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MODERN 1901 -
VICTORIAN 1837 - 01
GEORGIAN 1714 - 1830
STUART 1603 - 1714
TUDOR 1485 - 1603
MEDIEVAL 1154 - 1485
NORMAN 1066 - 1154
SAXON & VIKING 410 - 1066
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interim

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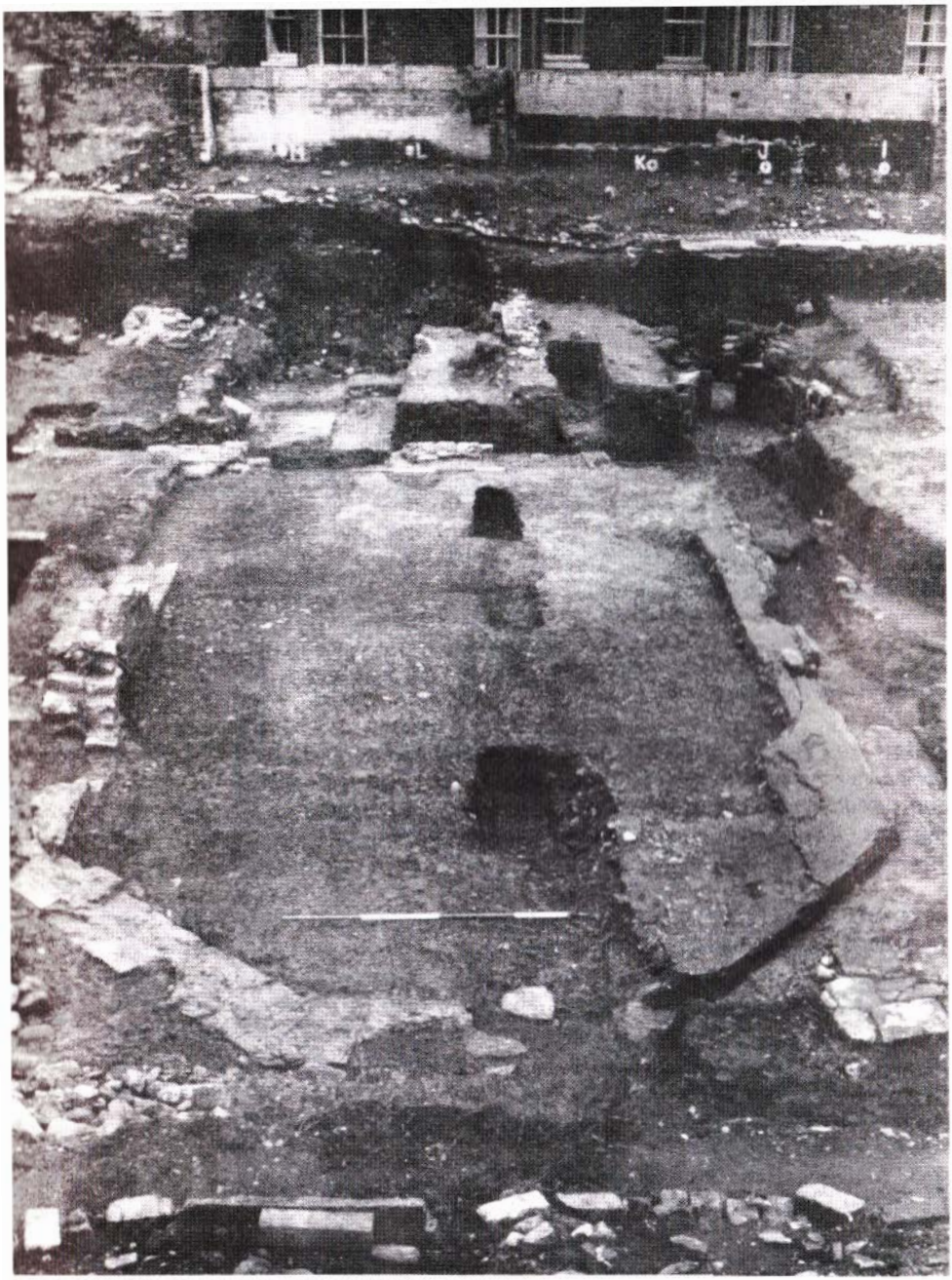


CLEMENTHORPE
The apsidally-ended *triclinium* showing robbed out walls, foundations and a fragment of a tessellated pavement, cut by medieval graves.

FAIR OR FOUL

Like all those with a professional interest in the soil, your archaeologist has always got half an eye on the weather. As with commercial food producers, to whom too little water (like last summer) means stunted and underdeveloped plants and too much (like last winter) leads to blight, the excavator in the field has very precise notions of what represents optimum soil conditions.

The kind of long hot summer which spawns the best crops of bikini tops around the sites is absolute death to stratigraphy: clay, mortar, sand and silt all bake to a greyish yellow; the spectrum of colours visible in the sections under early morning dew blurs into uniformity as the sun appears over the roof-tops and the features plotted on to the site plans when freshly exposed are rendered totally invisible.

A few weeks of weather like this and heavy rain becomes more of a hazard than a help: at the Cattlemarket excavations, for example (INTERIM vol 1 no 3) the clay soil covering most of the site became almost impervious after weeks of baking in the sun, so that when the rain did come it simply collected on the surface in great sheets and any attempt to meddle with it smeared away all trace of detail. To some extent, the problems of extreme drought can be treated locally by judicious spraying with water from a garden insecticide spray or, on a larger scale, with a garden hose. By this method, the individual excavator can maintain some control over his own patch and the site photographer can actually *see* what it is he is supposed to be shooting.

An embarrassment of rain can be equally disruptive, liquifying layers of soil in a way that makes it almost impossible to distinguish between them, or to decide to which of them the individual finds belongs. This can be a particular problem

in excavating the pits and trenches with which most urban sites are peppered for these tend to act as sumps into which the surface water drains; by the time one of these has filled with rain and been bailed out again two or three times, the finer details of the exposed stratigraphy would tax the most experienced of excavators. The problems posed by excess water are not, however, all created by adverse weather conditions. Many of our excavations in York are carried on below the 'water table', the level at which water stands naturally in the soil. Anyone wishing to dig a well has simply to sink a shaft below the water table for the water to flow in and collect in the bottom; carrying out an archaeological excavation at a similar depth produces the same hydrological response, with the result that highly efficient electric water pumps are now standard equipment, on digs of this sort.

To the hazards of wet and heat can be added that of cold. The excavators on Coppergate who spent last summer trying to stop their newly-exposed timber buildings from drying out in the sun spent the winter combatting another hazard – frost. The effects of ice forming in waterlogged wood can literally be shattering, so that a great deal of care is needed if these hard-won trophies are not to be reduced to matchwood within weeks of their being unearthed from nine centuries of undisturbed and well-insulated existence underground. Further excavation around already-exposed timbers during severe frost can result in fragments of timber adhering to and being dug out with the adjacent soil. At times during last winter the excavators on Aldwark found that freshly exposed soil was freezing solid faster than it could be trowelled away – ghastly conditions for archaeology and archaeologists alike!

Each of these hazards has in the past been held up as a good reason for suspending excavations until conditions improve, but with the erratic climatic cycle we enjoy in this country the over-cautious digger could construct a year-long closed season without too much trouble. An attempt to neutralise the effect of the weather has been made on Coppergate, where a large polythene cover has made every day a digging day since last November. With or without covers, the excavations simply *have* to go on: building programmes cannot be held up until better weather comes; sites abandoned in mid excavation quickly suffer from the effects of climate and vegetation; the excavators themselves, many of whom have to subsist on very little money indeed, could ill afford prolonged periods without work and would soon disperse to other jobs if they were laid off, so that each resumption of excavations would have to be preceeded by a recruiting drive for skilled diggers.

If the weather is the villain of the piece it is the excavators who are the heroes. Cold and wet all winter, plagued with dust in the summer, the price they pay in sheer physical discomfort is one which never appears on any balance sheet, but without it the Trust would be forced out of business overnight.

FRIENDS AND NEIGHBOURS

THE YORK EXCAVATION GROUP

The York Excavation Group has been invited by INTERIM to tell of its history as the local amateur archaeological body, but having counted up to about forty sites dug in the past eleven years, we decided a full story would take several INTERIMS, so the following are just some jottings to introduce us.

The Group was born on the 29th September 1965 when a number of us, who had been trained and inspired by Mr. L. P. Wenham at evening classes and summer digs, decided that a formal organisation was badly needed in York to be on call when opportunities for rescue archaeology arose.

To this end we adopted a Constitution stating our object as—

> 'To assist practically, as amateurs, in all aspects of archaeological excavation, exploration and research, those qualified and engaged in these fields in the City and environs of York'.

Eleven years later our objects are precisely the same.

Our offers of assistance soon led to our organizing weekly pot-washing and marking sessions on the Royal Commission on Historical Monuments' material from their digs at St Mary Bishophill Senior and the Roman fort at Newton Kyme.

In March 1966 our first major opportunity for digging arose with the demolition of a large area of property in Blossom Street in preparation for the new Prudential Assurance Company's building. Negotiations with the Company resulted in our being generously offered almost the freedom of the site for some months.

It was here that our declared 'Objects' had their first trial and failed because no qualified archaeologist was available to direct the dig. We, therefore, decided to take it on ourselves under our then Secretary, Don Stewart, who did in fact later become a professional.

Several years previously a dig by Mr. Wenham, who continued to act as our guide and mentor, had uncovered a Roman road junction in an adjacent garden, so one of our aims was to explore its continued line. In fact we uncovered a complete section of this much repaired road from ditch to ditch, one side even having its kerb stone. Traces of buildings were found alongside the road, varying from 1st-century Roman to one containing part of a large medieval kiln.

We were pleased to find on this dig, as we have ever since, that a serious attempt to do what we felt was worthwhile has been rewarded with nothing but help from the more knowledgeable to whom we turned for advice. To be strictly accurate, there was one exception to this, but he taught us, if nothing else, the importance of diplomacy in archaeology.

This Roman road started what has become a speciality of the Group, a continuing research project on Roman roads, in addition to our other work which has usually been in the nature of rescue digs. So far we have dug sections across actual or probable roads at nine different sites around York.

To return to Blossom Street, the dig here continued until July 1967 when by way of a thank-you to the Prudential we set up a display, still in their entrance hall, showing something of the history of, and finds from, the site.

During our first summer we also dug at Overton, where farm buildings were being built on the site of a moated manor, believed to have been owned in the 10th century by Earl Morcar, and at Stamford Bridge, as part of their celebration of the 900th anniversary of Hardrada's defeat by King Harold.

At Overton we found some post holes of a wooden building, but nothing by which they could be dated. At Stamford Bridge we dug in the suggestively-named Chapel Garth, looking for an explanation of the name, for which there is no historical evidence, and for the Roman road believed to cross the site. We found no recognisable remains of a building but did find a cobbled layer almost certainly indicating a road, before winter flooding put an end to the work.

1966 also saw us helping Mr. Wenham with a dig on the other side of Blossom Street, on land acquired by the Bar Convent for a garden. This proved to contain a Roman cemetery with several skeletons and a fine lead ossuary.

In 1966 the Group became affiliated to the Yorkshire Philosophical Society. We gained three main advantages from this: an invitation to attend their meetings, a

joint annual lecture on a subject of our choice and, as an essential basis of the work we were able to do that year and since, a grant of £75 to set us up with the basic tools.

This is probably the place to mention our close relationship with York's other Society with whom we have common interests, the Yorkshire Architectural and York Archaeological Society. They have also helped us financially, particularly with the insurance payments which form one of our major unavoidable burdens.

