

NORTHERN ARCHAEOLOGY TODAY

YORK ARCHAEOLOGICAL TRUST MAGAZINE

Issue 1

This issue:

**Pittentian
Eastern Moors
Nottingham's Caves**



Welcome!

...to the first issue of **Northern Archaeology Today**, York Archaeological Trust's roundup of work throughout the family of units which make up the Trust.

Recently York Archaeological Trust has expanded through the inclusion of ArcHeritage in Sheffield, Northlight Heritage in Scotland, and now Trent and Peak Archaeology in Nottingham. It has become clear that 'Yorkshire Archaeology Today' is no longer an accurate title for a magazine reporting the full range of the Trust's archaeological activities, so the decision has been taken to relaunch the magazine with a wider remit and a new title.

We will also be featuring articles on archaeological projects from beyond the Trust – in this issue, the Yearsley Moor Archaeological Project tell us about their work in Yearsley Woods.

We hope that the relaunched magazine will bring to its readers a greater appreciation of the range of archaeological endeavour undertaken by York Archaeological Trust and others in the North.

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Cover picture:

Hollow way on Big Moor, Derbyshire

Circling the Square

Northlight Heritage excavations at Pittentian, Crieff, Perth and Kinross



Top: Pittentian from the air

Inset: Site location

Northlight Heritage spent several weeks of the summer of 2011 excavating an intriguing and impressive timber circle site near Crieff, Perth and Kinross. The site was identified during the construction of an access track for the erection of one of the many electricity towers which form the Beaulieu to Denny power-line, and as such the excavation was funded by Scottish and Southern Energy Ltd.

Edouard Masson-MacLean was the archaeologist on the ground when the initial construction work began, and on the final day of topsoil removal within the track corridor he spotted several posthole-like features. Under further investigation we discovered that several of these postholes contained coarse prehistoric pottery and a plan was put in place to widen the area of investigation with a single large trench within the proposed tower construction footprint.

Over the following weeks a full excavation team uncovered evidence of significant prehistoric activity on the site. The postholes that Edouard had discovered proved to be part of

two small square post-defined structures, each approximately 2.7m across. Further pottery was recovered, along with fragments of burnt bone and charcoal, perhaps indicative of domestic occupation. Only 15m to the east of these houses was a much more substantial structure.

This structure was defined by arrangements of postholes, forming a large timber circle. This was a complex structure consisting of two concentric rings of posts (c. 22.6m and 13.9m in diameter), a central square arrangement of posts (5.4m across), a trapezoidal setting of posts and several large pits.

The posts that made up the circles varied in size according to the structural element of which they were part. The posts of the central square setting were the largest on the site and were circular in profile with a diameter of c. 0.6m. These were the deepest features on the site, suggesting that the timbers that stood here were impressively large.

The inner ring of timbers was the next largest in terms of size of posts, although interestingly many of these timbers appeared to have been shaped and squared off to a size of between 0.2 and 0.3m across. The timbers of the outer ring were smaller again, although, as these features were shallower, less evidence of any treatment of the timbers was discovered.

There was little evidence for the destruction of the monument at Pittentian. Whilst charcoal was encountered, it was not (with the exception of some of the large pits) typically in large amounts. The interpretation made in the field was that these timbers had rotted in situ, although the deposition of part of a pot on the top of one of the large central postholes suggested that, in this case at least, what had remained of the post above ground had been removed.

A cluster of features at a gap in the western side of the outer circle of timbers has been



tentatively interpreted as a possible entrance, comprising a complex arrangement of posts with wattle and daub walls. A trapezoidal arrangement of posts was situated between the outer and middle timber circles, and appeared to lead to a large pit enclosed within another post-defined structure. This large pit contained lots of charcoal and burnt bone, suggesting that burning had occurred here, perhaps cremation of the dead, or the cooking of meat for feasting. The architecture of the timber circle and associated structures may have controlled the ways in which people moved through the monument, and the activities which took place here.

There are many known timber circles (sometimes referred to as pit circles) in Scotland, and these are generally thought to date to the late Neolithic period, although most have been identified through aerial photography and very few have been excavated and reliably dated. Perhaps the closest Scottish parallel is a timber circle excavated at Machrie Moor, Arran, which is very similar in size and morphology to the monument at Pittentian.

The area around Crieff, and more broadly Strathearn, is rich in prehistoric archaeology and of particular note is the nearby Broich cursus. During the forthcoming post-excavation

analysis we will consider the local context of Pittentian and look at how it may have related to nearby monuments such as the Broich cursus. The timber circle would have formed an important part of a wider group of monuments, people and places.

Understanding the relationship between the timber circle and the putative domestic structures on the site is particularly important when considered in light of the discovery of small square structures, of similar size to those at Pittentian, at Durrington Walls in Wiltshire. The structures at Durrington Walls have been interpreted as houses within a Neolithic village, possibly inhabited by the people who built the timber circle. This potential division in the use of the site is reflected in the artefacts recovered at Pittentian: the bulk of the pottery from the site was recovered from the area of the possible houses, while most of the lithics were found in the postholes of the timber circle, and appear to have been specifically placed within the holes. The connection between Neolithic period domestic structures and large monuments is rare, and this makes the site at Pittentian of particular importance. Northlight Heritage is looking forward to the further discoveries and insights that the forthcoming post-excavation work will bring.

Alastair Becket

IN BRIEF...

