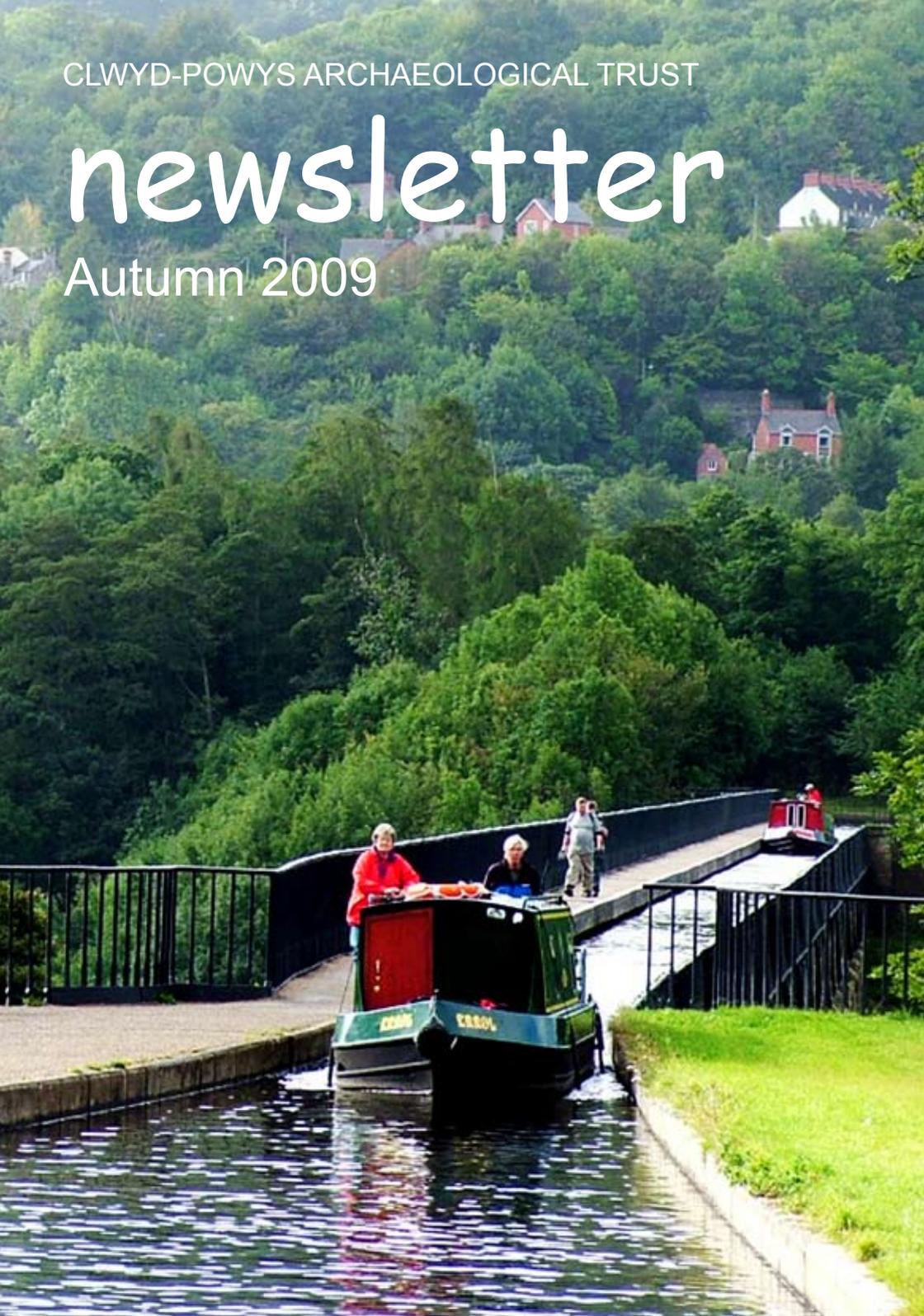


CLWYD-POWYS ARCHAEOLOGICAL TRUST

newsletter

Autumn 2009



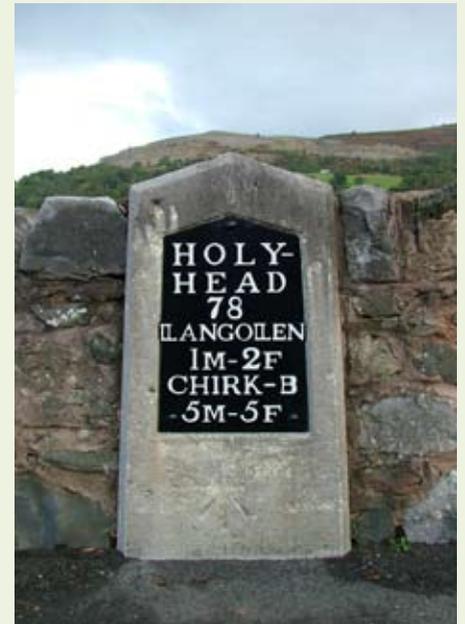
The Vale of Llangollen World Heritage Site

In June 2009 the Pontcysyllte Aqueduct and Canal was granted World Heritage status by UNESCO, joining the Castles and Town Walls of King Edward in Gwynedd, and the Blaenavon Industrial Landscape, to become Wales' third World Heritage Site.

The Pontcysyllte World Heritage Site stretches for 18 kilometres along the canal, from the Horeshoe Falls in the west to the Chirk Aqueduct in the east. The focus is undoubtedly the Pontcysyllte Aqueduct itself – a feat of civil engineering of the Industrial Revolution, completed in the early years of the 19th century – but the landscape through which the canal runs is no less remarkable.



The Vale of Llangollen and Eglwyseg Historic Landscape forms a buffer zone through which Wales's newest World Heritage Site runs. As defined in the *Historic Landscapes Register*, the historic landscape includes many sites of historical interest as well as some stunning scenery. In addition to the Pontcysyllte aqueduct there are the Iron Age hillfort and medieval castle on Dinas Brân, the 9th-century Eliseg Pillar, the 12th-century Cistercian abbey at Valle Crucis, slate quarries above the Horseshoe Pass and Thomas Telford's Holyhead Road.



Photos on this and previous page. Top left: Eliseg's Pillar. Bottom left: Valle Crucis. Top: Eglwyseg Rocks. Right: milestone on the Holyhead Road.