Because these two Societies are largely involved with lectures and summer visits, it has left a niche for us to fill by way of being an excavating branch of them both, and because of the feast of lectures they provide we have had no need to enter this field ourselves except for the occasional, usually specialist, one on our own interests. With a cheese and wine party for ourselves and friends, and an annual dinner, these form most of our non-working meetings. At the risk of laughter from those who think they know us better, I would say that we like to think of ourselves as an active working, rather than a passive, lectured-to group.

To return then to the practical work, the 1966/67 winter was spent working at Blossom Street, in evenings by Tilley lamplight and with pot-washing meetings, this time of our own material. In April 1967 we started work under Mr. Wenham's directions on another major dig, that in the vicarage garden beside St Mary's Bishophill Junior. This continued the uncovering of a large Roman apsidal building at least 24m (80 feet) wide, with walls of painted plaster, first discovered by him several years before. This building had later been used in Viking times as a fish processing factory and later still, in the 10th century, the area had been used for human burials. In 1967 we also extended our interest to Industrial Archaeology by surveying and photographing a chicory works and the so-called Dutch Warehouse in Skeldergate before their demolotion.

Having written so much on the first two years, I will pick out a few highlights of our work to date, during which the pattern of large and small digs with some Industrial Archaeology (largely a water-mill survey) has continued. In the autumn of 1967 we started six months excavation in relative comfort inside the 1286 chapel of Hazelwood Castle, west of Tadcaster, which was known to have earlier material under it. The Castle had been taken over by the Carmelite Fathers who were restoring the chapel, including a renewal of the floor.

In 1968 we first met resistivity surveying, with two areas we later dug being surveyed first my Mr. Aspinall of Bradford University. These were a Roman road at Appletree Farm, York and a Roman period occupation site at Crambe. We also carried out trial excavations in a possible Roman cemetery on the site of the new District Hospital in York. 1968 also saw our first meeting with Mr. Addyman when we lent a hand with a survey of Baile Hill, which he was later to dig.

December 1968 saw the start of a Ministry of Works sponsored dig of a large area of the Roman *vicus* at Malton where factories were to be built. This was directed jointly by Messrs. T. Manby and L.P. Wenham and kept us very busy uncovering impressive remains of buildings and roads for about eighteen months.

1970 saw the start of several years' work in the garden of the Borthwick Institute where we had the opportunity to sample an area of York little known archaeologically and adjacent to which "strong walls," presumably Roman, had been reported from the 18th century. We will return to this later after picking up another thread in the story of the Group.

For some years prior to 1969 the late Mr. Jeffrey Radley of the Royal Commission on Historical Monuments had been giving lecture courses around the theme of man and the landscape. In that year he had the opportunity to dig in York, so under his supervision some seventeen of his class members, very few of whom were at that time York Excavation Group members, helped to excavate the mysterious stone chamber, first discovered by accident in 1839, that was known to be buried in the city defences behind the library in Museum Street. The excavation revealed a square stone building set in a breach in the Roman wall. The building was provisionally dated to the 7th century and became known as the 'Anglian Tower', a name to take on greater significance later. Having completed the dig, the group stayed together and helped Radley cut a section completely through the defences at that point, a task which involved tunnelling beneath the medieval walls. It was when nearing the completion of this dig that Jeff was tragically killed when part of the trench caved in.

This tragedy welded the class members into a very tightly-knit independent band of friends. After the accident, this group was asked, by the R.C.H.M., to help in a scheme proposed by the City Council to make the Anglian Tower accessible to the public. For this purpose and mainly for insurance reasons the group called themselves the 'Anglian Tower Excavation Committee' and received a grant for £200 from the D.o.E. to help towards expenses.

Shortly after the work started the whole scheme was reviewed and it was decided to expose the Roman wall from the Multangular Tower to the Anglian Tower, and to landscape the defences to illustrate their build-up since Roman times. The scale of the work was such that the D.o.E. took over the excavation and the A.T.E.C. worked alongside the 'men from the Ministry.' From this episode grew our friendship with members of the D.o.E. which we have tried to maintain.

At this time the 'Radleyites' as the group had become known joined Y.E.G. but continued to operate as a somewhat independent body for a short time. In 1970/71 they were asked to watch the reconstruction of the Midland Bank in

Parliament Street, where in common with work done at other Banks in the vicinity, tantalising glimpses of Anglo-Scandinavian remains were seen and recorded.
Since that time the 'Radleyites' have slowly integrated with the original Y.E.G. members, but for better or for worse the independence and comradeship born out of Jeff Radley's death remains. The members of the two groups still tend to work within their own circle of friends but all are united to further the expertise and recognition of Y.E.G.

Membership of the Group has remained surprisingly steady at fifty to sixty for most of its life with a wide variety of occupations represented – engineers, housewives, teachers, students, etc. It has always been one of our strengths that we have built-in expertise for many tasks, from electrician to sexton and historian to builder, so that we have been able to spin out the work achieved on a total income of around £100 a year. It helped a great deal, though, that we have been lucky with accommodation, first Mr. Wenham and now Mr. J.P. Birch providing us with a meeting room/drawing office/store in the city without charge. Whilst mentioning members I would add that as there is a tendency, with time, for members to graduate from the active archaeology to the research side of our work, new members liking fresh air and exercise are always welcome.

To return to digs, 1971 saw us helping Mr. Wenham once more on York's 1900th anniversary research dig on the Roman defences. This added considerably to knowledge of the progression from the original turf ramparts to the walls and an interval tower whose remains are still visible.

Mention was made earlier of the start of a dig in the garden of the Borthwick Institute. This proved to be near the site of early Roman kilns and produced sherds of pottery which were of particular interest because they included types not normally considered Roman. Having obtained all the information we could from this restricted site against the city walls, we tried to find the kilns themselves with a magnetometer survey on the outside of the walls, and a resistivity survey, with an instrument which we built ourselves, inside them, but without obtaining any indications of remaining large structures. We could not at that time (one day – perhaps) dig immediately to the east where the Corporation stone yard was full. However, to the west the brewery on Aldwark was being demolished so we concentrated on getting permission to dig on this site.

Negotiations took about a year because of the site changing hands but eventually we obtained permission form the new owners, Messrs. Shepherd Homes Ltd., to dig some trial trenches. This permission carried a proviso which rather shook us, that our insurance cover be raised from its previous £10,000 to £250,000; they then gave us the delightful surprise of telling us that as they realised we worked on a shoestring they would pay the premium for us.

It was on this site that a new chapter in our history began as here we first met – indeed collided with – the Trust. I will expand a little on this encounter from the point of view of a Y.E.G. member, as the relationship between amateur and professional archaeologists is of national interest at present when public funds are being cut and when so much needs to be done. Our formal involvement with the Trust had been close right from its inception, with Y.E.G. being represented on the Trust's Executive Committee from its formation about a year before we started on this brewery site in February 1973.

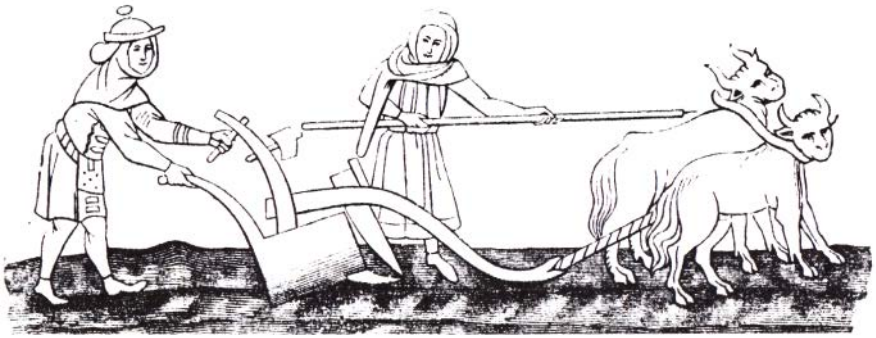
The project was discussed with Mr. Addyman, who agreed that as Trust staff were busy elsewhere and there was no knowledge of anything especially interesting on the site, we should go ahead in our search for the kilns. We accordingly opened out trial trenches at each end of the site, one of which at the north end soon uncovered traces of stone walls and skeletons, all the signs of an early unrecorded church. This immediately changed the character of the site and theTrust's diggers were diverted to it in force over a large area adjacent to our trench.

It was then that our problems and frustrations began: areas we had cleaned up for photography one evening were disturbed again by next evening, planning the site was difficult when levels were different in adjacent areas, skeletons were 'ours' at one end and 'theirs' at the other. Communications were difficult because of the Trust worked 'office' hours whereas we worked in the evenings and at weekends. It was clear that a site could not be worked properly under these conditions so we left the church end of it to the Trust and concentrated on the eastern part of the site where finds were less spectacular and the kilns were more likely to be. We both then spent about eighteen months here.

The story of how we progressed from this situation to the present one in which one of our digs is in a section of the Trust's showpiece Viking-age site at Copperagte needs another article to tell how after a rather unpromising start, professional and amateur archaeologists have been able to work out how to work closely together to their mutual advantage.

Derek King

The Answer Lies in the Soil



Despite, or perhaps because of, the fact that archaeologists have to remove large quantities of soils and sediments to obtain the information they want, their knowledge of pedology is usually very limited. Excavators' descriptions of soils, such as 'soft, black, smelly stuff,' and 'yellow gritty material,' while being very evocative to those concerned, have no real meaning and are useless to other archaeologists. If other artifacts were published with descriptions of similar precision, 'squiggly metal brooch' or 'porridge coloured pot sherd,' what would the reaction be?! Soil scientists do have internationally-recognised colour and soil type descriptions, and it seems a pity that some archaeologists so rarely use them when they are applicable.

John Evelyn, writing in 1675, said that there were 'no fewer than one hundred seventy nine millions one thousand and sixty different sorts of Earths,' a statement few archaeologists would dispute. The term 'soil' means different things to different people. To the gardener it is the top 25 cms which breaks his back in the spring, to the soil scientist (a pedologist) it is the layers in which physical and chemical change take place, while for an archaeologist all the matrix containing evidence of man's activity is 'soil.'

What is soil? A natural soil is a mixture of two main components: a mineral part, composed of rock particles of different sizes, and an organic fraction formed from the decomposed remains of plants and animals. The proportion of one part to the other may vary considerably, from 0 to 100%. A sand dune may have very little organic matter in it, whereas a peat bog may consist almost entirely of partially-decomposed plant matter. The mineral component of the soil comes from the rocks of the earth's crust. The action of wind and water, alternating heat and cold, the expansion and contraction of ice and water, all help to break up the solid rock. The more rock is weathered, the finer the mineral particles become. Chemical weathering can take place; minerals react with water in a

variety of ways, they may be dissolved, oxidised or hydrolysed. Together with physical weathering, this action will produce the variety of mineral particles which go to form soil. Different rocks have differing chemical compositions and it is the breakdown and solution of the different rock types which provides the nutrients needed for plant growth. It is immediately obvious that the softer or more soluble the parent rock is, the easier it is for it to be broken down and to form soil. The most resistant of all minerals is quartz or silica, so that although it composes only about 12% of the parent rocks, most European soils contain a mineral fraction which is 90-95% quartz, all the other material having been composed.

Soil particles are usually put into groups depending on their size. The sands range from 2.0 mm to 0.2 mm, silts from 0.2 mm to 0.002 mm, and clay is smaller than 0.003 mm in size. Anything larger than 2.00 mm, gravel or boulders, is not considered to be soil. Particles may vary in shape from flat plates to spheres. This means that there is always considerable space between them, which enables air and water to permeate through the soil, a necessity for plant growth. It was once calculated that an ounce of a silty clay loam had a specific area of nearly 400 square feet and that an ounce of clay will have a value of over six acres. It is the small size and large surface area of clay particles which gives clay its unusual properties. Clay particles are very complex in compostion and have the ability to 'bind' with water and can exchange bases with simple salts, which cannot be easily washed out. The lighter soils, such as sands, are not able to do this, and the nutrients in them may be easily leached, or washed out. The characteristic properties of clay are greatly modified by soil organic matter or humans, and by calcium carbonate or lime, which is why humus and lime are important for agricultural soils. Humus will help in the formation of soil crumbs or peds, and lime will be exchanged for some of the bases held in the clay. Calcium carbonate in this country comes mainly from limestone and chalk, rocks which vary considerably in hardness, and which are the remains of marine organisms, mainly shells and forminifera, laid down when the sea covered the present land surfaces.