Under York Minster

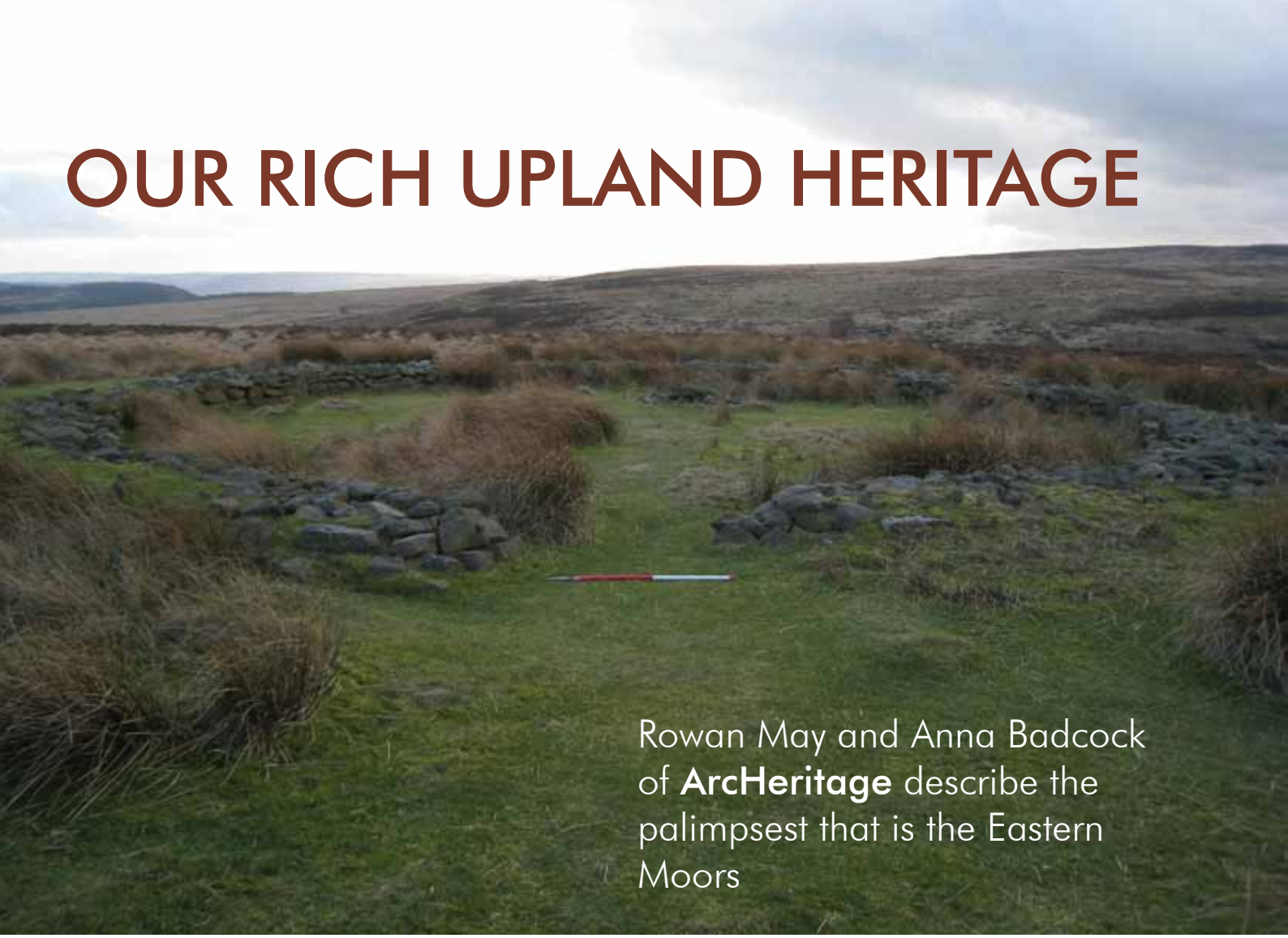
YAT staff have been excavating a lift shaft as part of a major Heritage Lottery Fund project to revamp the Minster's collections and exhibition space and improve access within the church.

Our excavation identified the foundations of the standing 13th century transept, one of which had been packed with disturbed human bones. Below this level, construction deposits for the earlier Norman Minster of AD 1080 were uncovered, showing the development of the cathedral from the Romanesque to the Gothic styles. The bulk of the

sequence was probably of Anglo-Scandinavian date, although little datable material was found. Possible demolition deposits associated with the final taking-down of the Roman fortress headquarters were identified, and a couple of enigmatic postholes which were cut into further Roman demolition material. These postholes may be 4th century, or possibly later; an intriguing possibility that will have to wait for post-excavation analysis to confirm or deny.



OUR RICH UPLAND HERITAGE



Rowan May and Anna Badcock
of **ArcHeritage** describe the
palimpsest that is the Eastern
Moors

Barbrook II Bronze Age embanked stone circle, Big Moor

Between October 2010 and March 2011, ArcHeritage undertook an extensive landscape survey of the Eastern Moors Estate on the eastern edge of the Peak District National Park. The survey was commissioned by the Eastern Moors Partnership, a new union of the National Trust and the RSPB which has been formed to lease and manage the Eastern Moors Estate.

The Estate, owned by the National Park Authority, comprises Totley Moor, Brown Edge, Ramsley Moor, Big Moor, Clod Hall Moor, Jack Flat and Leash Fen, and covers a total area of about 10 square miles (26 sq km).

The aim of the survey was to provide, for the first time, as complete a picture as possible of the rich archaeological resource contained within the estate. The archaeological survey will sit alongside a whole range of wildlife and habitat surveys, and will provide information to enable

the Eastern Moors Partnership to develop a long-term landscape management strategy.

Several parts of this landscape have been studied in the past, notably portions of Big Moor, Gardom's Edge and Stoke Flat which were mapped in great detail by John Barnatt (Peak District National Park Authority) and Stewart Ainsworth (English Heritage) in the 1990s. While we know a lot about certain parts of this landscape, many other parts are less well known, and this project provided the first opportunity for a systematic survey of the entire estate.

The first part of the project involved desk-based research, analysing a large body of published and unpublished literature on the history and archaeology of the moors. Aerial photographs and historic maps were also studied. The area was then divided into blocks measuring 1km x 0.5km, and each block was



Location of the Eastern Moors Estate

systemically walked to locate and record new archaeological features, and to check previously surveyed features. The survey was undertaken using survey-grade GPS equipment to allow us to map features to within one metre of accuracy; each feature was described, photographed, and assigned a unique number.



