



Frontispiece 1. A Romano-British floor mosaic under excavation at Chedworth Villa, Gloucestershire, UK. New radiocarbon dates on charcoal and bone from the foundation trench of one of the room's walls indicate that the mosaic was probably laid in the mid fifth century AD, decades after the end of Roman rule, during the 'sub-Roman' period. The large and wealthy villa, located near the second largest urban centre of late Roman Britain at Corinium (Cirencester), was first identified and excavated in the 1860s. The newly dated mosaic was investigated in 2017 as part of a five-year project to uncover the north wing of the villa, including a bath suite. The villa is owned and managed by the National Trust (© National Trust-Stephen Haywood).



Frontispiece 2. A thermopolium, or snack bar, revealed by excavations at Pompeii in 2019 and 2020. Located in Regio V of the city, the bar features a masonry counter, with inset ceramic dolia, or storage vessels, for the serving of food and drink. The front of the counter is decorated with brightly painted still life and mythological scenes, including two ducks, a rooster, a guard dog and a Nereid riding a seahorse. The excavations have also recovered a diverse assemblage of transport, storage and serving vessels, as well as archaeobotanical, zooarchaeological and human remains. Buried by the volcanic eruption of AD 79, the building appears to have been disturbed by clandestine excavations during the seventeenth century. The bar is one of around 80 known from the ancient city. Photograph © Luigi Spina and Pompeii Archaeological Park.



EDITORIAL

Tunnel vision

🚗 Long gone are the days when a drive to the south-west of England for summer holidays offered the opportunity to pull to the side of the road and admire Stonehenge at close quarters. Today, the A344 that once cut hard against the Heel Stone has been grassed over, the car park just 150m from the trilithons has been removed and proper visitor facilities have finally been opened 2km to the west. As a result, the immediate landscape of the monument has arguably changed more in the past decade than in the previous century. Yet one intractable issue persists: what to do with the A303 that passes, at its closest point, just a couple of hundred metres from the monument. Proposals to widen the road, burying the section past Stonehenge in a tunnel, have come and gone over the past 25 years, falling by the wayside due to costs and concerns about the impact on the wider archaeological landscape. Finally, however, last November the UK Secretary of State for Transport approved the Development Consent Order giving the go-ahead for the 13km-long Amesbury to Berwick Down road scheme. The route, which crosses the middle of the World Heritage Site (WHS), includes a 2.9km tunnel and comes with a price tag of around £2bn. As it has been several years since we last covered the saga of the A303¹, an update on some of the developments leading to the recent government approval is in order.

The current scheme originated in 2014, with the preferred route finalised following public consultation in 2017 and 2018. In addition to relieving traffic congestion and reducing journey times, Highways England identifies a number of environmental, community and cultural heritage benefits. The scheme promises ‘green bridges’ to allow people and wildlife to cross over the unburied sections of road, the restoration of chalk downland and the creation of jobs and economic growth. It also seeks to remove “the sight and sound of the noisy, busy road from most of the World Heritage Site [in order to] return the Stonehenge landscape to something like its original setting” as well as to reconnect the course of the Avenue, currently cut by the existing A303.² Whether or not the ‘restored’ landscape will resemble that of 5000 years ago, surely everyone would welcome a more tranquil setting for the monument, and restoration of the integrity of the Avenue would be a tangible benefit. Such gains within the immediate vicinity of Stonehenge, however, are off-set by the planned deep cuttings through which the four-lane road will approach the eastern and western tunnel portals, located well within the boundaries of the WHS (Figure 1).

In 2019, the 44th Session of the World Heritage Committee commented on the plans, urging consideration of a longer tunnel that would locate the western portal (Figure 2)

¹ SCARRE, C. 2017. Editorial. *Antiquity* 91: 565–72. <https://doi.org/10.15184/aqy.2017.79>

² Available at: <https://highwaysengland.co.uk/our-work/a303-stonehenge/benefits/> (accessed 4 January 2021).



Figure 1. Map of the proposed A303 road scheme including the Stonehenge tunnel (as of August 2020) (© Highways England).



