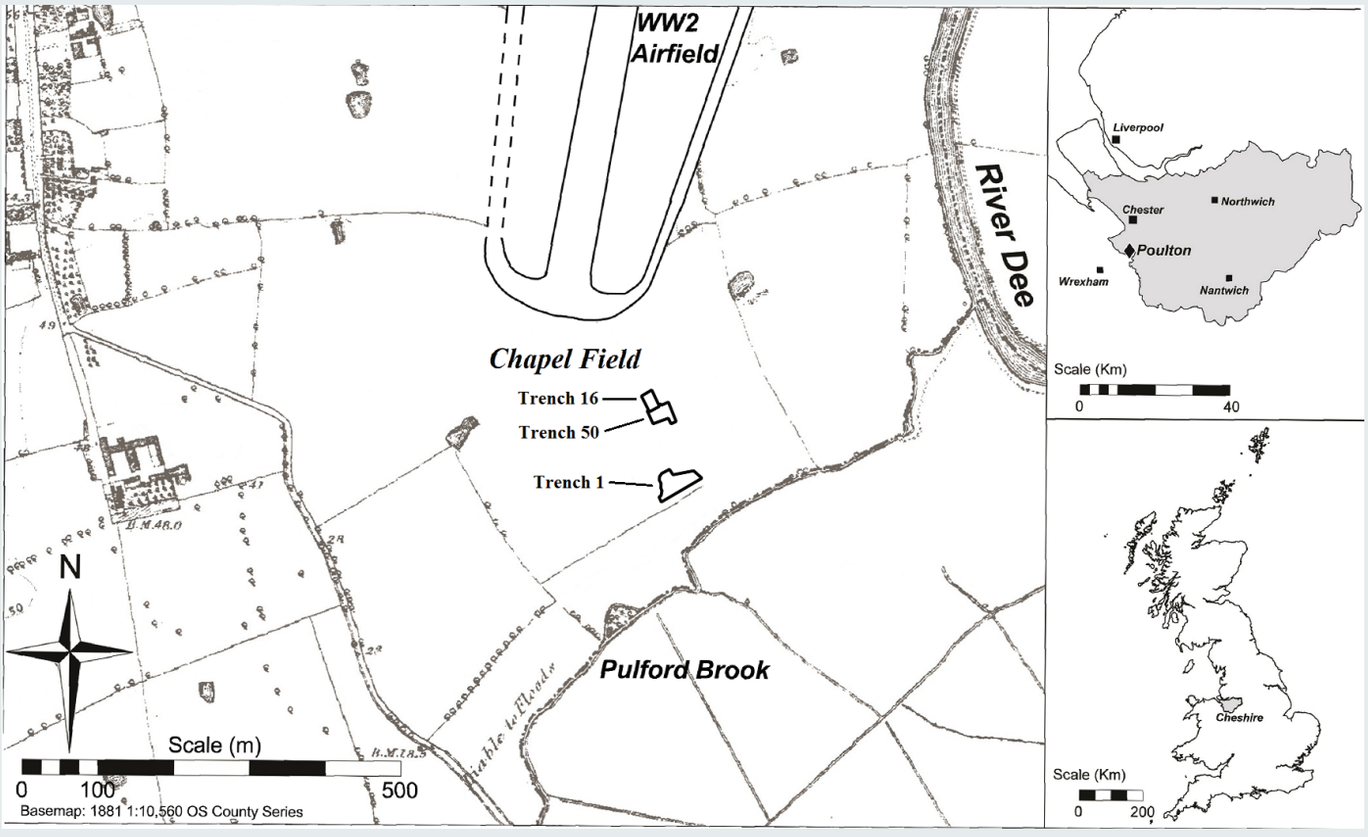
Living like common people

Excavating a medieval peasant farming community at Poulton

Hundreds of skeletons recovered during the excavation of a medieval cemetery in Cheshire are helping to tell the story of a poor farming community who served a Cistercian Abbey for generations. Kevin Cootes, Janet Axworthy, Carole Davenport, and David Jordan reveal more.

BELOW More than 800 medieval skeletons excavated at Poulton have shed new light on a Cheshire community who farmed the land in the service of a Cistercian Abbey between the 13th and 16th centuries.