Disturbed Bronze Age cairn on Big Moor

The results of the fieldwork were collated with all the data from previous surveys into a single database and GIS. The GIS format allows the data to be interrogated and is a very useful tool for future research. Distribution maps can be created for certain types of site or time period. Crucially, the GIS is a 'live' tool, and new information can be added as future studies are completed.

The results demonstrate extremely clearly the intensity of use of this upland area over millennia and remind us that our seemingly 'wild' landscapes are a creation of past human activity. The estate contains 30 Scheduled Ancient Monuments, of which 22 relate to prehistoric



Bronze Age cairn on Gardom's Edge

activity. The Barbrook stone circles are perhaps the best known but large areas on Big Moor, Stoke Flat and Gardom's Edge contain some of the UK's most important and dense Bronze Age field systems, settlement evidence and ritual monuments. A new cairnfield was identified on Big Moor, along with other previously unrecorded prehistoric earthworks.

One of the significant results of the survey was revealing the density of ancient routeways crossing the moors. Deep paths, 'hollow ways', eroded through time by the passage of people and animals, criss-cross this landscape. Along several of them are medieval and post-medieval guide stoops, way markers and clapper bridges. It is almost impossible to date these features, and some of these routes may have originated in prehistoric times. In the later 18th and 19th centuries these routes were largely replaced by turnpike roads.

Hollow way on Big Moor



Barbrook Reservoir guide stoop, an 18th century way marker.



Evidence for stone extraction of varying types is widespread across the estate. These include the millstone quarries on the much-loved gritstone edges of Curbar, Froggatt, Gardom's and Birchen, as well as a host of other smaller quarries and small 'day pits' where permission would have been granted for the extraction of as much stone as could be taken in a single day.

Most stone outcrops, ridges and boulder-strewn slopes contain evidence for stone-working in some form. In some places quarrymen's graffiti can be seen, and the remains of small, stone-built shelters are present at the base of some outcrops in the stone-working areas. Dating of the quarries is difficult, but some of the millstone quarries are thought to have originated in medieval times.

Coal, ganister (a fine-grained quartzite used to line furnaces) and fireclay have also been extracted from the estate, as testified by the sunken remains of in-filled mine shafts below Brown Edge, at Bucka Hill and at Gardom's Edge. The start date of these workings is not known, but at Bucka Hill mining appears to have pre-dated the 18th-century turnpike road, and had ceased by 1811.

The structural remains of a 16th- or 17th-century water-powered lead smelting mill can be seen on Bar Brook, as it runs parallel to the A621. Water leats and ponds associated with the mill also survive. On Ramsley Moor, the remains of another lead-smelting mill adjacent to a stream are much less clear than those at Bar Brook, but both sites are important Scheduled Ancient Monuments.

In the 19th century, following the Parliamentary Enclosure Awards, the majority of the survey area became part of the Duke of Rutland's grouse shooting estate, associated with the hunting lodge at Longshaw. The management of the shooting estate maintained the moorland character of the landscape and probably helped to preserve the rich range of archaeological features from earlier periods, though it would have led to restrictions on local people's use of the moors. Shooting butts in a



Millstone quarry at Curbar Edge



Quarry hollow on Ramsley Moor



Infilled mine shaft hollow at Bucka Hill

variety of styles are present across the landscape, and several of the current footpaths originated as carriage roads offering scenic views of the Duke's estate.

The moors were utilised for army training purposes in both World Wars. No features can be definitively dated to the First World War, though features with First World War characteristics include one possible communication trench on Totley Moor and a series of zig-zag trench features on Ramsley Moor. A variety of Second World War training features are located on Big Moor. These include a dense collection of slit trenches and foxholes, as well as bullet and mortar blast scars on boulders and outcrops. White Edge was clearly used for target practice, as there are large numbers of bullet scars on the outcrop and boulders at its northern end.

One element of the more recent use of the moors which has received little attention is the network of features relating to water management and supply. The Barbrook Reservoir, which first appears on the 1879 OS map, was built by the Chesterfield Union Water Works. This is a small reservoir and must have soon proved insufficient, as Ramsley Reservoir was constructed for the same water company at the turn of the 20th century. A number of buried pipelines cross the moors, and at the north edge of Ramsley Moor a series of bedrock borehole cores are still present on the site of a former pumping station.

In total, 5,937 individual features are included in the survey database – this includes over 2,500 previously unrecorded sites. This significant piece of work will provide a very valuable tool for the Eastern Moors Partnership as landscape management proposals are developed. It is also a resource which can be drawn on to develop interpretation and educational activities, and we hope the database and GIS will continue to grow as new discoveries are made

This article first appeared in the January 2012 edition of 'Archaeology and Conservation in Derbyshire'.



Using GPS equipment to survey features on the moors



Stone-built grouse shooting butt on Big Moor



WWII mortar blast scar on an earthfast boulder at Swine Sty, Big Moor

CORE VALUES

Results of Tree-Ring Dating at Lady Row in York

The identification of timbers dating to 1316 in a building from York will not come as a great surprise to readers of *Northern Archaeology Today*. Much older structures are regularly excavated by field officers and encountered by the building archaeology team and conservation specialists at York Archaeological Trust. However, identifying timbers of this date in 64–72 Goodramgate, known more commonly in York as Lady Row, is a significant milestone in the study of standing buildings in the city.

Lady Row and Property Development

Lady Row is important as the oldest-known standing timber-framed building in York. It is also special as a rare survival of a row of small, mainly one-up, one-down cottages. Situated in front of the parish church of Holy Trinity Goodramgate, the row was constructed as a speculative development for rent. Although comparatively few examples have survived, buildings such as these would have been a common sight across 14th- and 15th-century cities. Religious and secular organisations, large-

scale institutional landlords and individual property developers alike constructed them widely across the late medieval period, generating an income from their rent. These houses would have been home to a diverse, but largely poor community of labourers and small-scale artisans, single women and religious men.

