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Participatory Augering: A Methodology for Challenging Perceptions of Archaeology and Landscape Change

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Public engagement is a significant feature of twenty-first-century archaeological practice. While more diverse audiences are connecting with the discipline in a multitude of ways, public perceptions of archaeology are still marred by stereotypes. Community excavations of 'sites' to discover 'treasures' which tell us about the 'past' overshadow other forms of public research output and hinder the potential of the discipline to contribute to contemporary society more widely. This paper proposes participatory augering as an active public engagement method that challenges assumptions about the nature of archaeological practice by focusing on interpretation at a landscape-scale. Through exploration of recent participatory augering research by the REFIT Project and Environmental Archaeologist Mike Allen, this paper demonstrates how the public can contribute to active archaeological research by exploring narratives of landscape change. Evaluation of the existing case studies reflects the potential of the approach to engage audiences with new archaeological methods and narratives which have the potential to transform perceptions of the discipline and, through knowledge exchange, drive community-led contributions to contemporary landscape management.

KEYWORDS public archaeology, environmental archaeology, augering, landscape management

Introduction

Archaeology and heritage are more open and accessible at a local, national, and international level than ever before (Robinson & Silverman, 2015: 4). While increasing access to various forms of media (print, TV, digital) has undoubtedly played a part in fuelling interest, greater focus on public engagement from within the sector has been equally critical in fostering knowledge exchange. Academic output on the theory and practice of 'engagement' across the interlocking, yet separable, fields of 'Public Archaeology' (Skeates, et al., 2012), 'Community Archaeology' (Thomas, 2017) and 'Archaeology Resource Management' (Carman, 2015) has been growing for over fifty years. The result is that a more socially conscious, multivocal methodology for engagement is more thoroughly entwined in the discourse.[1] From greater partnership working between source communities and heritage professionals to community-led initiatives, information sharing between diverse stakeholders is embedded in an adaptive form of archaeological research. And yet, we need to ask whether the latest collaborations are offering anything new. Are we simply rehashing the approaches that have dominated public archaeology for half a century, while deceiving ourselves (and the public) that we are breaking new ground through little more than a digital twist (cf. Richardson, 2013)?

This paper argues that, while public archaeology continues to grow, it is failing to challenge many of the persistent stereotypes that overshadow understandings of heritage, archaeology, and archaeologists (Moshenska, 2017a: 151–65). The research emerges from recent initiatives by the REFIT Project (n.d.) in partnership with environmental archaeologist Mike Allen. Developing from a UK-centred landscape-based methodology, the approach is not a one-size-fits-all model, but addresses engagement through fieldwork. Moving away from community excavation techniques designed to discover 'things' about the 'past', this approach utilizes the process of augering to benefit both the public and archaeologists by offering a multi-temporal view of 'place' from a cultural landscape perspective, which feeds into contemporary landscape management.

Landscape-scale public engagement

Landscape-scale approaches to public archaeology are essential, as they engage stakeholders in lesser-known areas of the discipline, which interrogate the impact of both human and natural action on the lived environment over time. This allows for the creation of 'long-view' narratives that can be integrated alongside other established engagement and knowledge-sharing techniques such as community mapping and oral histories, as well as data from excavation. The integration of multiple landscape facets through augering facilitates the co-production of palimpsest understandings of changing places and communities. Building up a picture of the past, this methodology not only puts sites and artefacts into their landscape context, contributing directly to understudied datasets, but engages stakeholders in the production of archaeological accounts of landscape change. As such, the work reflects the role of cultural heritage in negotiating the new forms of twenty-first century community that have emerged due to increasing mobility and digital cohesion. These post-industrial social shifts have forged stronger attachments to place

and greater resistance to change, while creating communities that are increasingly disconnected from the realities of 'the land' (Fairclough, et al., 2008: 1–12; Moore & Tully, 2018). Participatory augering therefore offers a channel for explaining landscape change and re-establishing connections between communities and their local (non-urban) landscapes. This process in turn can help foster a sense of ownership and feed into perceptions of contemporary landscape management. This is important, beyond public archaeology, in enabling the type of integrated community consultation and participation in contemporary land management and policy as set out in the European Landscape Convention (Council of Europe, 2000) and governmental planning guidance (e.g. CLG, 2010; 2012; DCLG, 2012).

At present, the definitions and scope of landscape management have changed due to the initiatives outlined above, but current practice has failed to keep pace (Fairclough, 2008a: 299; Fluck & Holyoak, 2017). This has meant that the conservationist ideology towards landscapes and their histories continues to dominate over a 'people-centred approach', creating a system that positions the public primarily as recipients of 'outputs' (Waterton, 2005: 319) rather than as 'agents of change'. The engagement approach offered here will focus on the UK to demonstrate how participatory augering can redress this balance, innovate the wider public archaeology 'package', and add a new dimension to outdated perceptions of the historic environment and archaeology. In addition, the approach also has the potential for significant impact beyond the confines of the discipline by raising awareness of and participation in contemporary landscape management.

Public archaeology — a shifting vision

Public archaeology is a flexible and multifaceted discipline. This is both a strength and a challenge, in that the approach is infinitely adaptable and simultaneously difficult to pin down. Alongside ongoing issues with terminology, regarding words such as 'community' and 'public', 'archaeology' can also be interpreted in myriad forms (Thomas, 2017: 15). As a result, a focus on definitions has been replaced by detailing the aims of public archaeology. Matsuda and Okamura (2011: 4) perhaps capture this most simply, explaining that public archaeology 'examines the relationship between archaeology and the public, and then seeks to improve it'.

For a discipline that was largely divided between a US education-based and UK interaction-based approach from the 1970s to early 2000s (cf. Merriman, 2004a; Schadla-Hall, 2006; Simpson, 2010), there is now a more unified vision of public archaeology. Built largely on the UK model (cf. Moshenska, 2017a; Thomas, 2017), the methods and practices have some overlap with community involvement in Archaeological Resource Management (ARM) as outlined by Carman (2015). That is not to say that the education or outreach aspects of public engagement are in decline, in fact the top-down versus bottom-up approach is still very much debated (Richardson, 2013: 2–3). Instead, as Moshenka (2017a: 5–11) highlights in his discussion of 'Some Common Types of Public Archaeology', education/outreach works alongside popular archaeology, archaeologists working with the public, public sector archaeology, and so on to create a democratic range of methods which encompass the spectrum of 'contact between archaeology and the

wider world' (Moshenska, 2017a: 5–11). In this process, both archaeologists and publics actively share and co-create knowledge in what should be a constant process of expansion and negotiation. Concerns are emerging, however, regarding the future of the approach as studies into public perceptions of archaeology suggest that greater engagement has not resulted in significantly higher levels of understanding of the discipline and its relevance to wider society (Bonacchi, 2014; Moshenska, 2017b).