ALL IMAGES: courtesy of Kevin Cootes



ABOVE Located near the Welsh–English border (volatile disputed territory during the medieval period), Poulton was once home to a short-lived Cistercian Abbey. This plan shows the site's location and where the present research project put in its trenches.

The study of medieval history frequently focuses on the upper echelons of society, with documentary evidence dominated by the lives of the rich and powerful. But what about the rest of the population? These sources tell us little about the day-to-day existence of the medieval poor – for this, we must turn to archaeology, which paints a picture of lives that could be both harsh and short. An ongoing research excavation at a rural cemetery near Poulton, Cheshire, is revealing the story of a small community who farmed land belonging to a Cistercian Abbey between the 13th and 16th centuries. Analysis of more than 800 skeletons found there has produced vivid evidence of people who were all too familiar with a physically demanding lifestyle, disease, high infant mortality when compared to modern populations, and, on occasion, violent death.

At first glance, though, Poulton appears little different to the many other hamlets scattered across rural Cheshire. It comprises a series of farms and private residences surrounded by lush pasture and woodland. Yet hints of its archaeological promise first emerged in 1962, when local farmer Gerry Fair was ploughing a field on the outskirts of the village. His efforts uncovered a series of worked sandstone blocks belonging to a ruined structure, as well as a locally made 15th-century floor tile. Tantalisingly, these discoveries were made in an area known as Chapel Field – and, indeed, historic maps suggested that a long-forgotten rural chapel had indeed once existed on this spot.

It is thought that this building would have belonged to the Cistercian Abbey whose presence at Poulton is well documented in medieval records. Founded in *c*.AD 1153-1158 on lands granted to the Church by a wealthy Norman benefactor called Robert Pincerna, its estate lay south of Chester on the English–Welsh border. This rural setting was entirely in keeping with other Cistercian endowments across England, Wales, and northern Europe: the monks preferred to build their abbeys beside watercourses in secluded locations. Chapel Field would have been ideal for their purposes: it forms a spur of land on the west bank of the River Dee, situated on a prominent plateau that overlooks the floodplain and 'Old Pulford Brook'. Today, we can still see possible traces of their activities in the surrounding landscape, in the form of four fish ponds, a rerouted watercourse, and an artificial island – features that are paralleled on other known Cistercian sites, particularly in eastern England.

THE CHAPEL BY THE GATE

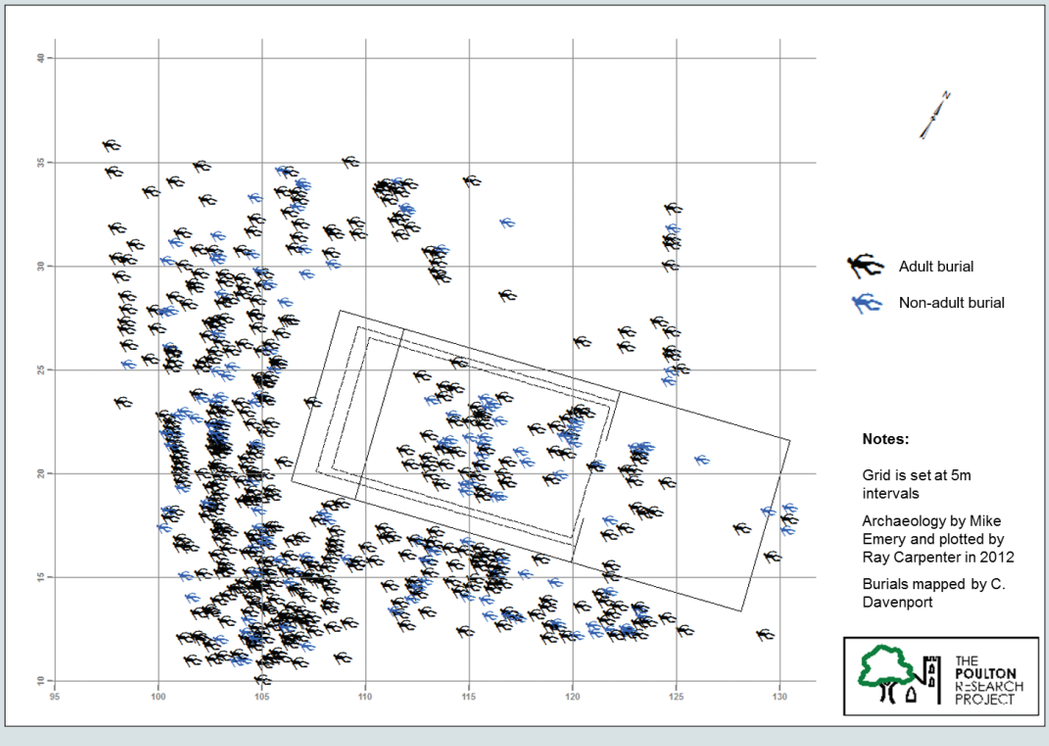
Despite its enviable location, the abbey was short-lived, only lasting until AD 1214-1220, when the establishment was transferred to Dieulacres in Staffordshire. The ➡