Building Lady Row

The date of construction of Lady Row has attracted considerable attention from archaeologists and historians. The building has been linked to a charter in which the parishioners of the church of Holy Trinity Goodramgate requested permission to construct a range of houses 128ft by 18ft (39 x 5.5m) on the edge of their churchyard. The parishioners requested consent to construct this building in 1315, which was subsequently granted in 1316. The details within the charter correspond with the dimensions and location of Lady Row, and the early 14th-century date is also consistent with the overall style of the building. Consequently, 1316 has been taken as

*Lady Row,
Goodramgate, York*



Robert Howard of the Nottingham Tree Ring Dating Laboratory taking a core from one of the Lady Row roof timbers

the date of the construction of Lady Row. The identification of the timbers in the building by tree-ring dating to 1316 confirms that the charter relates directly to Lady Row, and shows that the building project was underway very soon after permission had been granted.

The Tree-Ring Dating Process

Tree-ring dating, or dendrochronology as it is also known, involves the analysis of the growth pattern of trees used in the construction of a building. A sample known as a 'core' is taken from one or more timbers from the building and the widths of the annual growth-rings present within that sample are measured, plotted and compared against a series of reference patterns or chronologies to identify the date of the tree ring sequence. The width of the annual growth ring is affected by weather conditions during the growing season (from about April to October), soil conditions and woodland density. Dense woodland coupled with a poor growing season (very little rain) will produce timbers with very narrow tree-rings. Sparse woodland and a season of high rainfall will produce timbers with very wide rings.

The analysis of timber samples using dendrochronology not only provides the opportunity to date a timber-framed building, but also to understand the woodland where the timbers originated and the method of construction.

Dendrochronology and York

York is a challenging area for tree-ring dating. Previous dendrochronology in the city has found that a large number of standing late medieval buildings contain fast-grown, wide-ringed timbers. Timbers with these characteristics are often difficult to date using dendrochronology.

Timber used in the construction of late medieval buildings in York often came from woodland resources in the Vale of York, to the north of the city. The presence of wide-ringed timbers may be an indication that woodland supplies across the region were sparse and possibly depleting.

Tree-ring dating analysis at Lady Row

Given the problems with dendrochronology in York, it is hugely significant that tree-ring dating proved successful at Lady Row. Nine out of fourteen samples matched consistently and securely at a first-measured ring date of 1079 and a last-measured ring date of 1316. Two further samples successfully matched against the reference material to the period 1239–1315.

All the samples came from the roof space, except for two which were taken from a wall stud. These elements of the building all appeared to be original. It was therefore intriguing that three of the samples taken at Lady Row had

Core samples
from Lady Row
timbers



complete sapwood and last-measured ring dates of 1311, 1315 and 1316, suggesting that timbers of multiple felling dates had been used in the construction of this building.

These differences could be explained by the use of stockpiled timber. There are other examples of this practice in 14th-century York. An important surviving building account detailing the purchases made during the construction of a complex of small houses by the Vicars Choral of York Minster between 1360 and 1364 suggests that timbers from multiple sources were also used in this project. Timbers purchased directly from the woodland were supplemented with timbers from their own stores, timbers bought from other institutions around the city, and from their local craftsmen working in the construction industry.

The samples also suggest that timber used in the construction of Lady Row were sourced from beyond the region. The tree-ring dating analysis tentatively suggests that the timber used in the construction of Lady Row came from the Nottingham or Derbyshire area. The master carpenter involved in the construction of Lady Row may well have looked further afield to alternative sources of supply if he could not obtain adequate timber locally.

The future study of timber-framed buildings in York

Tree-ring dating has added significantly to our understanding of the age and the materials used in the construction of Lady Row. It has also raised additional lines of enquiry about the contacts and networks of the York property developers and the scope of locally available timber supplies across the late medieval period. Further dendrochronology in standing York buildings, coupled with research into building accounts and woodland resources, would refine and develop our knowledge of construction practices in late medieval York.

Jayne Rimmer

Acknowledgements

This project was generously supported by a research grant from the Vernacular Architecture Group as part of a larger study I am currently undertaking into urban small houses across late medieval England. I would also like to thank Robert Howard and Alison Arnold of the Nottingham Tree Ring Dating Laboratory for undertaking the dendrochronology sampling and analysis. Cathy Tyers, John Oxley, Martin Roberts, Steve Allen and Ian Panter also offered valuable advice throughout the project. I am also hugely grateful to the owners and tenants of Lady Row, namely Andrea Bambridge, Mr Wang and Paul Barker, who allowed me access to their properties to carry out this research.



Swimming and Showtime!

Entwisle Road Leisure Centre, Rochdale

Main pool with
stage at far end

ArchHeritage was commissioned by Rochdale Metropolitan Borough Council to carry out a programme of building recording, including measured survey and photography, at the site of the Central Leisure Centre in Entwisle Road, Rochdale. The buildings were due to be demolished to make way for a new leisure centre complex. This survey was completed in conjunction with Huw Pritchard from the Building Recording team in the York office.

The site includes the interwar municipal baths complex and a redundant early 20th-century office and weighbridge house for the Corporation Sanitary Depot. Built in 1937, the baths employed the latest thinking in municipal baths design and hygiene and incorporated a range of art deco architectural features, motifs and modern materials. From the analysis of the baths complex, the original plan form, spatial arrangements and circulation spaces within the building were identified. These and a range of functional elements have increased our understanding of how the building operated. Despite the introduction

of new gymnasium and exercise facilities in recent years many of the original architectural details and fittings survive, particularly in the main pool with its spectacular hyperbolic arched roof, balconies and concert stage. The latter is of particular interest; when the baths were not in use for swimming, the pool could be covered over and the room used for concerts and theatrical performances.

The baths complex represents a good survival of an integrated interwar baths and public hall complex designed and built by the local authority to a set of the most up-to-date hygiene and welfare requirements of the time.

'Public baths reflect honour on the town, bestow abundant credit on the council, are model sanitary purifiers, and are hourly bestowing blessings, cheap, pure, and healthful, on the toiling masses of this great community.'
Hugh Simmin, *Liverpool Mercury* 1856.