The Pontcysyllte World Heritage Site is a fitting tribute to the ‘Ladies of Llangollen’ who in the last few decades of the 18th century initiated perhaps the earliest conservation movement in Wales. They campaigned vociferously against industrialisation in general and the opening of quarries and cotton mills in particular, which according to local newspapers they feared would ‘leave their beautiful seat no longer a retreat from the busy hum of men’.

They likewise campaigned against Telford’s Holyhead Road, but evidently felt less threatened by the new canal. They were numbered amongst the party of distinguished guests occupying the first barges to cross the Pontcysyllte Aqueduct, amidst great pomp at the opening ceremony in 1805.



Plas Newydd, Llangollen with Dinas Brân in the background (above) the home of Eleanor Butler and Sarah Ponsonby who lived here in the late 18th and early 19th century. The two women played host to an illustrious coterie of friends and acquaintances, becoming known affectionately as the ‘Ladies of Llangollen.’



The Pontcysyllte aqueduct, conceived by the celebrated civil engineer Thomas Telford, is a pioneering masterpiece of engineering and monumental metal architecture.

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For the Pontcysyllte World Heritage Site see: <http://whc.unesco.org/en/list/1303>
 For the Vale of Llangollen and Eglwyseg Historic Landscape: www.cpat.org.uk/projects/longer/histland/llangoll/vlintr.htm

Piecing together the past in the Walton Basin

With the help of local landowners and farmers we are learning more and more about the remarkable complex of prehistoric sites discovered from the air which straddle the Hindwell Brook in the Walton Basin of eastern Radnorshire.