ABOVE The Cistercian Abbey that once occupied the site had an enviable location on a plateau overlooking a floodplain. Even today it is easy to see why the monks selected this spot for their new home.
RIGHT Although the physical remains of the Cistercian Abbey have for now remained elusive, traces of a chapel that probably stood at its gate have been excavated at Poulton, among them medieval floor tiles.

Poulton lands remained an important part of the Cistercian estate, however, and local farming continued under their control, overseen by a prior installed as caretaker. Yet, while the abbey's fortunes had foundered, the fact that its existence was so brief offered exciting opportunities for archaeologists. It gave us the rare chance to study such a structure in its original form, which would normally have been obscured by later additions and developments. The potential for revealing illuminating information about early construction techniques and materials was promising indeed.

Archaeological investigations of the structural remains therefore began. Initiated as a joint venture between the University of Liverpool and Chester Archaeology in 1995, it eventually evolved into an independent student training and community project. But while excavation failed to identify the site of the abbey itself, it did shed further light on Gerry Fair's 'chapel'. Closer examination confirmed that the sandstone footings found in Chapel Field were indeed from a small chapel with a tower, nave, and chancel, which had been enlarged from a smaller, single-celled structure. While its foundation date remains unknown, documents testify to its presence at least as early as AD 1250, and it is thought that it may have been a *capella ad portam* or 'chapel by the gate'.

Such buildings have parallels on other Cistercian sites, like Rievaulx Abbey in Yorkshire – they provided a place of worship and a graveyard for the local lay community, who would not have been permitted access to the abbey, or burial rights within it. Further documentary research reveals that the chapel was later converted to a private place of worship during the 15th century, when the Manley family leased their Poulton estate from the Cistercians, and its last probable use was as a Parliamentarian



LEFT To-date, around 800 individual burials have been excavated from an estimated cemetery population of 1,000-2,000.

ABOVE The graves do not seem to have had formal markers, as many of them intercut earlier burials. Here, an adult burial has cut into an older grave containing the remains of two children.

garrison during the English Civil War. By 1672 it had fallen into disrepair, and all remains still standing above the ground had been removed by 1718. With the chapel no longer visible, its location faded from local memory – until Gerry Fair brought it to light once more over 200 years later.

EXPLORING THE BURIAL GROUND

More recently our investigations have expanded into the lay cemetery that was once attached to the chapel, where – to our delight – we found that the human remains interred were much better preserved than expected. Cheshire's acidic clays generally dissolve bone within a few centuries, but in Chapel Field the retreating ice sheets of the last glaciation had deposited calcite-rich material from the area of the Irish Sea, providing an excellent environment for the survival of human bone.

The cemetery is thought to have been used by multiple generations spanning the 13th-16th centuries, and to-date approximately 800 individual burials have been excavated from an estimated population of 1,000-2,000. Extrapolating from these figures, we believe the local community would have been relatively small, with as few as 100-150 people per generation. What would we be able to reconstruct about the lives and deaths of the farmers and their families who were interred here?

Let's first look at the burials themselves. The Poulton graves were generally shallow (the current practice of burying at a depth of 6 feet was not introduced until the 'Cemetery Clauses Act' of 1847), and all clearly reflect medieval Christian beliefs, being aligned east–west to face the return of Christ at the Second Coming. While we found no evidence of formal grave markers, it is possible that there were some made from organic materials which have not survived (although the numerous occurrences of graves cutting into earlier burials might suggest that they were not marked). Similarly, although no coffins were discovered in any of the graves, the presence of iron nails and metal pins indicates that people were laid to rest in wooden caskets and shrouds.

