



Conserving the Calder stones

How a chambered tomb travelled from Liverpool to London

The small stone circle that has stood in Liverpool's Calderstones Park for the past half century is in fact the remains of a chambered tomb. Now its uprights have been carefully removed and taken to London for conservation before they return home to be arranged in a new installation more in keeping with their original form. [Carly Hilts](#) reports.

ABOVE & INSET
For around half a century, the Calder stones were displayed in a glasshouse in Liverpool's Calderstones Park. They have now been taken to a workshop in London for restoration and, after they return home, redisplay by Orbis Conservation.



ABOVE Orbis Conservation work to remove Stone F, the smallest of the Calder stones. Unlike its neighbours, this stone was set in concrete; the conservators have decided not to remove this, to avoid damaging the stone.

Stepping inside an unassuming unit on a Greenwich business park, I found myself surrounded by giants. These towering, brightly coloured forms were, in fact, 19th-century ships' figureheads, loaned to Orbis Conservation by the National Museum of the Royal Navy for expert restoration. It was another, equally monumental project that I had come to find out about, though.

The ring of six monoliths known as the Calder stones are Liverpool's earliest monument, but the

4,800-year-old uprights (which have spent the past half century in a glasshouse in Calderstones Park) are not in their original form, and have not stood in their original location for centuries. Made from local red sandstone and covered in prehistoric rock art, until recently the Calder stones were arranged in a rough circle – but it is thought that they probably originally formed part of a late Neolithic or early Bronze Age (c.2800-2000 BC) passage tomb similar to those at Newgrange, Co. Meath, and Bryn Celli Ddu, Anglesey.

This kind of burial mound, seen across northern Europe, had a long entrance passageway leading to a central chamber, sometimes with side chambers leading off it.

Now the stones have been lifted from their sockets and transported 200 miles south to Orbis Conservation's Greenwich workshop. There, they are being cleaned and consolidated ahead of reinstallation in a purpose-built new home at the rear of Calderstones Mansion House (see p.41). It is part of a project commissioned by national charity The Reader, and supported by the HLF and Liverpool City Council, that will create The International Centre for Shared Reading, a new community hub that also includes a theatre, café, and gallery space. This is only the most recent move that the stones have undergone, however.

TRACING THE STONES

Readers who lived in Liverpool before 1954 will remember the Calder stones ➔

BELOW LEFT Between 1845 and 1954, the stones were housed outside the entrance to the park, as shown on this postcard.

BELOW A full survey and assessment of the stones was undertaken before they were removed from the ground.

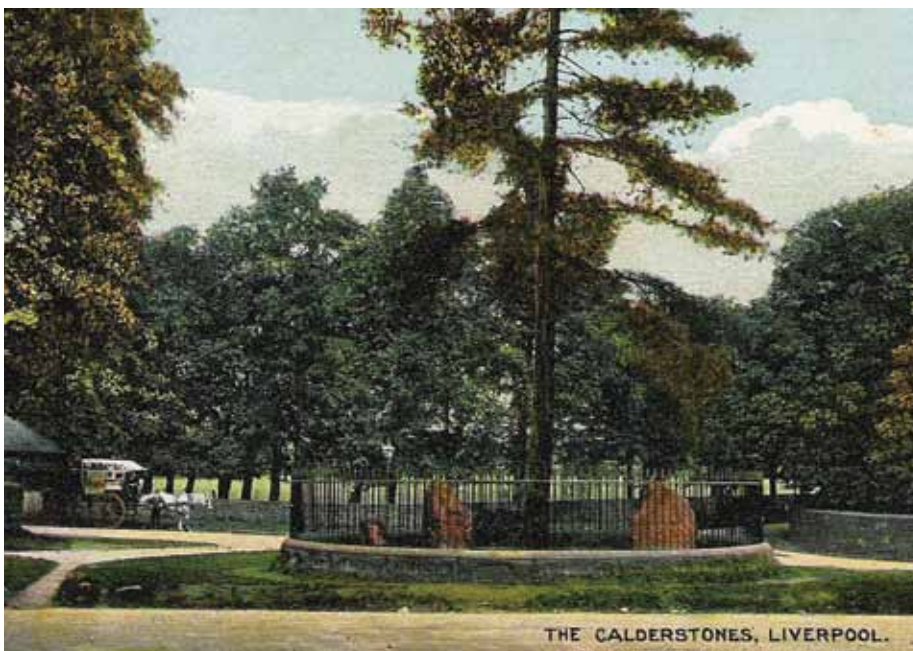


IMAGE: Trustees of National Museums Liverpool



RIGHT This bird carving, probably added to one of the Calder stones in the medieval period, was spotted by a Liverpool schoolboy just four years ago.