Perceptions of archaeology

As Moshenska states (2017a: 13), the paucity of data on perceptions is the greatest barrier to the development of public archaeology. In fact, it seems absurd that the discipline continues to communicate 'blindly' without the tools to understand its audience or the efficacy of its methods (Merriman, 2002: 547). While the trajectory of archaeology TV shows, rising museum visits, and early studies into public awareness reveal significant levels of interest (cf. Ramos & Duganne, 2000; Roper Starch Inc., 1995), most work on perceptions has been small-scale; generally at site, community, or museum level (e.g. Feder, 1984; 1995; Simpson, 2010). National datasets exist, such as Historic England's annual 'Heritage Counts' survey (n.d.) and Piccini and Henson's (2006) study of heritage TV viewing. This research, however, tends to focus on defining topics of public interest and asking 'who' is engaging with heritage rather than addressing perceptions of archaeologists or heritage practice per se. Recent research by Bonacchi (2012; 2013; 2014) has attempted to take a wider view and look at both the national and technological trends that are shaping perceptions of the discipline (see also Lazzari, 2017). Worryingly, as seen in comparisons in the UK and US between the 1980s, 1990s and 2000s (cf. Feder, 1984; 1995; Merriman, 1991; Piccini & Henson, 2006), little appears to have changed.

More research is needed to thoroughly scrutinize public perceptions of the discipline and to continue to assess why the line between popular archaeology (in film and fiction) and professional archaeology remains blurred (cf. Feder, 1987; McManamon, 1999; Moshenska, 2017b; Pokotylo & Guppy, 1999). Stereotypes of archaeology and archaeologists, largely from popular culture, need to be taken seriously. Those working within public archaeology are often in part to blame. Issues include apathy towards public engagement within commercial archaeology (Orange, 2013) alongside academic contributions to misperceptions, such as Simpson and William's (2008: 75) suggestion that excavation is essential to engagement as it fits public perceptions. Global developments such as UNESCO's list of World Heritage Sites and the 1972 World Heritage Convention have also had a significant impact on public understandings of archaeological heritage which focus on 'sites', that is, standing remains (cf. Smith & Akagawa, 2009: 1–10). Since the 1990s steps have been taken to redress the balance and move policy and practice away from the nineteenth-century concept of archaeological 'sites' as divorced from their surroundings (Grima, 2017: 73–92; Smith & Waterton, 2009: 69). For example, UNESCO introduced the 2003 Convention for the Safeguarding of the Intangible Cultural Heritage and added 'cultural landscapes' (i.e. sites that combine human and natural 'wonders') to the World Heritage List (cf. Lock &

Molyneaux, 2006; UNESCO, 2013). However, the ideology of 'separation and protection' is so heavily instilled in public (and conservationist) attitudes that the discipline continues to neglect aspects of the historic environment that give sites their context and meaning (English Heritage, 2008: 314). This issue is compounded by the nature-culture dualism that has long pervaded Western thought (cf. Collingwood, 1945; Williams, 1980) and continues to manifest in disconnected government departments (e.g. the divide between the UK's Department for Digital, Culture, Media and Sport and the Department for Environment, Food and Rural Affairs) and public perceptions (cf. Lock & Cole, 2011; Moore & Tully, 2018; Scott, 2002). As a result, elements such as landscape archaeology or the role of heritage in agri-environment schemes are largely unknown.[2]

Existing divisions and stereotypes do both the public and the discipline a disservice, as they do not represent the diversity of current archaeology. This disconnects the discipline from wider heritage and environmental practice and overlooks new opportunities for public engagement. Exposure to new methods within public archaeology that focus on landscape-scale projects which are specifically 'not digging stuff up' (Moshenska, 2017b: 165) are therefore increasingly important. As Sørensen and Carman state (2009: 7), part of the problem within archaeology is that less attention has been given to the study of 'landscapes as heritage' in comparison to studies of heritage legislation or people's relationship with heritage. The latest contributions to the field (e.g. Moshenska, 2017a; Silverman, et al., 2017) continue to lack practical solutions to these issues. The question, then, is how to shift perceptions to acknowledge heritage sites as 'protean spaces which are at the same time both distinct from and fully integrated in to the larger landscape [… and to a] larger network of heritage sites' (Garden, 2009: 273–74)?

Community mapping and participatory GIS offer one means of engaging with different perceptions of landscape 'as heritage' (e.g. Fitzjohn, 2009; Know Your Place, n.d.) that are already used by communities to challenge planning and development applications (P. Driscoll, pers. comm., 2017). Allowing us to 'think and speak about places in new ways' through the creation of a longer-term landscape history (Fitzjohn, 2009: 249), integrated mapping systems help move archaeology and heritage management towards a system in which the values of sustainable environment and heritage are inextricably linked (|Jameson Jr, 2008: 431). While these digital initiatives meet the collaborative aims of public archaeology, there are still issues both in terms of digital access and the integration of wider data sets connected to cultural landscapes. The nature of available information and population distribution within the Know Your Place model, for example, means urban centres dominate data[3] that can only go back as far as existing records or living memory. Rural environment layers could be added, from LIDAR data and historic orchard studies to species surveys and contemporary agricultural land use maps. This would provide another dimension to local understandings of place and further empower current decision making on land management at a public level. This paper suggests that the results of participatory augering could be incorporated into such a process. Revealing integrated narratives, with greater time depth and scale than existing participatory approaches, the method could unlock new avenues of engagement which empower local people in planning decisions, garner

greater public support for the discipline, and promote its wider societal role (Watson & Waterton, 2010: 1).

Approaching landscapes

Studies of UK TV audiences reflect the 'power of place' through the popularity of programmes that integrate heritage, locality, and landscapes, for example, *Coast* (Piccini & Henson, 2006: 13). All landscapes (not just 'special',' i.e. protected, landscapes) shape our lives, just as we shape landscapes, and yet this theme is rarely taken up in public archaeology beyond community mapping as discussed above. Thus, active fieldwork, engaging with layers of 'place' history through landscape archaeology, offers a means of capturing local interests in new ways. Contributing to archaeological research, the approach also helps to build communities with the knowledge to input more effectively into policies such as Landscape Character Assessments (Tudor, 2014) and local plans by acknowledging landscape change.

In terms of the discipline, landscape archaeology (Ashmore & Knapp, 1999; David & Thomas, 2008), environmental archaeology (Turney, et al., 2005; Wilkinson & Stevens, 2003) and studies of cultural landscapes (Jones, 2003) have been gaining prominence since the 1990s. Combing 'science' and the 'sensual', current approaches unite hard data with perceptions of landscapes that are not bounded in the same way as traditional excavation and survey work (Tilley, 1994).

The expanding remit of landscape archaeology explains the growth of landscape perspectives within heritage management (cf. Fairclough, 2008b). Calling for greater inter- and intra-disciplinary approaches that move beyond academia and into 'real' life (Fairclough, 2008b: 298), ARM aims to acknowledge more 'holistically defined' public landscape perceptions that interlink with notions of value and sustainable development (Clark, 2008; Fairclough, 2008b: 298, Fluck & Holyoak, 2017; Moore & Tully, 2018). Within this movement there is also the potential to challenge the paradise/progress dialectic in which a 'natural', constant, and harmonious traditional society is viewed in contrast to the instability and disharmony (particularly with nature) of modern society (Olwig, 2008: 246, 250). It is clear, therefore, that landscape approaches which unite the various strands of methodology from across archaeology, ARM, and the wider social sciences have the potential to change perceptions. This is true for both archaeology and landscapes as the interactions between people and environment are physically entwined in the stories of 'place', community, and the structure of the soil.

The REFIT Project: changing perceptions of archaeology and landscapes

Since 2015, the Resituating Europe's First Towns (REFIT) Project has been working with stakeholders from the UK, France, and Spain to explore perceptions of European cultural landscapes (Moore & Tully, 2018; REFIT, n.d.). Funded through the JPI-Heritage plus scheme, the research focuses on Late Iron Age oppida, monuments which, due to their size (often over 100 hectares), can only be understood at a landscape scale (Moore, 2017). Focusing on the known oppida landscapes of

Bibracte (France), Ulaca (Spain), and Bagendon and Salmonsbury (UK), the project has been working with a range of stakeholders, from wildlife organizations to local residents, to position existing archaeological knowledge alongside the lesser-known perceptions and management approaches surrounding these landscapes, and to share best practice at a European level.

