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MUSEUM GARDENS, YORK

Tree Planting Survey



York Archaeological Trust

Site Investigations

COUNTY PLANNING DEPARTMENT

Your Reference:

John D. Rennilson MA MSc MRTPI ARICS MB

My Reference: NRC/SLM

When telephoning please ask for: Mr Campling
Ext: 2330

11 June 1993

Dear Sir

Museum Gardens: Tree Planting Zones

Thank you for sending the report by YAT on proposed tree planting zones within the Scheduled Area. I can confirm that the division into three broad zones, providing for areas where tree planting could be carried out without constraint, areas subject to archaeological evaluation, and no planting areas is acceptable. I note that the report recommends carrying out a geophysical survey of the intermediate zone to more precisely locate early buildings and archaeological features before planting trees. I would suggest that a geophysical survey of the whole zone could be carried out well in advance of any individual plantings. I would also point out that English Heritage may require you to take further precautions in this area as a condition of Scheduled Monument Consent. However, I do think that a reasonable balance between the preservation of archaeology and the conservation of an historic garden has been achieved.

Yours faithfully



N Campling
Deputy Archaeological Officer
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COUNTY PLANNING DEPARTMENT		
- 9 JUN 1993		
PASS TO	INITIALS	DATE
NRC	Adk improm + chat	10/6/93

Mr Neil Camplin
Archaeological Section
County Planning Department
North Yorkshire County Council
County Hall
Northallerton DL7 8AD

8th June 1993

Dear Neil

Museum Gardens: Tree Planting

Some considerable time ago I told you that the York Archaeological Trust was preparing for us a set of proposals on tree planting in Museum Gardens. I have now received those proposals from David Brinklow and accordingly I enclose a copy for your perusal.

I would be grateful for any comments you may have, so that I can bear them in mind before I take the proposals to elected members.

With kind regards

Yours sincerely

County Museums Officer

Museum Gardens, York

A Report on the Feasibility of Tree Planting

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1. Introduction

York Archaeological Trust was commissioned by North Yorkshire County Council to prepare a survey of archaeological evidence from Museum Gardens and to define the relative sensitivity of particular areas of the gardens to major horticultural work such as the planting of trees. The aim of the survey was to assist in the development of an appropriate management strategy to allow the continuation of horticultural work within the gardens whilst preserving the vulnerable archaeological remains below. For the purposes of this report a tree has been defined as a woody plant with roots greater than 10mm diameter which penetrate to depths greater than 0.50m.

Museum Gardens, York is both a Scheduled Ancient Monument and an important historic botanical garden. It is included in the English Heritage Register of Historic Gardens at grade 2. In many instances the requirements of these two uses are mutually exclusive. It was therefore deemed essential to define what was already known of the archaeology in the gardens and to attempt to determine if there were areas in which trees could be planted with minimal disturbance.

Evidence has been collected of all known archaeological discoveries in the area of interest and the results are summarised below. Where possible the location and extent of archaeological investigations have been plotted together with any dated structural remains identified. The edges of the earliest excavations, by Wellbeloved and in the Chancel of St Mary's Abbey, have not been located. A contour survey of the gardens has also been

undertaken and this has been plotted onto a digitised version of the 1:200 scale plan of the gardens produced by NYCC Surveyors Department in 1984 which has been used as the base for the mapped results. Also included in the mapped data is the location of a range of Abbey buildings identified from historical evidence by Dr Christopher Norton and we are indebted to him for the use of this information in advance of its publication.

On occasions in the past, parts of Museum Gardens have been subject to resistivity survey. The results of these surveys have been disappointing and since it has not proved possible to locate the areas surveyed accurately, they have been omitted from the survey results. However, the accuracy and discrimination of geophysical survey has improved considerably in the recent past and it is suggested that careful, well located survey of areas in which buildings are suspected should be able to predict their position with some precision.

The report was collated by Jane Lilley and David Brinklow, the topographical survey was undertaken by Trevor Pearson and Jane Lilley and the figures prepared by Trevor Pearson.

2. Archaeological Evidence

a) Work undertaken in the Museum Gardens, York, from 1829-1972.

1827-1828 Excavations beneath site of the Yorkshire Philosophical Society Museum

Excavations were carried out by Revd. Charles Wellbeloved on behalf of the Yorkshire Philosophical Society, prior to the construction of their new museum (now the Yorkshire Museum). The excavations revealed the outlines of the claustral buildings of the Abbey of St Mary which were planned in detail. These plans were used as the basis for the R.C.H.M. plan of the abbey buildings (R.C.H.M.Y., 1975).

1900-1902 The chancel of Saint Mary's Abbey

Initially, longitudinal and transverse trenches five feet (1.52m) deep were excavated within the chancel, but no trace of earlier monastic floors were found. The excavations were later extended and the outline of the 11th century Norman abbey church was revealed, including the apsidal chapels of the northern transept and east end of the church.