in a very different location, standing within a low circular wall just outside the park gates at the junction of Calderstones Road and Menlove Avenue. They had been placed there in 1845 by the owner of Calderstones Mansion House, a lead-shot manufacturer called Joseph Need Walker. At that time the parkland formed part of his estate (it opened as a park in 1905), and he wanted an eye-catching feature at the entrance. Following the fashion of the day, he arranged the uprights as a stone circle, but this interpretation was not accurate: earlier records attest that



the stones came from a burial mound a short distance away (its location is shown on a map of 1768). Our earliest reference to the Calder stones dates back 200 years earlier, though, when the site was mentioned

in a 16th-century boundary dispute (referred to as ‘the dojer, rojer or Caldwaye stones’). There, an accompanying map shows three stones set in a roughly oval mound.

What happened to this monument? Written sources testify that some of its stones were removed as early as the 16th century, but it was more seriously disturbed in the mid-17th century. An account of 1825 reports that ‘digging about the stones’ uncovered urns ‘made of the coarsest clay containing human dust and bones’ – probably secondary Bronze Age cremation burials that had been inserted into the mound by later communities recognising the monument’s

PHOTO: Francesca Jones

The Calder stones rock art

Five of the six Calder stones are marked with extensive patterns of Neolithic and Bronze Age rock art, as well as more recent graffiti (the plainer Stone F, smallest of the Calder stones, is not shown here). These markings were vividly documented during the 2007 photographic survey by Adam Stanford and George Nash, and these images are reproduced here by kind permission of the former.

The first image shows the front of Stone A, the largest of the Calder stones. On its surface you can see a series of

concentric circles reflecting typically Neolithic motifs, while towards its top, in the lighter coloured area, images of two bare feet have been carved, one above the other, during the Bronze Age. The dramatic colour contrast reflects the stone being displayed outside during the Industrial Revolution, when its natural sandstone colour was covered with carbonised black. Stone A’s reverse is not pictured, but it is decorated with spirals, concentric circles, and a small number of cupmarks.

The next two images depict the right and left sides of Stone B. The former has patterns of concentric circles and Bronze Age cupmarks, while the latter shows multiple grooved lines,



RIGHT The stones, each of which weighs between one and three tonnes, were removed using chain slings and gantries over a five-day period.

significance – and that some of the urns were dug up 60 years earlier. Another ‘sepulchral urn’ is mentioned in a 19th-century account, when the mound was dug into by workers gathering sand to make mortar for the construction of a nearby house. Unfortunately, the early 19th century would also see the complete destruction of the mound, during the expansion of a nearby road – though, in a luckier turn of events, a letter of the time quotes a local gardener, John Peers, who witnessed it, giving us invaluable insights into its original structure.

Peers recalls: *[I] remembered the*



Calder stones well, before they were set up in their present position. The roads at that time were narrow country lanes. At this place there are four crossroads, and the stones lay upon a large mound at the roadside, high above the road, on...

the south side. Only a few of the larger stones could be seen lying flat near the top, partly buried in the earth, and a few of the points of the other stones. Upon this mound, in the summer after work, and on Sundays, the boys and men from the neighbouring farms would come and lie in the sun... [I] well remembered the mound being destroyed. They were widening the road about the time it was done away with. When they dug down into it they found more of the stones, and the marked ones were among them. For some

time the stones were laid aside on the farm, and were taken away. Mr Booker had the largest and set it up in his field where it now is for the cattle to rub on... When the stones were dug down to... They looked as if they had been a little hut or ➔

cupmarks, and cup- and ringmarks. Other areas of the stone, not shown here, have more examples of Bronze Age footprints, as well as a small cross that was probably etched into the upright during the medieval period.

