

**Archaeological salvage recording  
at Tringford Pumping Station  
Little Tring,  
Wendover Arm, Grand Union Canal,  
Dacorum**

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# **Contents**

## **Introduction**

## **Summary**

### **The documentary material**

- Listed building description
- Summary by Salberter
- Historic mapping
- Historic plans
- Previous work on the site

### **The fieldwork**

- General
- General site observations
- Description of deposits

### **The finds**

- Description
- Commentary on the finds

## **Conclusion**

## **Bibliography**

- Traditional sources
- Internet sources

## **Acknowledgements**

## **Archive**

## **Appendix 1: List of the contexts**

## **Appendix 2: OASIS form**

## **List of the illustrations**

### **Drawings**

- Fig 1: Location of site  
Fig 2.1: Historic mapping  
Fig 2.2: Historic plans  
Fig 3.1: Recorded features  
Fig 3.2: Location of figures 4 to 23  
Fig 3.3: Sections  
Fig 3.4: Matrix

### **Photographs**

- Fig 4: Boundary wall, context 001  
Fig 5: Boundary wall, context 001  
Fig 6: Junction of boundary wall, contexts 001, 002 and 005  
Fig 7: Junction of boundary wall, contexts 001, 002, 005 and 006  
Fig 8: Existing wall, context 006  
Fig 9: Section 1  
Fig 10: Existing wall, contexts 007 and 010  
Fig 11: Section 2  
Fig 12: Existing wall, context 007  
Fig 13: Existing wall, context 007  
Fig 14: Existing wall and robber trench, contexts 003 and 004  
Fig 15: Section 3  
Fig 16: Existing wall, robbed wall and robber trench, contexts 003, 005 and 004  
Fig 17: Existing wall, robbed wall and robber trench, contexts 003, 005 and 004  
Fig 18: Existing wall, context 002  
Fig 19: Existing wall and brick surface, contexts 007 and 009  
Fig 20: Existing walls and stone slab, contexts 001, 006 and 008  
Fig 21: Existing wall under excavation, context 007  
Fig 22: Junction of existing walls, stone slab and brick surface, contexts 006, 007, 008 and 009  
Fig 23: Existing wall, concrete surface, cast iron sheets and brick surface, contexts 007, 013, 011, 012 and 009

### **The finds**

- Fig 24: Samples of bricks from the site, Rufford of Stourbridge

### **Interpretative material**

- Fig 25: Works of Rufford and Co, 1901

# Archaeological salvage recording at Tringford Pumping Station Little Tring, Wendover Arm, Grand Union Canal, Dacorum

## Introduction

Archaeological salvage recording at Tringford Pumping Station Little Tring, Wendover Arm, Grand Union Canal, Dacorum (SP 91798 12969; Fig 1) was undertaken at the request of Phil Emery of the Canal & River Trust. Tringford Pumping Station is a listed building (Grade II), listed in 1986. The salvage recording was to comprise a drawn and photographic record of brick footings and surfaces exposed to the west-south-west of the pumping station during works associated with the installation of a new pump. Resources were limited and no specific documentary or other study was undertaken to place these deposits in their historical context. However, a preliminary account of Tringford Pumping Station and the cast iron vessels had been made by a former Canal & River Trust Heritage Advisor (Salberter 2016) and this has been quoted from extensively below.

## Summary

An archaeological salvage recording was carried out at Tringford Pumping Station Little Tring, Wendover Arm, Grand Union Canal, Dacorum. This recorded the remains of a former building on the site, a boundary wall and a sequence of alteration and development dating from the original construction of the Wendover Arm to the mid 20th century.

## The documentary material

### Listed building description

Listing Name: The TRING RURAL GRAND UNION CANAL - SP 91 SW WENDOVER ARM (North side) Little Tring 4/62 - Tringford Pumping Station Gd II

Listing Description: Water pumping station to fill Tring summit level of canal from reservoirs. Erected 1816-17 at 'spot determined by Rr Telford', with Boulton and Watt steam engine (date 1803 on c20 plaque incorrect) as second pumping station on Wendover feeder arm. Extended 1836-8 when station adapted as single centralised pumping station with 2nd steam engine ('York' engine) added, removed 1913, boiler house on n side mid c19, diesel engine house in ne angle dated '1911', beam engine removed and engine house reduced in height 1927 (plaque over door '1803/1927'). Red brick original engine-and-pumphouse, brown brick extensions, uniform sandstone dressings added to existing round headed windows, and slated pitched roofs. A long narrow brick pumphouse parallel with the canal and with outflow ponds between. 4 round-headed large windows with keystones and impost blocks. Still in use with long headings from reservoirs concentrating on 3 deep brick wells in the pumphouse. Water now pumped by electric pumps up to level of canal arm which flows into the Marsworth end of the summit level. Wider and lower boiler house extends along much of n side of pumphouse. Brown brick with blue brick offset to plinth and segmental arches to openings. Widespan c19 king-post timber trusses spanning from corbels on rear wall of pumphouse to piers in n wall. Designed for 2 boilers. Underfloor air intakes from small round headed external opening low down in middle of n wall there 22 1/2 inches thick. 2 high double doors with 2 large windows with cast iron framed small-pane frames in w gable end. Toothed brick band in corbelled verge. 5 bays panelled n side with 2 similar windows. Yellow brick diesel engine house with red brick dressings and canted corner, in the ne angle of the other buildings. 2 tall round headed windows and door. Small panes and windows at ground level.

Interior in glazed brick with dado and raised platform formerly supporting 100hp and 50hp diesel engines. Pumphouse entered by round headed double doorway in n side of part projecting to w of boiler house. 27" thick side-walls and 5ft thick crosswall built to support the 24ft long cast iron beam of the pumping engine. Photographs and a plaque record this in use and during removal. Erected 1817-8 it had a 49½ inch diameter cylinder and a 8ft stroke. The doorway is flanked by 2 tall tuscan cast iron columns from the engine frame topped by balls from the superstructure. An ornamental cast iron trestle from the valve assembly is built into the apex of the w gable. An earlier pumping station at Whitehouses (1802) pumped from Wilstone no. 1 reservoir but was superseded by Tringford Pumping Station and was subsequently demolished. Wilstone reservoir was heightened in 1811 and 1827 and extended in 1835 (no. 2) and 1839 (no. 3) by which time it had been supplemented by

Marsworth Reservoir (1806), Tringford Reservoir (1814), and Startops End Reservoir (1815). They supply the summit level of the canal main line, opened in 1799 as the Grand Junction Canal. The Wendover arm opened in the same year, was closed to commercial traffic in 1896 and a long stretch beyond the pumping station has been filled in.

### **Summary by Salberter (2016)**

The challenge of ensuring that the water level could be maintained to a navigable level on a canal was crucial to the success and profitability of the Grand Junction Canal Company. In the case of the Grand Junction Canal (GJC), there are two summits: at Braunston and at Tring and each had their particular difficulties.

The GJC ascends some 380 feet from its junction with the River Thames until, after a climb of 56 locks in over 36 miles, it reaches the two-and-a-half mile long Tring Summit, from where it then descends northwards towards Braunston. Streams and rivers were diverted and reservoirs, feeders, headings and pumping stations were built to supply the summit with water.