Public baths for washing and recreation as opposed to purely medicinal bathing became increasingly popular during the 19th century out of concern for the hygiene of the working classes when very few dwellings had bathing facilities and sanitation was poor. The 1846 Baths and Wash Houses Act allowed parish vestries to build slipper baths, laundries and open air pools. This was amended in 1878 to allow for the building of covered swimming baths. By the 1890s covered baths became increasingly widespread as swimming for recreational reasons became more popular but also because the Act permitted the pool to be covered in winter to serve as a public hall, providing an added amenity and incentive for building. The first few baths tended to be simple but by the 1900s were increasingly elaborate and were often designed as architectural statements that projected a private institution's prestige or a public authority's commitment to health and welfare. Parallel to the

public baths, the Victorian period also saw the emergence of Turkish Baths located in specially constructed premises. The larger establishments could contain first- and second-class (male) pools and a separate ladies' pool, slipper baths for both sexes, changing rooms, a gallery, a laundry, perhaps a board room, and would have had their own boilers and chimney. In addition, wider public use could be catered for by a stage in the main pool hall, galleries and seating areas for spectators and a cafe. By the interwar period baths were desegregated and separate pools had fallen out of fashion. Hygiene was improved by the use of filters and the chlorination of water.

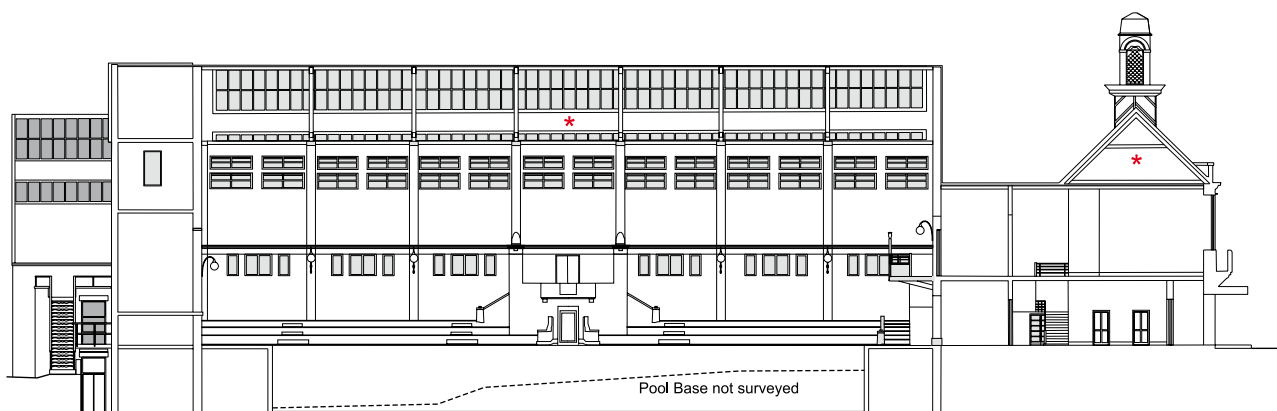
During the second half of the 20th century, as the majority of houses had washing facilities, the emphasis changed to swimming for recreation and health rather than hygiene. In addition, many baths became part of a wider sporting and exercise complex including gymnasias, squash

Sections through the building.

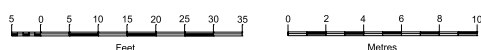
Drawing: Marcus Abbott



Cross section through both pools



Longitudinal section through main pool



* Please note.
Access to the roof spaces was not available at the time of survey, therefore the exact structure of the roof is not known.



Main pool side gallery

courts and a multi-purpose sports hall. These developments can be traced through changes in name from baths to swimming pool to leisure centre.

The Entwistle Road baths were designed and built by the Borough Surveyors Department and completed in 1937 at a total cost of £67,131, with R T Howarth of Rochdale being the main contractor. The baths included two swimming or plunge pools, slipper, Turkish, Russian and foam baths, a café and a stage in the main pool hall for concerts. They were formally opened on 25 May 1937 at 3p.m. by the Mayor of Rochdale, Councillor Charlie Crowder, JP. The opening ceremony included speeches, a tour of the building and according to the programme of events, 'Bathing Parades by Mannequins and an Exhibition of Ornamental Swimming'. The company present included various councillors, the local MP, a representative of the contractors, Miss Yorkshire and the 'Cotton Queen of Great Britain'.

The baths were built to replace the existing Smith Street Baths (built 1868) and the site at Entwistle Road was chosen partly because it was central to the town but also because of the proximity of the refuse destructor at the

adjacent Sanitary Depot which was able to provide steam for the baths, negating the need for a separate boiler house and plant.

The detailed analysis of the Entwistle Road Baths has enabled a fuller understanding of the form and function of the complex in its context as an interwar municipal baths. The broad design of the baths adopted the (then) current thinking with a breadth of facilities, but it is only through a consideration of the plan form that the flow and functions within the building can be appreciated. It is essentially a building of two functions reflected in the design and placing of two discrete areas. The public baths (plunge, slipper, Turkish, etc.) for general use were focused around the entry lobby which gave access to all areas. The second area is the foyer to the main baths, which acts as a prelude to the main pool hall for its secondary use for public events such as galas and musical entertainment. The design of this space, with flanking dog-leg stairs and triple doors to allow swift movement of an audience, owes more to the design of buildings of public entertainment such as theatres and cinemas. The use of the foyer by bathers was as a corridor leading to the male changing rooms on the eastern side and to the café above.



Control panel (above): Main pool foyer staircase (right)



One of the key factors in managing hygiene was the management of people. Control of visitors through the ticket office enabled clean towels to be issued, wide doors and corridors enabled efficient access to the various baths, and segregation of spectators from bathers around the pools reduced contamination of the water. By having dedicated changing rooms rather than pool-side cubicles, access to the pools was managed through footbaths and continuously running showers. Although mixed bathing had become acceptable by the 1930s, there was clear physical separation of the changing facilities with changing rooms on opposing sides of the two pools and separate access and waiting rooms for the slipper baths.