1925-1927 Multangular tower

A series of excavations was carried out by the York Roman Excavations Group and published by A. Kaine in the Annual Reports of the Yorkshire Philosophical Society and by S.N. Miller in the Journal of Roman Studies. Although most of the excavations were within the Multangular Tower, a section was cut in front of the fortress wall. This revealed a berm five feet (1.52m) wide and a double ditch. The inner ditch was five feet (1.52m) deep and the outer eight feet (2.44m) deep. The foundations of the Roman fortress wall were also exposed. A series of small cuttings were also made across these ditches around the base of the multangular tower.

1952-57 Excavations against south wall of St. Mary's Abbey

A series of excavations were carried out by G.F. Willmot, the results of which remain unpublished. A series of Roman remains were found the earliest of which was a timber building on the same alignment as the Roman legionary fortress. This was sealed by a robbed out wall foundation for a building on a markedly different alignment, which, in turn, was sealed by the surface of a road of c. AD 260, aligned south-east/north-west. Another Roman building of uncertain date was found beneath the south-west corner of the abbey church. A pit dated to the Anglo-Saxon period was also found.

In a separate trench Willmot excavated a Roman wall over eight feet (2.44m) wide, which has been interpreted as the south-west wall of a fortified enclosure adjacent to the Roman fortress.

1957 Interval Tower S.W.6

G.F. Willmot excavated the area in front of Tower S.W.6, the results of which are unpublished. Fragments of the wall core of the Roman tower were uncovered. It is reported that, sealing the Roman ditch, was a very late Roman or post-Roman building. This excavation is of considerable importance because some 5th century pottery was recovered.

b) Work undertaken by York Archaeological Trust in the Museum Gardens, York, since 1972.

The sites are listed chronologically and are identified by Trust site codes which are also the Yorkshire Museum accession numbers. Codes with numbers in the thousands refer to sites without finds.

1976.1010 Museum Gardens, Public Toilets

A.B.Sumpter observed the digging of foundation trenches 0.55 - 0.70m deep for the new public toilet block in the south-east corner of Museum Gardens. Over the southern part of the site 0.30m of dark brown topsoil above medium/red-brown sandy silt was revealed.

The northern part of the site contained a compact spread of limestone rubble and mortar at a depth of 0.30m below ground level. This was bounded on the riverward side by the foundations of a north-west/south-east aligned wall. The foundations were formed of large, roughly-dressed limestone blocks and the feature was thought to be of medieval date. There was no previous record of buildings in this part of the abbey precinct and no function can be attributed to a building here from these observations.

1982.1018 Museum Gardens, Sewer Trench

David Brinklow observed the digging of a sewer trench 1.75m deep in the north-east corner of Museum Gardens, running from the gateway into King's Manor Lane across the front of the Curator's House.

The remains of two stone walls were cut by the trench at a depth of only 0.10—0.15m beneath the tarmac path surface. The more easterly of these was formed of two courses of well-cut, well-mortared gritstone and limestone blocks set on foundations of cobble and rough limestone rubble. Its total height was 1.60m and it was 0.70—0.80m thick. It aligned well with the known position of the precinct wall of St. Mary's Abbey and is likely to be part of this feature.

The north-westerly wall, represented by foundations only, was of rough limestone rubble and cobbles and was 0.75—0.80m thick. No dating evidence was recovered for either wall.

1984.6 Museum Gardens, medieval drain

A complex arrangement of interlinked medieval drains was observed by David Brinklow for Y.A.T. and Robert White and Dick Welbourn for N.Y.C.C.

Three separate trenches were dug by workmen attempting to clear blockages to the foul drainage from the Yorkshire Museum and the King's Manor. In Trench A the remains of an external corner of a building constructed in magnesian limestone ashlar were recorded, together with the junction of three medieval drains. The largest of these ran from the buildings of St. Mary's Abbey and had been greatly disturbed during the insertion of a brick drain of early 19th century date. A second drain of similar proportions ran into the first from the north-east (i.e. from the direction of the Multangular Tower). A third drain of much smaller size and square in section was cut into

the northern wall of the first drain and served the Abbot's Lodging (later the King's Manor).

In Trench B, in the grassed area in front of the Multangular Tower, some capping stones of the drain were removed to reveal that it was complete and in a sound structural condition only 0.34m beneath the turf.

Trench C, at the edge of the tarmac path leading into Museum Gardens from Museum Street, revealed what appeared to be a properly finished end to the stone-built drain, the outflow of which discharged into a circular brick-built 19th century continuation. The upper surface of the stone drain was 1.50m beneath the tarmac here with the base of the drain a further 1.03m below.

