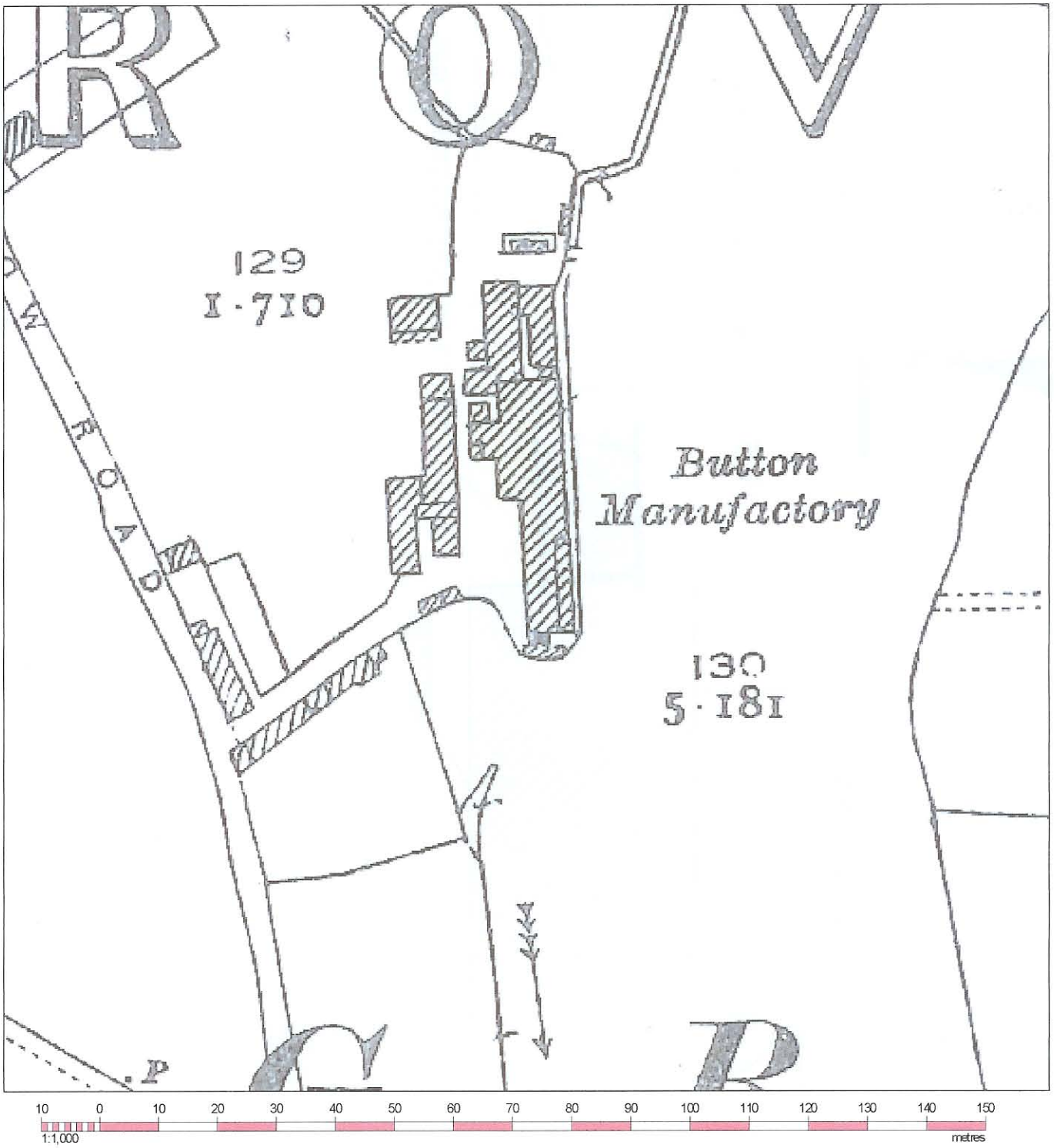
Figure 6. The Button Factory; 3rd Edition Ordnance Survey (1937)



The 3rd edition Ordnance Survey map shows the pond to have now gone. There are further small buildings attached to the complex.

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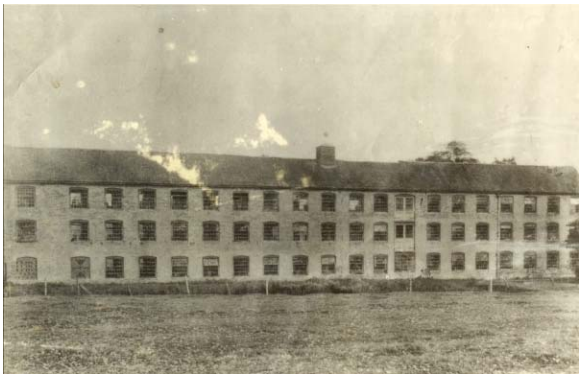
Plates