Although soil particles are derived from the parent rocks, the soil on the surface may have little in common with the rocks beneath it. The glaciers which have covered parts of this island more than four times have played their part. As well as grinding the rocks to produce soil particles the ice flows have transported and dumped material far from its source of origin. A look at the solid geology and drift maps for an area will show this. The retreating glaciers left behind them mineral particles which were very rich in plant nutrients. The colonisation of the soil by plants, their death, and the death of the fauna associated with the flora, released organic material into the soil; water draining through the soil often leached the minerals out, so that soil nowadays is probably poorer than when it was first formed.

The organic fraction of a soil starts off as the litter of dead plant material on the surface. The action of soil micro-organisms, fungi and bacteria break this down into a dark grey or black amorphous, structureless, set of substances, the majority of which are humic acids. Humus has some similar properties to clay, and may be leached through a soil like clay and nutrients. Peat is usually formed from partially decomposed or structureless plant remains, the process of humification being incomplete because of the anaerobic (oxygenless) conditions, usually brought about by water-logging. Organic deposits are especially important in environmental archaeology as pollen and insect remains are also preserved if the plants do not fully decay. Peat formation usually takes place in streams and lakes and on the ground in areas where the rainfall is high and evaporation is low. Thick deposits of peat have formed over neolithic fields in parts of Ireland, indicating not only the potential rate of peat formation, but also a change in the climate.

Soil processes are extremely complex and variable, and there are a number of ways in which the physical nature of a soil may be described. The methods used in Britain are described in the Soil Survey's *Soil Survey Field Handbook.* Soil colour is always described using the colour charts, codes and standard names of the Munsell Soil Colour Chart. The main soil colour is given a code which refers to its colour, chroma and hue, and a name. This is usually done for a damp soil, but the information from air dry and rubbed soils may also be useful. As soils are rarely only one colour the main mottling colour is also given, with an indication of the abundance, size, contrast and sharpness. The proportion and size of the particles is used to describe the soil, as sand, silt, clay, loam etc.; there are some twenty-three classes which depend on the percentages of the three particle-size classes. Particle analysis is extremely useful in helping determine the origin of the soil, whether it was formed by wind or water action, by glaciation, or as a result of man's activities.

Under natural conditions, soils form distinct profiles which can be seen as a number of definite horizons. The description of the horizons is fairly complex as soils are so variable, but they may be simplified into four or five main zones. Beneath the litter and organic layers are the mineral horizons. The first is the A horizon, which is near the surface and is characterised by the incorporation of humus from the organic layers above it. The A horizon will often have been disturbed by cultivation, in which case it may have some of the underlying layers mixed in with it. The E horizon, just under the A horizon, will be lighter in colour than those above or below when the humus and minerals are being leached out. The B horizon is an illuvial layer, receiving the clay, humus and minerals from the E horizon. The soil crumb or ped structure is often well developed and there may be less earth worm activity. A C horizon will contain some of the parent rock structure with the mineral particles and the R horizon is almost continuous bedrock.

Not all soil profiles have all the horizons: chalk rendzinas go straight from the A horizon to the C. Cultivation and erosion and deposition will alter the depth of the A horizon, and earth worm activity may produce a stone-free layer just underneath the organic horizon. Earth worms are not the only cause of soil movement; wind, water and solifluction will all cause soil to move down a gradient. Over long periods of time this may represent a considerable amount of material, resulting in the denudation of hilltops and the filling up of valleys. Archaeological sites, situated on or below slopes, may have several metres of sediments over them in only one or two thousand years. The action of wind and water can cause a sorting out of the particle size, and bury old ground surfaces. The load-bearing capacity of water and wind depends on their speed. A fast-flowing river can transport large sand particles, slower water smaller particles. The size and proportion of particles is often an extremely good indication of how the material arrived there. Solifluction, freezing and thawing, is a much more powerful process than wind or water sorting. Large stones may be moved, sometimes forming regular patterns of stripes or polygons. In this country solifluction phenomenon is fairly rare.

Man-made ditches, pits and post holes, when not deliberately filled, are soon filled from the material around them. Soil analysis may show which pits are contemporary and which are not if the fills are similar. Work has been done to show where the clay walls of houses on tell sites came from and work in York hopes to show how some of the very thick layers of sediments, sometimes over 8 m deep, accumulated or urban sites.

John Hood

Further Reading

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SITES REVIEW

On the Bedern/Aldwark sites which are under the eagle eyes of Mike Daniells, the loss of the summer digging team, plus the onset of shorter days and the 'rainy season', has inevitably meant a slowing up of progress. Nevertheless, it is most heartening to be able to report at last that the excavation of the foundry site under Ryszard Bartkowiak's supervision is really in its final stages. Work on the greater part of the area was stopped at the 13th-century levels described in the last issue.

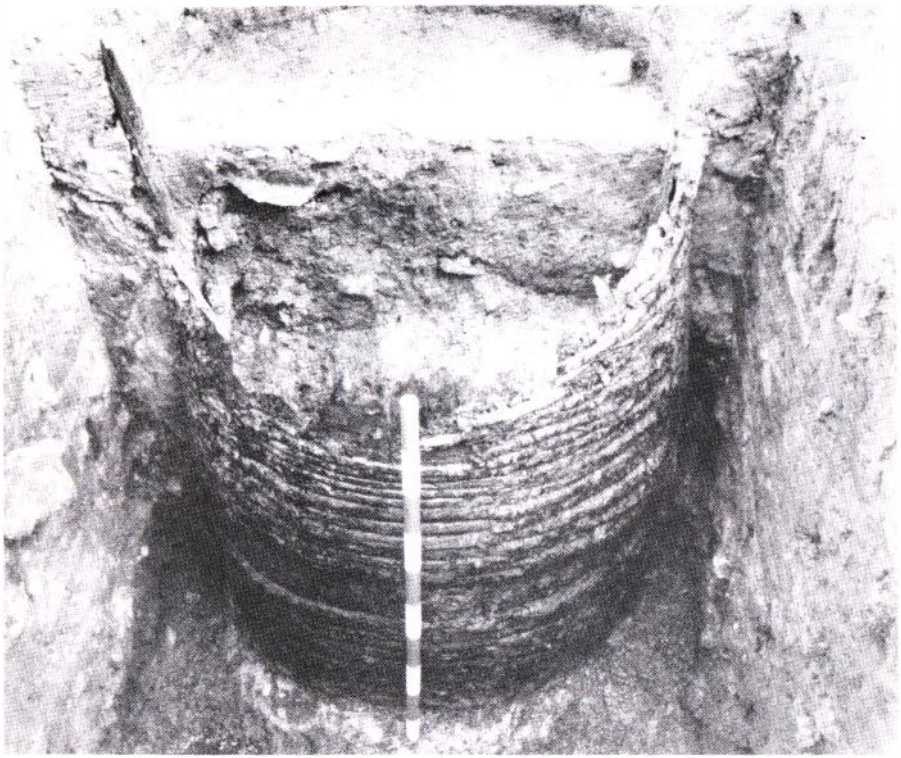
The only further task involved the removal of the bowl furnace and its asssociated structures also described in the last issue, and the lifting of apparently the earliest, and one of the most extensive, of the casting-mould 'floors', located against the south-western edge of the excavation. Under this, an area of cobbling was revealed, conceivably the remains of a passageway. We are fairly confident that the bulk of the evidence relating to thc foundry has now been excavated and, tempting as it was to carry on into the underlying deposits, it was decided that the time had come to call a halt, now that excavation had more than reached our 1 m depth limit for this area, the limit beyond which the redevelopment will not cause much disturbance.

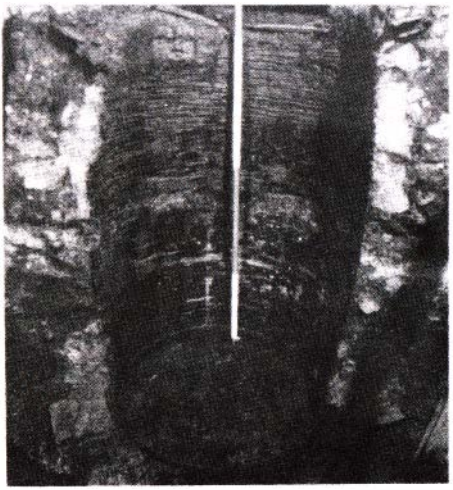
Only one task remains outstanding on this site: the full excavation of the 13th-century barrel-lined well which, it is hoped, will provide extremely valuable material associated with the foundry's activities. This work has already revealed much of the well's constructional techniques. The shaft consists of at least two barrels, each about 1.5 m high and some 90 cms in diameter, one set into the top of the other, built within a wide construction pit. The construction pit was back-filled with a mixture of clay and soil, with clean yellow clay packed around the actual barrels, presumably to form a water-resistant sheath. The barrels themselves are formed of oak staves some 1.5 m long x 15 cms wide, curved to shape.

The staves are held in place, not with metal hoops as are modern barrels, but with withy hooping, covering the greater external surface of the barrel. This hooping is itself overbound with smaller withies at the point where the two ends return around the barrel and meet. A bung-hole about halfway up the barrel and a cooper's mark complete the details of this fine example of medieval barrel-making.

The excavation of the well itself presented particular problems. It necessitated the excavation of a large square pit to contain both the shaft and the construction trench for the well. This excavation pit is now already over 2 m deep and has still reached only the top of the lower barrel, so shoring is essential – just to add to our problems. To start with, as much of the internal fill of the shaft as could be excavated was cleared to a half section, and the backfill of the construction pit and some of the surrounding deposits dug out to expose the exterior of the barrel itself. A careful photographic and drawn record of this was made – a very demanding and time consuming task – and the hoops, staves and backfill were also removed to the half-section. Further drawings and photos of this section followed, and the backfill was then selectively sampled and removed. The interior of the barrel was now exposed, again drawn and photographed, then theses staves removed, and the newly-exposed hoops similarly recorded. These were then taken out and the surrounding deposits dug out to the limit of our excavation pit. After further attention to our shoring, the whole process will be repeated with the lower barrel, with the added difficulty that we hope to be able to lift the lower barrel with a view to conserving it! Small wonder that archaeology sometimes takes what might at first sight seem an inordinately long time.

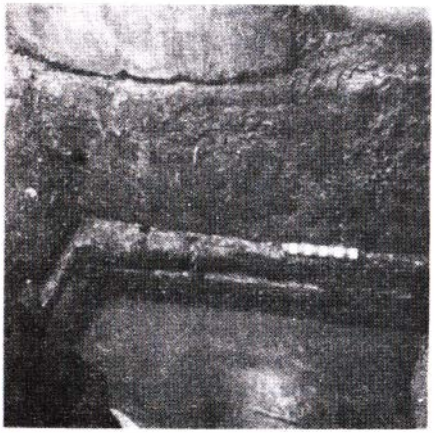
To the north-east of the foundry in an area now being supervised by Martin Stockwell and Colin Briden, work has recently revealed the later levels of what we hope will prove to be part of the College of the Vicars Choral, set around the remains of their great hall (cf. INTERIM vol 3 no 4 pp 5-8: vol 4 no 2 pp 27-32). A strip along the south-west of the hall, some 32 m long x 10 m wide has now been excavated to late 17th/early 18th-century levels. The foundations in brick and stone of a large house, about 8m square, form the largest structure exposed to date. It has a brick-built cellar in one corner, showing at least two structural phases. The stonework in the foundations contains re-used moulded stones, almost certainly of medieval date and this, coupled with some evidence of earlier wall lines immediately below the foundations of (and perhaps actually incorporated into one corner of) the building, suggests that it had a predecessor on the same alignment. Open areas appear to have lain to both the south-west and north-west, the former area apparently gardens from at least the 17th century, the latter identifiable as Back Bedern Court, shown on the 1852 Ordnance Survey map of the area. Fronting onto Back Bedern, and just to the south-west of it, a series of stone-built walls suggests the remains of at least two perhaps substantially earlier buildings on this part of the site.