Perceptions gathering, engagement events, publicizing outcomes, and evaluating data were employed within the REFIT landscapes in order to help shape integrated future landscape management strategies in line with the public engagement aims of the European Landscape Convention (Council of Europe, 2000). The perceptions data showed serious lacunae in understandings of the case-study landscapes and their management between different interest groups. In addition, notions of timeless landscapes dominated initial perceptions, and realizations of the mutual impact of human action and the environment on landscape change were relatively low (Moore & Tully, 2018). What was clear was that the majority of stakeholders cared deeply about sustainability and the future management of 'their cultural landscapes'. At the two UK landscapes around Bagendon (a village under multiple private ownership) and Salmonsbury (Greystones Farm, managed by the Gloucestershire Wildlife Trust), in the Cotswolds, this realization led to the development of a number of engagement events. The events aimed to work in tandem with information from research and developer-funded archaeological excavations into the oppida (cf. Cotswold Archaeology, 2009; Moore, 2014) in order to bring different stakeholders together, challenge stereotypes about farming, archaeology, wildlife, and land management practice, and create a forum for collaboration and knowledge exchange.

As archaeologists, the REFIT Team wanted to find an archaeologically based engagement approach that would communicate the key messages surrounding landscape change. The method would need to avoid reinforcing perceptions that archaeology is only about excavation and 'the past', and instead promote the contemporary relevance of the discipline, particularly at the landscape-scale. In addition, the approach should speak to a wide range of landscape interests, generate 'real' data and reflect the need for collaboration and sustainability in future landscape management beyond the project's lifetime. As existing approaches to public archaeology did not seem to have the answer, we turned to landscape archaeology, and, more specifically, augering.

Augering and archaeology

Fairclough (2008b: 420) states, 'as traditional methods of land management fade from memory, we will need more and more knowledge and understanding of the landscape's historic aspects to help us take sustainable decisions'. He adds a complication, however, highlighting that 'landscape can be regarded as "merely" the construct of perception and interpretation. This means it is not the same as environment, even if it is forged from the same materials' (Fairclough, 2008b: 417). Augering as a means of public engagement offers a way to unite landscape perceptions (intangible and changing) with the 'fabric' (tangible and scientifically measurable) of the environment.

Augering is only one of many methodologies connected to landscape archaeology. It was first used as an archaeological tool in the early twentieth century to date sites (Stein, 1986). Today it is utilized as a means of reconstructing past environments, and is often accompanied by remote sensing, archival studies, pollen analysis, and so on (Allen, 2017; David & Thomas, 2008). It can, however, act as a relatively standalone method for transforming 'sites' into 'landscapes', and in creating a more 'joined up' knowledge of place, environmental change, and land management over time. While augering may not sound alluring in terms of public engagement, the different elements of the process and the potential information that can be gleaned chime with diverse interests. Farmers, for example, are highly invested in soils and employ agronomists to analyse topsoil depth, fertility, drainage, and sub-soil profiles. Those with an interest in wildlife and environment can learn a great deal from reconstructions of past habitats and species using such analyses. Communities are keen to know how their local areas looked in the past and to make connections with earlier peoples and land use. Planning authorities and national designation boards (such as that for Areas of Outstanding Natural Beauty) require information about the changing historic and environmental character of the landscape to develop holistic management plans. As a result, the data from augering can assist with farm, ecology, community, and planning-led decision-making and help link these interests in the creation of more integrated future landscape management practice and policy (cf. Moore & Tully, 2018).

Enlisting the interested public in augering research programmes therefore has three key elements: 1) challenging stereotypes of the discipline, while enhancing archaeological/environmental understanding as part of a programme of research; 2) disseminating new skills and knowledge with real-world implications for land management, ranging from the protection of the historic environment to flood protection; and 3) facilitating and valuing additional public/local knowledge in archaeological, planning, and environmental decision-making on land management.

Augering is, in fact, an ideal engagement technique as it is a relatively simple, minimally intrusive method that enables active involvement in the research process. Background information (theory), training, guidance, and supervised field experience is, of course, essential. This can vary from half a day to several days. After several repeated augering points, most volunteers should be able to record the basics satisfactorily, as the aim is a basic record (presence, depth, and extent of soils and sediments), not a detailed geoarchaeological one. Regular monitoring is needed to ensure consistency with a geoarchaeologist independently or collectively recording at least one auger point along each transect or in each topographic zone. However, augering does not only offer a 'deficit model', in which public understanding of archaeology is enhanced (Merriman, 2004b: 5). The training instead strengthens participants' roles within a 'multi-perspective model' in which volunteers can contribute additional perspectives about the wider landscape, soils, archaeology, taphonomy, and land management over time, which will feedback into archaeological practice (Matsuda & Okamura, 2011: 1–18; Merriman, 2004b: 7).

In addition, augering to collect data across a survey transect, or more widely across a larger landscape where a greater number of auger points are recorded, can be greatly archaeologically beneficial and cost-effective. With training and

field experience, teams of volunteers can easily accumulate data over large areas, enabling mapping, survey, and characterization of whole defined landscapes semi-autonomously with minimal archaeological supervision. Such surveys can be used to define the presence and absence of colluvial and alluvial deposits, the depth and extent of deposits, and the likelihood and type of archaeological evidence buried beneath them (cf. Allen, 1988; 1991). In addition, the work can assist in defining the geoarchaeological sedimentary architecture and land use/landscape history of an area. This may isolate specific locations, topographical zones, or areas that may benefit from more detailed recording and investigation – just as in many auger surveys. Volunteers can also be trained in the whole process, not only including auger records and survey locations (GPS) but also typing up record sheets into pro-forma records for archaeological use.

With this holistic approach in mind, reviewing the data with volunteers is important to demonstrate the value of their work and additional knowledge. This has the dual benefit of revealing volunteers' active role in the research process while enhancing the sense of ownership and knowledge transfer regarding landscape change, which can feed into contemporary landscape management from the bottom-up. Building on this, the auger data should also be published, not only so the data is available for the wider research/land management community, but to encourage volunteers to further their interest and engage with local landscape responsibilities.

The deployment of trained volunteers enables greater ground to be covered, and more data to be acquired than by environmental archaeologists alone. However, due to the time needed to train individuals, longer-term and larger-scale projects with a dedicated team of volunteers are best suited in terms of archaeological research return and knowledge exchange. The success of this style of engagement approach for delivering landscape-scale outputs is already apparent through the use of geophysical survey by archaeological volunteer groups, such as the work of Durham University Archaeological Service's survey team as part of the North Pennines Area of Outstanding Natural Beauty 'Altogether Archaeology' Project (North Pennines AONB, n.d.).

There are, of course, difficulties connected to participatory augering. As with the archaeological survey techniques cited above, environmental archaeology also suffers from a lack of available specialists to deliver training (a problem not faced regarding community excavation). To counter this, the model employed by the 'Altogether Archaeology' geophysical survey team – in which Durham University staff trained selected members of local societies, who in turn trained further members and the wider public – could be adopted alongside a strong support and monitoring system for participatory augering. There are also potential problems related to the quality of field records and the greater likelihood of inconsistencies between records created by multiple individuals. In addition, the accumulated data requires inputting manually, either by volunteers or the geoarchaeologist – a long process in which accuracy is extremely important. The authors argue that these issues are offset by the advantage (in comparison to public excavation) that records or data sets can be repeated and additional measures, such as more detailed records or test pits excavation, can be added as appropriate.