The ashlar drain described above appears to have been the main drain from the Abbey living quarters towards the City Ditch and hence the River Ouse. It is clearly an important and impressive structure and is only shallowly buried.

1984.1011 Museum Gardens, boreholes

A total of eight boreholes sunk in advance of Yorkshire Water Authority Flood Defence construction were observed by David Brinklow. Three were within the area of former swimming pool and were ceased when the pool base was encountered at a depth of 1.75m. The remaining boreholes located possible archaeological layers to a depth of c.3.25m but with no dating evidence.

1985.2 Museum Gardens, sewer trench

Machine-dug trenches to lay a new sewer to the Yorkshire Museum were observed by David Brinklow. A trench (1) ran north-eastwards from the most northerly manhole of 1984.6, turned at right-angles (2) to run towards the Yorkshire Museum and turned again (3) to run parallel to the Museum. Trenches 1 and 2 obliquely cut a medieval limestone wall, running south-west / north-east and faced with roughly-cut limestone ashlar. The wall was exposed for a length of c.11m, was c.1.20m wide and the core comprised angular limestone fragments in mortar. It was based on a mortar skin which sealed a foundation deposit of cobbles and limestone fragments in silty mortar. An unfinished limestone capital found among the spoil was assumed to have formed part of the wall core.

Traces of cobbles found at a lower level may indicate an earlier surface but no features associated with the wall were seen. Trench 3 contained only material redeposited in the 19th century.

1985.6 Museum Gardens (IBM)

A trench was excavated under the supervision of Niall Oakey in advance of the erection of a pavilion for an IBM exhibition on the lawn in front of the Yorkshire Museum. Beneath 0.90m of 19th century dumped material was found the robbed cobble and mortar foundation of a structure connected with the cloister walk or the western range of cloister buildings. This was sealed by undisturbed demolition material.

1985.10 Museum Gardens (Flood Defences)

A number of trenches were observed and excavated under the supervision of Niall Oakey in advance of Yorkshire Water Authority Flood Defence construction.

a) Removal of a tree against the western precinct wall revealed its original foundations at a depth of 8.80m OD. They were overlain by a crude post-medieval rebuild at 9.80m OD (possibly associated with the Civil War siege of 1644) and topped with Victorian and modern rebuilds.

b) Observation of a machine-cut trench showed features representing the construction of the swimming-baths in the south-west of Museum Gardens and the creation of an ornamental garden between the Hospitium and the Esplanade in the 19th century, but no structures associated with the abbey were found.

c) Observation of a machine cut trench revealed a wall of dressed limestone aligned north-north-east/south-south-west. This is interpreted as the eastern wall of a passage down to a gateway through the southern precinct wall giving access to the river. Two further limestone walls on a parallel alignment and at right angles to the southern precinct wall were recorded further eastwards. A well shaft of 19th century date, re-using medieval limestone and gritstone masonry, was also observed within this trench.

d) Limited excavation revealed the heavily robbed remains of the southern precinct wall, bonded at the western end of the trench to a continuation of the north-north-east/south-south-west wall seen in Trench c. Evidence of medieval activity north of the precinct wall was recorded.

e) Observation and limited excavation revealed the remains of medieval walls of limestone and tile parallel to the southern precinct wall, presumably

belonging to buildings abutting the inside of the wall. These remains were not disturbed by subsequent construction work and have been reburied.

f) Observation of a machine-cut trench to remove a modern drain showed that it had disturbed the southern precinct wall of the abbey.

g) Observation of a machine-cut trench revealed the robbed remains of the southern precinct wall.

h) Excavation of a narrow trench to a depth of c0.50m disturbed only deposits associated with the use of the gardens in the 19th and 20th centuries.

1986.19 Museum Gardens (Tempest Anderson Hall)

An area was excavated under the supervision of Niall Oakey to facilitate the construction of a viewing platform outside a Museum Gallery and the elimination of rising damp within the Museum. After the removal of soil cast up from the Wellbeloved excavations of the 1820s, part of the southern and eastern walls of the south transept of the late 13th century abbey church were exposed. Investigation showed that the foundations of the eastern wall reused masonry from the earlier church. The mortared cobble and limestone raft of the apsed south transept of the earlier 11th abbey church was also exposed and recorded.

1986.1010 Yorkshire Museum basement

Construction work associated with new toilets for the Yorkshire Museum which was observed by David Brinklow revealed structural fragments of an abbey building immediately beneath the floor slabs of the Museum basement. These were as recorded on the Wellbeloved and RCHM plans of the abbey and were undisturbed by the works.

1987.12 Museum Gardens, sewer trench

A trench dug to release a trapped video camera was observed by David Brinklow. 2.20m of dumped material, probably of 19th century date but incorporating debris from St. Mary's Abbey, was noted. This may have been used deliberately to fill the City Ditch following the excavations of the abbey ruins in the late 1820s.