The complex now appears to include two cursus monuments (long and narrow ditched enclosures which probably had a ritual function), two palisaded enclosures,

a causewayed enclosure, a stone circle and standing stone, burial mounds, settlement sites, a 'formative henge' or a supersize ring-ditch (perhaps similar to the earliest phase of Stonehenge), and a triple-ditched enclosure.

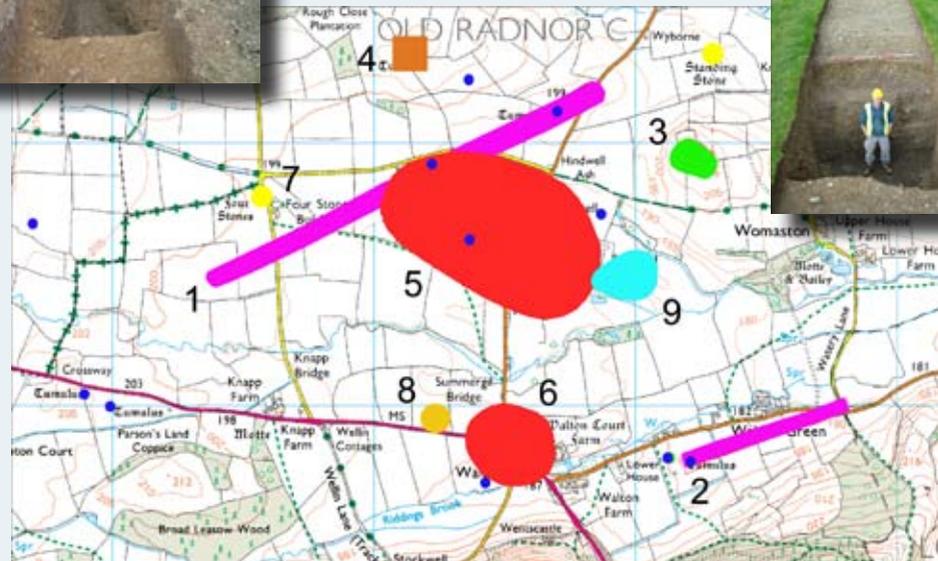
Radiocarbon dating (explained more fully on page 8) plays a vital role in gradually piecing together the sequence of events in the overall story. Earlier excavations by the Trust on the site of a burial mound at Upper Ninepence

revealed a sequence of settlement activity which has been shown by radiocarbon dating to span the period between about 3000–2500 BC, associated with middle and later Neolithic pottery. The staggering Hindwell palisaded enclosure – the largest palisaded enclosure known in Britain, covering an area of 35 hectares and enclosed by over 1400 posts the size of tree trunks – has been shown by radiocarbon dating to have been built in the period between 2800–2500 BC.