▲ BEDERN
The upper barrel of well showing external withy binding (Scale 1 metre)

◀ The barrel excavated and half-sectioned (Scale 2 metres)



▲ COPPERGATE
View down the ashlar-lined sixteenth century well shaft

◀ Base of well showing ashlars resting upon re-used grooved timbers

Apart from the deep trench still under excavation on the Aldwark site, investigation of the Roman levels in the area has now finished with the successful conclusion of excavation in three cellars. (INTERIM vol 4 no 2 p 10). On Aldwark, however, the main bulk of the Roman deposits are still to be excavated. Recent work, under the supervision of Heather Gibson, has concentrated on those levels which immediately underlay the building with the burnt floors and robbed-out walls described in the last INTERIM. It is now clear that this building, dating to the 11th century, was of considerable size, at least 10 m long, with a particularly well-built rear wall of mortared construction set into an elaborately piled foundation trench, 70 cms deep x 1.50 m wide. Underlying this building was a substantial soil build-up, possibly relating to a period of abandonment. This in turn overlay the remains of a series of intercutting rubbish pits apparently of Anglo-Scandinavian date, which cut into what appear to be the uppermost Roman deposits, including at least one well-built mortared stone wall, presumably part of a barrack block within the fortress. Nearby, the plank lining of the central well has now been removed and the top of a lower barrel-lined shaft exposed; this still awaits excavation.

At the rear of the site, always a difficult area which has presented particular problems of interpretation, extensive deposits of mixed sticky clay and silt have recently been excavated. These formed clear, almost classic, tip-lines, ostensibly the backfill of a large, possibly linear feature. There are as yet no clear limits to this feature, and it may well prove to be the reason for the massive dumping in this area in the middle ages. If a large feature of some sort lay open here up to the 13th century (the date of the material now being excavated from this backfill) and it was slowly filled in over some time, it could well be expected to produce archaeological deposits very similar to the dumps and spreads excavated in this part of the site. One possible though still very speculative interpretation of this area is that it may be part of the *Werkdyke,* a defensive ditch perhaps dating originally to the Anglo-Scandinavian period. Excavation on the Ebor Brewery site (INTERIM vol 2 no 2 p 8) revealed a similar feature which was interpreted at the time as possibly part of this ditch, and it is conceivable that it ran parallel to the city walls and Aldwark at least as far as our present excavations.

At Coppergate, where Richard Hall is in charge of operations, and the area supervisors are David Evans, Shahed Power and Mick Humphrys, the site now bears little resemblance to that described in our last issue. Considerable progress has been made with both the Anglo-Scandinavian timber structures visible near to the street frontage, and the medieval stone buildings which survive further back down the slope towards the River Foss. In addition, another area has been stripped of its modern disturbance levels.

Two of the three medieval stone buildings have now been recorded and removed, and both seem to have had timber predecessors on virtually the same alignment.

Indeed the timber predecessors themselves seem to have gone through several phases of rebuilding, and the whole picture is one of the utmost complexity. One wall of one of the stone buildings was built on a raft of cobbles, which in turn had been set over massive tree trunks lying in a trench. This represents a 13th-century foundation, designed to take and spread the weight of the wall above, and indicates the care with which the medieval builders had to counteract the treacherous soil conditions. The tree-trunks measure up to 80 cms in diameter and (although this is only a guess) may well have been several hundred years old when cut down. Thus they have considerable potential as a source of extending our sequence of tree-ring observations, which provide the basis for dendrochronological dating. Such a method of dating could be of supreme importance, since there is a lot of timber at Coppergate to provide samples for the work, and it could give precise dates for some of our structures, although the usual *caveats* about the reuse of timbers at a date perhaps long removed from their felling will make us wary.

The only medieval stone building still *in situ* is the best preserved of the three and is being investigated by York Excavation Group. It was probably erected in the 13th century, as were its counterparts, and the slightly diverging alignments of some of its walls again testify to several periods of rebuilding. It was still in use in the 16th century, when a cobbled floor was laid over part of its floor area. There is as yet no indication of what function this building served, but the central stone structure incorporated brick and stone built hearths and ovens in its later, 15th-century, phases.

The other major late medieval or post-medieval feature which has been explored recently is an ashlar-lined well shaft, 80 cms square, which descends to a depth of 8 m below the adjacent ground level. The dressed stones, many of which are plastered and some of which still bear traces of paint, rest upon reused timbers some 10 cms above the bottom of the shaft. Each of these timbers has grooves with two pairs of opposed peg holes cut into their exposed face, and were probably originally parts of a timber roof. The timbers in turn rest upon cobbles packed around with silt, which themselves sit on the brick floor of the shaft. The space between the timbers and the floor was the business part of the structure, where the water welled up.

The date of the feature is problematic at present – certainly the shaft was open into the late 19th or early 20th century, as modern bricks and tiles were in the fill down to within a metre or so of the bottom. From this depth there is quite a good group of 17th-century pottery and a range of wooden artifacts stamped SR. Discounting 'Southern Region' and 'Stephanus Rex' as anachronistic, the initials are most probably those of a carpenter or joiner working on the site at the date. Right at the base of the shaft was a small group of medieval material, including a prick spur, the rowel (revolving goad) from a rowel spur, and

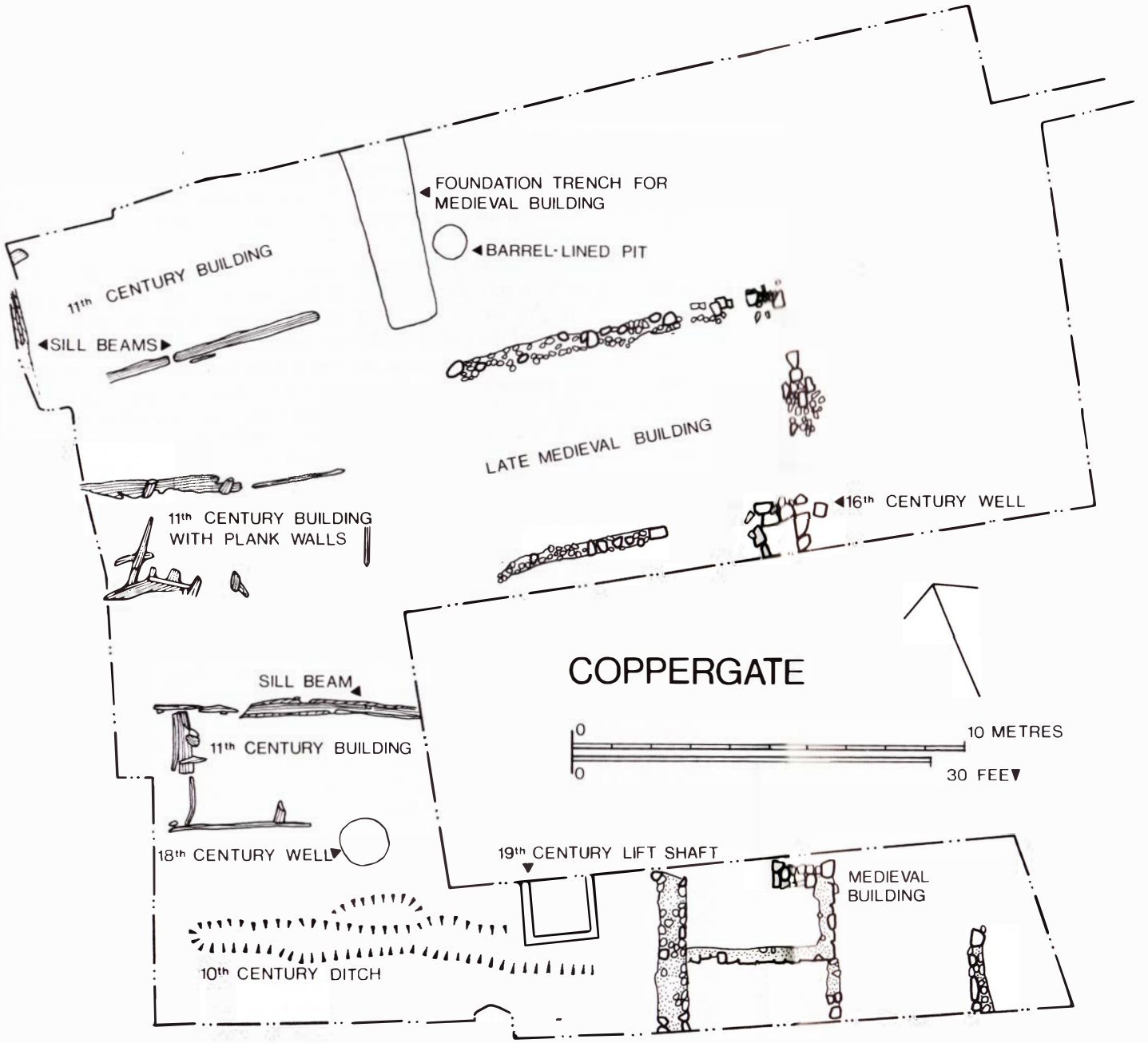
13th/14th-century pottery. All these could of course be intrusions, and the answer will be won when we face up to the task of digging out the clay construction pit in which the well was set.

Nearer the street frontage, the very vestigial remains of a burnt timber building, mentioned in the last issue, can now be assigned to the 13th century. What is missing at present from the entire site is any trace of a building which belongs to the 12th century. However we have now uncovered the remains of three excellently preserved wooden structures which can be dated to the 11th century.

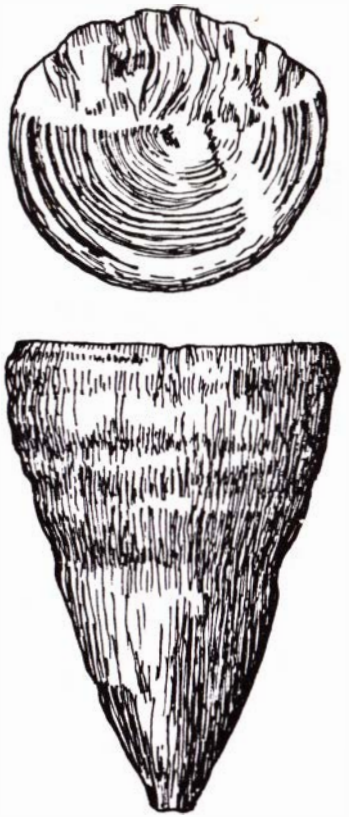
So far as we can tell at this stage, all conform to a single basic pattern. Two, apparently cut into surrounding banks of clay, have timberwork surviving up to a metre in height, whilst the third had everything above foundation level destroyed by one of the modern cellars on the site. Here, however, we have seen a large portion of a fairly massive squared timber sill beam of U- or L-shaped section, which supported one side wall of the building. At right angles to this, and at the very front of the present excavation area, is a beam of similar dimensions but with a narrower groove in it, which at present we are interpreting as the foundation for a partition wall, with the building stretching on towards and below the present street frontage. Whilst floor and foundation levels have not yet been reached in the other two buildings, glimpses of the substructures of one, gained in the bottom of later medieval rubbish pits which cut its lines, show that it is of identical form. The upper details of this latter structure, with horizontal planks supported internally by upright posts, are in turn similar to those of the third wooden building, the one in the middle, and so probably they all follow the same pattern throughout. The west wall of this central structure collapsed under pressure from the surrounding soil, an event which caused the horizontal timbers to bow markedly, but not to break. This accident also tilted over the internal uprights at this point, and lying at an angle they survive to a greater height than anywhere else. This fortunate chance has revealed that they have peg holes above some sort of half-lap or scarf joint. The timbers have rotted above this point, and it remains to be worked out whether the joint is a scarf, to join two parts of a vertical, or whether a major horizontal member could have been affixed here.