Images four and five show the front and back of Stone C. Here we can see further examples of typically Neolithic imagery, including spirals and concentric circles, but there are also Bronze Age elements – the broken upper surface of the reverse was later covered with a scatter of more than 60 cupmarks dating to this latter period. The stone is also extensively covered with modern graffiti, such as etched initials.

The penultimate image is of the reverse of Stone D, which is marked by prehistoric cup- and ringmarks. In stark contrast, its front (not shown) is carved with much later images, depicting probably 19th-century bootprints. Did these reference the Bronze Age footprints carved on some of the other stones?

The last image shows the reverse of Stone E. This is etched with more Neolithic and Bronze Age artwork, including footprints, cupmarks (arranged like the pattern of dots representing a five on dice), and concentric circles, but towards the bottom of the stone, at its lower right corner, you can also see a large Maltese cross that was probably added during the medieval period.



PHOTOS: all images in this box are copyright Aerial Cam, www.aerial-cam.co.uk



cellar. Below the stones was found a large quantity of burnt bones, white and in small pieces. He thought there must have been a cart-load or two.

Peers' description of stones arranged in a little 'cellar' suggests clear parallels with the central burial chamber of a Neolithic passage grave; might the 'burnt bone' reflect the accumulated cremated remains of a community who had used the monument as a burial space over a long period of time? It is possible too that the tomb formed part of a wider prehistoric landscape; a mid-16th-century map also shows a nearby mound labelled 'Pikeloo Hill', speculated to be another burial mound, while another isolated upright called the 'Rodgerstone' stood nearby. Liverpool's famous 'Robin Hood Stone' stands just 1km to the south of the Calder stones; it is covered in very similar cup and ring marks to the six monoliths, and may well have formed part of the same group. Was this an area of ritual focus and significance during the later Neolithic and Bronze Age periods?

ANCIENT ART

The fact that all but one of the Calder stones are covered with ornate rock art lends strength to suggestions of their having come from a tomb. The spirals, concentric circles, and

ABOVE Created using laser scans of the Calder stones during the recent conservation work, this digital model shows the stones in their familiar, if inaccurate, circular arrangement, and the shadow of the 1950s glasshouse that once contained them.

patterns of lines that have been etched into the uprights' surfaces are strikingly similar to examples recorded in Welsh and Irish passage graves, such as Barclodiad y Gawres, Anglesey, and Knowth, Co. Meath. There are also hints of later activity, though: many of the stones have more typically Bronze Age markings, including scatters of circular depressions called 'cupmarks', and patterns of cups and rings. Some of these are extensive – one of the uprights, known as Stone C, has a pattern of more than 60 cupmarks gouged into its upper surface. A number of the stones bear intriguing outlines of human feet, too.

These markings have been observed since early antiquarian examinations,

but in 2007 Adam Stanford and George Nash carried out a photographic survey using oblique light in darkness, which revealed a wealth of previously unrecorded artwork. New finds have also come to light in even more recent times: in 2015, Liverpool schoolboy Connor Hannaway spotted a small carving of a bird etched close to the base of one of the stones. This image is thought to be medieval in origin, and it is not the only carving on the stones that post-dates the prehistoric. Many of their surfaces are marked with modern graffiti, including the initials of visitors, while several of the stones, by contrast with the Bronze Age footprints, have been etched with (probably 19th-century) bootprints. A straight-armed cross has been etched onto Stone B, and a (probably medieval) Maltese cross can be seen on Stone E.

Since the stones were exposed and displayed outside, their surfaces have become weathered and many of the carvings are now quite worn (making the 2007 photographic survey, and images created during the latest work – of which, more below – invaluable resources for studying the ancient

BELOW Stark patterns of colour contrast on the stones reflect the period when they were displayed outside during the Industrial Revolution, discolouring their sandstone surfaces with heavy carbonisation. This stone is pictured lying down in Orbis Conservation's workshop.