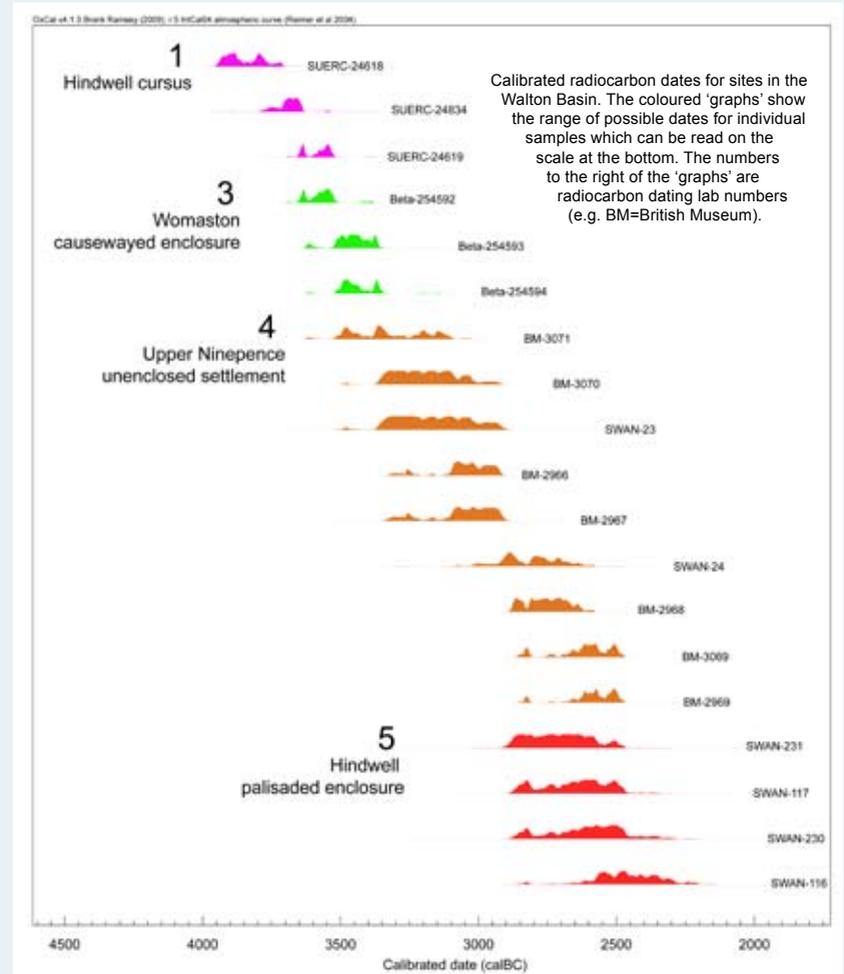
More recent work is pushing back the origins of this complex of monuments. Small-scale excavations on the newly-discovered Womaston causewayed enclosure was reported in the Spring 2009 *Newsletter*. We have now received radiocarbon dates which show that it was built in the earlier Neolithic period, between about 3400–3600 BC. Similarly, trial work on the Hindwell cursus shows that it was probably built at about the same time. The story hopefully continues . . .



Left: one of the ditches of **1** the Hindwell cursus, excavated in February 2009. Right: inner and outer ditches of **3** the Womaston causewayed enclosure excavated in the summer of 2008.



Sketch map of prehistoric sites in the Walton Basin. **1** Hindwell cursus, **2** Walton Green cursus, **3** Womaston causewayed enclosure, **4** Upper Ninepence settlement site, **5** Hindwell palisaded enclosure, **6** Walton palisaded enclosure, **7** Four Stones stone circle, **8** 'formative henge', **9** triple-ditched enclosure. Blue spots represent burial mounds or 'tumuli'.



Calibrated radiocarbon dates for sites in the Walton Basin. The coloured 'graphs' show the range of possible dates for individual samples which can be read on the scale at the bottom. The numbers to the right of the 'graphs' are radiocarbon dating lab numbers (e.g. BM=British Museum).



Radiocarbon dating results for the haft of a Late Bronze Age socketed axe from the Breiddin hillfort, Montgomeryshire.

How radiocarbon dating works

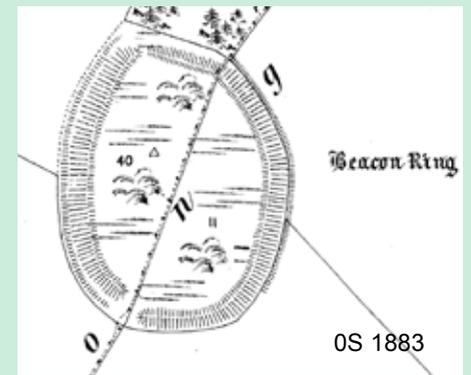
Radiocarbon (^{14}C) is a weakly radioactive isotope of carbon, continually produced in the atmosphere by cosmic rays. The radiocarbon is taken up by plants during photosynthesis and also by animals which eat the plants. At death, however, living things stop taking in carbon of all types, and what they already contain eventually decays away, like all radioactive materials, at a known rate. It is this slow decay that makes carbon dating of archaeological samples possible. By measuring the ratio of radiocarbon to ordinary carbon in something that was once alive it is possible to estimate when it died. Typical samples used for dating include charcoal, animal bone and plant remains such as wood.