There is a group of reservoirs at Tring that were built and altered over several decades: Wilstone built in 1802, altered in 1811 and 1827 and extended in 1836 and 1839; Marsworth built in 1806, Tringford built in 1816 and Startops End built in 1817. Two associated pumping stations were built: on the Wendover Arm: 'Whitehouses' (1803), and Tringford (1818) while a third one was located near Bulbourne Junction. The only remaining pumping station associated with these reservoirs is the one at Tringford, following a centralisation scheme in the 1830s (Evans).

In the same epoch, William Anderson carried out an inspection of the main line and recommended the construction of a series of pumping stations to return some of the water that was being carried downstream with each boat going through a lock. By 1841, nine engines referred to as the 'Northern Engines' were built to pass the water back around the seventeen locks and in some cases connect onto wells. These engine houses were built by contractors 'Grissell & Peto' at Fenny Stratford (lock 22), Stoke Hammond (lock 23), Soulbury (locks 24-26), Leighton Buzzard (lock 27), Church (locks 28 & 29), Horton (locks 30 & 31), Ivinghoe (locks 32 & 33), Seabrook (locks 34 to 36) and Marsworth (locks 37 & 38). These buildings were usually rectangular in plan, built of bricks with a slate roof and used to include a prominent chimney to accommodate a steam engine (Faulkner).

The same contractor built duplicate locks at the same period from Marsworth to Stoke Hammond and in total 23 locks northwards from the summit were duplicated apart from Fenny Stratford. These new locks were narrow locks to reduce the amount of water required when locking a single narrow boat. In the original Act, smaller boats of a certain size could be prevented from using locks unless there was a surplus of water and this could lead to long wait for single narrow boat to use a wide locks when water levels were low.

### *The Wendover Arm*

Canals are most profitable if they can link up with industrial and commercial towns and the construction of branches enabled the main line to connect to further places. The original 1793 Act authorised the construction of four arms and of feeders to provide required water. Shortly after, the locations of a further potential eight were surveyed of which, locally, Aylesbury was built after it had been approved by Jessop.

The Wendover Arm was actually originally conceived as a feeder channel and as such could be built under the first Act.(Faulkner). It was extremely important in bringing water to the Tring summit and works were under way as early as 1793. Realising that the feeder would bring additional benefits if it could be made navigable, it was incorporated into the 1794 Act which gave assent to the Aylesbury and Wendover Arms. By about 1797 the Wendover Arm was completed as a navigable feeder (Massey).

As early as 1802, it was noted that the banks of the Wendover Arm were leaking and various repairs were undertaken. Several of the leading canal engineers at the time pondered the issue, including Jessop, Telford and Benjamin Beevan (Massey). Still leakage persisted and by 1841 it was found that 20 locks of water a day were being lost (Faulkner). Further localised puddling was carried out but by 1855 the amount of loss had increased to 25 locks (*ibid*) which lead to John Lakes and William Cubitt's plan of asphaltting the canal bed to be undertaken in 1858 (Massey). This would eventually

be removed and replaced with new puddle as the asphalt didn't solve the problem. Ultimately, the Arm was abandoned as a navigable waterway west of Little Tring, where a dam was built in 1904 (*ibid*) although it had been in intermittent use only since the late 1890s.

In 1989, the Wendover Arm Trust was formed to promote the restoration of the Arm. Volunteers are relining the canal bed and banks and a section is in water, although only a short length is currently connected to the main line.

### *Tringford Pumping Station*

The original 1817 building has been so extensively remodelled, extended and rebuilt that the only element that is likely to remain of that period is some fabric hidden within well 2 and some headings and reservoir structures. The original footprint of the building isn't known and a map regression exercise shows the footprint of the building has been consistent since the 1870s. Original drawings for the construction of the Pump station in 1817-18 haven't been found but the subsequent alterations have been documented and in particular, the photographs held by the Waterways Archives are extremely informative.

#### 1817-18: The origins

The Station was built at a spot chosen by Thomas Telford (Massey) and headings constructed from Startops End and Tringford Reservoirs. A Boulton and Watt steam pumping engine that had a capacity of 80 locks per day (Massey) was installed (in what is now pump well no.2)

#### 1836-44: Centralisation

A second pumping well was dug and headings driven from Wilstone reservoir. The pumping at Whitehouses was terminated. The original steam engine was modified to occupy the new well (now referred to as well 3) and a new 'York' steam engine was installed in the old well (now well 2).

#### 1911-12: Modernisation

Various alterations were carried out to carry water to/from the station with new headings and pipelines. The York steam engine was scrapped and a new well built (well 1) with new electric pumps installed at wells 1 & 2 alongside associated diesel-electric generators. The original Boulton & Watt steam engine was still in use.

#### 1927: The end of the steam days and major rebuild

The original Boulton & Watt steam engine from 1818 was scrapped with the chimney and upper storey of the building, previously accommodating the steam engine, being removed. A new 11Kv AC mains electricity supply was installed and a new AC electric pump was installed in well 3 from 1835, while the diesel-electric plants are still used for the 1911-12 pumps in wells 1 & 2.

#### 1945

Pump no.4 was built at the bottom of the lane from Tringford P.S.

#### 1960s

No. 1 pump was replaced and the diesel-electric plant was scrapped. The generators are no longer required as the pumps are now linked to the mains electricity supply.

#### 21st century

No. 2 pump was taken out of use and pump 3 repaired.

### **Historic mapping**

The earliest available map is the 1st edition Ordnance Survey map of 1877 (Fig 2.1). This shows the site occupied by an 'L' shaped building to the south-west and an open space to the north-east. There is a boundary linking the eastern-most corner of the building with the adjacent engine house or pumping station. The only difference between this map and the Ordnance Survey maps of 1897 and 1922 is a short 'L' shaped boundary extending from the northern-most corner of the building (Fig 2.1).

### **Historic plans**

An historic plan dated to 1946 was drawn-up with the primary purpose of showing the various headings and pumping wells associated with Tringford pumping station. In addition, for the purposes of

context, on the edge of its survey area, it conveniently shows the 'L' shaped building depicted on the historic mapping and recorded in part by this project. Of particular importance is the return shown on its northern wall which was also recorded by this project near the north-western limit of context 007 (Fig 3.1).

### **Previous work on the site**

Historic building survey was undertaken at Tringford Pumping Station Little Tring, Wendover Arm, Grand Union Canal, Dacorum. This recorded two cast iron vessels, known as mufflers, which were installed in 1911-12 as part of a diesel-electric generator system and were decommissioned in the 1960s when the pumps were connected to the mains electricity supply (Cook and MacLeod 2017).

## **The fieldwork**

### **General**

Fieldwork took place on the 2nd and 3rd October 2020. It comprised mechanical stripping of the upper layers to expose the remains of walls, the cleaning-up of these features and their recording by drawing and photography. A full description of the contexts is given in Appendix 1. Contexts are described in summary form below.

### **Description of deposits**

#### *Phase 1: natural deposits – undated - Fig 3.4*

These comprised a very light grey cream sandy clay (contexts 017 and 026; Fig 3.3, sections 1 and 2). In addition, the upper surface of context 026 (context 025; Fig 3.3, section 2) sloped down to the north-north-west and was thought to represent the original natural ground level, predating canal construction activity on this part of the site.