PHOTO: C HILLS



LEFT The stones have been carefully cleaned using non-ionised water, dry brushing, and vacuuming.

to undertake a full photographic report and assess the stones' structural condition. Fortunately, despite their multiple disturbances and changes of location in the past, they were found to be very sound, although some of their surfaces were affected by delamination, with the layers within the sandstone beginning to separate. Laser scans of the stones and their glasshouse surroundings were also undertaken, creating a detailed digital model of the uprights and their former home.

Towards the end of 2018, Orbis Conservation returned to Liverpool, and the stones were carefully lifted, using a gantry and chain slings, before being transported to London on trucks. This was no mean feat: the largest stone (Stone A) is 2.4m long and 0.9m wide, and weighs a hefty 3 tonnes, while even the smaller

stones weigh around 1-1.5 tonnes. Extracting the stones and loading them onto the trucks was a five-day process – but, with that achieved, they were on their way south, making their most dramatic move away from their original location to-date.

I visited the stones in Orbis's Greenwich workshop in early December to learn more about how the stones were being conserved and prepared for reinstallation. What was particularly striking about the uprights was not just how big they were – like icebergs, much of their size is usually invisible below the surface – but how the story of their past could be clearly read on their external surfaces. Both the Calder ➔

LEFT In 1954, it was decided to move the stones from outside the park to a purpose-built glasshouse.

“Five of the six Calder stones are marked with extensive patterns of Neolithic and Bronze Age rock art, as well as more recent graffiti.”

artwork. In 1954, the decision was taken to move the stones indoors, and a purpose-built glasshouse, known as the Harthill Vestibule, was built for them inside the bounds of Calderstones Park. There they would remain for just over half a century, protected from the weather, although their poorly controlled environment led to further deterioration. In 2017, The Reader secured funding to build them a new home that would secure their future.

RECORDING THE STONES

This brings us to the present day, and Orbis Conservation's involvement with the stones. Orbis is managing both the conservation and the redisplay of the Calder stones, and in May of last year they visited the glasshouse





PHOTO: C Hills

ABOVE The lower end of this stone has been wrapped in aluminium foil, a protective barrier layer that has been applied as part of the remounting process before the stones are reinstalled.

stones' period of display outside during the Industrial Revolution, and their decades within the glass vestibule, have left clear traces on them, with dramatic patterns of discolouration. All parts exposed to the elements during the 19th and early 20th century show heavy carbonisation, colouring their surfaces a deep black, while the uncontrolled conditions of the glasshouse has also resulted in damage from water ingress, the freeze-thaw cycle, and biological growth.

This colour difference is dramatic: you can easily see at a glance which portions of the stones were above or below ground (the latter are much paler and closer to the original sandstone hue).

CONTRASTING COLOURS

This discolouration also left the conservation project with a decision to make: whether to attempt to remove the discolouration and restore the sandstone to its original colour. It has been decided not to do this, as it would leave too much of the stone exposed, making it vulnerable – and, the team notes, the dark colouration actually makes some of the rock art stand out more clearly in places. The

surface of the stones has been gently cleaned, though, using a combination of dry-brushing and vacuuming, while non-ionised water and swabs were used to remove bird droppings. Consolidants have also been injected to treat the delamination.

As for the mounting process, the lower ends of the stones have been covered with aluminium foil, which will then be coated in acetone resin. This will form a barrier layer to an outer protective jacket of Jesmonite (an acrylic polymer), protecting the porous sandstone from coming into contact with it. These steps

will make the base of the stones impermeable to water, guarding them against further damage from water ingress, salt, and the freeze-thaw cycle, and will also make the intervention completely reversible in case future researchers need to examine the stones once more.

The stones will be set in new silicone sockets with stainless-steel bracketing and dry sand packing. This stands in contrast to their previous set-up, where most had been packed with bricks. The smallest stone (Stone F), though, was set in concrete – possibly to allow more of



BELOW The stones have stood in at least three locations prior to their recent move. Here they are shown outside Calderstones Park.