1987.16 Museum Gardens (Esplanade Gate)

An area dug away by gardeners to insert a ramp entrance to Museum Gardens from the Esplanade was observed by David Brinklow. Re-used medieval stonework was recorded c.0.10m beneath the steps which were to be replaced. It had almost certainly been used in the construction of the 19th century swimming bath boundary wall.

1987.17 Museum Gardens (Flood Defences)

A trench dug by machine to construct a pumping station for the Yorkshire Water Authority was observed by David Brinklow and Niall Oakey. A surface of limestone, brick and tile was noted sloping down towards the river and is interpreted as the floor of the passage down to the river, the east wall of which was recorded in 1985.10, trenches c) and d).

1987.23 Museum Gardens (Access Road)

The machine removal of material from the roadway into the Museum Gardens past the gardeners' accommodation was observed by Keith Emerick. Re-used medieval masonry incorporated in the external walls of the 19th century swimming-bath complex was noted.

1987.1002 Museum Gardens (sewer manhole)

A new manhole cover was inserted above a manhole constructed at the south end of the medieval sewer in 1984. No further archaeological evidence was forthcoming.

1988.5 Yorkshire Museum

Martin Stockwell observed the reflooring of a store room within the Yorkshire museum. Excavation was to a depth of 0.20m below the floor level. No features of archaeological interest were located.

1989.2 Museum Gardens (ice cream kiosk drainage)

During the cutting of one of a series of three circular drainage sumps close to the ice-cream kiosk a length of limestone ashlar wall was recorded, aligned north-east/south-west. Only the internal face of the wall was seen surviving to 8.76m OD with a brick-faced offset 0.62m beneath the surviving top. A series of mortar floors abutting the offset were removed by the contractors. The base of foundation was located 0.53m beneath the offset. The wall is believed to relate to a medieval building which has not previously been recorded.

1988/89.18 Yorkshire Museum, Lift Building

A complex sequence of structures forming part of St. Mary's Abbey was recorded and partially removed during the construction of a lift building to allow access to the upper floor of the Yorkshire Museum. The site, immediately adjacent to the basement entrance to the Yorkshire Museum, was partially covered by a large earth mound thought to represent the spoil from Wellbeloved's excavations of 1827—8.

The upper 2m of the mound appeared to be re-deposited material but beneath this, at 16.36m OD, upstanding walls of Abbey buildings were found. Some of these remains had been exposed and planned during the 19th century excavations and belonged to the school and dormitory building assigned to the period of building undertaken by Abbot John de Gilling in the early 14th century. Contemporary with these features was a stone-built drain which ran diagonally beneath the building to join the drainage system previously recorded in 1984 (1984.6 Trench A).

The foundations of earlier, probably 12th century, walls were recorded beneath the floor of the school. These incorporated two re-used stones which had fragments of painted plaster on their surfaces.

1988.1046 Museum Gardens (Hospitium path-edging)

A surface of limestone and cobbles at 8.17m OD was recorded by Martin Stockwell in the base of a trench 0.45m deep dug to insert path edging on the eastern side of the Hospitium. Its position is consistent with interpretation as a roadway aligned through the archway adjacent to the Hospitium to the gate in the precinct wall beyond.

1989.20 Museum Gardens tree planting

A 1m x 1m trench was excavated under the supervision of Niall Oakey in advance of tree planting within the cloister garth. This revealed deposits interpreted as undisturbed monastic levels at 15.60m OD, which were sealed by deposits derived from the collapse or demolition of the claustral buildings after the dissolution. The uppermost c.0.70m of material had been dumped in the 19th and 20th centuries.

1989.1013 Hospitium electricity cable trench

Russell Marwood observed the cutting of a 23.7m x 0.25m trench, which was excavated to a depth of 0.60m. A dark brown clay possibly of medieval date was found at a depth of 0.15-0.25m below the present ground surface, but no structural features were located. The clay was sealed by the present tarmac ground surface.

1989.1014 Yorkshire Museum electricity trench

Martin Stockwell observed the excavation of a 0.50m deep trench adjacent to King's Manor. The deposits encountered were all of post-medieval date.

1989.1046 Museum Gardens path edging

The probable foundations of the north-east post of the original gates to Museum Gardens were exposed 0.20-0.40m beneath the surface of the path leading into the gardens from Museum Street.

1990.23 Hospitium

A portion of the hospitium floor was lifted, to enable the installation of a new heating system, and the area beneath excavated to a maximum depth of 0.30m. A cobble surface of 18th or 19th century date was exposed.

1990.1013 Museum Gardens, gas main trench

A 55.5m long trench was excavated to a depth of 0.60m to accommodate a gas pipe. The deposits encountered were all of post-medieval date.