Augering in action

Considering the potential, one would assume that augering is regularly employed to provide data for interdisciplinary landscape management and public engagement in archaeology. This, however, is not the case. In the UK, Local Plans, Area of Outstanding Natural Beauty management plans, Historic Landscape Character Assessments, ecological assessments, and the like rely heavily on documentation (i.e. maps and records from Historic Environment Records, historic species data, etc.). This information is used in conjunction with assessments of contemporary assets through 'Natural Capital' and 'Ecosystems services', which take into account the value of cultural resources as well as more obvious aspects such as species diversity and so on (Schaich, et al., 2010). As far as the authors are aware (other than the use of peat-coring as part of peatland-based development and restoration projects, e.g. Bonnett, et al., 2011), data from auger surveys is not regularly included in traditional landscape assessments or their associated planning documents. This seems surprising considering the rapid and minimally intrusive intervention and the potential of the method to provide historic data on factors such as vegetation change, migrating river courses, and so on, and to assess how human actions, such as farming and settlement, have contributed to these changes.

In terms of public archaeology in the UK (and elsewhere), the use of augering as an engagement tool is also rare (through probably proportionately higher than in other archaeological endeavours in the research and commercial sector). Environmental and landscape archaeology is often employed to engage new audiences, such as by Cardiff University's Guerrilla Archaeology group (n.d.) who have created guidance documents on public engagement with human and animal bones, snails, and pollen (cf. Mulville & Law, 2013). Augering, however, is rarely mentioned as a method for putting these selective archaeological datasets into their landscape context or for drawing on wider public knowledge to enhance archaeological research. Thus, while engagement with these aspects of environmental archaeology resonates with public interest, they continue to focus on 'excavation', 'artefacts/ecofacts', and 'sites' and promulgate stereotypes about the discipline.

Specific examples of community involvement with archaeological augering in the UK seem to be limited to the Lincolnshire/Nottinghamshire area or the work of one of this paper's authors, Mike Allen. In the East Midlands, the Lincolnshire Heritage Forum (n.d.) offers beginners training in archaeological augering connected to the Heritage Lottery Fund-supported project 'Ice Age Journeys' (n.d.) (hereafter IAJ) at Farndon Fields, Nottinghamshire. Another group, Heritage Lincolnshire, in partnership with the Friends of Bolingbroke Castle, has also employed volunteers in augering-based research. In this case, the work was part of a wider conservation and engagement programme funded by an English Heritage grant in 2009. Augering was applied specifically to aid research on the castle's moat in order to inform restoration work (Heritage Lincolnshire, n.d.).

Mike Allen, a fully trained geoarchaeologist with over thirty years' experience, has conducted a number of volunteer-based augering projects at a variety of scales in the UK, most commonly undertaken in the guise of teaching/learning, or specific research goals. As part of the Continuing Education Course at Reading University, Mike led students in a small-scale augering programme outside Avebury

World Heritage Site in Wiltshire. Examining for the presence of hillwash, participants worked in small teams and recorded their own auger profiles of a simple auger transect. Due to demand for further involvement, the work was expanded with a small fee-paying course run by Allen Environmental Archaeology to optimize the teaching and research outcomes by examining and mapping colluvium in the Avebury environs. At Barcombe, East Sussex, a class-based introduction and Powerpoint lecture were delivered before conducting augering, with the specific aim of questioning traditional interpretations of the landscape separating a Roman bath house and villa.

A more controlled and sustained programme of augering research was undertaken as part of National Trust archaeological engagement projects on the Seven Sisters and at Belle Toute in Sussex (National Trust, n.d). After a half-day introduction and hands-on demonstration, teams of volunteers met for several weekends and augered four of the Seven Sisters dry valleys, recording the presence, extent, and depth of colluvium. The augering culminated in three areas being selected for small-scale, detailed test-pit excavation, hand-sieving and palaeo-environmental sampling, which was assisted by the same volunteers.

Of all these examples, the only formal feedback on participatory augering comes from the IAJ research. The project's 117 volunteers ranked augering fifth out of ten options regarding the most rewarding aspects of their experience, after field walking, sorting flints, test-pit excavation, and contact with like-minded people (Ice Age Journeys, 2015: 11).[4] This small piece of feedback, alongside clear evidence of the potential of volunteer augering to cover larger areas effectively, has led IAJ to expand their augering programme (D. Garton, pers. comm., 2017). Anecdotal evidence from Allen's work suggests that augering is received with enjoyment as the experience of understanding the variation (geography), time depth, and human impact on the landscape appears to be phenomenally rewarding in terms of 'what you can get from a bit of dirt'.

These projects clearly reveal the potential value of participatory augering as a public engagement technique that can explain landscape change and include additional public knowledge to feed into future landscape management. More information on method and evaluation is, however, needed to enable other projects to build on existing work. The discussion below aims to set out how participatory augering can be incorporated into wider archaeological engagement. The approach has developed from Allen's experience outlined above, alongside evaluation work into participatory augering carried out in partnership with the REFIT Project. In addition, the approach builds on a much larger-scale engagement programme currently in development by Allen as a part of the AHRC-funded Avebury landscape 'Living with Monuments' project (n.d.). In order to increase the archaeological team's capacity to map soils, colluvial and alluvial sediments, volunteers will be trained in augering through a combination of class- and field-based seminars, demonstrations, and practical sessions. Once deemed proficient, each volunteer will be given a fieldwork passport. The passport (in development) is currently a fourteen-page draft document that, when complete, will act as proof that volunteers have passed the supervision phase. In addition, the document will identify volunteers to landowners, farmers, and tenants while carrying out independent work.

Although volunteers will not be working alone, they will be encouraged to organize themselves into small teams (3–4). Each team will book and collect the auger and the relevant paperwork from the National Trust Estate Office in order to undertake self-led augering within defined areas of the landscape — mapping the soils and sediments and recording their locations with GPS and simple survey techniques. Volunteers will then hand in their field records and have the opportunity to input them at the National Trust Estate Office. The envisaged approach will involve volunteer results being checked by the archaeological team and group discussions taking place to incorporate participants' wider landscape knowledge and methodological suggestions into further research. This two-way process may lead to more detailed geoarchaeological investigation taking place in which volunteers will have further opportunity to assist. The approach will involve long-term volunteer engagement in the entire research programme, from planning to publication. As a result, the initiative hopes to work with the public to build new narratives about archaeology, while raising awareness of the changing nature of the Avebury landscape in order to promote community involvement in managing future change.

Methodological background: the REFIT Project

In the summer of 2016, the first of the REFIT Project's participatory augering events took place with farmers, museum professionals, and residents in the landscape around Bagendon in the Cotswolds. The aim of the half-day workshop was to engage stakeholders with the message of landscape change through limited and targeted augering. The workshop provided an opportunity for different interest groups to share diverse understandings of the modern landscape. These perceptions and their connections to current land management were built on through the augering process to provide new insights into the human and natural actions that have shaped the land. Changes in perceptions of the landscape and archaeology were documented through two short public videos explaining augering and the importance of landscape archaeology to the wider public (REFIT, 2016a; 2016b).