It is important to make sure that the sample to be used for radiocarbon dating is uncontaminated and clearly relates in some way to the particular event to be dated. A classic example of this comes from the Breiddin hillfort in Montgomeryshire, shown above, where a Late Bronze Age socketed axe found during excavation still held part of the original wooden haft that had been burnt in a fire. Dating the charred haft helped us to say when the earliest hillfort at the site was built.

Radiocarbon dates are not precise, however. Radiocarbon decays relatively slowly and consequently dates are quoted at plus or minus a particular reading. In the example provided by the British Museum laboratory (BM) shown above, the central value is given as 2704 radiocarbon years before present (BP, which by convention is AD 1950), plus or minus 50 years. Further uncertainty is introduced by the fact that the proportion of radiocarbon in the atmosphere has varied over time, which means that it is also necessary to 'calibrate' the results against samples of known date (obtained from tree-ring dating). The final result for the haft of the Breiddin axe, shown above, is that there is a 68.2% probability that the wood (and by extension the axe and the hillfort) date to between 900–815 calibrated years BC, which though imprecise, this is better than guesswork!

The Beacon Ring experience!

Our Autumn 2008 *Newsletter* announced that we had just acquired the magnificent Beacon Ring Iron Age hillfort, just to the east of Welshpool. During the last year we have spent time thinking about how to improve the site for everyone's enjoyment – one of our major plans being to remove the maturing trees that were planted inside the hillfort and to turn it back into meadow. With the help of work-experience students and volunteers we have also been able to make a start on survey work designed to tell us more about the site.



Above right: Ordnance Survey plan of the hillfort in 1883 when it used to be under grassland. Above: the southern entrance to the hillfort. Right: a work-experience student being shown how to use an EDM for survey work at the hillfort.

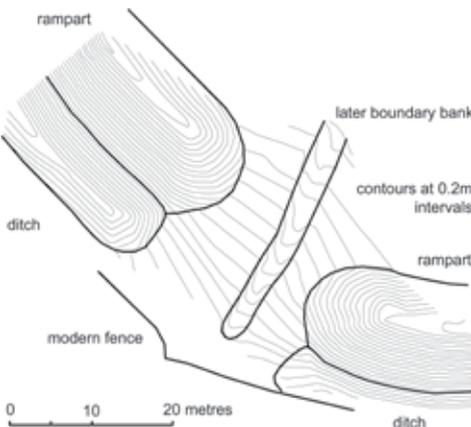




In looking at the best way of removing the trees and turning the interior of the hillfort back into grassland the Trust is grateful for the helpful advice that has already been received from both the Forestry Commission and the Montgomeryshire Wildlife Trust.

The survey work undertaken with the help of work-experience students and volunteers has included detailed ground survey and geophysical survey of part of the earthworks and a rapid vegetation survey of the hillfort defences. The work was undertaken in July 2009 with a team of up to 7 students from Welshpool High School, Builth High School, Llanidloes High School, Bishop's Castle Community College and Caereinion High School.

The aim of the project was to introduce students to a working environment, to give them the opportunity of finding out what archaeology is, and at the same time learning more about the site and contributing to the development of a monument management strategy. Other topics that the students took part in were survey work at a medieval moated site on Moat Farm near Welshpool, building survey work in and around Welshpool, and work on the office-based Portable Antiquities Scheme involving the recording of archaeological finds brought into the Trust. The work was carried out as part of the *Festival of British Archaeology 2009*, coordinated by the Council for British Archaeology, and also attracted a number of other volunteers.