1990.1016 Museum Gardens, St Mary's lodge path edging

A 0.45m deep trench was excavated on the eastern side of the abbey gatehouse, in advance of new path edgings. A garden wall dating to c.1840 was found.

1992.1001 Museum Gardens railings

A trench measuring 15.10m x 0.40m and 0.20m deep was excavated prior to the installation of new iron railings. This revealed garden soil and some limestone blocks from a rockery built around a tree adjacent to the city walls.

3. Summary of Archaeological Evidence

Although a considerable number of archaeological interventions have taken place within Museum Gardens, the picture of archaeological deposits beneath the surface remains patchy.

a) Roman

The precise nature and extent of Roman remains within Museum Gardens is not known. Nevertheless, the small trenches which have uncovered Roman deposits demonstrate a complex sequence of timber and stone structures. Although in the area of Abbey buildings these have probably been disturbed by medieval construction activities there is some evidence that elsewhere they remain in a good state of preservation.

The significance of the Roman legionary fortress defences is readily apparent and although in places, for example at the Multangular Tower, these are clear for all to see, the ditch deposits and any intervening stratification is also of considerable importance.

The putative annexe to the north of the Roman legionary fortress encompasses the north-eastern part of the gardens but the majority of structural remains so far discovered lie to the west of this. Further to the west lies the route of a presumed Roman road, on either side of which may have been Roman buildings.

b) Anglian/Anglo-Scandinavian

The archaeology of these periods has been poorly served by excavations in Museum Gardens. A significant number of fine small objects of this date have been recovered but are mostly poorly provenanced. This together with the 5th to 9th century material found in Willmot's excavation to the south of Interval Tower SW6 suggests intact stratification of the period would probably be found with modern excavation techniques. All areas in which Roman structures have been recorded have the potential for post-Roman occupation.

c) Medieval

The most obvious archaeological remains in Museum Gardens are those of the Benedictine Abbey of St Mary, founded in 1088, of which the church layout was excavated and left exposed in the early years of the 20th century. Although the layout of the claustral buildings of St Mary's Abbey is well known, that of the service ranges has been postulated from historical evidence alone. Detailed archaeological analysis of the development of even the known building plan is not possible from the records of 19th and early 20th century excavations. It is therefore of crucial importance that any remaining stratified deposits which might assist in this analysis be preserved.

d) Post-medieval

The Victorian gardens in which the Yorkshire Philosophical Society built the Yorkshire Museum are themselves of historical and archaeological interest. The modern history of the gardens is summarised in a report by Peter Goodchild of the Institute of Advanced Architectural Studies at the University of York which was completed during the drafting of the English Heritage Register of Historic Gardens.

4. Conclusions

The purpose of this survey was to attempt to define areas in Museum Gardens in York where:

- a) trees could be planted with negligible archaeological damage
- b) trees could be planted after appropriate archaeological investigation and
- c) archaeological remains were so sensitive that no disturbance should take place at all.

The entire area of Museum Gardens (except the Yorkshire Museum, Observatory and public toilets) is a Scheduled Ancient Monument (County Monument nos. 12 and 12a (Precinct wall)) and thus any disturbance of the ground requires scheduled monument consent (SMC) from the Department of National Heritage.

Archaeological deposits in the Museum Gardens are, except in the areas of the former City Ditch, relatively shallowly buried. They are thus particularly susceptible to disturbance from any activity which penetrates the ground to depths in excess of 0.5m.

The results of the survey should be examined therefore in the context of the damage which mature trees can do to vulnerable archaeological stratification. The excavation of planting pits may not cause significant harm to the underlying archaeological deposits but the long term damage in terms of stratigraphic disruption caused by the insidious action of major root penetration should be considered in advance of planting.

The removal of dead tree stumps also poses a potential threat to archaeological deposits. It is thus recommended that stump grinders are used to grind the stumps in situ and that no attempt is made to pull them from the ground.

The zones identified on Figure 4 have been largely dictated by the presence of archaeological remains. In order to facilitate garden management however, modern topographical features have been used as boundaries where possible.

It has proved possible to define areas within Museum Gardens where tree planting would cause minimal archaeological disturbance. Zone A on figure 4 delineates an area over the 19th century swimming pool, to the riverward side of the Abbey Precinct wall, around the public toilet block and between the Hospitium and the Abbey Gatehouse in which, as far as can be reasonably predicted, archaeological deposits are unlikely to be affected.

Zone C on figure 4 shows that part of Museum Gardens in which important archaeological deposits are known to exist at relatively shallow depth. These consist largely of the structural remains of St Mary's Abbey, the majority of which have been proved by excavation, the defences of the Roman legionary fortress and an ill understood series of Roman structural remains to the north-west of the legionary fortress. All of these remains are close to the surface and would suffer significant damage if trees were planted above them. This zone also includes the City Bank on the south-east edge of the gardens and a narrow strip adjacent to the Abbey precinct wall along the north-western boundary.