After both side walls had collapsed and some of the timbers had been deliberately removed, layers rich in organic material and wood shavings accumulated. Amongst these was a number of objects which look like wooden bungs, but which are in fact the debris from turning wooden bowls on a rotary lathe. Here then we have evidence for the proximity of a workshop of woodworkers, perhaps those who gave the street its name.

Immediately north of the finest of the medieval stone buildings there is no timber structure, but instead a series of rubbish pits. From these has come a

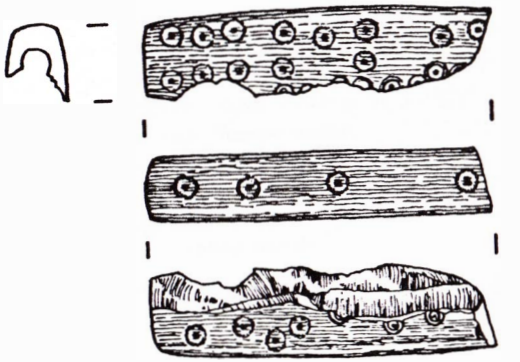


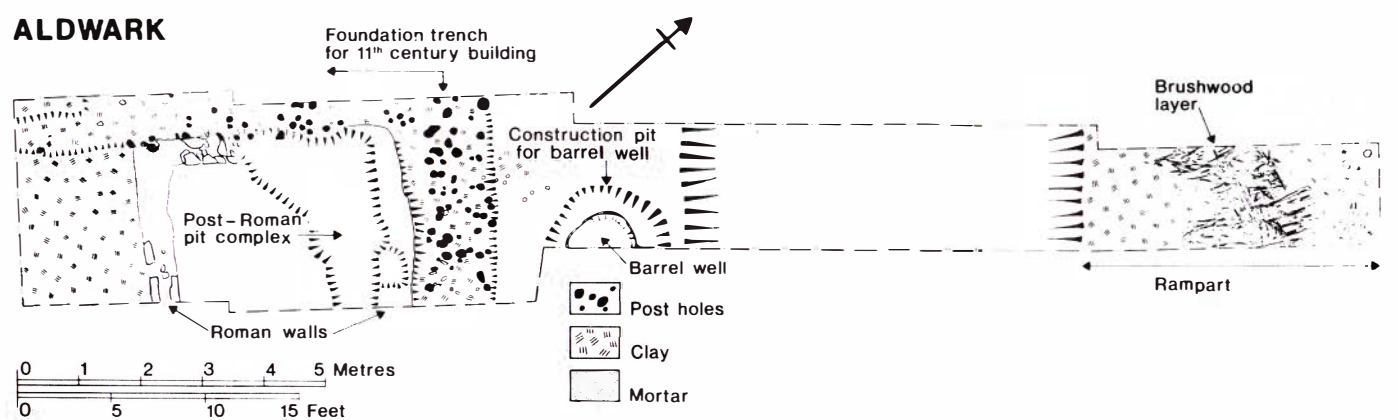
Pru Stott



Core from a wooden bowl turned on a rotary lathe.

Anglo-Scandinavian jet bead with tin-inlaid ring and dot decoration.





BEDERN AREA X

A Late 17th – early 18th – century ground plan.
B 20th century drains and intrusions.
C 19th – 20th century brick walls.
D Post-medieval brick-lined well.
E Post-medieval range of buildings.
F Brick buildings on stone footings of c. 1690 with sunken brick-floored cellar.
G Fire-place.
H Gardens.
I Yard, possibly Back Bedern.

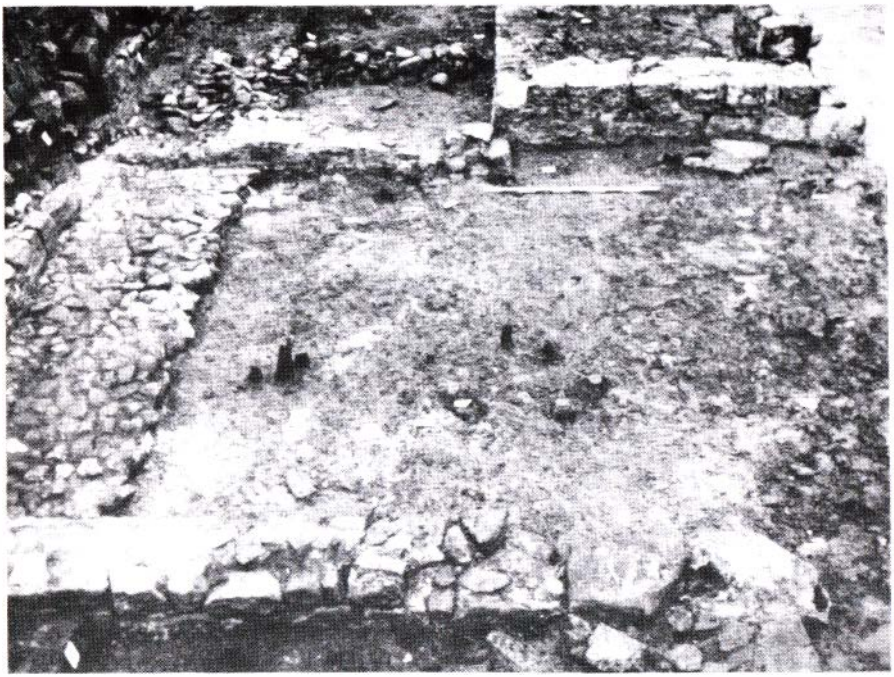
good collection of Anglo-Scandinavian artefacts – combs, beads, whetstones, etc. The more unusual finds include two jet objects inlaid with tin – one a small cross, and the other a broken rectangular object, bored through like a large bead. Several of the glass beads are polychrome, and there are two which have gold-foil shells.

At Clementhorpe, following the uncovering of post-medieval limekilns and the vestigial remains of St. Clement's Priory, a small Benedictine nunnery, attention has been focussed almost exclusively on the Roman remains, to which the geometric mosaic, illustrated in the last number of INTERIM, was the initial clue. Evidence for pre-conquest occupation of the site, hoped for in view of the place-name suffix – *thorpe*, proved elusive, the most tangible indications being two late Saxon silver pennies, one of King Aethelwulf of Wessex's Monogram type, minted at Canterbury between 838 and 858, moneyer Wealheard, and the other of Edward the Confessor's Short Cross Facing Portrait type, minted at York between 1062 and 1065, moneyer Outholf. They certainly suggest activity in the vicinity over the last two hundred years of the Saxon period, although the form of this activity remains unknown.

To return to the Roman building – the mosaic is now seen to occupy a small subsidiary room, to the north of a main room, which had been terraced out over the slope down to the River Ouse. Part of another subsidiary room was located to the south of this main area, making a symmetrical layout, but since there are unexcavated areas to both north and south, the total plan is unknown.

Most of the walls and parts of the foundation had been robbed out, but it was possible to see that the walls at the terraced east end had been built substantially larger than the others in a bid to counteract any possible instability in the dumped deposits below. The main room had a semi-apsidal west end, and there were also some indications that the apse area had been vaulted. Small areas of the edging *tesserae* of a tesselated pavement survived in the apse, resting on a base of *opus signinum.*

The whole picture is one of a fourth-century town house of some opulence, a testimony to the prosperity of York in the decades immediately preceding the official Roman withdrawal. There was no earlier occupation of the site, and no indication of the building's eventual fate, although there was a marked absence of demolition or destruction debris. The principal room would have been the *triclinium* or dining room, the other flanking rooms being perhaps reception rooms. All traces of the domestic quarters remain undiscovered, and despite generous help from a number of local individuals and business concerns, it is unlikely that further work will be possible before redevelopment starts. However, at least the nature and date of the Roman occupation, hitherto only known in the vaguest sense, have been elucidated.

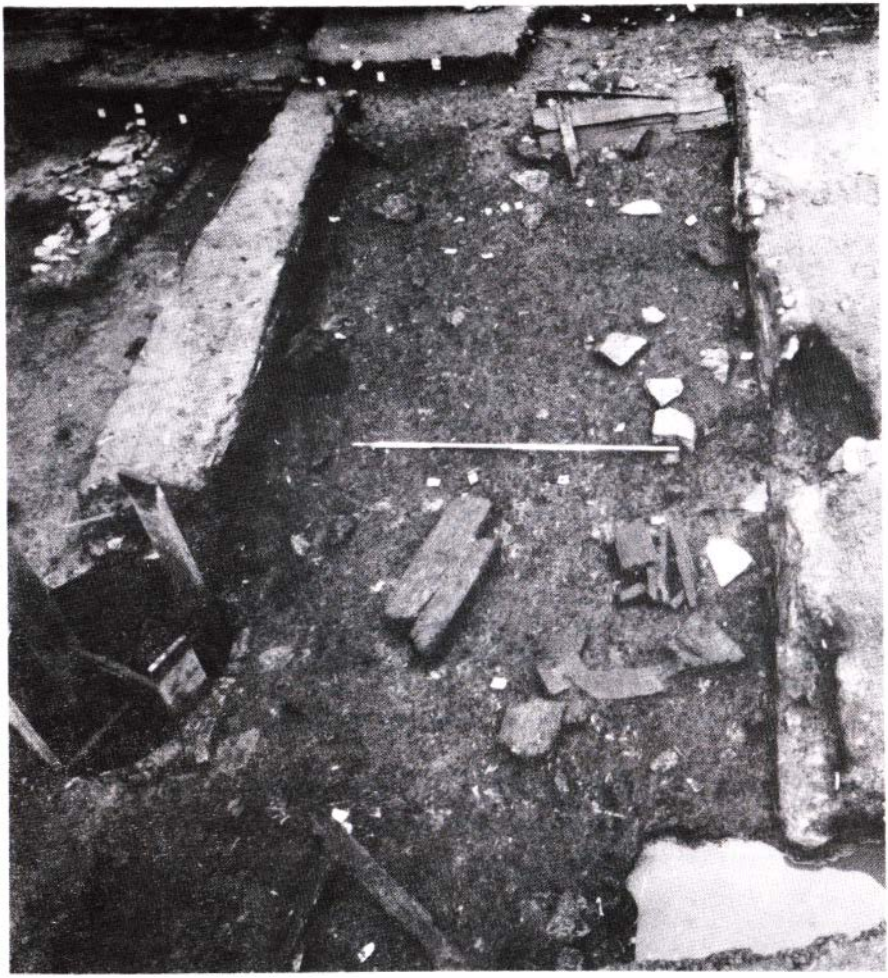


COPPERGATE

Top: multi-phased medieval stone structure under excavation by the York Excavation Group.

bottom left: medieval limestone wall resting on cobble foundations

bottom right: cobbles removed to reveal massive tree-trunk underpinning



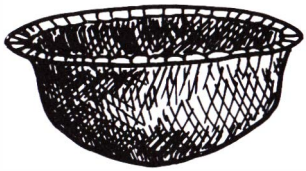
COPPERGATE
One of the eleventh-century buildings cut at bottom left by a modern well and at bottom and centre right by medieval pits. At top right part of the collapsed superstructure is visible and limestone rubble and timber fragments which were part of the backfill may also be seen.

'So we'll go no more A-roving..'