#### *Phase 2: construction activity – 1816-1817 – Fig 3.4*

An 'L' shaped, brick boundary wall (context 001; Figs 3.1, 4 and 5) was built to the south-west of the Tringford engine house, and is, presumably, contemporary with it. The south-western end of this wall was replaced in Phase 3, its original line being preserved by a robber trench filled with contexts 005 and 029; Figs 3.1, 3.3 and 15, section 3 – see below). Context 005 is clearly at right-angles to context 001 and represents a wall that, as a minimum, must have been closely associated with it and is believed to have been constructionally identical.

#### *Phase 3: construction activity – undated – Fig 3.4*

A new south-western return to the boundary wall (context 001), of slighter construction, was erected immediately adjacent to the earlier alignment (context 003; Figs 3.1, 3.3 and 14, section 3). Context 003 is clearly at right-angles to context 001 and must be associated with it. This wall appears to have had a doorway in the corner between contexts 001 and 003), providing access to the area to the south-west. This doorway was subsequently blocked-up by a brick in-filling of very slight construction (context 002; Figs 3.1, 6, 7 and 18).

#### *Phase 4: demolition activity – undated – Fig 3.4*

The replacement wall, context 003, was itself demolished and its bricks recovered by a robber trench (context 004), subsequently filled with contexts 027 and 028 (Figs 3.1 and 3.3, 14, 15 and 17, section 3). It is likely that this was in preparation for the construction activity of Phase 5.

#### *Phase 5: construction activity – pre 1877 – Fig 3.4*

The natural slope of the ground was levelled-up with a succession of layers of varying composition (contexts 022, 023, 031 and 024; Figs 3.3 and 11, section 2), culminating with a screed (context 021).

#### *Phase 6: construction activity – pre 1877 – Fig 3.4*

The area to the south-west of the now demolished wall, context 003, was raised a little in level by two rather uneven layers (contexts 015 and 016; Figs 3.3 and 9, section 1). These may be construction debris or other detritus. A foundation trench (context 019) was cut through these layers and into the natural subsoil. Within this trench a building and boundary wall (contexts 007 and 006; Figs 3.1, 9, 10, 12 and 13) were built, at right-angles to each other but at a slight angle to the original boundary wall (context 001). A brick floor (context 009; Figs 3.1, 3.3, 11 and 22, section 2) was laid inside the building, on top of the screed (context 021) and the void left between the edge of the foundation trench (context 019) and the wall (context 007) was backfilled (context 018). Other deposits associated with

this phase are two cast iron plates (contexts 011 and 012; Figs 3.1 and 23) and a concrete surface (context 013; Figs 3.1 and 23).

*Phase 7: activity to the north-east of building 007 – mid 20th century – Fig 3.4*

Activity resulting in a large quantity of ashes and other burnt material (context 014; Figs 3.1, 3.3 and 9, section 1) was undertaken in the corner between contexts 006 and 007. This may have been a bonfire, burning inflammable construction debris. A rectangular stone slab, possibly one of many forming a paved surface, was subsequently laid on this deposit (context 008; Figs 3.1, 3.3, 9 and 20, section 1).

*Phase 8: demolition of boundary wall, context 001 – pre 1948 – Fig 3.4*

There are no contexts associated with this phase but it appears from the site plan of 1946 (Fig 2.2) that the boundary wall (contexts 001 and 006) had been demolished by this date, presumably replaced by a precursor to the existing security fence.

*Phase 9: demolition of building 006/007 – post 1948 – Fig 3.4*

There are no contexts associated with this phase but it appears from the site plan of 1946 (Fig 2.2) that the building identified on this plan as 'original workshop' was still extant at this date.

*Phase 10: topsoil, mid 20th century – Fig 3.4*

A layer of topsoil formed or was laid across the site (contexts 020 and 030; Figs 3.3 and 15, section 3).

## **The finds**

### **Description**

Three frogless bricks were recovered stamped RUFFORD STOURBRIDGE (Fig 24). These measured:

225 x 112 x 63mm  
230 x 110 x 66mm  
225 x 111 x 65mm

### **Commentary on the finds**

In 1802 Francis Rufford opened a fire brick works known as Rufford and Co ([https://www.gracesguide.co.uk/Rufford\\_and\\_Co](https://www.gracesguide.co.uk/Rufford_and_Co)). Based in Hungary Hill, Stourbridge (Fig 25), there were virtually two branches of the business. What was known as the New Works was devoted to the manufacture of glazed bricks and porcelain baths. Covering two acres of ground, and being nearly, 1,000 feet long, these works afforded every facility for the expeditious and economical carrying on of the trade on a large scale (<http://www.84f.com/chronology/1880s/188700rc.htm>). They were specially planned to economise on both time and labour throughout the manufacturing processes. The clay as well as the coal used were in the main mined in the firm's own pits, whence, after the clay, had been ground and tempered in the mills, it was brought to the works by means of a tramway. The workshops proper are three in number, and measure 150 ft. by 30 ft.

Other products for which the company was well-known were porcelain baths, housemaid's and hospital sinks, and washing tubs, and for durability and cleanliness these as well as the baths were unrivalled. The jury of the 1851 Exhibition, in awarding the Gold 'Isis' Medal in respect of these products, spoke of the innovations as 'ingenious,' and remarked upon their 'novelty and cheapness'. Adjoining departments of the business included painting-shops, cement-grinding rooms, stores for clay, etc, and a commodious warehouse. In the last-named could be seen a representative collection of the various products, including porcelain baths, sinks, troughs, fire-brick goods, and an excellent assortment of coloured glazed bricks, which were so largely used in modern architecture including the Birmingham Art Gallery.

Not far from the works already noted are the Upper Fire-Brick Works, near which were situated the fire-clay and coal-pits owned by the firm, the whole covering an area of 150 acres. Powerful engines representing an aggregate of 250 horsepower were here employed in raising the raw materials from the pits, in grinding the clay, and in pumping. Blacksmith's and repairing shops, pattern-making, wheelwright's and other workshops and stores are provided, which help to make the works self-contained: Every description of fire-brick was made here, and the utmost care was exercised



throughout the various operations to ensure the highest quality of material and the best finish. The great extent of this portion of the Works may be inferred from the fact that there were twenty moulding-stoves and nine burning-kilns. In addition to ordinary fire-bricks, the range of productions included crucibles for brass casting, and clay gas-retorts of a special character, which proved to be far more useful than those of the ordinary type.

Rufford and Co ceased trading in 1936.

## **Conclusion**

A demolished building, a boundary wall and a sequence of alteration and development that dated from the original construction of the Wendover Arm to the mid 20th century was recorded by the project. This was accomplished in adverse weather conditions, with severe time and financial constraints and under restrictions as a result of the Covid-19 pandemic, largely due to the unstinting cooperation of Charles Baker, Senior Project Manager, Andy Nichols, Engineer and Phil Emery, Heritage Advisor all of the Canal & River Trust.