The remaining areas, marked Zone B on figure 4, are those in which remains are suspected to exist but not currently proven archaeologically. In this area it seems reasonable to insist that archaeological investigation should precede the planting of trees.

In the area between the Hospitium and the public toilets it is likely that medieval building remains will be found. It is recommended that geophysical survey should form the first stage of any archaeological evaluation here in an attempt to locate the structural remains precisely.

The area of the modern bowling green to the north of the Abbey Church may or may not contain archaeological remains. Archaeological investigation has not taken place in this part of Museum Gardens.

It cannot be assumed that archaeological investigation will clear the area for planting since if well stratified significant remains are located close to the surface clearly planting would impact severely upon them. Zone B should thus be termed the area in which tree planting may be possible subject to archaeological evaluation.

Bibliography

Brierley, W.H., 1901. 'Report on the excavations made in the chancel of Saint Mary's Abbey church', Yorkshire Philosophical Society Annual Report

——— 1902. 'Further reports on the excavation of the chancel of Saint Mary's Abbey church', Yorkshire Philosophical Society Annual Report

——— 1903. 'Report on the excavations in Saint Mary's Abbey 1902', Yorkshire Philosophical Society Annual Report

Gentil, P., G.F. Willmot's excavation at Saint Mary's Abbey, B.A. dissertation

Miller, S.N., 1928. 'Roman York: Excavations of 1926-1927', Journal of Roman Studies XVIII, 62-99.

Norton, C., forthcoming, The Buildings of St Mary's Abbey, York and their destruction, Antiquaries Journal

Raine, A., 1928. 'The excavations near the Multangular Tower 1926', Yorkshire Philosophical Society Annual Report 1927

RCHMY. Royal Commission on Historical Monuments (England). An Inventory of the Historical Monuments of York. 1 Eburacum, Roman York (1962); 4 Outside the City Walls East of the Ouse (1975).

Wellbeloved, C., 1829 Account of the ancient and present state of the Abbey of St Mary, York, and of the discoveries made in the recent excavations.

Willmot, G.F., 1954. 'Excavations at Saint Mary's Abbey', Yorkshire Architectural and York Archaeological Society Annual Report and Summary of Proceedings 1953-1954, 12-13