While the pattern of burials initially appeared haphazard, as we analysed the distribution more closely we could see that beneath the palimpsest of graves there was an orderly original arrangement of neat rows. These ran from north to south within the limits of the graveyard, and it seems that once the diggers had finished a row, they would start the process again by partially removing older burials and placing the disarticulated bones within the new graves.

Aside from this redeposited material, most of the graves only held one skeleton, though there were multiple examples of two, three, and even four individuals tucked into a single cut – a poignant reflection of how poorer members of society were especially vulnerable to contagious disease. In a period when medical knowledge was primitive in comparison to today, farmers would only have had access to the very basics of treatment, primarily comprising local herbs and natural cures. It is easy to imagine how an outbreak of disease could cut a swathe through a small community – might these multiple burials represent members of the same family who had died?

A rather different example of multiple burial was also identified in what have been interpreted as 'charnel pits'. There collections of long bones and skulls had been neatly stacked, presumably taken from existing inhumations that had been disturbed during later structural expansion. From these diverse forms of interment, we have already learned a huge amount about the people who lived and died in medieval Poulton. ➡

> "With the chapel no longer visible, its location faded from local memory – until local farmer Gerry Fair brought it to light once more, over 200 years later."

ABOVE As well as formal graves, bones disturbed by structural expansion had been placed in collective charnel pits.
RIGHT Evidence of illness was clear on some of the human remains. Here a leg bone showing signs of periostitis, caused by inflammation of connective tissue, has been placed beside an unaffected bone.

EVIDENCE OF ILLNESS

The human remains that we have excavated so far have all been transported to Liverpool John Moores University, where they are proving an invaluable focus for post-graduate research. The number of skeletons recovered from the site represents a rare opportunity to study a single community across multiple centuries; while work is still ongoing, results are already revealing a wealth of information on the diet, general health, and daily activities of this medieval population.

While for most of the Poulton individuals it is not possible to establish a precise cause of death – the acute nature of diseases like influenza, measles, plague, smallpox, or dysentery, could claim multiple victims in a short period of time, leaving no diagnostic marks on the bone – but a limited number of the skeletons do show signs of inherited and communicable conditions that would have adversely affected the sufferer's quality of life. One of the most common conditions we saw is periostitis, which is caused by an inflammation of connective tissue that surrounds the bone. This is a symptom rather than a cause, though, and can be the result of infection, injury, and excessive physical activity – all factors consistent with a hard farming life.

We also observed several occurrences of both spina bifida occulta (a malformation of one or more vertebrae) and benign tumours, the latter characterised by small bone lumps on the skull known as button osteomas. While these conditions would have been essentially asymptomatic in the majority of cases, several chronic diseases have been identified. Interestingly for a farming community whose livelihood very much revolved around outdoor work, two young members of the population had the characteristic bowed leg bones consistent with rickets, caused by prolonged deficiency of Vitamin D, which is primarily created by the skin through exposure to sunlight. Perhaps these individuals had experienced other long-term health problems not visible in their bones, which prevented them from spending time outdoors.

Another disease seen in the bones of two of the young was congenital syphilis, which would have been inherited from the mother during pregnancy. It is diagnosed by the presence of multiple rounded enamel cusps on the permanent teeth, called 'mulberry molars'. Among the adults, a distinctive condition was Diffuse Idiopathic Skeletal Hyperostosis (DISH), which is caused by the ossification of ligaments in the spine, producing a 'candlewax' effect across the vertebrae. In advanced cases, it can cause stiffening in the sufferer's back, reducing their range of movement. In modern populations, it is most common in diabetic or obese men over the age of 50.

Above all, the most commonly identified condition that we recorded in the Poulton population is called Paget's disease of bone. There, a fault in remodelling results in fragile and often misshapen bones which can appear swollen, especially in the skull, spine, pelvis, and legs. Both acquired and inherited factors appear to play a role

in its development, and, interestingly, the disease primarily affects people of British origin. A minimum of seven individuals have so far been confirmed as suffering from this disease at Poulton, which is more than at any other medieval site to-date in the Cheshire region. The identification of these cases is significant in that it provides a potential opportunity to help with the investigation of the disease's evolution and history.