## **Bibliography**

### **Principal source**

Salberter, F, 2016 *Tringford Pumping Station; design, access and heritage statement*

### **Other grey literature sources**

Cook, M, and MacLeod, S, in prep, *Building recording at Soulbury Pumping Station, Grand Union Canal*

Cook, M, and MacLeod, S, 2017 *Historic building recording at Tringford Pumping Station Little Tring, Wendover Arm, Grand Union Canal, Dacorum*

### **Sources quoted by Salberter**

Faulkner, A H, 1972 *The Grand Junction Canal*, David & Charles: Newton Abbot, Plymouth

McGarey, D G, nd *The History of Tringford Pumping Station 1817-1945*, Waterways Archives, Ellesmere, not published.

Evans, K, nd *Tringford Pumping Station – a brief history*

Evans, K, 2009 *Tringford Pumping Station – historical timeline*

Richards, S, 1974 *A history of Tring*, Tring Urban District Council, Hertfordshire

### **Internet sources**

[https://www.gracesguide.co.uk/Rufford\\_and\\_Co](https://www.gracesguide.co.uk/Rufford_and_Co)

<http://www.84f.com/chronology/1880s/188700rc.htm>

## **Archive**

The physical archive consists of:

- 31 Context sheets
- 1 Drawing
- 1 Hard copy of the report
- 1 Hard copy of the report illustrations
- 1 Hard copy of the WSI

It will be deposited at The Waterways Archive, Ellesmere Port upon approval of the report. It is anticipated that the finds, three bricks may be of interest to the museum. The museum will be consulted in this respect.

The digital archive consists of

- 1 Digital copy of the report (.docx format)
- 19 Illustrations (.bmp format)

It will be deposited with the Archaeology Data Service upon approval of the report.

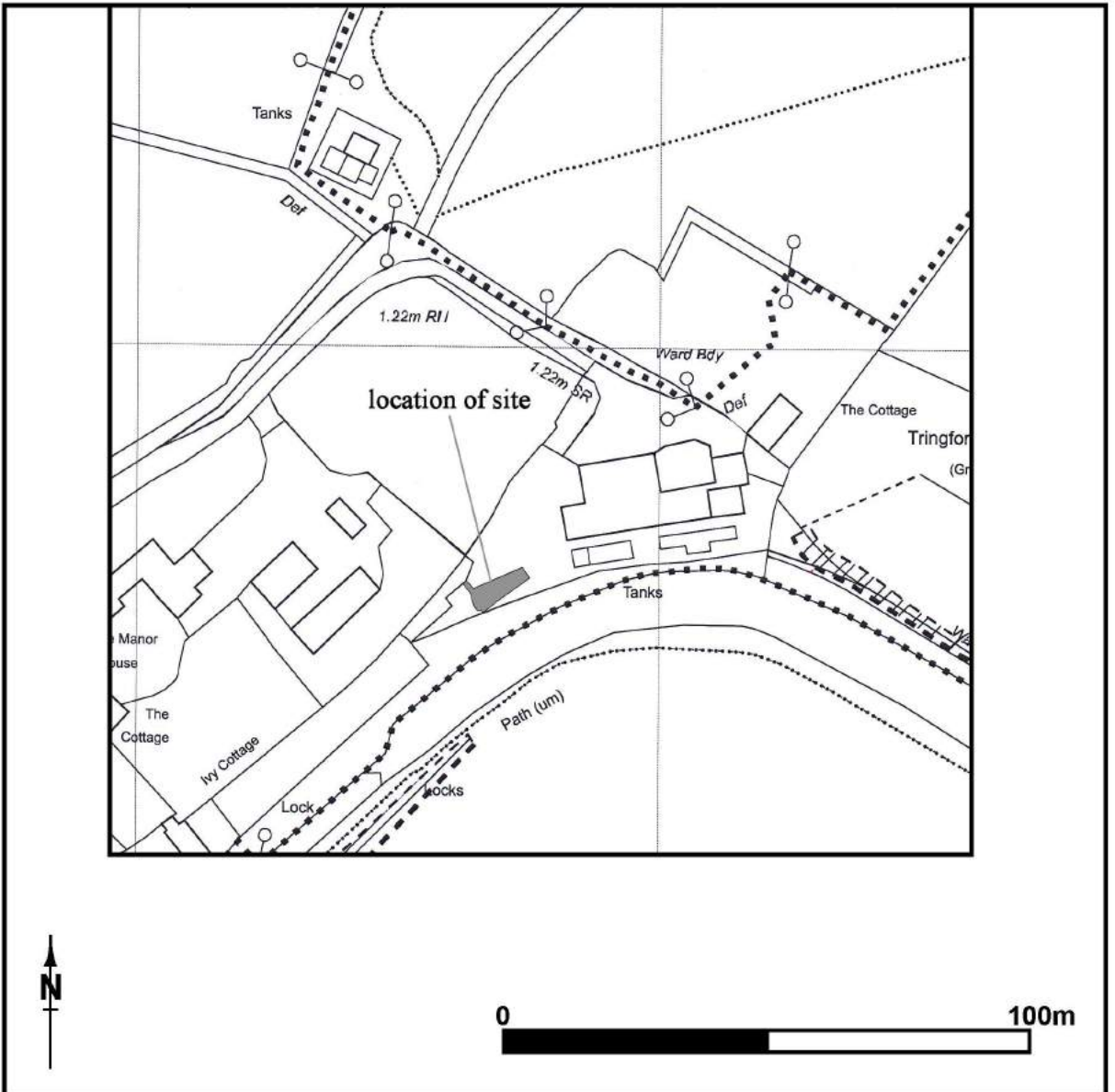
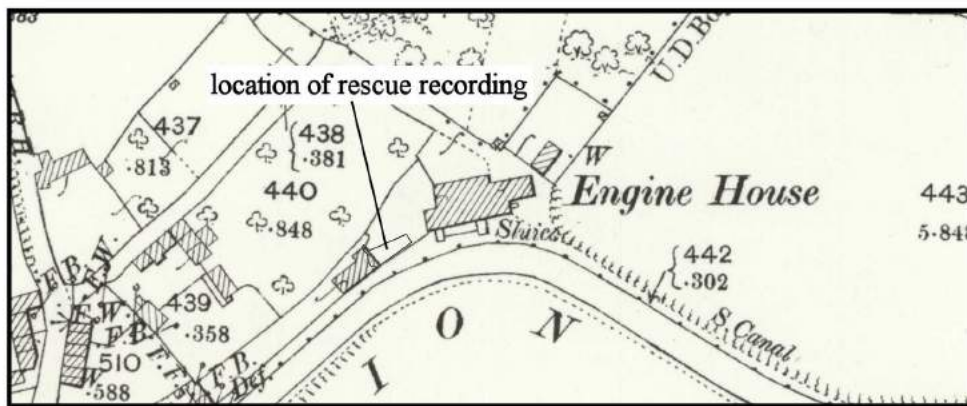