Figure 2. Proposed A303 tunnel western portal approach, with the existing road (top left) converted to a public right of way for walkers, cyclists and equestrians (© Highways England).

outside the WHS boundary, in order to protect the landscape's Outstanding Universal Value.³ Shortly after, in early 2020, the five-member Examining Authority of the Planning Inspectorate submitted a mammoth assessment of the proposed scheme to the Secretary of State. The report recognised a number of potential environmental and cultural heritage benefits, but concluded that overall it “would substantially and permanently harm the integrity of the WHS, now and in the future”. Of particular concern was the irreversible nature of parts of the scheme, for “Whilst the existing roads could be removed at any time [...] leaving little permanent effect on the cultural heritage of the Stonehenge landscape, the effects of the proposed junction [at Longbarrow] would be irreversible”. The report continues: “Seen from above, as the Stonehenge landscape was for the first time in the early twentieth century leading to the discovery of many features and enhanced appreciation of its interconnected significance, the Junction would [...] dwarf all other individual features, including the Stones”. The report concludes that “it has not been demonstrated that the substantial harm that would result to the significance of the WHS designated heritage asset is necessary in order to deliver substantial public benefits that would outweigh that harm”. The Examining Authority therefore recommended that consent to proceed should not be granted.⁴

If these two reviews found the overall cultural heritage benefits unconvincing, a 2019 report by the National Audit Office concluded that the project also offered a significantly

³ Available at: <https://whc.unesco.org/en/decisions/7543/> (accessed 4 January 2021).

⁴ Available at: <https://infrastructure.planninginspectorate.gov.uk/wp-content/ipc/uploads/projects/TR010025/TR010025-002181-STON%20%E2%80%933%20Final%20Recommendation%20Report.pdf> (accessed 4 January 2021).

lower ‘benefit-cost ratio’ in comparison with other road schemes—largely due to the cost of the tunnel. “Under the standard method for appraising transport projects,” the report observes, “the project would only deliver 31p of benefit for every £1 spent”. The report continues, “Highways England therefore expanded its appraisal to include a monetary value for cultural heritage, to reflect the project’s wider objectives [...] these make up 73% of total monetised benefits. With these included, Highways England expects the project to deliver £1.15 of benefit for every £1 spent”. This method of valuing heritage is clearly viewed with suspicion, as the report concludes that “calculating benefits in this way is inherently uncertain and the Department advises decision-makers to treat them cautiously”.⁵

In granting consent for the A303 scheme, the government has acted against the recommendations of these formal legal and economic assessments. Archaeologists and archaeological organisations have, of course, contributed to these various reviews, although there is a diversity of opinion. This is well represented by some of the community’s responses to the government’s November decision: for example, while Historic England sees “a lasting positive legacy”,⁶ the Save Stonehenge World Heritage Site (Stonehenge Alliance) has started legal proceedings seeking a judicial review.

In normal times, we might welcome the idea that a government had undertaken a benefit-cost analysis of a development project and decided to move ahead on the basis that three-quarters of the benefits would accrue through the value of cultural heritage. But this is no ordinary landscape and we are living in far from normal times. With a government desperate for ‘shovel-ready’ infrastructure projects with which to sustain the economy in the face of the worst recession in three centuries, it was almost inevitable that the scheme would be given the go-ahead no matter the cost. Hence, after 25 years, the project has reached a new milestone. Barring successful legal challenge or a change in the political winds, the next stage of archaeological investigations, and a wider programme of community engagement, should commence within the next few months.

Could the intractable problem of the A303 be solved in another way? For the cost-conscious—and historically unconscious—surely a cheaper and easier solution would be to dismantle and relocate the stones somewhere more convenient? After all, the approach has been used elsewhere: the current UK High Speed Rail 2 mitigation works include the transporting of ancient woodlands, soil and all, out of the path of the new railway and, in 2019, the Rubjerg Knude lighthouse in the north of Denmark was moved 70m inland to protect it from coastal erosion. Indeed, moving Stonehenge might have precedent. In this issue of *Antiquity*, Mike Parker Pearson and colleagues present new results that suggest the monument may have had an earlier construction phase—in south-west Wales. We have known for a century that the bluestones of Stonehenge originated in the Preseli Hills of


⁵ Available at: <https://www.nao.org.uk/wp-content/uploads/2019/05/Improving-the-A303-between-Amesbury-and-Berwick-Down.pdf> (accessed 4 January 2021).

⁶ Available at: <https://historicengland.org.uk/whats-new/statements/stonehenge-a303-tunnel-scheme-approved/> (accessed 4 January 2021).

Pembrokeshire. In their article, however, the authors argue that it was not simply stones that were transported from Wales to Wiltshire. Investigations at Waun Mawn near the bluestone quarry sites of Craig Rhos-y-Felin and Carn Goedog have identified a dismantled stone circle of early date and sharing similarities with Stonehenge in terms of size and solstitial alignment, as well as the shape and geological provenance of some of the dolerite pillars. Combining their new data with recent isotope studies, the authors suggest that the first stage of the Stonehenge we know today may have been built by Neolithic migrants from Wales, who brought with them not just stones with which to create a new monument, but rather elements of an existing monument to be re-created on Salisbury Plain.