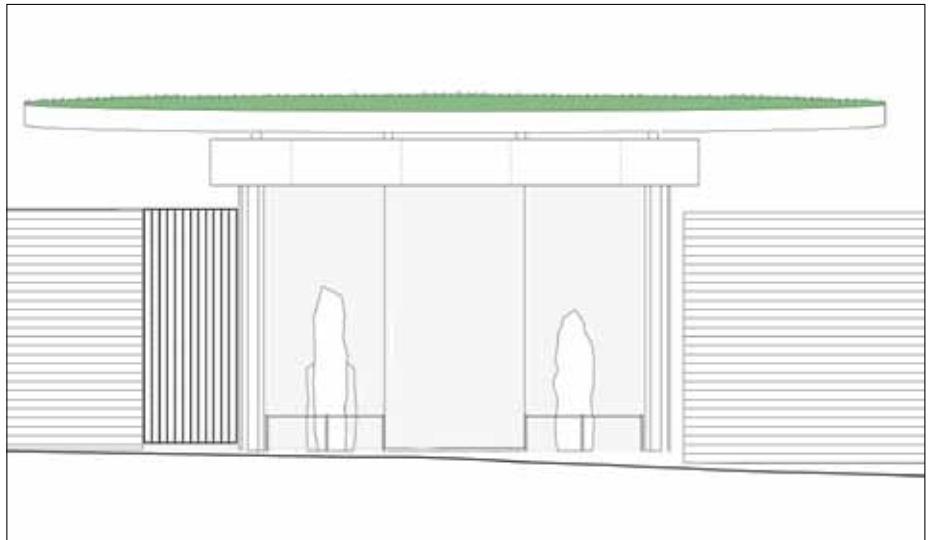
PHOTO: Trustees of National Museums Liverpool

it to be seen above the ground, as it was only shallowly set. The team is not planning to remove the concrete, as the risk to the stone is too great, but they will apply damp-proofing to prevent further water ingress.

At the time of my visit in December 2018, the stones were due to be returned to Liverpool in January, with the complex that forms their new home to be opened later this year. There, they will not be arranged in their familiar circle, but forming a corridor more akin to the Neolithic passageway that they may have originally been part of. This new arrangement will stand in a covered courtyard with a green roof, representing the long-lost burial mound in which they once stood.

In the almost 5,000 years of their existence, the Calder stones have made many journeys away from their original location – most recently, a

BELOW In contrast to our lead image, this is a plan for how the new home of the Calder stones will look: the uprights will be arranged in a corridor to reflect their passage tomb origins, while the green roof represents the covering burial mound.



very long way indeed from this spot – but their latest trip will see them restored to as close to their original layout as current understanding permits. ■

Further reading

Ron Cowell (2008) *The Calderstones: a prehistoric tomb in Liverpool*, Merseyside Archaeological Society, ISBN 090-6479053.

IMAGE: The Reader 2018

MILITARY HISTORY MONTHLY BOOK OF THE YEAR AWARDS



Our sister magazine, *Military History Monthly*, has curated a list of 2018's best military history titles: the nominees for this year's *MHM* book awards. The shortlist includes some of the best-researched, most insightful, and most readable titles reviewed and featured in *Military History Monthly* over the last year, and they need your help to select the winner!

Sponsored by **OSPREY PUBLISHING**

THE BOOKS NOMINATED ARE:

- **Hué 1968: a turning point of the American war in Vietnam** (Mark Bowden)
- **Last Hope Island: Britain, occupied Europe, and the brotherhood that helped turn the tide of war** (Lynne Olson)
- **The British Army and the First World War** (Ian Beckett, Timothy Bowman, and Mark Connelly)
- **Stormtroopers: a new history of Hitler's Brownshirts** (Daniel Siemens)
- **Grant** (Ron Chernow)
- **Squadron: ending the African slave trade** (John Broich)
- **The Other Norfolk Admirals: Myngs, Narbrough, and Shovell** (Simon Harris)
- **The Last Battle: endgame on the Western Front, 1918** (Peter Hart)
- **The Royal Navy's Air Service in the Great War** (David Hobbs)
- **World War II at Sea: a global history** (Craig L Symonds)
- **The British Civil Wars at Sea, 1638-1653** (Richard J Blakemore and Elaine Murphy)
- **Masters of Mayhem: Lawrence of Arabia and the British military mission to the Hejaz** (James Stejskal)

The winners will be announced at *CA Live! 2019* on 8 March

To cast your vote and read reviews of each title, visit www.military-history.org/awards