Yorkshire is rich in surviving historical and archaeological monuments, although these are only a tithe of what remained up to the last century. So half the fun of exploring the countryside is looking for clues to those now vanished, and trying to reconstruct the changing face of the landscape that our ancestors have known. York Young Rescue took advantage of the long wet summer to go out and get drenched amid a variety of rural settings, giving us a vivid impression of Yorkshire life since the last antithermal: for sheer, spine-tingling atmosphere, rolling mist and sheet rain are unbeatable. And we managed to prove that you don't have to be actually digging to be a dirt archaeologist.

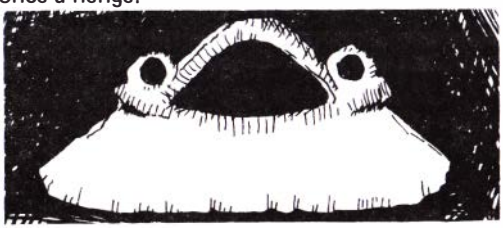
First Expedition

On the first of our roving Saturdays, we set out to examine the evidence of past settlement on the chalk Wolds: these sweep inland from Flamborough Head and then south into Lincolnshire to form the original east coastline before Ice Age glaciers deposited the clay drift of Holderness. Lying on an ancient shingle beach trapped between the clay and the chalk cliffs, one of us found some years ago the remains of an ancient elephant tusk, now in the museum at Sewerby. Since long before Bridlington Bay became the Roman *Dunum Sinus,* there must have been an important harbour in the area, and trade routes to it (or was it gift-exchange!) are suggested by the distribution of Neolithic longbarrows and polished west-country axes stretching back towards York. We soon discovered that the Roman road along which we left York (see INTERIM vol 3 no 3) had turned into a prehistoric ridgeway, which we detected from clues to be revealed later.



The land around these ridgeways must have been comparatively prosperous at times, supporting the erection of impressive religious monuments. We compared the Late Neolithic round barrows of Duggleby Howe and Willy Howe, still over 40 m. across and 6 m high: one with an incredibly rich assortment of cremations and inhumations deposited over a long period around the central, deep-cut grave containing one man and his round-bottomed bowl; the other with a similar grave pit but completely empty, and with no secondary interments, nothing but the curious folk tale recorded in King John's reign of a fairy goblet stolen by a traveller and eventually passed as a gift between various medieval kings of England and Scotland before disappearing from history (unless it be the Bronze Age gold cup from the *Danish* Willie Howe, kept in the nearby village church). Many of our burial mounds have been ploughed out although, fortunately, a fair number in the area have been scientificaliy excavated in recent years, and their finds and some excellent reconstruction models can be seen in Sewerby Museum.

After various diversions, we found ourselves cutting across country from one trackway to another, because we could just detect the parallel banks of that mysterious creature, the Neolithic cursus (just what was its purpus?). This one took us from the ancient Woldgate to the famous Rudston Monolith: the rood (holy) stane which medieval priests must have felt so uneasy about as it casts its long solstice shadows over the east end of their adjacent church. (In the end, Pope Gregory's psychological calculations proved correct, when he instructed his missionary priests not to destroy but to rededicate the old pagan shrines). Young archaeologists of 1977 can easily visualise scenes of earlier ritual around this 8 m. high pillar set within a circular enclosure, now the churchyard, but maybe once a henge.



Another ancient route, or line of advance, lay along the north escarpment of the Wolds, overlooking the famous Mesolithic site of Starr Carr beside what was then Lake Pickering. Two early Iron Age settlements on this slope have been found to be closely related, and after searching we located the major one, Staple Howe. Only two iron implements were actually found there, together with a

Late Bronze Age razor, but the complete plan of huts, granary and palisade was recovered in excavation. The site was discovered by two schoolboys finding pottery there, and after years of visitors and archaeologists, we managed to find one sherd of typical handmade, grass-impressed, quartz-gritted pottery, lying unnoticed on the ground.

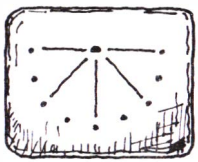
Danes Dyke, despite the name, has long been assigned to the Iron Age, since at that time, huge defensive earthworks were the in-thing, although the famous Gereral Pitt-Rivers decided it was Stone Age after finding flints in it! Recently, Mr. Ramm of the Royal Commission of Historical Monuments has pointed out that when you look at it in detail, none of these periods quite fits, and that similar Yorkshire earthworks suggest it was built by the Angles. Their now famous cemetery at Sewerby lies close by, with its dramatically concealed royal grave (unerringly discovered by schoolboy archaeologist Peter Addyman in the days when the world was young and legends were forged). Conserved at long last by John Earnshaw at the museum after having been re-entombed for over a decade in the vaults of the Department of the Environment, the grave goods make a magnificent display.

Many of the present Wolds settlements, including some that now bear Scandinavian names, are basically Saxon if not earlier; we found evidence for this, and for extensive recovery after William the Conqueror's Harrying of the North, on the churches we visited. Outstanding among these was the church at North Grimston which contained within and between its walls a wealth of carved stones from Saxon beasties to a fake graffito of 1789 carved into a Victorian ashlar! One wonders what remains of Grim's own sanctuary may lie beneath. We appreciated another fragment of medieval magnificence when we came to Bridlington Priory, whose church was saved from Henry VIII's destruction by the townsfolk to become their parish church, and learned that these places are more than priceless museums of our past, when we discovered that we were about to take part in a 20th-century wedding!

The Younger View

In spite of the reputedly low wages which archaeologists are supposed to receive, they can still afford to offer 1p for the first burial mound sighted from the minibus. I am inclined to believe the reports as I have never yet been given my reward. But after the first mound, they followed in quick succession and the road seemed to be surrounded by them. This showed that the road we were driving along was a prehistoric road.

Then we went to an ancient medieval church. I counted about twenty-one carvings on the outside; there was a scratched sundial built back into the wrong wall where the sun couldn't even get to it, and an ancient bishop looking out from the tower. We saw lots of stones with masons' marks on them. Inside was a fantastically carved tub font (Norman), and Chris was astounded that we actually realised that the scene round the outside was the Last Supper.

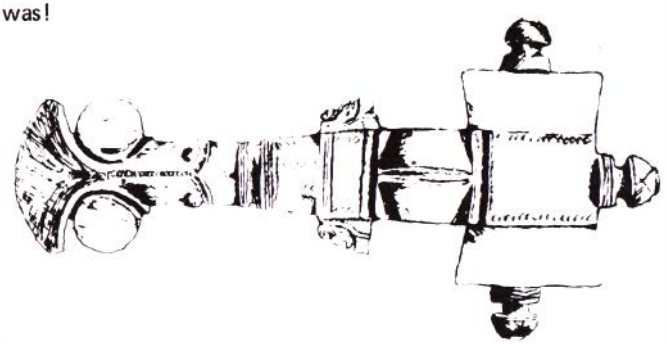


At Kilham church we saw a medieval coffin set end-on into the ground with a sundial on top – where did they put the bones? Most people would have been surprised to see a huge pagan standing stone in a Christian churchyard, but we knew better. At Rudston, to stop people worshipping pagan gods the new religion built their place of worship on the site. The sight of a church on their sacred ground probably discouraged the nonconformists. Nearby there were some stone cists from a Bronze Age burial mound, which once held a man and a women, crouched.

At Bridlington we had plenty of chips, and sheltered from the rain in the Olde Baile, which used to be the gatehouse for the priory, and a gaol as well. Eventually we changed our refuge and ran through the rain to the Priory, where we burst into a wedding! Chris told us various ghost stories about the place in a whisper, as it was about to begin, then we walked round the outside. All the monks' buildings had been pulled down and only the bit where the townspeople were allowed to enter remains.

We got into the minibus and drove to the Sewerby Archaeological Museum. It was in a park on the cliffs along the coast of England and we saw some wallabies. The museum contained many models showing the construction of Stone Age burial mounds and Iron Age huts, and the whole of the Priory as it must have been in its heyday. There was a lot of beautiful Anglian jewellery which had been excavated from the grave of a princess. A common female

servant had been thrown on top of her, probably alive as she was lying on her face and there was a stone to keep her down. They had realised that some greedy people might violate the resting place of their princess, so they had put no jewellery with the servant, hoping that people would stop at her and not think the grave was interesting enough to be excavated. This nearly worked, and only Peter Addyman kept on digging to make sure there was nothing there but there was!



At Danes Dyke, a great long earthwork defending Flamborough Head, Chris dropped us off and drove round to the far end to meet us walking. We couldn't find the Dyke in the trees despite (or because of!) his directions, but we managed by great ingenuity to find our way back to the minibus. Chris was not there, and he had locked us out in the rain when he went back to find us, and we all got wet through. Still, some people walked back along the Dyke and watched some foxes playing on the way.

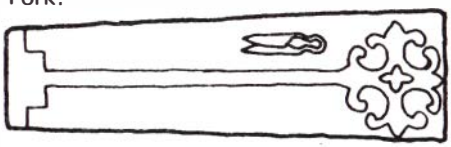
We explored round Willy Howe, and Chris told us about the mystery of the empty barrow and the fairy goblet. Then we tried to find the last place we were going to; this was Staple Howe, and was in the middle of a forest at dusk, the time when the ghost of one of the excavators who committed suicide and was cremated was supposed to appear as a pillar of light. Fortunately, we didn't see anything except some concrete posts showing where the huts had been, and a piece of Iron Age pottery made by the family that lived there.

Second Expedition

Our second trip moved into North Yorkshire to compare different types of castles and religious sites. We saw (dimly, through mist and rain) a classic motte and bailey set amid the marshes beside the River Wiske at Yafforth, and the much more elaborate arrangement at Whorlton, where the castle commands the road skirting the Moors to the east coast. Here the lord had built out from the bailey rampart a great earthwork enclosing the entire village to form a bourg (borough) for protection. Only the ruined Norman church remains of the village, and of the castle, a fine 14th-century gatehouse and a vaulted cellar.

Travelling back in time, we reached a much greater complex of earthworks at Stanwick, where the original British hillfort had been progressively enlarged against the inexorable advance of the Roman invaders. A consolidated section of the defences, as revealed by Sir Mortimer Wheeler, gave us a vivid picture of the task facing an attacking army, although the Romans seem to have gained their victory on open ground before the Brigantes had had time to complete their defences.

The consecration of later warfare to religion was seen in the local church, where medieval and later effigies included recumbent knights in armour, their swords carved on tombstones (likewise their ladies' cloth shears), and even an original helmet and gauntlets hung from the wall. Pagan connections too were suggested by the curious Viking hogback gravestones at Brompton, whose carved surfaces recall houses of the dead, although the significance of the muzzled bears' heads at each end remains a mystery. It is a pity that we were unable to trace the missing members of the prehistoric stone row at Boroughbridge, the Devil's Arrows (did he never score a hit?), which we examined on the way back to York.

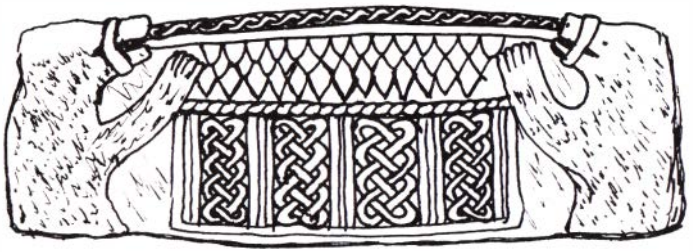


The Younger View

On the second trip we started somewhat behind schedule, as the stupid minibus would not start because of damp and we were waiting for about an hour. Luckily the Art Gallery was handy so we went in there for a while. In the end a pick up truck was sent for and we managed to get going. The next thing was that it was simply pouring down. Anyway, we eventually got going on our way to Whorlton Castle, which despite being in ruins was very interesting. We went inside the gatehouse which was still standing and saw the garderobes where the medieval toilets were. Then we went through to the remains of the main castle with some steep steps leading down to cellars where we counted four different masons' marks:  After we had seen the castle we ran down to Whorlton Church. We went through a lychgate and along a path through the trees to the church door where there were a lot of grooves where the medieval people sharpened their weapons. Part of the church was in ruins because the roof had fallen down, and there was a door with an eyehole which we peeped through to see into the end of the church. We walked round the outside and looked at the gravestones, a lot of them were broken. We found a scratched sundial to tell the priest time for Mass, and looked through the squint holes made so that the priest at one altar could peep through and keep in time with the priest at the main alter. The church was in the *bourg,* which had a big earth-

work round it, and where the ditch went under the road it was flooded. They built a small one round the castle and a big one round the village.