The use of materials is very much of its time. Engineering brick and stone was commonplace for facing but the baths also used large amounts of reinforced concrete. Little of this is visible as it was covered over but it is used extensively in basements, out of public gaze. The pools and the surrounding platforms and steps as well as the floors of the female changing rooms are all concrete. Elsewhere all floors must be concrete as terrazzo and tiling could not be laid on wood. The use of terrazzo and other composite materials for the changing cubicles and wall coping in the main pool is typical of the interwar boom in the use of

synthetic materials and polymers. Chromed steel, another contemporary material, was used for handrails and the café furniture.

'A splendid antidote to our modern largely sedentary existence and perhaps the finest of all exercises as every muscle of the body is brought into play. When they have ceased spending such fantastic sums on armaments they will be able, for the cost of a couple of bombing aeroplanes, be able to build a new swimming bath.'
Mayor of Exeter, 1939.

The building also reflects the social history of the area. Although they no longer survive, the presence of slipper baths, 17 for men and 8 for women, was testament to the need for health and hygiene which the building met. They also indicate that significant numbers of dwellings in the area were still without bathing facilities in 1937. One significant aspect of social history is that the building was designed and built by the local authority. The Borough Surveyors Department was responsible for the design, not a named architect. The baths were designed and built well and incorporated up-to-date ideas and styles. In the 1930s there was an economic depression which created a strong sense of civic responsibility and, whilst the commentators of the time may have expressed themselves in paternalistic ways, a clear sense of philanthropy prevailed.

Text: Huw Pritchard

Illustrations:

Marcus Abbott

Photography:

Michael Andrews

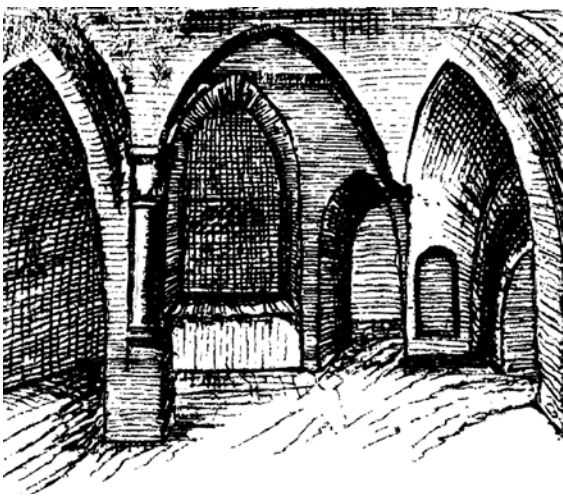
Nottingham's Medieval Sandstone Caves

In AD 893 the Welsh monk Asser, writing in his *Life of Alfred*, described how in 868 'the army of the pagans leaving Northumberland invaded Mercia and came to Nottingham, which is called in the British tongue "*Tigguocobauc*", which means "the house of caves", and they wintered there the same year'. The exact location of *Tigguocobauc* is unknown, but over 500 man-made sandstone caves are known beneath the modern city of Nottingham. Trent & Peak Archaeology, the newest member of the YAT family, has been conducting a laser survey of those caves.

The Nottingham Castle Sandstone into which the caves are all cut is itself unusual – a soft Triassic flood deposit with few joints and fractures, widely spaced bedding planes and little lamination, making it easy to carve but highly resistant to collapse. It seems entirely likely that the exposed cliff-faces flanking the River Leen were occupied way back into prehistory and formed the core of Asser's *Tigguocobauc*, but any datable evidence for this is now lost. The Anglo-Saxon *burh*, Norman Castle and medieval town grew up on top of the cliffs, overlooking the Trent and Leen floodplains to the south and flanking the old road from London to York.

Although *Tigguocobauc* is lost, many caves can be dated to the later medieval period. The Rock Chapel of St Mary is a possible earlier hermitage site known to have been used by monks from nearby Lenton Priory in 1239, cut back into the cliff-face. Although widely modified and reused since the Middle Ages – as a hunting lodge (1609), a notorious 'haunt of the lowest of society' (1820), a bowling club pavilion with skittle alley (1852), an air raid shelter (1940), and offices for a caravan showroom (1985) – elements of the medieval chapel including the altar and an ambulatory can still be recognised.

The survival of caves beneath the Victorian Birkin's lace warehouse and the post-war Broadmarsh shopping centre allow a rare insight into Nottingham's medieval industries. The Birkin's cave is one of several underground medieval maltings found in the city. These complex caves contain several elements: a well, a cistern, a germinating floor, and a kiln. Barley would be placed in the cistern and soaked with water from the well. It would then be spread on the germinating floor and turned occasionally with a malt shovel until germination was underway. Finally the germinating barley would be placed on a raised floor in the kiln and roasted by a fire below. The more the barley



Above: The altar in the Rock Chapel of St Mary, as drawn by Stretton in 1803; right: The same scene as surveyed in 2011.





The medieval malting below Birkin's lace warehouse. 360-degree panoramic image, showing (left to right) the malt kiln, germination floor, well and cistern. Note the carved crosses and the pulley-beam slot above the well.

(now called malt) was roasted, the darker the resulting beer would be. Generally malting was a process for the winter months only, but the cool and stable climate of these underground facilities allowed it to continue all year round. This bolstered Nottingham's fame as an ale town. This cave is an extraordinary survival of a virtually intact medieval factory.

The Broadmarsh Centre caves (BI2) were originally individual features beneath houses flanking the ancient street of Drury Hill. The demolition of Drury Hill revealed an underground tannery for processing hides, as

well as pub cellars and storage caves. This cave, cut back into the cliff face, would once have been open to the south with views across the River Leen and the Broad and Narrow marshes now preserved only as street and shopping complex names. The tannery spans two caves, one supported by a central pillar. In the floor are numerous rock-cut vats, once filled with the noxious fluids (including urine, lime and dog faeces) required for turning skins into leather. The complex, which is open today as a tourist attraction, is remarkably similar to the famous outdoor tanneries still processing leather in Marrakesh and Fez.



Plan view of the Broadmarsh tannery cave. Laser-scanned silhouette image.



The legendary Mortimer's Hole. Laser-scanned image with much of the Castle Rock removed.