Later that summer, augering was employed as one of many engagement techniques around the REFIT UK case-study landscape of Salmonsbury (Greystones Farm) during a public open day held in partnership with the Gloucestershire Wildlife Trust. The 'Love your Landscape' event focused on connecting farming, wildlife, and community narratives from the Iron Age until today. The REFIT team gathered feedback from visitors to assess whether the integration of multiple themes had been successful in changing perceptions. The following quotes give a flavour of the responses from both the Bagendon and Salmonsbury events:

> I've learnt a lot about the soil and what it tells us about the wider landscape over history. It is amazing how all the layers of use — the history and the nature and the farming — affect each other. (Visitor to 'Love your Landscape')

> The augering really hit home about how a place isn't just about 'now'. We've really seen a different side to the place. (Visitor to 'Love your Landscape')

> It [the augering] gives a different perspective […] To me archaeology is finding coins or bone fragments or something, which this is not at all about. (Farmer, Bagendon)

> Today's been great as it is the first time I've met any of the landowners and some of them are farmers, and […] I feel like I live in the ancient landscape and I don't understand what is happening in the modern landscape. So it has been really wonderful to have some conversations with them and to ask what do you do and what are you using the land for, so that improves my knowledge but I think it works the other way round too. (Heritage professional, near Bagendon)

The quotes show the impact of participatory augering in terms of encouraging stakeholders to reconsider perceptions of the landscape. Getting 'hands-on' with the soil also engaged individuals across different age groups and landscape interests, inspiring them to share knowledge and reconsider the landscape and the practice of archaeology.

The success of the 2016 events led to the development of twelve days of participatory augering with over thirty local stakeholders from the REFIT case study landscapes of Bagendon and Salmonsbury (Greystones Farm) in August 2017 (see Figure 1). The fieldwork aimed to assess the paleoenvironmental record to provide archaeological information on the environmental context of the oppida landscapes, whilst engaging stakeholders in narratives of landscape change and management. In order to do this, a series of test-pits (to provide environmental samples) and augering transects (for pollen cores and soil profiles) were undertaken across the landscapes (outside the scheduled areas). To assess the impact of the approach on participants' perceptions of archaeology, landscape change, and future management, formative and summative surveys were carried out. In addition,

FIGURE 1 Participatory augering training at Salmonsbury (Greystones Farm), 2017. *Image courtesy of Mike Boyes*

a short film 'Archaeology, it's not what you think!' was made at Salmonsbury as part of a larger public open day — a follow up to the 2016 'Love your Landscape' event (REFIT, 2017).

The film and evaluation data reveal the success of the project in transforming perceptions of archaeology and landscape. The completed surveys across the two landscapes indicated an interest in archaeology as the main motivation for taking part, with one-third of participants having been involved in previous archaeological work (see Tully, 2017a; 2017b). In the formative survey, expectations centred around learning more about oppida as 'sites' with a focus on 'finds' and understanding the 'past/past community'. Only four individuals expected to engage with the wider landscape or the development of the area over time. This is interesting as the call for volunteers was billed as an opportunity to understand changing land use and shows how the word archaeology leads to certain assumptions. The majority of participants in both landscapes felt the environs would have changed a great deal since the era of the oppida. About half of the participants for each landscape were aware of active management, but none named any specific initiatives such as Site of Special Scientific Interest, agri-environment schemes, SAM, and so on. Hopes for the future at both landscapes focused on greater funding, protection of the elements that make them special, greater public access, and understanding of the importance of these places.

The summative surveys showed that participants' outcomes were very different to the expectations outlined above. The work broke down the ideological divide between archaeology and today's landscape through a shift in focus towards the potential of soils to tell stories of changing land use and topography through ongoing natural and human action. The term 'site' was only used once in the summative responses. 'Finds' were also discussed differently, either in relation to archaeology being about 'more than just material finds (objects) which inform us about the past' or as a tool to work in conjunction with other methods of understanding landscapes, that is, 'artefacts can show timescale'. The quotes below highlight the potential of the approach to enthuse volunteers through new types of information that bring together different landscape interests and public expertise, raise awareness about landscape change across time, and shift perceptions of archaeology.

> I learned about soil and how the appearance of the oppidum affected the area, the way the river moved the soils and how to date/see changes in the test pits and augering holes. (Volunteer, Salmonsbury)

> I now have a clearer picture of the land over the millennia. (Volunteer, Bagendon)

> My ideas about archaeology have been changed quite a bit. I look back to when I was a kid and it was all about Carter finding Tutankhamun's tomb, and this weekend I see that looking at the land and the landscape and how man has affected the landscape over thousands of years is as important as Tutankhamun's mask. (Volunteer, Salmonsbury).

> Thinking about Time Team and stuff on the telly, we've seen it's not just about digging a hole but the research that goes on behind that, especially from a soil sampling perspective. (Volunteer, Salmonsbury)

The summative evaluation also showed how participants came to realize the importance of understanding palimpsest landscapes — their past and present management — and making connections to future management plans.

> The work has made me realize Bagendon needs more careful management. (Volunteer, Bagendon)

> Connecting over 2000 plus years of land use and occupation makes the parish what it is today. (Volunteer, Bagendon)

> Conservation and change can be combined. (Volunteer, Salmonsbury)

> Being here at Greystones, where everything is to do with the land, whether it is the past or the present, whether it is about farming or the wildlife here, I think it is all interconnected and we should be thinking about all those aspects, not just one. So maybe in the future farming will have to change and maybe people's attitudes to the countryside will have to change as well. (Volunteer, Salmonsbury)

The clear communication of the project's integrated landscape message supports the potential for participatory augering and the resultant new knowledge to empower communities to take a more active role in landscape management and planning decisions. Participants' 'revised' hopes for the future of the landscapes show a positive beginning from which the engagement technique and its results could achieve this in similar ways to the Know Your Place community mapping example discussed earlier in this paper.

> I hope that this work will contribute to improved future management. (Volunteer, Bagendon)

> By understanding landscape change we can better understand protective measures, and I hope it [the landscape] will be preserved. (Volunteer, Salmonsbury)

While the test-pitting element of the REFIT engagement work would be difficult to do at a larger scale, there is clear potential for participatory augering to be developed as a standalone form of citizen science.[5] Not only would this be a huge asset to archaeological units and researchers in terms of data collection and the addition of public perspectives into the research process, but the emerging picture of changing landscapes could be added as layers onto existing mapping resources such as Know Your Place, thus helping inform contemporary land management from local to national level. This may sound ambitious, however, other projects have begun to demonstrate the success and sustainability of volunteer-led public research (aka citizen science) and stewardship in archaeology at a landscape scale (e.g. Archaeology Scotland's 'Adopt a Monument' and 'Shorewatch' schemes).

Evaluation from the REFIT Project has shown the interest and accessibility of participatory augering in terms of its aims and methods. The approach could therefore build on similar training models, alongside a Know Your Place-style database, to take the methodology to a wider audience. What the research did not address, however, was negative aspects of augering (all responses were positive) or wider consultation with participants regarding comparisons between augering and other more familiar archaeological engagement tools such as field walking. This is in need of further research as, inevitably, augering will not excite everyone. To overcome

this, well-written publicity and the availability of inspiring individuals to deliver training are also essential.

The final selection of quotes reveals that REFIT stakeholders found participatory augering an interesting and meaningful way of engaging with the wider story of landscapes and their management. More importantly, perhaps, they made active suggestions for the extension of the work to other landscapes and communities.