In 1967 Jacquetta Hawkes reviewed the then current reinterpretation of Stonehenge as an astronomical calculator and the enthusiasm in support of this ‘scientific’ explanation in an era of technological progress and early computing. Hawkes’s review of the (lack of) evidence in support of this interpretation led her to conclude that “we should show that this is indeed the scientific age by refusing to give way to our own form of wishful thinking”. “Every age,” she observed “has the Stonehenge that it deserves—or desires”.⁷ In what age do we live in today? And what Stonehenge do we desire and deserve? Five years ago, in the age of benefit-cost assessments, we desired value for money but got endless debate and delay. Today, the shadows cast by Brexit and COVID-19 have ushered in a new age, a nation in need of state-funded mega infrastructure projects and of symbols of the restoration of national sovereignty. Perhaps we therefore deserve a Stonehenge that divides opinion in a similar way to Britain’s exit from the EU—ways that are not amenable to evidence or cost-based assessment. Whether archaeologists 500 years hence will think it meaningful that, in the aftermath of a pandemic, huge investment was made in a monument of ancient ‘healing stones’,⁸ only time will tell.

True lies

 The 1939 excavation of the Sutton Hoo ship burial looms large in the history of British archaeology. In 2007, the events surrounding the discovery were fictionalised in the novel *The Dig* by John Preston. Now, finally, we have the film of the novel, with the release of the Netflix production of the same name, bringing the story to the big (or rather, in the era of COVID-19 and home-streaming, the small) screen (Figure 3). There is much about archaeology that attracts the novelist and filmmaker, including mystery, adventure and treasure. Rarely, however, do these representations approximate to the day-to-day reality of the life archaeological, let alone ethical or health and safety considerations. How does *The Dig* (2007) measure up against such archaeological tropes? Based on the events surrounding the 1939 excavation of the Sutton Hoo ship burial on the Suffolk coast, *The Dig* (2007) lacks the exotic locations and swashbuckling favoured by some other Hollywood productions. But there is certainly treasure enough to precipitate conflict around the discovery. With some notable

⁷ HAWKES, J. 1967. God in the Machine. *Antiquity* 41: 174–80. <https://doi.org/10.1017/S0003598X00033202>

⁸ DARVILL, T. & G. WAINWRIGHT. 2009. Stonehenge excavations 2008. *Antiquaries Journal* 89: 1–19. <https://doi.org/10.1017/S000358150900002X>



Figure 3. A scene from the Netflix production of *The Dig*. © Larry Horricks/Netflix.

deviations, the book follows the chronological sequence of actual events, with the chapters shifting between the accounts of different narrators: Edith Pretty, the landowner; Basil Brown, the local archaeologist she hires to investigate the site; and Peggy Piggott. The latter's role as narrator is based upon her position as an 'outsider', one of the band of professional archaeologists who turn up at the site as news of the discovery spreads. As a young woman she is also an outsider in the male-dominated world of archaeology, and so able to observe critically the rivalries of her male colleagues too. In the novel at least, it transpires that her invitation from Charles Phillips to participate in the excavation, alongside her husband Stuart, relates to her light frame allowing her to work on the fragile remains of the ship: "Am I to understand you only asked me here because of my size, Mr Phillips?" Behind his spectacles, his eyes were quite small and bright. 'Exactly,' he said".⁹

From the different perspectives of the three narrators, the novel follows both the story of the excavation and the wider web of tensions that the discoveries elicit in the final months before the outbreak of war. There are rivalries, for example, between locals and outsiders and between regional and national institutions, and class runs through all the social interactions. A particular theme is the tension between amateur and professional. When Cambridge University-based Phillips assumes control of the excavations, sending out invitations to colleagues such as the Piggotts to assist on site, the self-taught archaeologist Basil Brown is sidelined. It is Brown's wife, May, who articulates the matter: "All I'm saying is that everyone is out to hog the glory for themselves, when the man who found the ship in the first

⁹ PRESTON, J. 2007. *The Dig*. London: Viking.

place and who made a proper excavation every bit as good as anyone else could have done is my Basil". In the context of class-conscious pre-war Britain and the growing professionalisation of archaeology, the discovery of 'Britain's Tutankhamun' excited particular emotion and jostling for recognition and control. But a high-profile find such as the Sutton Hoo ship burial would attract attention—and rivalries—in any age. Indeed, it may be integral to another archaeological-discovery-based film on the horizon. Earlier last year, actor and screenwriter Steve Coogan announced he would be working on a new project based on the events surrounding the discovery of Richard III's grave.¹⁰ "This Richard film," Coogan is reported as saying "is about the amateur *versus* the establishment, and intuition *versus* academia".¹¹

Has the professionalisation of archaeology crushed the soul and intuition from the study of the past? Have ivory-tower dons wrested control of the past from the passionate amateur? Or might this be another trope of 'screen archaeology' similar to adventure and exoticism?