Nottingham Castle, built high on the rock that takes its name, is as rich in caves as legends. These include King David's Dungeon (CD5), where David II of Scotland was reputed to have been held prisoner in 1346, the Slaughterhouse Cave, the Water Cave, the Western Passage which incorporates an ice-house (CD2), and the famous Mortimer's Hole (CD1). This tunnel, leading from the base of Castle Rock to the upper bailey of the medieval castle, may have been a player in one of the most dramatic episodes in Nottingham's history.

Roger de Mortimer, an English nobleman, had assumed control of the country in 1326 after deposing (and probably killing) Edward II, and having an affair with his wife, Isabella. In October 1330, a parliament was called at Nottingham. Mortimer and Isabella stayed in the royal castle, while the 17-year-old Edward III and his supporters lodged in the town. On the night of 19 October, Edward's troops covertly entered the castle via a secret tunnel, capturing Mortimer and Isabella. Mortimer was sent to the Tower and then to Tyburn, where he was hanged on 29 November 1330.

Legend has it that the secret tunnel was the cave now known as Mortimer's Hole, but there are reasons to doubt this attribution. Contemporary accounts refer to a secret tunnel leading west into the hunting park. Mortimer's

Hole is, and was, neither secret nor westward orientated; instead it is a rather well-known passage running south to the Leen. There is, however, a cave that fits the description. Known as the North-Western Passage (CD3), it is now completely blocked at the castle (east) end and mostly blocked at the park (west) end. It is possible, however, for a determined cave explorer to lift a flagstone in the garden of a 19th-century house, crawl through a manhole, under a low rock-cut arch and across large quantities of Victorian rubble, before being rewarded by a short stretch of stepped tunnel leading up towards the castle. While proof seems unlikely, this must be a strong contender for the true Mortimer's Hole.

Nottingham's caves continued to be used for a wide variety of purposes right up into the 20th century, and many are still in service as cellars and garages. The Georgian and Victorian periods in particular gave us spectacular follies and huge underground quarries, while some of the surviving Second World War air-raid shelters are especially evocative and moving. However it is the medieval caves that perhaps fascinate most: an intriguing glimpse into a lost world of subterranean endeavours, hidden from view beneath a modern European city.

David Strange-Walker & Julia Clarke
Trent & Peak Archaeology



Yearsley Moor

over 4,000 years of human presence



At first glance Yearsley Woods might seem like any other unremarkable conifer plantation, but dig a little deeper and you might be in for a big surprise. That was certainly the response of a group of volunteers who came together in 2009 as **The Yearsley Moor Archaeological Project** to uncover the mysteries of this area of woodland in the Howardian Hills, 22 miles north of York.

Although there was some knowledge about the area, no specific study had been carried out before and so the volunteers set about delving into its diverse past. After the volunteers had finished crawling through dense undergrowth beneath the pines and silver birch trees, scrolling through miles of microfiche tape at the County Records Office in Northallerton and

most recently excavating at two locations within the woodland, the story of the area began to take shape.

Yearsley's remnants of the past might be a little obscure and hidden away, but they are there and they tell a story of 4,000 years of human activity. The delicate outlines of humps in the forest and on adjoining fields are evidence

of human presence since the Bronze Age. Alas, the mounds have been 'excavated' in the past by treasure hunters.

In 1374 King Edward III granted the de Etton family at Gilling Castle the right to enclose an area as a deer park for hunting. The original legal document, including the King's Great Seal, can still be studied at the County Records Office in Northallerton. Roughly two-thirds of the deer park boundary has now been traced.

The remains of bell pits indicate an extensive coal mining industry from medieval to early modern times. A deed from 1648 shows the coal mining rights being leased for a year for the princely sum of £50, indicating the local importance of the industry. The remains of extensive limestone quarries have also been recorded, the stone being extracted for the making of lime in specially designed kilns.



Boundary stone



By the 18th century the Fairfax family owned Gilling Castle and, as was fashionable amongst rich landowners, had extensive landscaping work carried out in the park and garden, including such features as temples, ponds, a boat house and the planting of a wide variety of non-local trees and shrubs. Boundary stones were carefully positioned to demarcate the land of Gilling from the neighbouring Newburgh Priory estate. These stones were recorded in a legal document of 1796 and some can still be found today.

John Wedgwood, of the famous Staffordshire family, founded a pottery in Yearsley in the mid-17th century, manufacturing large cisterns, puzzle jugs, plates and bowls. This business was later transferred to Heworth.

Research was conducted into the military presence on Yearsley Moor from the late 19th century to the end of the Second World War. Although there was a strong seasonal military presence in neighbouring locations (Duncombe Park near Helmsley for example), no record of military training on Yearsley Moor itself has been found. The war memorial at Gilling East records the death of 13 local men in the First World War. Two aircraft accidents occurred locally, at Oulston and Yearsley village.

The volunteers have been working as part the Heritage Lottery-funded 'Lime and Ice' project on behalf of the North York Moors National Park and other partners. To find out more visit www.northyorkmoors.org.uk

Authors: J. Bradfield, G. Gaudian, E. M. Sanderson, G. Snowdon, C. Thorn, C. Williams, K. Werner



Haymarket Hostel



Since late January 2012 a team from York Archaeological Trust has been busily working at the former Haymarket Hostel and Car Park site on Peasholme Green, funded as part of the redevelopment of the area by City of York Council. Readers who have been following the Trust's activities for some time may remember the excavation of part of this site during the late 1980s when the location of the 'lost' church of All Saints, Peasholme Green, was confirmed.