> I thought 3 days of looking at soil samples it is going to be so monotonous, but it has been far from that. We've learnt so much about going down to different depths and the different stories it can tell. (Volunteer, Salmonsbury)

> The broader picture from augering and fieldwork would help with planning issues. (Volunteer, Bagendon)

> We need to do the same with other communities to link across a wider area, this would be more useful than seeing the Bagendon landscape in isolation. (Volunteer, Bagendon)

> This would be a great project to do with schools, to interview them [the children] and then do augering and test pits to help them understand landscapes and how they change. (Volunteer, Salmonsbury)

Comments on the potential of using the approach with schoolchildren is key to showing the perceived benefit and adaptability of the work with diverse audiences. Table 1 highlights some of the key steps needed to develop the participatory augering approach elsewhere. The list is not intended as a full methodology, but provides a simplified version of the Avebury 'Living with Monuments' volunteer auger guide discussed above.

Once training is complete, volunteers should each receive a detailed manual covering all elements of the course, plus additional information. Inevitably, as with all community engagement, a reflexive approach and ongoing two-way dialogue between archaeological facilitators and participants will be essential to the success of the training, data collection, and feedback system. As McManamon suggests, it is all about getting the right 'messengers' to communicate the right 'messages' (2000: 5–20) in order to tread the fine line between controlling the outputs necessary to maintain standards and in providing support and sharing knowledge in a 'multi-perspective' approach (Merriman, 2004b: 7). However, as the REFIT Project demonstrates, there is great enthusiasm for the approach and, as long as the crucial process of feedback and evaluation continues (see also Moshenska, 2017a: 13), modifications to the methodology can be made to fulfil the needs of different communities, abilities, landscapes, and research interests.

What next?

Participatory augering has wide-ranging potential for enhancing public engagement and changing perceptions of archaeology and landscape management. The tangible nature of the work — not just asking people to describe landscape values, but embedding these values in something you can see, touch, and record — is a crucial tool. Actively engaging stakeholders in the production of new knowledge, the approach meets calls for democratization within the

TABLE 1

KEY STEPS IN PARTICIPATORY AUGER TRAINING.

Training steps by theme	Training actions
1. Augering theory and practice	Classroom and field-based lectures and practical sessions
2. Archaeological aims	Explain the local and wider archaeological aims of the project to ensure volunteers understand their active role in the production of new data/research
3. Recording and collecting samples	Activities to practice mapping different soils — colour, stoniness, and thickness, identify colluvium (hillwash) and alluvium, identify and map old land surfaces, buried soils, middens, and 'dark earths', and learn when soils may have potential for pollen samples
4. The importance of recording systems	Training in recording techniques (via paper and/or use of online systems), emphasizing the importance of the accuracy of the permanent field record (i.e. in the project auger log/ database)
5. Setting research questions	Explain decisions regarding what researchers want to find out, why this information is important, and how to collect the data (e.g. defining sample intervals)
6. Defining survey boundaries	Classroom and field demonstrations on how to define mapping areas and gain access to land (e.g. private land, Scheduled Ancient Monument Consent, SSSIs, etc.)
7. Feedback and review	Outline procedures and schedules for feeding back and reviewing surveys with trained geoarchaeologists. This should be carried out alongside information on long-terms plans for the dissemination of project findings (newsletters to volunteers, local talks, publications, etc.)
8. The Countryside Code	Review the relevant aspects of the Countryside Code to ensure appropriate behaviour while carrying out surveys
9. Health and Safety	Review relevant health and safety policy and procedures (this includes risk assessments, local points of contact in case of emergencies/problems, lone working, and insurance)
10. Access to augers	Review locations and procedures for storage and use of community augers (contacts, booking systems, etc.)

discipline and has the potential to position archaeology as a vital 'empowerer' influencing decision-making on current and future landscape management. The integration of biology, chemistry, and geography alongside archaeology is also crucial in addressing the need for the discipline to diversify and move beyond the 'public humanities approach' into the realm of science communication and science studies (Moshenska, 2017a: 11–13).

With the above benefits in mind, the non-intrusive, cost- and time-efficient form of engagement could be built into the wider 'package' of public archaeology projects in the UK. This could take place quite simply through piecemeal additions to individual project funding. Time could be allocated within the process to uploading and disseminating the landscape data through a more coordinated participatory augering network and dedicated online platform, or as part of existing local mapping resources such as Know Your Place. Research results could be disseminated further through social media or other digital campaigns, some of which could be directed at younger audiences as research by the European Commission (2011) has shown an increasing interest by sixteen- to twenty-four-year-olds in digital cultural engagement.

The success of participatory augering and the dissemination network could be measured to overcome issues of lack of monitoring within public engagement (Mosenshka, 2017a: 13). This could be achieved through collating the numbers of records uploaded and processed alongside documenting use profiles (dwell time, return visits, etc.). Equally important would be developing a means of recording

when the resource is used in Local Plans, to challenge planning decisions or in other contemporary landscape-management initiatives at a local or national scale.

Conclusion

As this paper has demonstrated, there is no one-size-fits-all approach to successful public engagement in archaeology. What is clear, however, is that present perceptions of archaeology and its relationship with landscapes and their contemporary management are disjointed and hampered by stereotypes. While more work is needed from within the sector, the REFIT and Avebury examples have shown how participatory archaeological augering could play a central role in widening the offer of public archaeology in the UK to improve public experiences, enhance archaeological data sets and address issues of (mis)perception at a landscape scale. Demonstrating how archaeology is not simply about understanding the past, the volunteer-led approach has the potential to highlight landscape change, promote collaboration and knowledge exchange across stakeholder interests, and feed into contemporary landscape management and policy. Fostering a sense of ownership and empowerment, archaeology could help enable collaborative land management as set out in the European Landscape Convention (Council of Europe, 2000) and, by shaping the future of the places communities value today, cement the place of the discipline in wider society.

Notes

[1] The term 'public archaeology' will be used in this paper in keeping with dominant trends in the UK where the case studies are drawn.

[2] For example, Historic England's role in Countryside Stewardship schemes, in which they work in conjunction with Natural England (DEFRA), farmers, and landowners (cf. DEFRA, 2015), is little known beyond professional circles (cf. Moore & Tully, 2018).

[3] There are, of course, exceptions here in the case of community mapping projects with indigenous communities involved in the management of vast territories, e.g. in Australia and the US (see contributions to Tully & Ridges, 2016).

[4] More research is needed to highlight, through comparisons, the benefits and limitations of all participatory engagement methods. This, however, is not within the remit of this paper.

[5] This could also include sampling for pollen where training, time, and funding commitments allowed.

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Bibliography

Allen, M. J. 1988. Archaeological and Environmental Aspects of Colluviation in South-East England. In: W. Groenmann-van Waateringe and M. Robinson, eds. *Man-Made Soils*. Oxford: British Archaeological Reports, Int. Series 410, pp. 69–92.

Allen, M. J. 1991. Analysing the Landscape: A Geographical Approach to Archaeological Problems. In A. J. Schofield, ed. *Interpreting Artefact Scatters; Contributions to Ploughzone Archaeology*. Oxford: Oxbow Monograph 4, pp. 39–57.

Allen, M. J. 2017. The Geoarchaeology of Context: Sampling for Land Snails (on Archaeological Sites and Colluvium). In: M. J. Allen, ed. *Molluscs in Archaeology*. Oxford: Oxbow Books, pp. 30–47.