INFANT INTERMENTS AND INJURIES

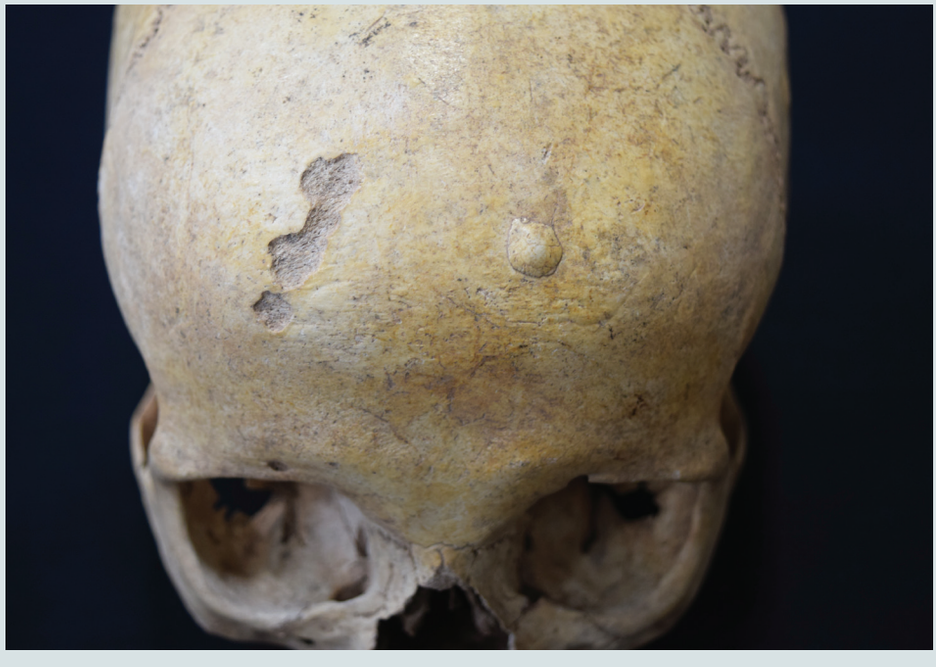
The overall mortality rate at Poulton provides indirect evidence of disease being an all-too-common threat to this community. Without the benefits of vaccinations or antibiotics, only 50% of the population survived to full adulthood. The first four years of life were especially dangerous, with approximately 20% dying by this age. The difficulties of childbirth can partially account for this high percentage, but there was another factor too. In medieval communities, breastfeeding commonly continued until a child was 3 or 4 years old, which supplemented the child's immune system with antibodies present in the mother's milk. When children were weaned, some did not survive the transition.

With such a high infant mortality rate, it might be reasonable to imagine that death was more readily accepted within a small community desensitised by the frequency of such losses – yet the burial record testifies that the people of Poulton grieved bereavements as deeply as we do today. There are burials where a child has been laid on their side with their hands tucked beneath the head as if sleeping, while in two double burials the hands of the children had been placed together and their heads inclined. These tender gestures suggest a visible expression of grief, possibly by their parent. An equally poignant example of child burial was uncovered near the southern limits of the graveyard, overlooking the plateau and floodplain, during the 2018 season.

There, the crouched remains of a baby had been nestled into a small household box, an item which would have been of considerable value to a peasant farmer. Although the wooden portion of this container had long since degraded, its locking mechanism and other metal components had survived to hint at its purpose. The baby had been born two to six weeks premature, osteological analysis suggests, and radiocarbon dating indicates that the interment had taken place at the height of the graveyard's use during the 14th-15th centuries. Box burials of this nature are extremely rare, especially for the medieval period, but the fact that the baby was premature might allow for a tentative interpretation.

If the baby was stillborn and therefore unbaptised, they would not have been entitled to burial within ➡

LEFT The remains of a child showing the distinctive bowed lower leg bones of someone who had suffered from rickets in life.
BELOW Small bone lumps like these, seen on the skull, are benign tumours known as button osteomas. Several examples were observed among the Poulton dead.



LEFT Some of the child burials suggested special treatment at the time of their interment: this grave includes the remains of two children who had had their hands placed together and their heads inclined towards each other.

consecrated ground. In these cases, a special area was often set aside outside the official burial ground, and the baby's soul was believed to wait in a state of limbo for the Second Coming. Might we imagine this child's grieving parents placing the tiny body in a conveniently sized box, and burying it under cover of darkness within the consecrated area? If they had approached this site from the base of the plateau, they would have been afforded natural cover, allowing them to carry out this task unobserved to ensure that their baby was buried with the rest of the community.