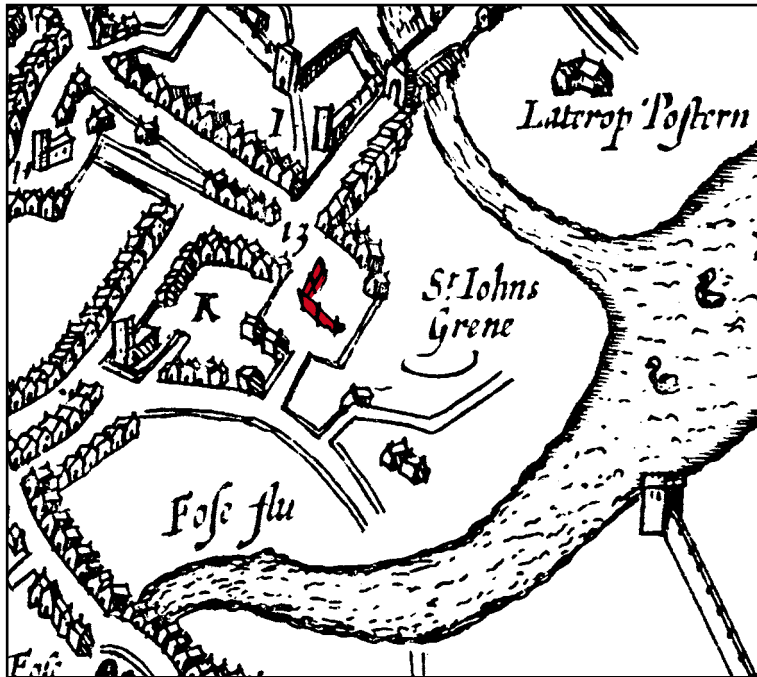
All Saints' Church is thought to be of 11th/12th-century foundation and was in use until the 16th century. Although officially closed by Act of Parliament in 1549, it continued to be used until the late 16th century, after which it was largely demolished. Documentary sources indicate that the roof tiles and building stone were taken for re-use elsewhere in the city in 1586. However, part of the building is depicted on Speed's 1610 map of York and partial ruins are thought to have survived into the early 18th century.

The opportunity to return to the site in 2012 after the demolition of the hostel, and the

investigation of a much larger area than that of the 1986–7 excavation, has produced some remarkable archaeological discoveries.

These include a large Roman defensive ditch and possible clay extraction pits, and post-Roman terracing deposits, evidence which suggests that the archaeological levels below the church and graveyard at the site may broadly reflect the land-use recently identified at Hungate.

The previously unexcavated south and east sides of All Saints and its surrounding graveyard are currently being investigated, allowing the



Detail of John Speed's map of 1610; the building in the rectangular area left of St John's Green seems to represent part of the former All Saints' Church



Top right: Substantial stone foundations of a medieval building

Bottom right: Excavating one of the burials from the graveyard



full extent of the church to be defined. The initial evidence suggests that the church was of at least two phases and that the east and west ends of the building were buttressed and had more substantial foundations than the north and south walls.

In addition to the church and graveyard, some evidence of medieval vernacular buildings near Peasholme Green and around the churchyard was anticipated. However, the uncovering of two very large medieval stone buildings from beneath a thick layer of demolition rubble on the east side of the churchyard was an unexpected discovery. Thought to be domestic buildings of 12th- to 13th-century date, judging by the quality of their construction and their 1m thick dressed stone walls, they were evidently of considerable status. Very few examples of stone medieval houses are known in Britain. Although fragmentary standing remains of two 12th-century examples survive in York

at Stonegate and Grays Court in the Minster Close, the excavation of one in the city is unprecedented. Over the coming months the focus of the excavation turns to the removal of the burials within the excavation area. Meanwhile, it is hoped that more detail will emerge about these intriguing buildings from documentary research and detailed post-excitation analysis.

Ben Reeves



For more information about All Saints, and the churches of York see: 'The Medieval Parish Churches of York: The Pictorial Evidence' by Barbara Wilson and Frances Mee, published by York Archaeological Trust.



Harry Gration and author Van Wilson, seated, with project manager Christine Kyriacou, top left, and interviewees from *The Changing Face of Clifton* pose for the press at the book's launch in Barley Hall in October 2011

Oral History Update

The Changing Face of Clifton, No. 5 in YAT's oral history series, was launched in October 2011 in Barley Hall with BBC's Harry Gration in attendance. Harry, an old boy of St Peter's School which is featured in the book, wrote the foreword, and gave an entertaining speech encouraging people to throw off their Northern habits and buy rather than borrow the book. Harry's speech was obviously effective as the book was an immediate success. It sold out within three months and has already been reprinted!



Rowntree Gymnastics Club, 1928



York boxer Frank Fowler sparring, 1920s



Archery demonstration at Lord Mayor's Gala, Knavesmire, 1976

Work is well underway on the sixth book in the series, on Olympic sports in York. Publication will be in June 2012, just before the London 2012 Olympic Games. The new book will celebrate 25 different Olympic sports and York sportsmen and women who have represented local clubs and societies. Some Olympians are included. York has been particularly well-known for swimming, football and cycling. Other sports to be featured in the book include archery, athletics, badminton, boxing, fencing, gymnastics, hockey, judo, table tennis, taekwondo, tennis, volleyball and water polo.

We are now planning our seventh book in the series for publication in 2013. We have chosen to study Coney Street, one of York's main shopping

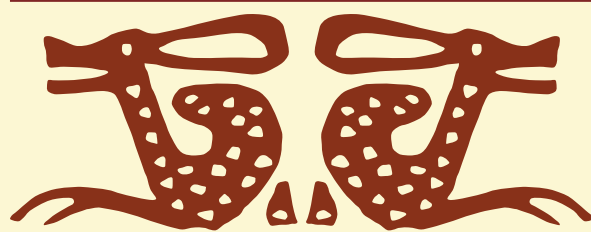
streets. Coney Street has a long and fascinating history going back to the Roman era. In more recent times it had been an important centre for retail fashion, boasting many 'costumiers' and furriers, and, of course, the well-known Leak and Thorpe department store. There were pubs (such as the famous George Inn), small press and publishing houses, cinemas, a Turkish bath, and churches. The year 2012 marks the 800th anniversary of York becoming a self-governing city, and the project will mark this by encompassing the Mansion House, at the end of Coney Street, and the Guildhall, in its 2012 interviews. Clearly once again a fascinating topic!

Christine Kyriacou

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