Ashmore, W. & Knapp, B. A. 1999. *Archaeologies of Landscape*. Malden: Blackwell Publishers.

Bonacchi, C. ed. 2012. *Archaeology and Digital Communication: Towards Strategies of Public Engagement*. London: Archetype Publications.

Bonacchi, C. 2013. Audiences and Experiential Values of Archaeological Television: The Case Study of 'Time Team'. *Public Archaeology*, 12(2): 111–25.

Bonacchi, C. 2014. Understanding the Public Experience of Archaeology in the UK and Italy: A Call for a 'Sociological' Movement in Public Archaeology. *European Journal of Post-Classical Archaeologies*, 4: 377–400.

Bonnett, S. A., Linsted, R., Ross, S., and Maltby, E., and Natural England. 2011. Guidelines for Monitoring the Success of Peatland Restoration [online] Technical Report Natural England, SWIMMER [accessed 1 June 2018]. Available at: http://eprints.uwe.ac.uk/21938.

Cardiff University. n.d. Guerilla Archaeology Group [online] [accessed 12 December 2017]. Available at: www.guerillaarchaeology.wordpress.com.

Carman, J. 2015. *Archaeological Resource Management: An International Perspective*. Cambridge: Cambridge University Press.

Clark, K. 2008. Only Connect — Sustainable Development and Cultural Heritage. In: G. Fairclough, R. Harrison, J. H. Jameson, Jr, and J. Schofield, eds. *The Heritage Reader*. New York: Routledge, pp. 82–98.

Collingwood, R. G. 1945. *The Idea of Nature*. Oxford: Clarendon Press.

Communities and Local Government (CLG). 2010. *Planning Policy Statement 5: Planning for the Historic Environment*. London: The Stationery Office.

Communities and Local Government (CLG). 2012. *National Planning Policy Framework*. London: The Stationery Office.

Cotswold Archaeology. 2009. *Greystones Farm. Evaluation Report*. Kemble: CA Report 09085.

Council of Europe. 2000. European Landscape Convention [online] [accessed 1 June 2018]. Available from: https://www.coe.int/en/web/conventions/full-list/-/conventions/treaty/176.

David, B. & Thomas, J. eds. 2008. *Handbook of Landscape Archaeology*. Walnut Creek, CA: Left Coast Press.

Department for Communities and Local Government (DCLG). 2012. National Planning Policy Framework [online] [accessed 15 December 2017]. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/6077/2116950.pdf.

Department for Environment, Food and Rural Affairs (DEFRA). 2015. Countryside Stewardship [accessed 1 June 2018]. Available from: https://www.gov.uk/government/collections/countryside-stewardship-get-paid-for-environmental-land-management.

English Heritage. 2008. Sustaining the Historic Environment. New Perspectives on the Future. In: G. Fairclough, R. Harrison, J. H. Jameson, Jr, and J. Schofield, eds. *The Heritage Reader*. New York: Routledge, pp. 313–21.

European Commission. 2011. Digital Competence in the Digital Agenda: Digital Agenda Scoreboard 2011 [online] [accessed 15 December 2017]. Available at: https://ec.europa.eu/digital-agenda/sites/digital-agenda/files/digitalliteracy.pdf.

Fairclough, G. 2008a. New Heritage: An Introductory Essay. In: G. Fairclough, R. Harrison, J. H. Jameson, Jr, and J. Schofield, eds. *The Heritage Reader*. New York: Routledge, pp. 297–312.

Fairclough, G. 2008b. 'The Long Chain', Archaeology, Historical Landscape Characterization and Time Depth in the Landscape. In: G. Fairclough, R. Harrison, J. H. Jameson, Jr, and J. Schofield, eds. *The Heritage Reader*. New York: Routledge, pp. 408–24.

Fairclough, G., Harrison, R., Jameson, Jr., J. H. & Schofield, J. 2008. Heritage, Memory and Modernity. In: G. Fairclough, R. Harrison, J. H. Jameson, Jr, and J. Schofield, eds. *The Heritage Reader*. New York: Routledge, pp. 1–12.

Feder, K. L. 1984. Irrationality and Popular Archaeology. *American Antiquity*, 46(6): 525–41.

Feder, K. L. 1987. Cult Archaeology and Creationism: A Coordinated Research Project. In: F. B. Harold and R. A. Eve, eds. *Cult Archaeology and Creationism: Understanding Pseudoscientific Beliefs About the Past*. Iowa City, IA: University of Iowa Press, pp. 34–48.

Feder, K. L. 1995. Ten Years After: Surveying Misconceptions about the Human Past. *CRM*, 18(3): 10–14.

Fitzjohn, M. 2009. The Use of GIS in Landscape Heritage and Attitudes to Place. Digital Deep Maps. In: M. L. Stig Sørensen and J. Carman, eds. *Heritage Studies: Methods and Approaches*. London and New York: Routledge, pp. 237–52.

Fluck, H. & Holyoak, V. 2017. *Ecosystems Services, Natural Capital and the Historic Environment*. Research Report Series 19/2017. London: Historic England.

Garden, M-C. E. 2009. The Heritagescape. Looking at Heritage Sites. In: M. L. Stig Sørensen and J. Carman, eds, *Heritage Studies: Methods and Approaches*. London and New York: Routledge, pp. 270–91.

Grima, R. 2017. Presenting Archaeological Sites to the Public. In: G. Moshenska, ed, *Key Concepts in Public Archaeology*. London: UCL Press, pp. 73–92.

Heritage Lincolnshire. n.d. Home [online] [accessed 12 December 2017]. Available at: https://www.heritagelincolnshire.org/wp-content/uploads/BolingbrokeCastle-Looking-At-Archaeology.pdf.

Historic England. n.d. Heritage Counts [online] [accessed 12 December 2017]. Available at: https://historicengland.org.uk/research/heritage-counts/.

Ice Age Journeys. n.d. Home [online] [accessed 12 December 2017]. Available at: www.iceagejourneys.org.uk.

Ice Age Journeys. 2015. *Evaluation Report*. Lincoln: Lincolnshire Heritage Forum.

Jameson, Jr, J. H. 2008. Presenting Archaeology to the Public, Then and Now. An Introduction. In: G. Fairclough, R. Harrison, J. H. Jameson, Jr, and J. Schofield, eds. *The Heritage Reader*. New York: Routledge, pp. 427–56.

Jones, M. 2003. The Concept of Cultural Landscape: Discourse and Narratives. In: H. Palang and G. Fry, eds. *Landscape Interfaces.Cultural Heritage in Changing Landscapes* Dordrecht: Springer, pp. 21–51.

Know Your Place. n.d. Home [online] [accessed 12 December 2017]. Available at: http://www.kypwest.org.uk/.

Lazzari, O. 2017. Archaeology in the Media. Survey Concerning Public Perceptions of Archaeology for the Theoretical Archaeology Group Conference TAG 2017 [online] [accessed 1 June 2018]. Available at: https://docs.google.com/forms/d/e/1FAIpQLScOr_yn7XsoKgjoGMpZMOzviWYWdxMovtfEbLNRrDOuHvY7Gw/viewform.

Lincolnshire Heritage Forum. n.d. Home [online] [accessed 12 December 2017]. Available at: www.lincsheritageforum.org.uk/about.