Fig 1: Location of site

1877



1897



1922

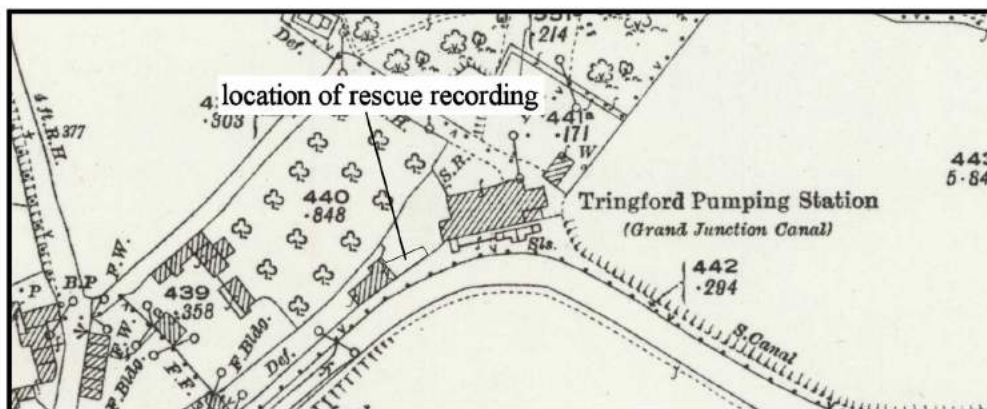


Fig 2.1: Historic mapping; the dates are of the original survey or revision



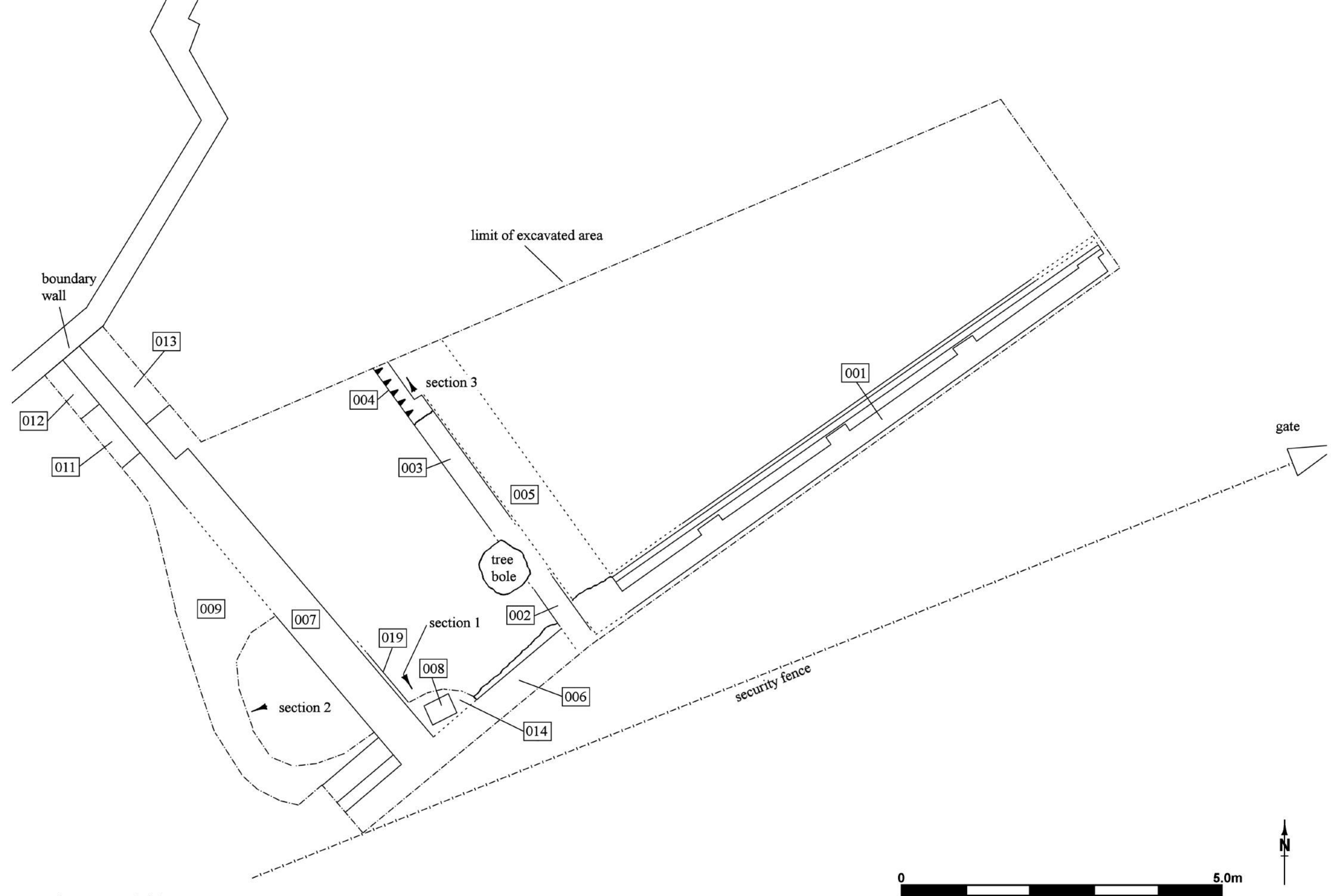


Fig 3.1: Recorded features

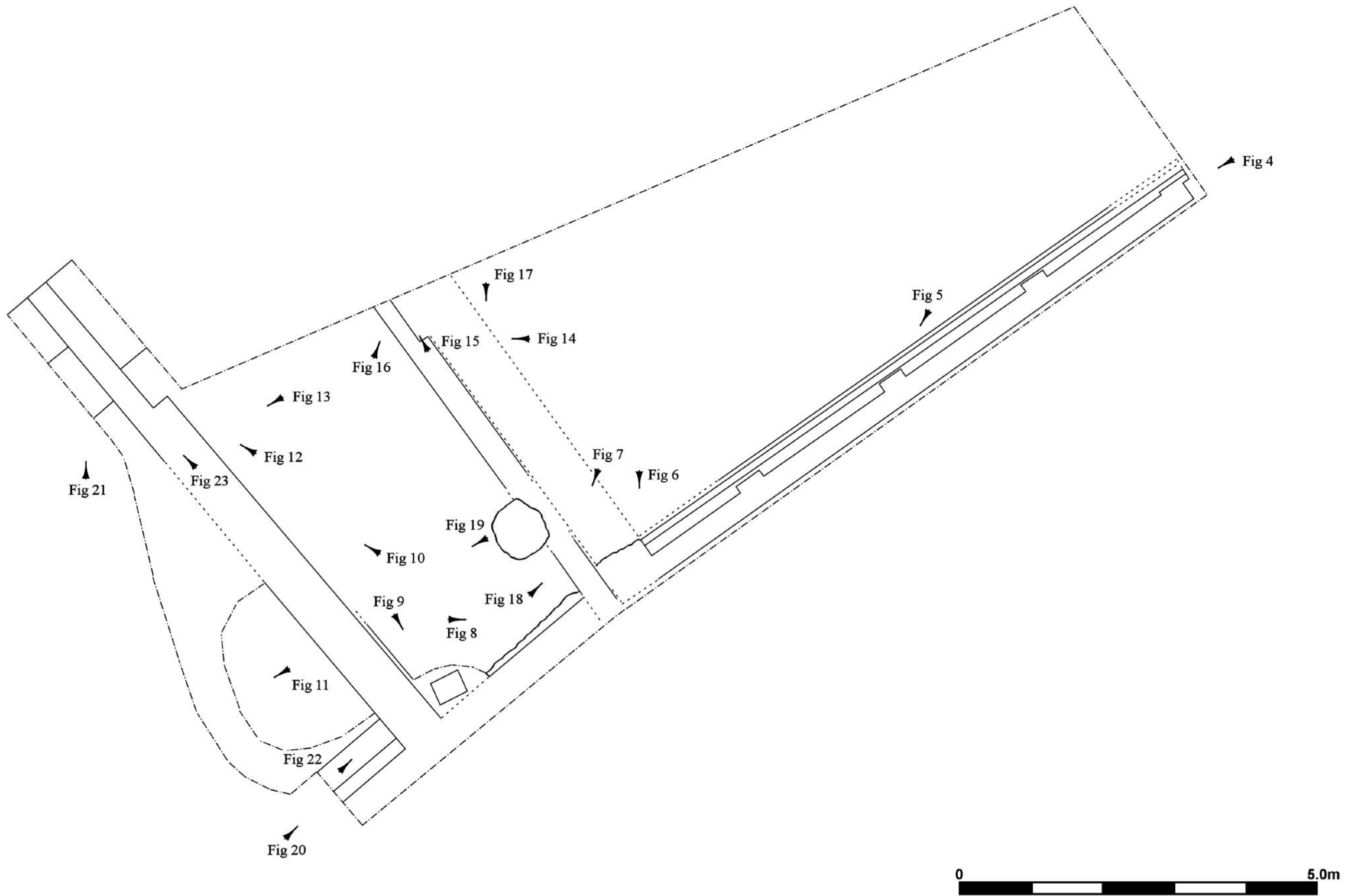
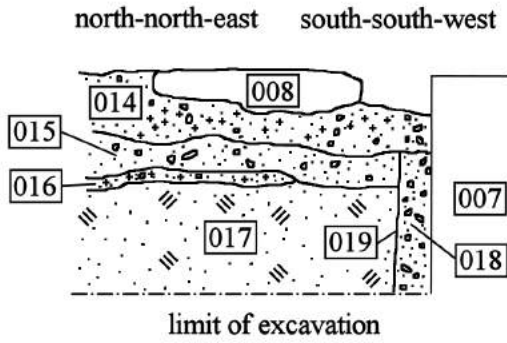