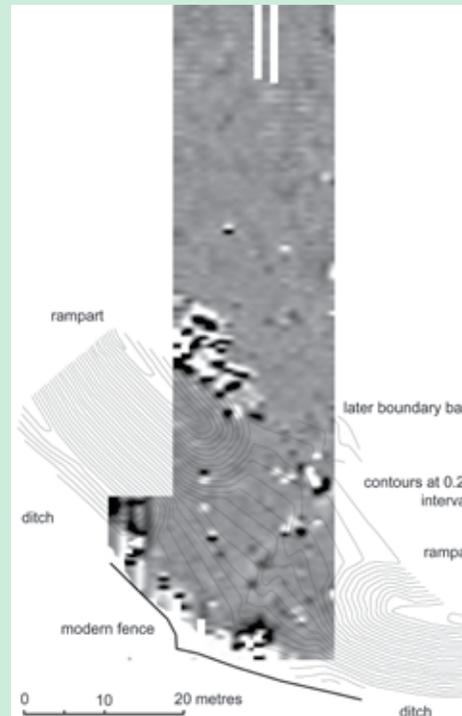
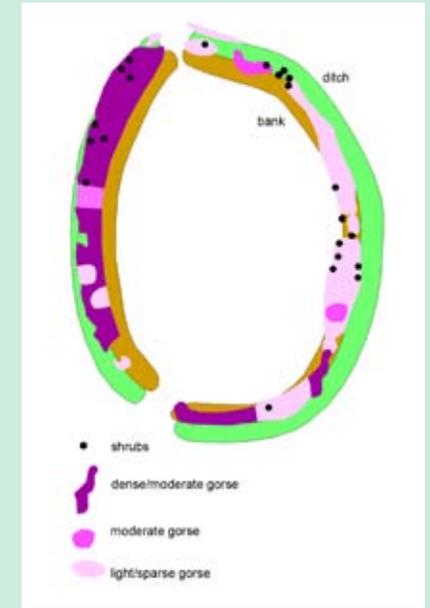


Left: EDM survey work in progress on the southern hillfort entrance with (below) results of the detailed contour plan.

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For a fuller report on the work carried out at Beacon Ring during the last year go to: <http://www.cpat.org.uk/beacon/index.htm>

For a report on the survey work carried out by work-experience students go to: <http://www.cpat.org.uk/outreach/nad/workex09.htm>



Geophysical survey was carried out by the team of students on part of the southern entrance to the hillfort with a magnetometer (top left). The results (left) are not as clear as had been hoped, but appear to show an area of burning just inside the entrance. The vegetation survey (above), carried out using a hand-held GPS will be helpful in identifying future priorities for clearing the gorse and shrubs that currently obscure the defences.



Highway 64 revisited . . . Newtown's Roman road!

The question of building a bypass to avoid the notorious bottleneck at Newtown has been hotly debated for many years. Roman road engineers evidently faced fewer constraints when they built the new military road through the Severn valley in about AD 70. The road, built to facilitate troop movements and promote trade in the period following the Roman conquest, is listed as RR64 in Margary's treatise, *Roman Roads in Britain*. Almost 300 metres of the Roman road – one of the longest stretches ever excavated in Wales – was examined in June and July 2009 in advance of the new Tesco store to be built in the angle between the Kerry Road and Pool Road.



The Newtown Roman Road site viewed from the north, in the angle between the Kerry Road to the left and the Pool Road to the right. The Roman road can just be made out along the right-hand side of the development site, parallel with the railway – an association that perhaps has greater significance than might first appear. The late Professor Michael Jarrett of Cardiff University was wont to illustrate his lectures of the Roman conquest of Wales by a map of the railways of Wales in their heyday, c. 1910. As he said, 'the railways give a fair indication of what will have been possible routes of penetration for a sizeable Roman army'.



The Roman road at Newtown during excavation in June 2009, looking south towards Pryce Jones' Royal Welsh Warehouse. A Roman copper coin (dupondius) from the make-up of the second road surface dates to the reign of Trajan, emperor between AD 98–117. The TR at the beginning of Trajan can just be made out at the top, but will hopefully become clearer once the coin has been conserved!