There are certainly questions about who controls knowledge of the past, and TV and film exert particular influence on popular perceptions. But what happens if the latter are, like *The Dig*, fictionalised? As Preston notes at the end of his novel: "Certain changes have been made for dramatic effect". This particular question arose late last year in response to another Netflix production, season four of *The Crown*, recounting events around the royal family and the British political establishment of the 1980s. As with the previous instalments of this historical drama, questions were raised about the authenticity of some of the scenes depicted. This time around, however, the British government felt moved to intervene; with so few pressing national and international challenges with which to contend, the UK Secretary of State for Digital, Culture, Media and Sport found time to let it be known that he would be personally writing to Netflix to request the addition of a warning notice to alert credulous viewers to the fictional nature of the series (a request that was rejected).

As with all fictionalised accounts of the past, the creators of *The Crown* sought to advance the plot and develop plausible characters, reorganising chronological sequences, omitting some events and even inventing others. Might this confuse and misinform, or even actively seek to deceive? Surely only if viewed as documentary rather than entertainment. So, will viewers of *The Dig* be harmed by some light tinkering with the order of events? Doubtful. Might the film inspire a few viewers to find out a bit more about the history of archaeology or about Anglo-Saxon ship burials? Possibly. One thing is for certain: the announcement that Indiana Jones is due to return for a fifth and final adventure will ensure that all the tropes of 'screen archaeology' will have another Hollywood outing in the not too distant future.

¹⁰BUCKLEY, R., M. MORRIS, J. APPLEBY, T. KING, D. O'SULLIVAN & L. FOXHALL. 2013. 'The king in the car park': new light on the death and burial of Richard III in the Grey Friars church, Leicester, in 1485. *Antiquity* 87: 519–38. <https://doi.org/10.1017/S0003598X00049103>

¹¹ Available at: <https://www.bbc.co.uk/news/uk-england-leicestershire-54015723> (accessed 4 January 2021).

Plastic human

🔗 A recent analysis of archaeological-discovery trends predicted that some categories of sites and finds, as varied as Neanderthal crania and Maya monuments, will be significantly diminished by the end of this century.¹² As the authors noted, however, their prediction of the ‘end of archaeological discovery’ excludes the addition of contemporary material culture to the archaeological record. In fact, this modern material dominates what Matt Edgeworth has labelled the archaeosphere, that is: “the sum of humanly modified deposits on the surface of the Earth. Occupation debris, landfill, urban artificial ground, quarried materials, plough-soils, other cultivation soils, dumps of industrial waste, [and] more ancient strata containing cultural material”.¹³ This expansive definition of the archaeological domain dramatically widens the scope of archaeology, and shifts the challenge from quantifying how rapidly finite archaeological resources are diminishing to how fast new materials are accumulating.

A *Nature* paper now provides some possible insights into this matter. Setting out to quantify ‘anthropogenic mass’, the authors find that, by 2020, the accumulated weight of all human-made ‘stuff’ equated to 1.1 teratonnes.¹⁴ This figure is so impossible to grasp that the study compares it to the mass of all life on Earth. Noting that “Comparing biomass with human-made mass necessitates bringing together objects with different attributes, going beyond comparing apples and oranges to compare apples and mobile phones”, the authors show that 2020(±6) is the crossover point when anthropogenic materials exceeded global biomass. Moreover, the rate at which human-made mass has increased is extraordinary: anthropogenic mass was the equivalent of only three per cent of biomass at the start of the twentieth century.