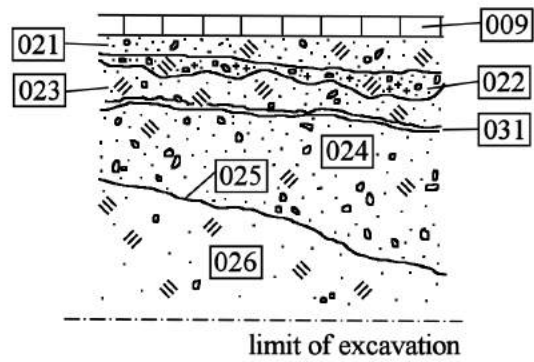
Fig 3.2: Location of Figs 4 to 23

Section 1



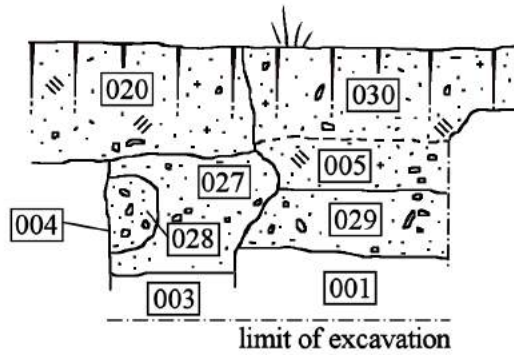
Section 2

south-south-east north-north-west



Section 3

west-south-west east-north-east












-  loam and/or topsoil
-  stones
-  sand/gravel
-  clay
-  bricks
-  ash and charcoal
-  limit of excavation
-  height above Ordnance Datum
-  area of soil strip



Fig 3.3: Sections



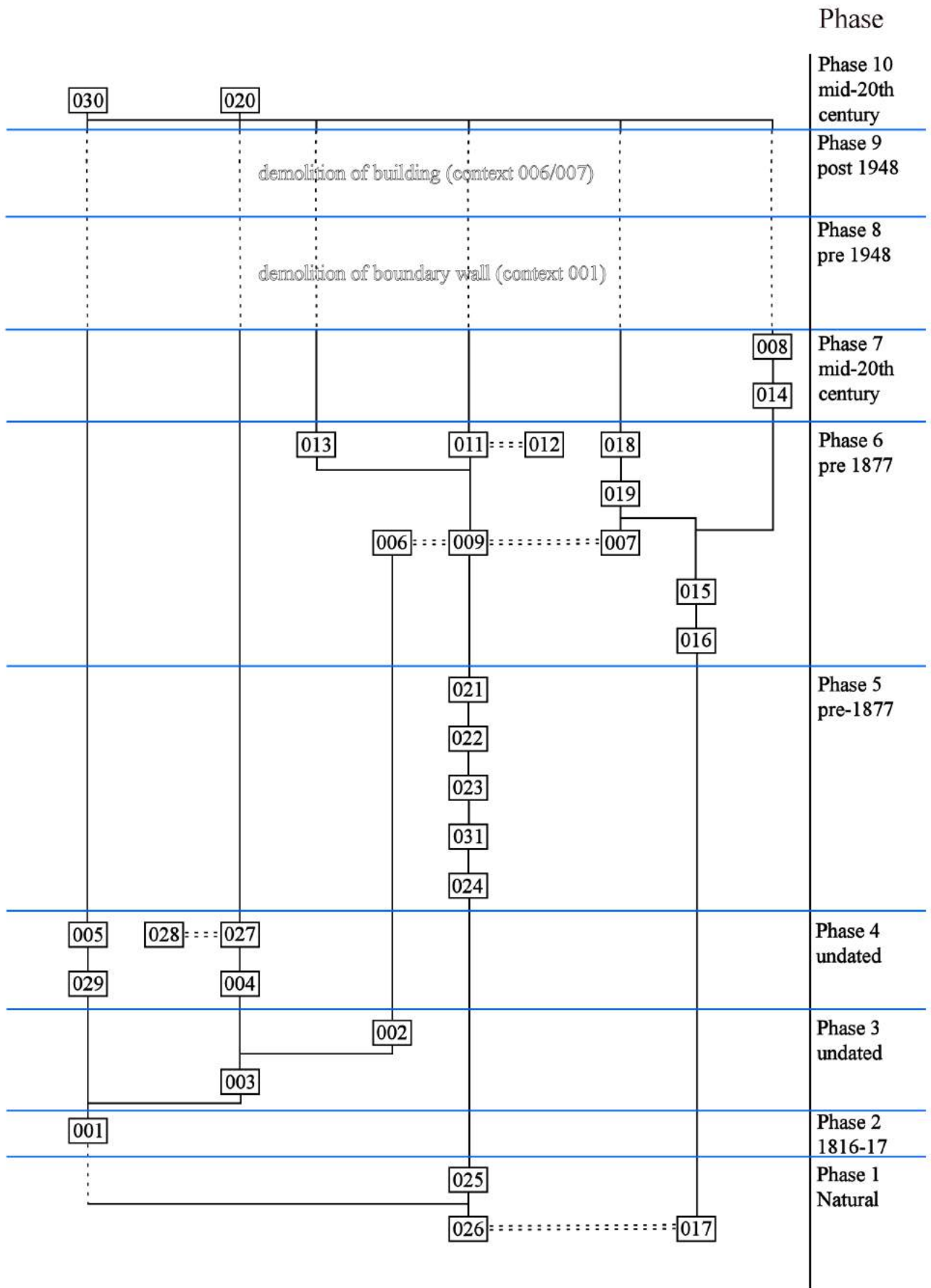


Fig 3.4: Matrix



Fig 4: Boundary wall; showing buttresses, context 001, scale 1.0m



Fig 5: Boundary wall; context 001, showing stepped footing, scale 1.0m



Fig 6: Junction of boundary wall, existing wall and robbed wall, contexts 001, 002 and 005, scale 0.5m