The rain seemed to make us more jolly and we didn't mind at all, so we carried on the tour and dashed into a church at Brompton to see the carved Viking stones. They were shaped a bit like upside down boats, but they also had tiles carved on the roofs, and funny bears' heads hanging on to the gables. Then we went into Northallerton for fish and chips. After about an hour we set off for Stanwick.



This was an Iron Age fort. The huge earthworks were built by the Brigantes to stop the Roman invaders. They dug down until they were into the solid rock. This made it very hard for the Roman general from York, Petilius Cerealis, to attack King Venutius's army. But first it also prevented Queen Cartimandua from getting at the King, who had fallen out with her for making friends with the Romans. While there we visited an old church, which was extremely interesting, because in the wall stone carved coffin lids were used. They all had crosses carved on them with flowery ends, and the man would have a sword or norseshoe and a woman would have shears carved on them. A helmet and armour gloves were hanging on the wall, and they were covered in rust.

Then we set off home, but we stopped at Boroughbridge to see the Devil's Arrows. They were made of stone and were tall pillar-like things in a sort of straight line. They are thought to be part of a large area along the River Ure which has several prehistoric religious circles and avenues. There were marks around the stones where ropes had been attached for dragging them up.

Third Expedition

Our third expedition was meant to be a coach outing to Durham, but water befouled us again, and we had to return to York. However, some of us set forth after lunch on a medieval quest along the rivers Ouse and Derwent. We located three episcopal palaces by the remains of their gatehouses (you can see Cawood and Bishopthorpe from the road, but the fine early 14th-century brickwork at Howden lies hidden in the Rectory garden), a well-preserved Norman motte and

later moated manor-house site at Aughton (the home of Robert Aske, destined to be hanged in chains from Clifford's Tower in York after the ill-fated Pilgrimage of Grace), and some very fine churches. The most splendid was the collegiate church at Howden, where we were privileged with a special tour by the Rector. It was interesting to compare the beautifully restored decorated 13th-century door fittings with the older Viking-type door at Stillingfleet, before returning home to a flooded city.

The Younger View

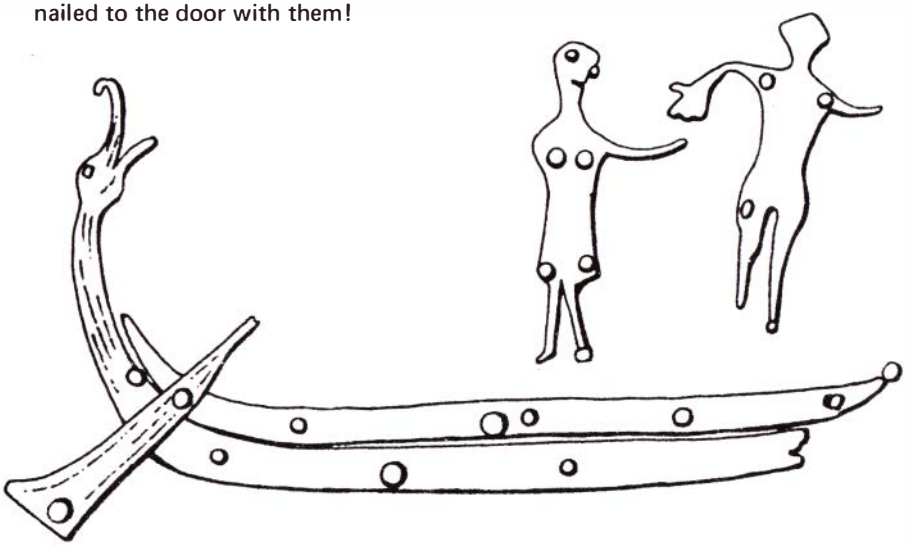
We *thought* we were going to Durham, but about thirteen miles out of York our ideas changed. After running through rather a large puddle our speed dropped from about 50 m.p.h. to 5 m.p.h., and a large ticking noise echoed through the coach: we free-wheeled into a layby and stopped. The driver couldn't get the engine going so he went on a long trek to telephone for another coach to take us. Some people got out to explore in the fields and pick blackberries, otherwise we sat and waited for about three hours, and by that time it wasn't worth going on so the new coach took us back to York.

About seven of us stayed with Chris as he said he would take us on a mystery tour in the minibus. So after our fish and chips we started off with the Archbishop's Palace at Bishopthorpe but we didn't go in. Then eventually we

found the site of the earlier palace at Cawood, and drove up to the medieval gatehouse. Some people lived at Riccall, so we dropped them off and they showed us the Norman doorway in the church. Then we left the main road and got the minibus stuck in the mud at Aughton castle and had to push it out. We found the carving of a salamander on the wall of the church, which was locked; it was carved there because the Aske family were the lords of the manor and *aske* was the medieval word for salamander.

Then we went to Howden to see the church, which is built a bit like York Minster and Durham Cathedral combined, so we had the best of both worlds after all. One of us was caught by the vicar climbing into the ruined chapter house, but we got talking to him and he took us round inside the church, although it was meant to be closed for the night. It had a really spooky atmosphere with just a few lights on and shadows everywhere. He showed us the ancient money chests, one cut of a solid tree trunk, and a very rare statue of the Virgin Mary with a dove on her shoulder.

When we got to Beverley we wanted to see the original White Rabbit in one of the churches, but it was locked, and we walked round the outside under the flying buttresses. We went on and stopped at a transport cafe for more chips,and finally got out to look at the Viking door at Stillingfleet. Chris had to use his pen-torch but we could see the iron longboat and the little men disguising the bolts holding it together. We didn't like the idea of being skinned alive and nailed to the door with them!



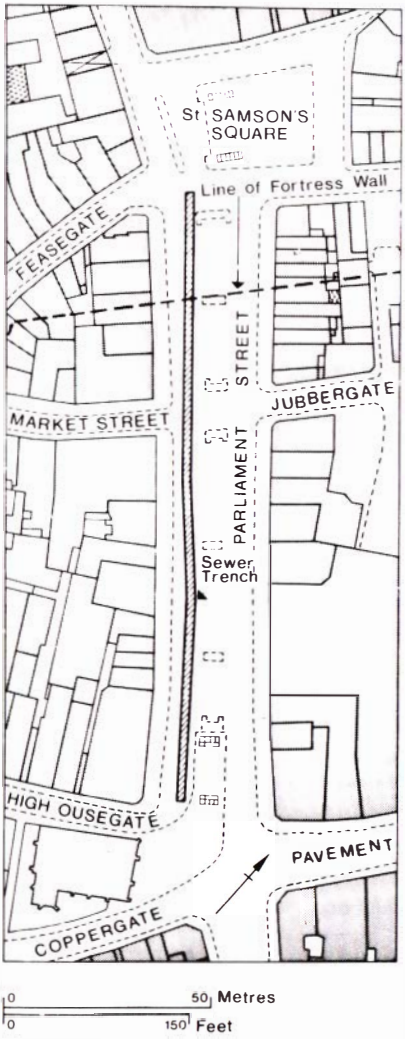
Written by Paul Brettell, Louise Currey, Peter Dobson, Mandy Hurst, Nicola Parish & Jeremy Ward, and collated by Chris Clarke.

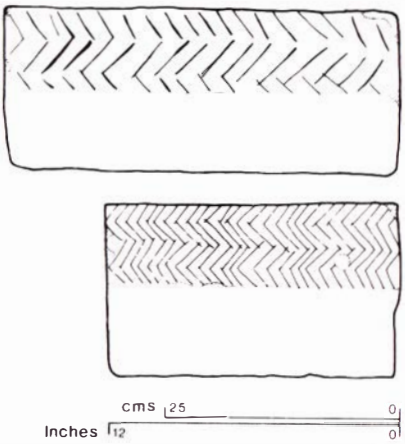
KEYHOLE ARCHAEOLOGY

THE PARLIAMENT STREET SEWER

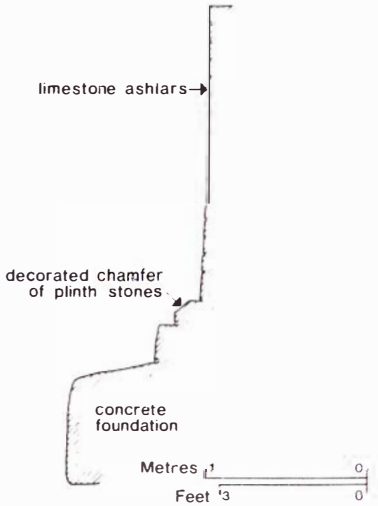
If it were in your power to torment an archaeologist of your choice, you could not do better than to make him dream of a particularly rich site in which he was interested being destroyed before his eyes. An additional fiendish piece of imagination might prompt you to let him have some tantalising glimpses of what was being lost, before abruptly screening it from his vision.

Dreams sometimes come true, however, and a nightmare of this type is at present being enacted in the centre of York. The location is Parliament Street, a road which, as its breadth suggests, is not part of the medieval street system, but which was created in the 19th century. Parliament Street runs from within the fortress area across the line of the Roman defences towards the River Foss, through an area where we know from other observations that there is a deep build-up of medieval deposits covering the Roman levels (INTERIM vol 3 no 2 p 30: vol 4 no 1 p 18). During the 19th century construction work much must have been destroyed, but we do know, for example, that a cemetery was uncovered at one point, with a group of burials in wooden coffins as well as some stone grave slabs which date to the Saxo-Norman period. To show the extent of the gaps in our knowledge of the history of York at this period, it is not known to which, if any, church the cemetery was appended.





ELEVATION OF TWO DECORATED PLINTH STONES



PROFILE OF S.E. FACE OF FORTRESS WALL

PARLIAMENT STREET SEWER

But we digress. Beneath Parliament Street there runs a major sewer, which with the passing of time is now unable to cope with the demands made upon it. Replacement has been going on, length by length, for many months past, and is not yet complete. The job is a slow one, as the original pipe is deeply buried, and the new one is being laid over 6.5 m down. Consequently, a monster excavator is slicing its way along the street, removing the soil. Instant reaction to this might be – so what? : the archaeology must have been ruined when the original sewer was laid – but to our surprise, the Victorians, tunnel builders of some considerable expertise, chose to burrow in and insert the pipe, leaving the deposits above intact.

This much could be gathered from an examination of the end section of the first length of trench excavated, whose sides were initially shored in the open fashion (i.e. the vertical shores of the steel shuttering had some space between them), with the excavator gently tapping them into place. In the black organic soil build-up there appeared clear traces of wattle property boundaries of medieval date, an indication of what was being removed. The twist of the knife in this archaeological wound came when, as work progressed, the sides of the trench were close shored (i.e. totally obscured) by a sophisticated device, the Ram-Shore. This is not the place to eulogise the efficiency and increased protection offered by this piece of equipment, but it renders archaeological recording of the section, all that is left to the Trust, virtually impossible.