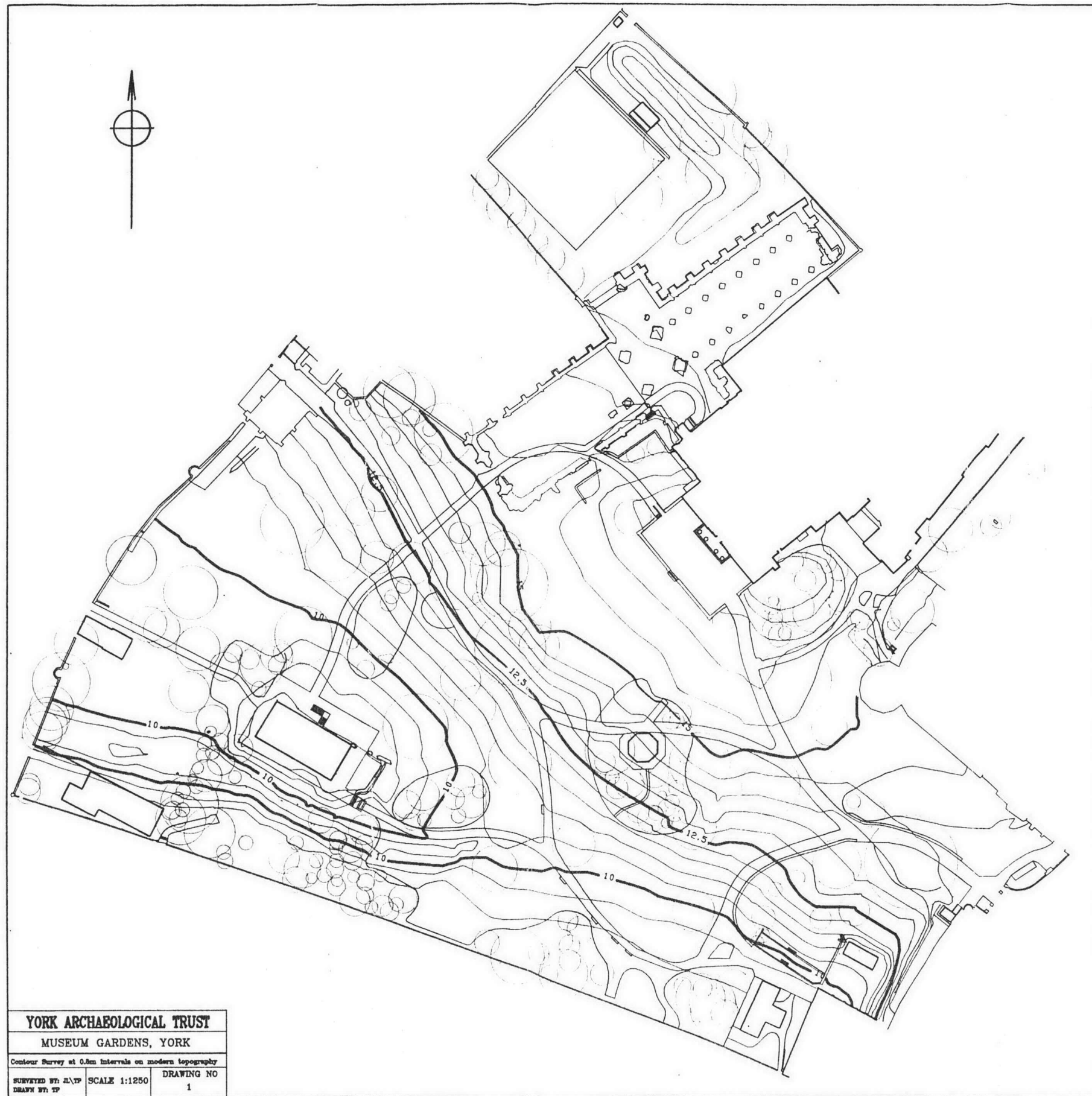


Figure 1

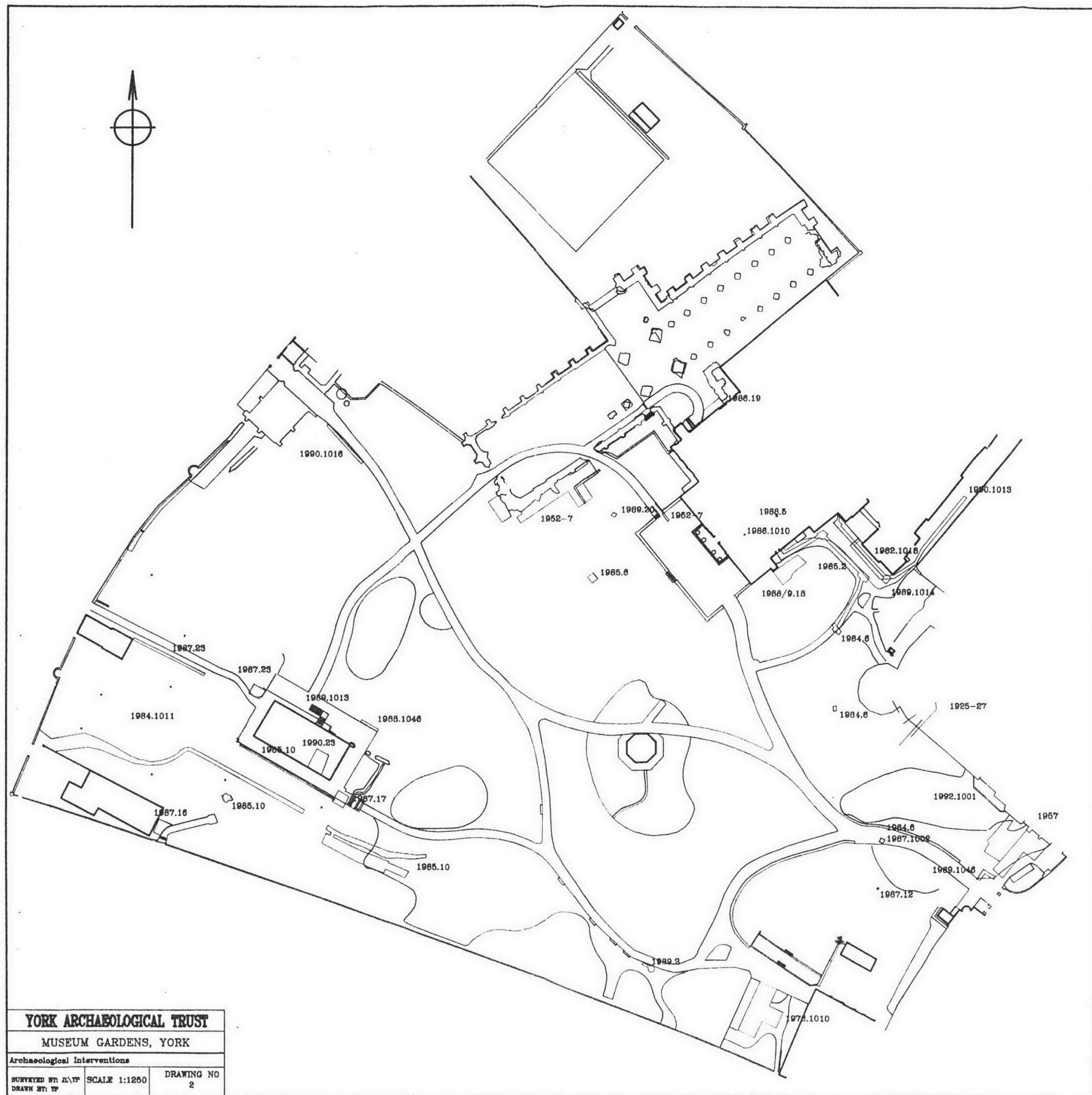