Fig 7: Junction of boundary wall, existing wall, robbed wall and other existing wall, contexts 001, 002, 005 and 006, scale 0.5m



Fig 8: Existing wall; showing stepped footing, context 006, scale 1.0m



Fig 9: Section 1, scale 0.5m



Fig 10: Existing wall, context 007 with stepped footing, context 010, probably same wall as shown on historic mapping, Figs 2.1 and 2.2, scale 1.0m



Fig 11: Section 2, scale 1.0m



Fig 12: Existing wall; context 007, scale 0.5m

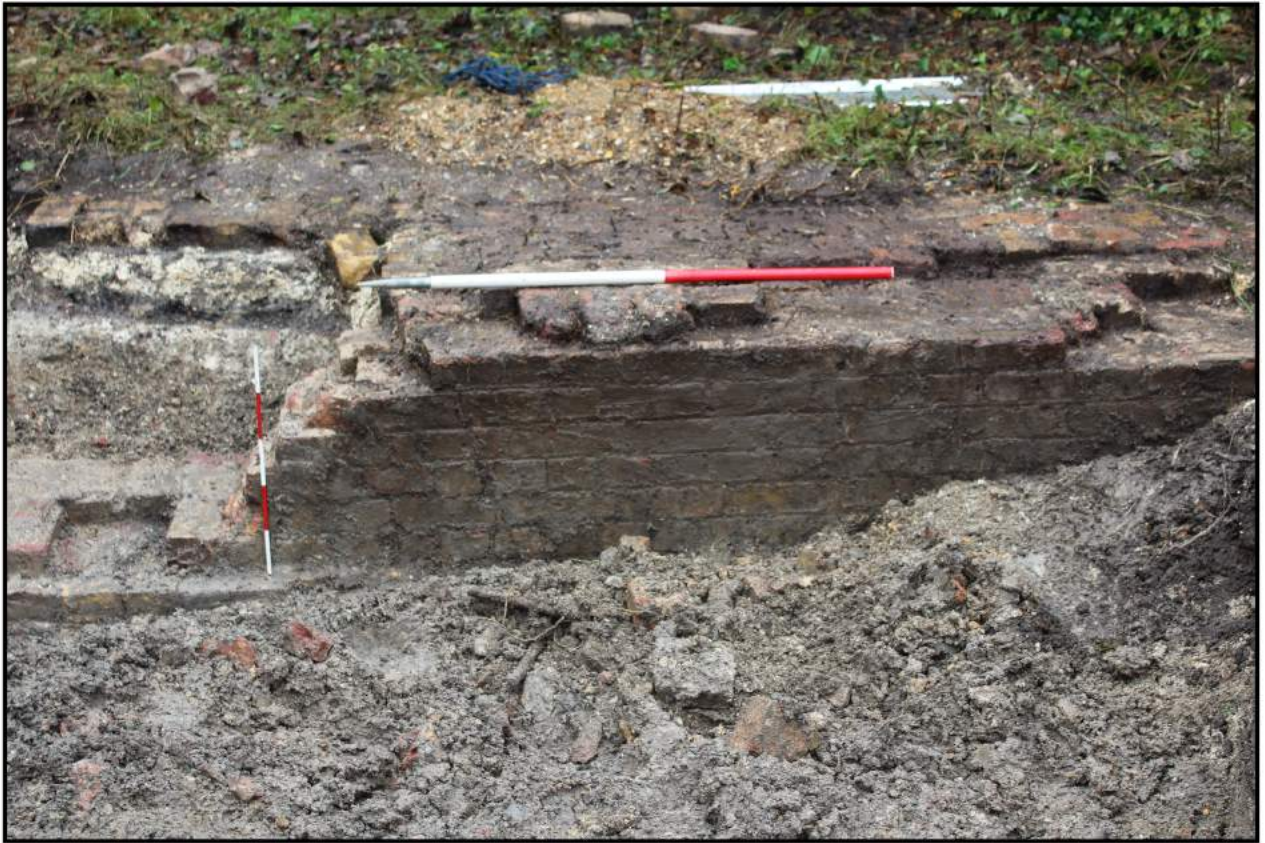


Fig 13: Existing wall; context 007, English bond, scales 0.5 and 1.0m



Fig 14: Existing wall, context 003 and robber trench, context 004, scale 1.0m



Fig 15: Section 3; scale 0.5m



Fig 16: Existing wall, context 003, robbed wall, context 005 and robber trench, context 004; scale 0.5m





Fig 17: Existing wall, context 003, robbed wall, context 005 and robber trench, context 004; scale 1.0m



Fig 18: Existing wall, context 002; showing its slight construction



Fig 19: Existing wall, context 007 with brick surface, context 009 behind, scale 1.0m



Fig 20: Existing walls, contexts 001 and 006, showing angle between them and stone slab, context 008, scale 1.0m