Three main phases of road construction were identified, each composed of a layer of compacted river gravel and represents a considerable investment in time and effort. The earliest phase was laid on a bed of imported clay, with a road width of around 4.5 metres and a single roadside ditch on the south-east side. The second phase of road construction was laid directly onto the surface of the first, formed of graded river gravel which was compacted to form a solid surface, within which a number of wheel ruts were identified. The roadside ditch was recut to form a wider and deeper feature, although again there seems to have been no corresponding ditch on the north-western side. A single Roman coin was found within the make-up for the second phase suggesting that repairs to the road were made in the early years of the second century AD. The final phase saw a widening of the road to around 6 metres – comparable to many modern roads – extending over the flanking ditch on the south-eastern side.

Earlier finds in and around Newtown clearly show that there was some form of settlement here, but the areas to either side of the Roman road appear to be devoid of contemporary



The Roman road at Newtown formed part of an arterial road linking the legionary fortress and subsequent Roman city at Wroxeter with the chain of forts further to the west. The air photo on the next page shows the line of the Roman road diverging from the modern road west of Newtown running towards Caersws where it must have crossed the meandering river Severn.

Caersws formed a local hub in the Roman communications network in mid Wales, with roads also branching off southwards towards the fort at Castell Collen (near Llandrindod Wells), northwards towards the fort at Bala, and westwards towards the fort at Pennal.

Small trading settlements sprang up next to the Roman forts at Caersws and Fordan Gaer to serve the needs of the military and survived into the later 2nd and 3rd centuries. Native farms continued to prosper in the surrounding countryside under the eye of the military.

The inscribed stone shown to the left was found in a Roman pit or well excavated by Mr Jeremy Connell in advance of building development in Newtown in 1976. The stone, which is about 20 centimetres across, may depict Mars, the Roman god of war, brandishing a sword and circular shield. Beneath his right arm is a rectangular object and a small animal. A number of holes drilled into the back of the stone suggest that the stone was mounted on a wall or post. Although there is relatively little evidence for the impact of 'Romanisation' in the area, charming finds of this kind may imply that the impact of the Roman way of life on native farmers was more profound than we think.



activity, with the exception of a rough spread of stone which had been laid on the same clay foundation as the road towards the south-eastern end of the excavation. Given the strategic importance of the road it is possible that a broad *cordon militaire* was maintained to either side.

Though now barely visible, the road evidently continued to form a distinctive landscape feature for a long time after the Roman period, the recently-excavated stretch of the Roman road in Newtown remarkably survived as a footpath up to modern times. The Pembrokeshire antiquary Richard Fenton made observations about the road in and around Newtown over two centuries ago in his *Tour in Wales* written in 1804. This shows that the road was still sufficiently distinctive at that time to form part of the parish boundary between the parishes of Newtown and Llanllwchaiern.



By chance, the excavation team for the Newtown Roman road included Paolo Scozzari, an Italian archaeologist who graduated from Bologna University.

Paolo, worked with the Trust in May to July 2009, finding out about how we do things here in Wales. He has a particular interest in medieval archaeology and spent much of his spare time visiting castles and abbeys in Wales.

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For further information about the Roman road project visit the Trust's website: www.cpat.org.uk/news/news.htm#r64
For more information about Roman roads in general see I D Margary's Roman Roads in Britain (1973)



The Newtown Roman road excavations generated considerable local interest. An open day, organised by Tesco, was held as the dig drew to a close, and attracted several hundred visitors even on a wet day!

The Trust is grateful to individual landowners for permission to carry out the projects described in this Newsletter. Funding or help has been provided by the following organisations:



Download: this and earlier editions of the Newsletter can be downloaded from www.cpat.org.uk/news/newslets/newslets.htm

Front cover: Pontcysyllte Aqueduct and Canal.

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