The materials that dominate this rapidly expanding mass are concrete, brick, aggregates and asphalt. While plastic has come to be seen as a defining material of the Anthropocene, as a proportion of human-made mass, it is insignificant (less than 1 per cent). Nonetheless, even this puny figure represents eight gigatons, the equivalent of twice the total animal mass on the planet. It is therefore no surprise that plastics have made their way into every organism and environment, from the depths of the Mariana Trench to the peak of Mount Everest. They have even made it into the archaeological stratigraphy of ‘prehistoric’ houses. In this issue, Mytum and Meek report on the excavation of two reconstructed Iron Age roundhouses at Castell Henllys in Wales. Built in the 1980s, the two structures were recently taken down, providing the opportunity to investigate the deposits that have accumulated over the last three decades. The excavations revealed significant quantities of plastic waste attesting to the construction and use of the buildings. The abundance of sweet (candy) wrappers in particular speaks to the role of these roundhouses as shelter for picnicking school children. Around the world, people are seeking sustainable alternatives to plastic; just recently, for example,

¹² SUROVELL, T.A., J.L. TOOHEY, A.D. MYERS, J.M. LABELLE, J.C.M. AHERN & B. REISIG. 2017. The end of archaeological discovery. *American Antiquity* 82: 288–300. <https://doi.org/10.1017/aaq.2016.33>

¹³ EDGEWORTH, M. 2016. Grounded objects: archaeology and speculative realism. *Archaeological Dialogues* 23: 93–113. <https://doi.org/10.1017/S138020381600012X>

¹⁴ ELHACHAM, E. *et al.* 2020. Global human-made mass exceeds all living biomass. *Nature* 588: 442–44. <https://doi.org/10.1038/s41586-020-3010-5>

India's railway minister has announced plans for the replacement of plastic cups with traditional ceramic *kulhads* at all 7000 of the country's rail stations. Yet, even if all plastic production and use were to cease tomorrow, we have firmly set down a 'plastic horizon' for future archaeologists of the archaeosphere to investigate.

Recognition of materials such as plastic as 'archaeological' invites wider reflection on the value of objects and materials. In English law, one definition of such value is 'treasure', defined by the 1996 Treasure Act as objects more than 300 years old, made of gold or silver, or found alongside other objects made of precious metals. Last December, the UK Culture Minister announced plans to consult on broadening this legal definition, with less focus on the inherent value of the materials from which they are made and more emphasis on cultural and contextual considerations.¹⁵ Whether any forthcoming changes will curtail the sale to private collectors of those objects that do not currently fall under the Treasure Act is unclear, but the consultation at least is a welcome attempt to decouple cultural significance from the economic value of the constituent materials.

Such competing definitions of value—of form and context *vs* substance—are the focus of an article by Sainsbury *et al.* in this issue. Combining biographical and archaeometric approaches to objects made of glass and metal, the authors demonstrate the complexity of past reuse and recycling of materials. In the process, they explore the contingent nature of value. When, for instance, does the personal or cultural significance of an object eclipse the economic value of the materials from which it is made? Examples such as daggers and axes in Bronze Age Britain demonstrate different ways in which value was conceptualised in the past; while some daggers appear to have been handed down as heirlooms (i.e. reused), many axes were melted down and recast as new axes (i.e. recycled). Where did the value lie? In the objects' substance, their forms, the manufacturing processes, the contexts of use and deposition? Sometimes the mixing of metals from different provenances or the reworking of an object to convert it to a new purpose are perceived as unfortunate biographical episodes—obscuring a precise geological provenance or the original appearance of an artefact. Here, Sainsbury *et al.*'s exploration of the mutability of these objects leads them to reconceptualise these taphonomic processes as integral to understanding the complexity of materiality in the past.

On offer elsewhere in this issue is a rich geographic, chronological and thematic mix. We present articles discussing archaeological contexts as diverse as the prehistoric peopling of the Mongolian Plateau through to the investigation of a Second World War battlefield in Germany. We explore the networks that served to bring exotic objects from across the Northern Andes to the Wari heartlands, and consider how chacmool sculptures recently identified in Costa Rica fit into the context of the transcontinental exchange of elite goods and ideas connecting lower Central America with the Maya region, and even as far as Chaco 4000km to the north. We examine human burials from Neolithic China, Bronze Age Oman and medieval Europe to illuminate questions of health, status and belief. And, in a debate feature, Joanna

¹⁵ Available at: <https://www.gov.uk/government/news/government-redefines-treasure-to-increase-protection-for-archaeological-finds> (accessed 4 January 2021).

Editorial

Brück and respondents consider the concept of kinship. Pushing back against normative assumptions about social relations underlying the interpretation of some palaeogenetic research, the contributors show that while blood may be thicker than water, human social relations, past and present, are more diverse than often assumed. From iconic sites to mundane plastic packaging, and from planetary-scale processes to the intimacy of bonds between individual humans, our first issue of 2021 gives a strong sense of the diversity and richness of the study of the archaeological past.

ROBERT WITCHER
1 February 2021