Fig 21: Existing wall, context 007 under excavation



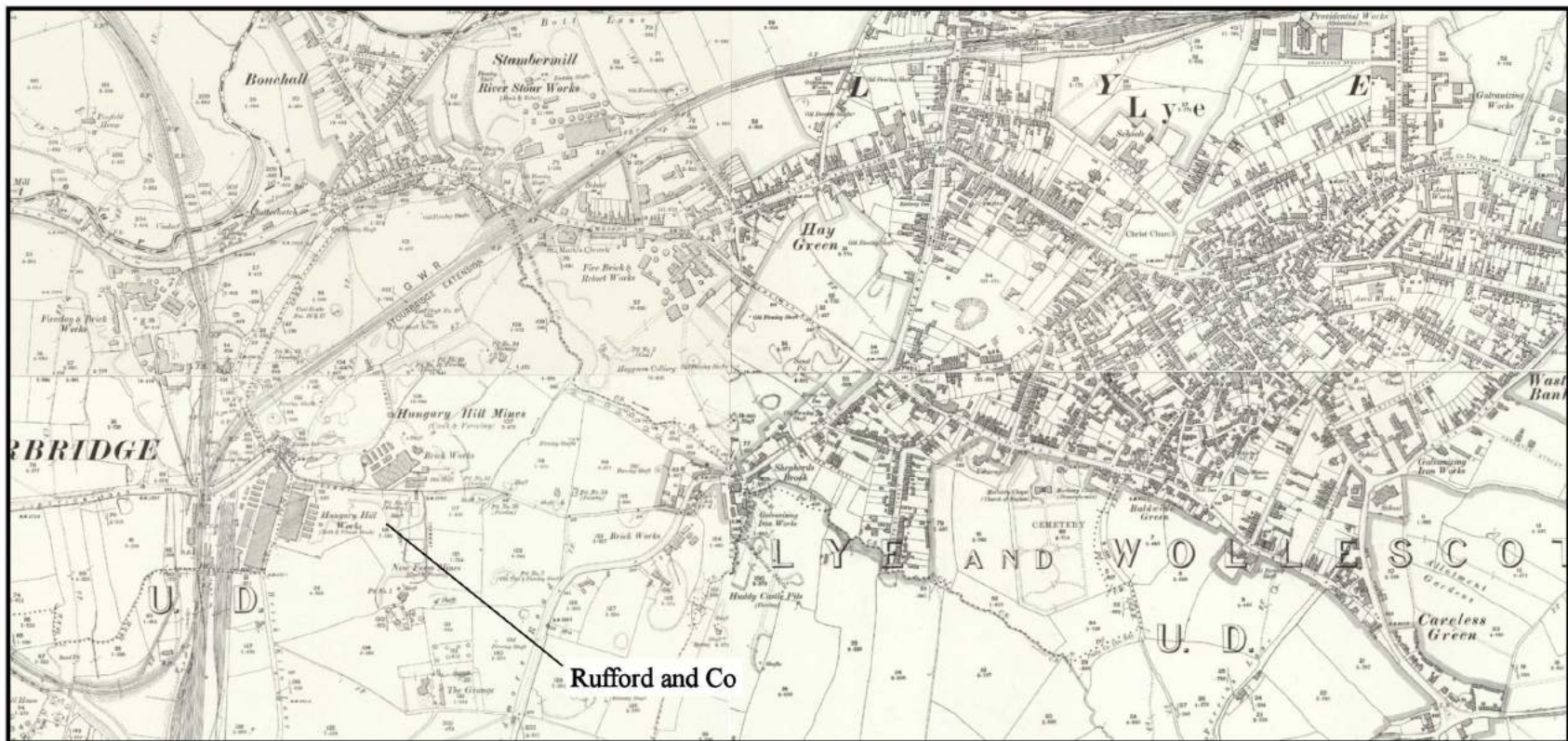
Fig 22: Junction of existing walls, contexts 006 and 007, showing stone slab, context 008 and brick surface, context 009



Fig 23: Existing wall, context 007, concrete surface, context 013, cast iron sheets, contexts 011 and 012 and brick surface, context 009, scale 0.5m



Fig 24: Samples of bricks from the site; made by Rufford of Stourbridge, scale 0.5m



not to scale

Fig 25: Ordnance Survey map of 1901 showing what is believed to be the brickworks of Rufford and Co

## Appendix 1: List of the contexts

Context number	Description	Interpretation
001	Brick wall with stepped footing and buttresses	Original site boundary wall
002	Brick wall, very slight footing; aligns with but of different construction to 003	Modification of 003, possibly infill of a doorway
003	Brick wall, footing of lime concrete, partially robbed-out by 004	At right angles to, and associated with 001, replacement of wall represented by 005
004	Vertically sided cut	Robber trench
005	Light grey sandy clay	Redeposited natural, fill of robber trench, former alignment of 001
006	Brick wall with irregular footing, may abut 001; at right angles to 007 and is built-in to it	Part of south-east wall of building and boundary wall shown on historic mapping (Fig 2.1)
007	Brick wall at right angles to 006; English bond, built-in to 006	Part of north-east wall of building shown on historic mapping (Fig 2.1)
008	Rectangular flat stone	Possible surface of hearth
009	Brick surface	Floor of building shown on historic mapping (Fig 2.1), part of 006 and 007
010	Not used	
011	Cast iron casting	Cover plate just inside sub-divided section of building shown on historic mapping (Fig 2.2)
012	Cast iron casting	Cover plate just inside sub-divided section of building shown on historic mapping (Fig 2.2)
013	Concrete surface	Yard surface or access track
014	Black ashy deposit	Debris from chimney or stove in corner of 006/007
015	Very dark grey and mixed layer of small, angular stones and clay with common roots and other organic material	Layer
016	Thin, dark grey brown sandy clay	Layer
017	Very light grey cream sandy clay	Natural subsoil
018	Very dark grey and mixed layer of small, angular stones and clay	Fill of 019
019	Vertical cut; filled with 018	Foundation trench for 007
020	Dark grey brown sandy clay loam with occasional small rounded stones	Topsoil
021	Very light grey cream sandy clay with areas of loam and root penetration	Levelling layer for 009, upper levelling layer on natural slope of ground 025, possibly re-deposited natural
022	Mid grey sandy clay - peters out to south-south-east	Levelling layer for 009, levelling layer on natural slope of ground

<b>Context number</b>	<b>Description</b>	<b>Interpretation</b>
023	Mid pink sandy clay	Levelling layer for 009, levelling layer on natural slope of ground
024	Mid pink blocky sandy clay	Levelling layer for 009, lower levelling layer on natural slope of ground
025	Gently sloping (south-south-east to north-north-west) surface	Natural ground level
026	Very light grey cream sandy clay	Natural subsoil
027	Very mixed layer of dark grey brown sandy clay and yellow orange sandy clay	Fill of 004
028	Yellow orange sandy clay	Part of 027
029	Dark orange yellow sandy clay	Part of 005
030	Dark grey brown sandy clay loam with occasional small rounded stones	Topsoil
031	Very thin layer of mid orange sand	Fill of 025



## **Appendix 2: OASIS form**

# OASIS DATA COLLECTION FORM: England

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## Printable version

**OASIS ID: martinco1-416475**

### Project details

Project name	Tringford Pumping Station
Short description of the project	Archaeological salvage recording at Tringford Pumping Station Little Tring, Wendover Arm, Grand Union Canal, Dacorum
Project dates	Start: 02-10-2020 End: 25-02-2021
Previous/future work	Yes / Not known
Type of project	Recording project
Site status	Listed Building
Current Land use	Vacant Land 1 - Vacant land previously developed
Monument type	BUILDING Post Medieval
Significant Finds	NONE None
Investigation type	"Salvage Excavation"
Prompt	Listed Building Consent

### Project location

Country	England
Site location	HERTFORDSHIRE DACORUM TRING Tringford Pumping Station Little Tring, Wendover Arm, Grand Union Canal, Dacorum
Study area	200 Square metres
Site coordinates	SP 91798 12969 51.807361249056 -0.668373290274 51 48 26 N 000 40 06 W Point
Height OD / Depth	Min: 0m Max: 0m

### Project creators

Name of Organisation	Martin Cook BA MCIfA
Project brief originator	Canal and River Trust
Project design originator	Martin Cook BA MCIfA
Project director/manager	Martin Cook BA MCIfA
Project supervisor	Martin Cook BA MCIfA

Type of sponsor/funding body Canal and River Trust

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### Project archives

Physical Archive Exists? No

Digital Archive recipient ADS

Digital Contents "none"

Digital Media available "Images raster / digital photography","Text"

Paper Archive recipient Waterways Trust

Paper Contents "none"

Paper Media available "Report"

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### Project bibliography 1

Publication type Grey literature (unpublished document/manuscript)

Title Archaeological salvage recording at Tringford Pumping Station Little Tring, Wendover Arm, Grand Union Canal, Dacorum

Author(s)/Editor(s) Cook, M.

Date 2021

Issuer or publisher Martin Cook MCIfA

Place of issue or publication Walton-on-the-Naze

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Entered by Martin Cook (office@martinjcook.com)

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