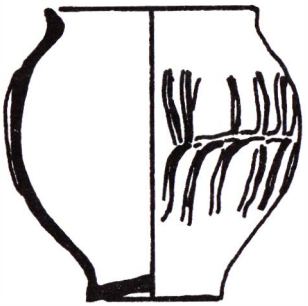
Amidst this tale of gloom, a ray of sunshine peeped through when the Roman fortress wall duly appeared, traversing the width of the trench. Standing to a height of approximately 1.75 m, and too substantial to be quickly removed, through the kindness of the City Engineer's Department and of the contractors, Stepney and Co., the Trust was afforded an afternoon to record it. This involved washing down, a processs which revealed that the chamfered offset of the plinth was tooled with an incised chevron motif, a characteristic which has not been previously recorded on the other fragments of Roman wall which have been seen over the years. The wall above was composed of small limestone blocks, and the plinth was set on mortar and cobble foundations which had been constructed over a series of timber piles.

There was no evidence for the date of this length of wall, and one of the major problems will be assesssing its possible position in the sequence of refurbishings of the defences. Meantime work on the sewer goes on, and we hope that our recently appointed hole-watcher *extraordinaire,* David Brinklow, will have further news to report in these pages before long.

Richard Hall

POT SPOT; COUNTRY COUSINS

In this issue we leave the delicate, imported fine wares, to spotlight a type of everyday coarse ware – the Rustic Ware jar, so named because of the resemblance its surface decoration bears to that often found on masonry which has been deliberately roughened or 'rusticated' by the mason.



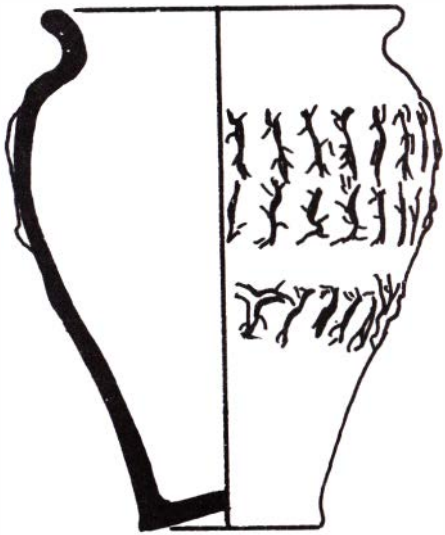
Rustic Ware jars are almost invariably grey in colour, though red examples are known, probably representing either the products of kilns that have misfired, or imitations of the ware in local fabrics, as may have been the case in York itself where red Rustic Ware has been found on numerous sites.

The decoration is achieved by adding a semi-liquid slip to the wall of the pot before firing. The 'rustication' is formed by dipping a finger (or some instrument of similar shape) into the slip and then rapidly drawing it away. The slip follows and takes on the form of a sharp point or ridge. The purpose of the rustication was probably purely decorative, but it may also have assisted the handling of the vessels.

The origins of Rustic Ware may be traced back to pottery and metal prototypes in the Mediterranean area, but as far as Britain is concerned the Rhineland was the more immediate source, similar wares being found on numerous sites there. Some of these wares travelled with the invading

armies and their popularity ensured that they were quickly imitated by potters in Britain. Rustic Ware jars were mainly used by soldiers and enjoyed great success throughout the reigns of Nero, Vespasian, Titus, Domitian and Trajan. They occur almost everywhere there were soldiers, including the Midlands, the Thames Valley, East Anglia and Wales. Their main concentration is in the North however, reflecting the continual military occupation in that part of the province.

Kilns producing Rustic Ware in Britain include North Hykeham and Lea in Lincolnshire, Cantley in Yorkshire, and Holt in Denbighshire. Over the years the shape of the jars changed from globular to tall and pear-shaped, while the rustication itself became less vigorous, perhaps as a result of the need for quick mass-production. Its era as one of the chief types of military vessel came to an end in the early years of Hadrian's reign, when it was superceded by vessels in 'black-burnished' wares which could be produced more cheaply and easily.



Rustic Ware is, however, of great value to Roman pottery researchers because it is both easy to recognise even when in small fragments and because it is quite easy to date, having had a relatively short life from c. AD 50 to c. AD 120. Such 'country cousins' are always welcome at the Roman pottery table!

For a detailed study of Rustic Ware see F. H. Thompson *Antiquaries Journal* 38 (1958), 15-51.

MEET THE ARCHAEOLOGIST
THE SURVEYOR-DRAUGHTSMAN

Unlike the majority of the York Archaeological Trust's staff, Dick Raines is something of a local lad (local to the county, at least), but that's not to say he hasn't been around a bit. Born in Hull and educated at Pocklington, Dick's early ambition to read architecture at Cambridge was thwarted by indifferent A-levels, the result of overmuch time spent in the art room (and, it seems, a total failure to come to terms with a healthy routine of outdoor sports and cold showers).

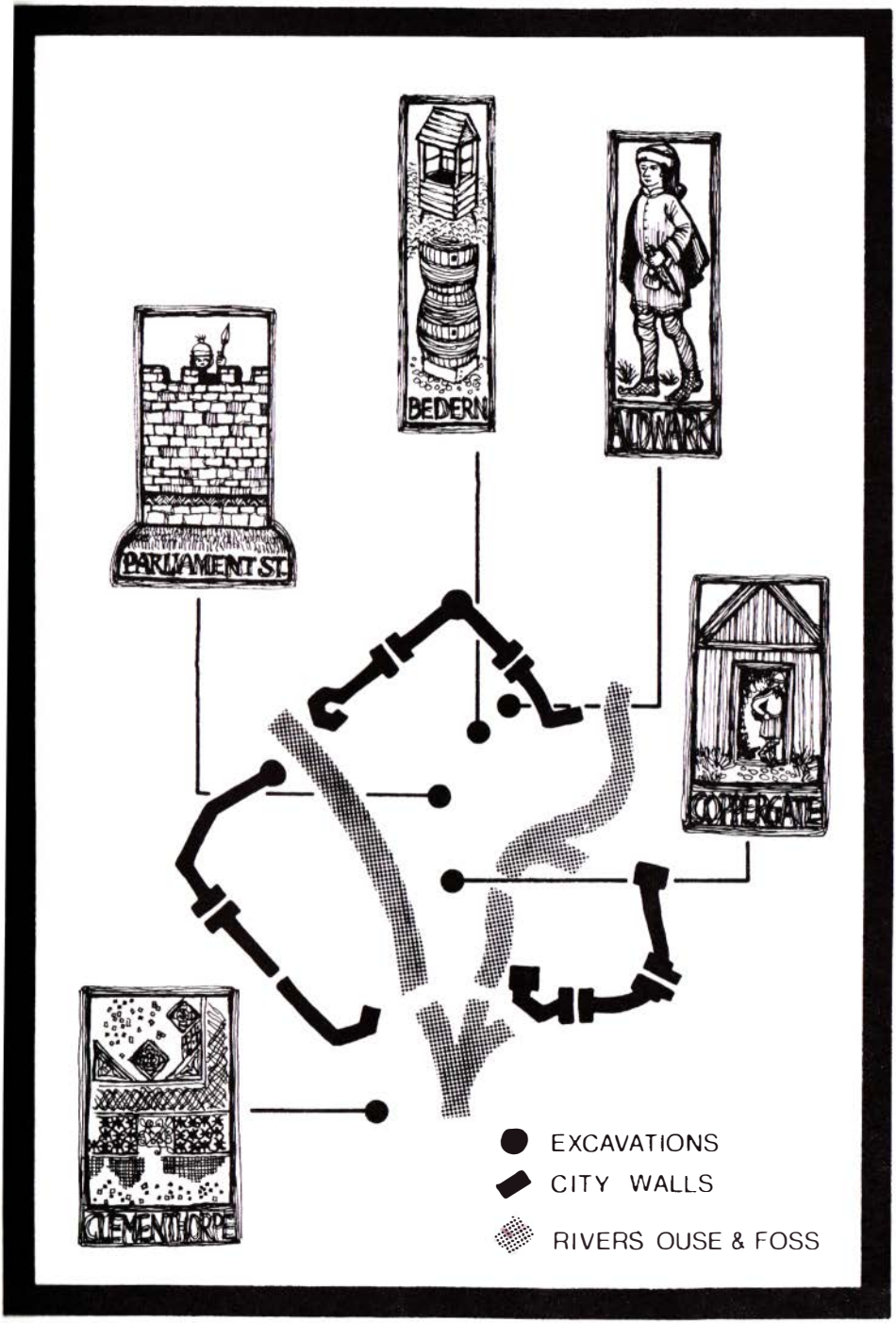
The regime at Hull College of Art proved much more to his liking, however, and after a successful year's pre-diploma course there, Dick embarked on three further years of art school at Leicester. Following a course in three-dimensional design, he studied product design, furniture design, jewellery and interior design, eventually specialising in ceramics. Although pottery has proved to be one of his lasting interests, Dick has never actually made his living from it. His first eighteen months as a wage-earner were spent at the Phoenix Theatre, Leicester, as carpenter, scene painter, and general dogsbody, where his most cherished achievement seems to have been building a signal box for Arnold Ridley's *Ghost Train.*

The urge to travel took Dick to Istanbul in the back of a beaten-up van in 1967 and then the following year he visited York for a holiday and has hardly left the city ever since. Although he managed to hold an exhibiition of his ceramics in Micklegate soon after arriving, the exigencies of keeping body and soul together have demanded that he follow other full-time careers ever since. Apart from occasional bouts of Art College teaching these have generally had only a loose connection with the artistic world – technician at the Art Gallery, barman at the

Arts Centre – and sometimes none at all, as when he spent some time driving a delivery van for an electrical retailer and attending to minor faults, mostly caused by foreign coins jammed in slot-meters. Even when he joined the York Minster excavations in 1971 it was with the intention of digging, but fortunately his true potential was recognised by Derek Phillips who began to train him as his surveyor and draughtman. The exacting standards set by the Phillips regime and by the engineers who were then struggling to keep the Minster upright (from whom Dick picked up a great many hints) were to lay the foundations for the precision by which he works today, and far from being restricted by the mathematical framework of site surveying, he has managed to impress his personal stamp on the plans and sections which he produces for publication. The Trust was indeed fortunate to acquire his services in 1975 and INTERIM especially so, first of all for the excellent illustrations he has produced for us since then and, for the last three issues, for his overall control of the layout and design.

INTERIM is only one of Dick's part-time interests though, and he often seems to pack more into his leisure time than most people do in a 40 hour week. One of his most absorbing interests is model making – not battleships and aeroplanes like most people but display models of public exhibitions. The first of these was of the *principia,* the headquarters building of the Roman fortress which was uncovered during the excavations in the Minster undercroft, where the model now forms part of the permanent exhibition; Dick's models of the Norman predecessor of the present Minster are also to be seen there. His other projects have included the Roman villa at Gargrave, West Yorkshire (for the Area Museums Service) and his current one, the most ambitious of all, is a relief map for the Castle Museum of the whole of Yorkshire at a scale of half an inch to the mile; as any Yorkshireman will tell you, that's quite a number of half inches! Last summer his building urge took on a whole new dimension when he designed and built all the stands for the *Viking Kingdom of York* exhibition at the Yorkshire Museum; anyone who saw the exhibition will agree that the lessons of the theatre stage, the model workshop and the drawing board had been absorbed with a thoroughness which would have gladdened the hearts of all Dick's erstwhile mentors.

With so many responsibilities at work and so many projects at home, Dick always has the air of someone *going* somewhere and when encountered in the street between his Aldwark office and his home near the Knavesmire he is invariably hurrying along clutching rolls of drawing film, tools or surveying instruments, bent on meeting one deadline or another. At home he is cared for by his wife, Sue, who somehow manages to cope with his round-the-clock routine and look after their two children. For a boy constantly having had to be told that he must try harder, Dick has turned out to be a commendably energetic and successful professional. Now if they'd had an A-level for initiative . . .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BULLETIN OF THE YORK ARCHAEOLOGICAL TRUST

VOLUME 4 NUMBER 3