Figure 2

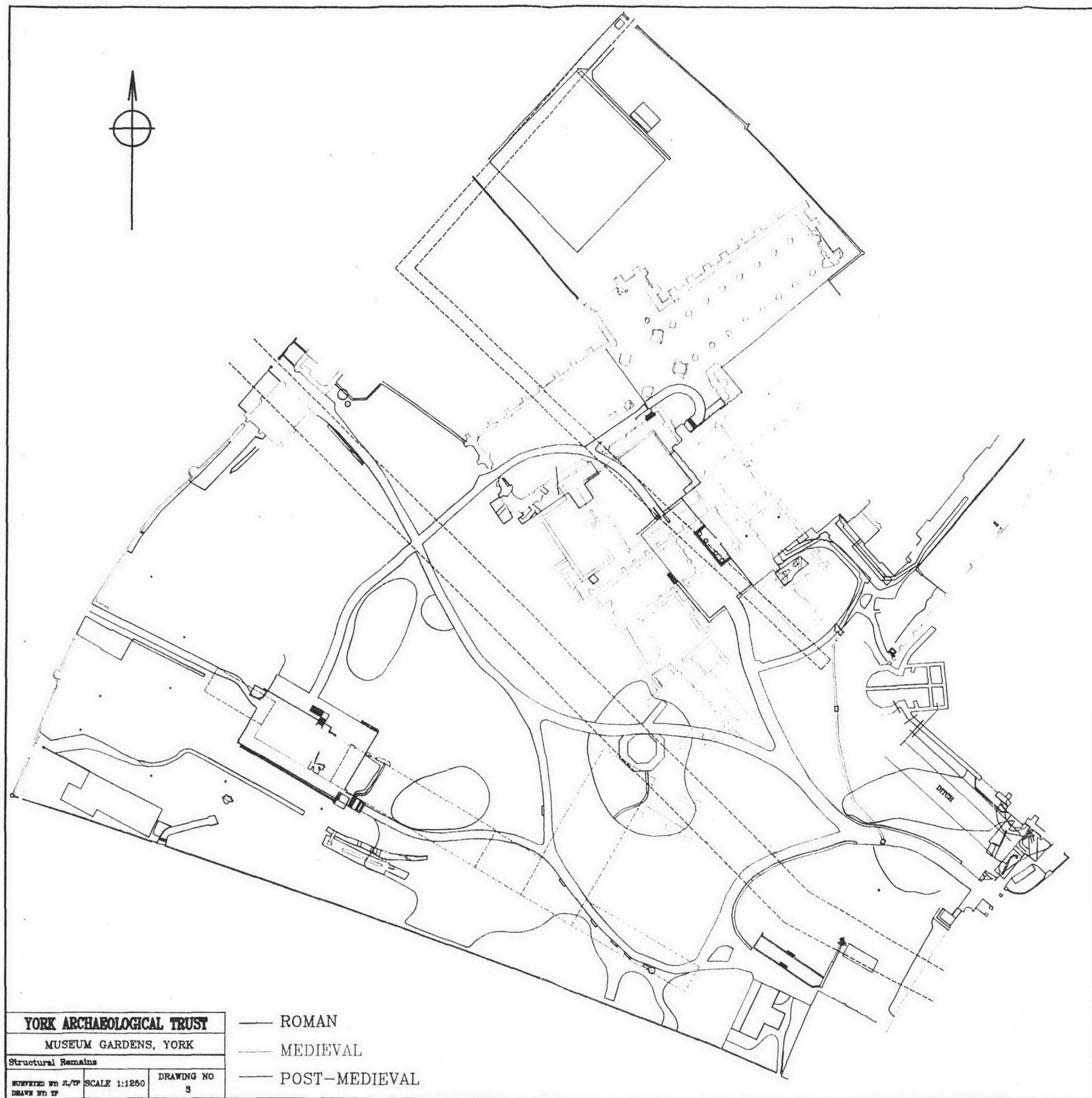


Figure 3



Figure 4