For those members of the farming community who did survive childhood, years of manual work often took a heavy toll on the skeleton, as we could clearly see in the excavated remains. The most common conditions noted in the adult population relate to osteoarthrosis, resulting from the wearing down of cartilage. In advanced cases of this condition, the bones would rub painfully against each other, creating a shiny effect called eburnation. Additionally, we saw examples where prolonged and repeated pressure on the lower part of the back had caused osteophytosis, a condition which results in extra, uneven bone growth on the edges of the vertebrae.

Daily immersion in a life of physically hard labour exposed farmers to falls and injuries, which were reflected in the numerous fractures that we saw among the Poulton population. These generally occurred in the long bones, hands, and feet, but were also noted in the ribs and collarbones. Most had apparently been set in a competent manner and seemed well healed, but there were notable exceptions. When a break in a long bone was severe, it would have been extremely difficult to realign – as we saw in the case of a skeleton numbered #603. This individual had suffered an oblique fracture of the right leg, affecting both their tibia and fibula, and while their bones had healed, they had been left with a shortened leg and a pronounced limp. Yet they were among the luckier ones – an open fracture or break could all too easily become seriously infected, leading to life-threatening conditions such as osteomyelitis, while other excavated skeletons bore witness to traumatic injuries to the arm or leg that had led to abnormal bone growth within the muscles, called myositis ossificans traumatica.

THE TEETH TALK

There were further clues to come from the Poulton skeletons' teeth. A population's dental record provides a wealth of evidence for their lifestyle and general health, and here we could see heavy tooth wear caused by the consumption of poor, coarse-grained bread, as well as frequent calculus, periodontal disease, and, to a lesser extent, abscesses indicating poor dental hygiene. In one unfortunate individual, an abscess had broken through the bone near the root of a tooth, enabling the pus to drain but causing a great deal of pain to the sufferer. Tooth loss was also common to varying degrees – in extreme cases, people had been left entirely toothless.

Where people did have remaining teeth, we could identify periods of probable poor nutrition through our analysis. In times of extreme stress, such as starvation due to poor harvests or disease, the body diverts resources from non-essential processes to deal with the life-threatening crisis. If these stresses occur during childhood, they result in defective tooth-formation, evidenced through horizontal bands called linear enamel hypoplasia. Additional evidence of malnutrition could also be seen in the adult population, including multiple cases

of cribra orbitalia, characterised by pitting at the roof of the eye sockets, consistent with anaemia caused by iron deficiency.

In addition to the everyday stresses of disease and the possibility of starvation caused by uncertain harvests, there was a rather different threat that loomed over the people of Poulton. This small and vulnerable community occupied contested territory on the border of England and Wales, territory that was no stranger to violence as rulers including Edward I, Henry II, and Henry III led invasions from nearby Chester, or were forced to repel retaliatory strikes. Five of the Poulton skeletons demonstrate evidence of almost certainly fatal combat injury, with arrowheads found in their chest cavities. These individuals, all male, have been dated to the 12th-14th centuries, and for some of them we can piece together a surprisingly clear picture of their final moments. Skeleton 535 was particularly interesting. He was aged around 35-39 when he was killed with an armour-piercing bolt identified as a Type M7 bodkin. The fact that this arrowhead had ended up in the man's chest cavity but had not damaged the surrounding ribs indicates that he had been standing at a significantly higher point than the archer when he was shot, possibly on top of the plateau overlooking the floodplain.

This individual's fate highlights the hazardous environment in which our community lived. Analysis of the Poulton skeletons has given rare insights and extensive details of the challenges faced by a small farming settlement during the medieval period. If disease, uncertain harvests and a hard manual lifestyle were not enough to contend with, living in contested border territory brought additional dangers. As investigations continue to produce new evidence, though, one thing is certain: the Poulton population will continue to reveal a host of new secrets about life and death in this corner of medieval England. We also still have an abbey to find!

ABOVE Medieval Poulton lay within contested border country, and five of the excavated skeletons demonstrated the dangers that this represented: all male, these 12th- to 14th-century individuals had arrowheads like this within their chest cavities, almost certainly reflecting fatal combat injuries.

BELOW Might the remains of this premature baby, nestled inside a household box, represent a clandestine burial, perhaps interred by grieving parents who wanted their unbaptised child still to lie within consecrated ground?

Acknowledgements

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Further reading

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