Plate 1



The Button Factory from a photograph of the late 19th century (Supplied by Mr E.Waldron)

Plate 2

The Button Factory during demolition; view to the north-east

Plates

Plate 3

The Button Factory during demolition viewed to the south-east

Plate 4

Silty subsoil over natural yellowish sand, below demolition layer (scale 1 metre)

Plates

Plate 4

Silty subsoil over natural yellowish sand

Plate 5

Waterlogging on the eastern side of the site

Plates

Plate 5

Waterlogging on the eastern side of the site

Plate 6

The line of the pond on the west of the site indicated by the dark fill; view to the north-east (scale 1 metre)

Plates

Plate 7

Waterlogging within the backfill of the pond at its eastern side

Plate 8

Sandstone foundations of The Button factory (scale 1 metre)

Plates

Plate 9

North-south brick arch drain seen at the southern end of the site

Plate 10

Part of an impellor pump found within the fill of the pond

Plates

Plate 11

End of an era

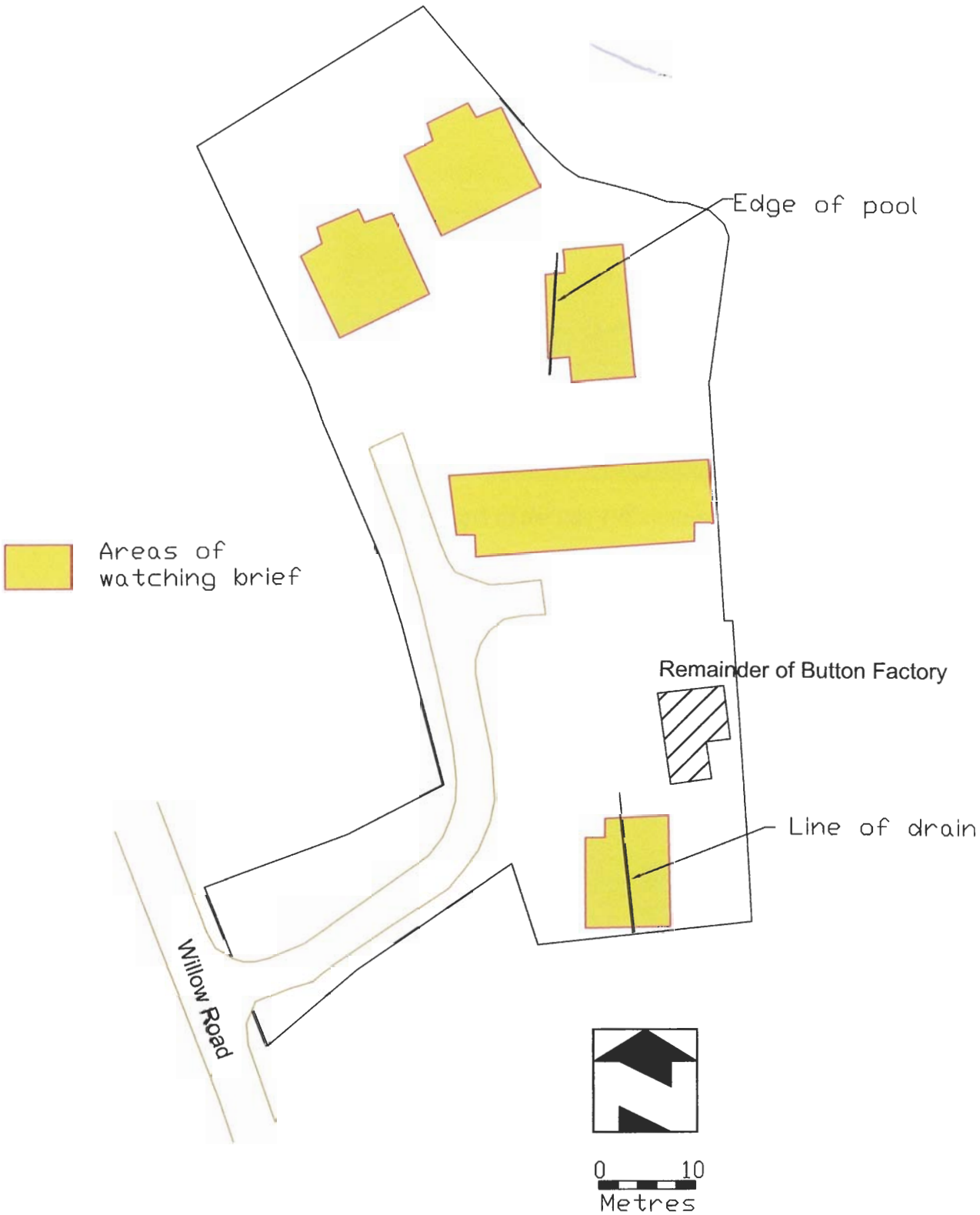


Figure 7: Areas Observed during the watching brief