Living with Monuments. n.d. Research [online] [accessed 12 December 2017]. Available at: www.ntarchaeostonehengeaveburywhs.wordpress.com/research/living-with-monuments.

Lock, K. & Cole, L. 2011. *Public Perceptions of Landscapes and Ecosystems in the UK*. A report to the Department for Environment, Food and Rural Affairs (Report No. DEFRA NE0109). London: Policy Studies Institute/Defra.

Lock, G. & Molyneaux, B. eds. 2006. *Confronting Scale in Archaeology: Issues of Theory and Practice*. New York, NY: Springer.

Matsuda, A. & Okamura, K. 2011. Introduction: New Perspectives in Global Public Archaeology. In: K. Okamura and A. Matsuda, eds. *New Perspectives in Global Public Archaeology*. New York, NY: Springer, pp. 1–18.

McManamon, F. P. 1999. Understanding the Public's Understanding of Archaeology. *Common Ground*, 4(2): 3.

McManamon, F. P. 2000. Archaeological Messages and Messengers, *Public Archaeology*, 1(1): 5–20.

Merriman, N. 1991. *Beyond the Glass Case: The Past, the Heritage and the Public in Britain*. Leicester: Leicester University Press.

Merriman, N. 2002 Archaeology, Heritage and Interpretation. In: B. Cunliffe, W. Davies and C. Renfrew, eds. *Archaeology: The Widening Debate*. Oxford: Oxford University Press, pp. 541–66.

Merriman, N. ed. 2004a. *Public Archaeology*. London and New York: Routledge.

Merriman, N. 2004b. Introduction: Diversity and Dissonance in Public Archaeology. In: N. Merriman, ed. *Public Archaeology*. London: Routledge, pp. 1–17.

Moore, T. 2014. The Birth of a Capital? Bagendon 'Oppidum' and the Impact of Rome on the British Countryside. In: D. Breeze, ed. *The Impact of Rome on the British Countryside*. London: The Royal Archaeological Institute, pp. 26–30.

Moore, T. 2017. Alternatives to Urbanism? Reconsidering Oppida and the Urban Question in Late Iron Age Europe. *Journal of World Prehistory*, 30(3): 281–300.

Moore, T. & Tully, G. 2018. Connecting Landscapes: Examining and Enhancing the Relationship Between Stakeholder Values and Cultural Landscape Management in England. *Landscape Research*, 43(6): 1–15.

Moshenska, G. 2017a. Key Concepts in Public Archaeology. Introduction. In: G. Moshenska, ed. *Key Concepts in Public Archaeology*. London: UCL Press, pp. 1–13.

Moshenska, G. 2017b. Archaeologists in Popular Culture. In: G. Moshenska, ed. *Key Concepts in Public Archaeology*. London: UCL Press, pp. 151–65.

Mulville, J. & Law, M. 2013. *Environmental Archaeology and Community Engagement. Activities and Advice*. Cardiff: The Association for Environmental Archaeology and Cardiff Osteoarchaeology Research Group.

National Trust. n.d. Birling Gap and the Seven Sisters [online] [accessed 12 December 2017]. Available at: www.nationaltrust.org.uk/birling-gap-and-the-seven-sisters/projects/amazing-archaeology-at-seven-sisters.

North Pennines AONB. n.d. Altogether Archaeology [online] [accessed 12 December 2017]. Available at: www.northpennines.org.uk/our-work/altogether-archaeology.

Olwig, K. R. 2008. 'Time Out of Mind' — 'Mind Out of Time': Custom Versus Tradition in Environmental Heritage Research and Interpretation. In: G. Fairclough, R. Harrison, J. H. Jameson, Jr, and J. Schofield, eds. *The Heritage Reader*. New York, NY: Routledge, pp. 245–55.

Orange, H. 2013. Public Engagement at Archaeology South-East. *Archaeology International*, 16(2012–13): 41–46.

Piccini, A. & Henson, D. 2006. Survey of Heritage Television Viewing [online] [accessed 16 December 2017]. Available at: http://hc.english-heritage.org.uk/content/pub/eh_tvcounts_report_final.pdf.

Pokotylo, D. L. & Guppy, N. 1999. Public Opinion and Archaeological Heritage: Views from Outside the Profession. *American Antiquity*, 64: 400–16.

Ramos, M. & Duganne, D. 2000. Exploring Public Perceptions and Attitudes about Archaeology [online] [accessed 14 December 2017]. Available at: www.saa.org/Portals/0/SAA/pubedu/nrptdraft4.pdf.

REFIT Project. n.d. Home [online] [accessed 12 December 2017]. Available at: www.refitproject.com.

REFIT. 2016a. Augering Archaeological Landscapes [online] [accessed 12 December 2017]. Available at: www.youtube.com/watch?v = myaaVql5PLg.

REFIT. 2016b. Bagendon — Getting to the Core [online] [accessed 12 December 2017]. Available at: www.youtube.com/watch?v = S-VdM8R_Iig&t = 9s.

REFIT. 2017. Archaeology — It's Not What You Think! [online] [accessed 12 December 2017]. Available at: www.youtube.com/watch?v = wqd_1WtEBLI&feature = youtu.be.

Richardson, L. 2013 A Digital Public Archaeology? *Papers from the Institute of Archaeology*, 23(1): 10: 1–12.

Robinson, M. & Silverman, H. eds. 2015. *Encounters with Popular Pasts Cultural Heritage and Popular Culture*. Switzerland: Springer International.

Roper Starch Inc. 1995. *Americans' Attitudes Towards History*. Study conducted for the History Channel. New York: Roper Starch Inc.

Schadla-Hall, T. 2006. Public Archaeology in the Twenty-First Century. In: R. Layton, S. Shennan, and P. Stone, eds. *A Future for Archaeology: The Past in the Present*. London: UCL Press, pp. 75–82.

Schaich, H., Bieling, C. & Plieninger, T. 2010. Linking Ecosystem Services with Cultural Landscape Research. *GAIA — Ecological Perspectives for Science and Society*, 19(4): 269–77.

Scott, A. 2002. Assessing Public Perception of Landscape: The LANDMAP Experience. *Landscape Research*, 27: 271–95.

Silverman, H., Waterton, E. & Watson, S. eds. 2017. *Heritage in Action. Making the Past in the Present*. London: Springer.

Simpson, F. 2010. *The Values of Community Archaeology: A Comparative Assessment between the UK and US*. Oxford: Archaeopress.

Simpson, F. & Williams, H. 2008. Evaluating Community Archaeology in the UK. *Public Archaeology*, 7(2): 69–90.

Skeates, R., McDavid, C. & Carman, J. eds. 2012. *The Oxford Handbook of Public Archaeology*. Oxford: Oxford University Press.

Smith, L. & Akagawa, N. 2009. Introduction. In: L. Smith and N Akagawa, eds. *Intangible Heritage*. London: Routledge, pp. 1–10.

Smith, L. & Waterton. E. 2009. *Heritage, Communities and Archaeology*. London: Gerald Duckworth & Co.

Sørensen, M. L. & Carman, J. eds. 2009. *Heritage Studies: Methods and Approaches*. London and New York: Routledge, pp. 237–52.

Stein, J. K. 1986. Coring Archaeological Sites. *American Antiquity*, 51(3): 505–27.

Thomas, S. 2017. Community Archaeology. In: G. Moshenska, ed. *Key Concepts in Public Archaeology*. London: UCL Press, pp. 14–30.

Tilley, C. 1994. *A Phenonenology of Landscape*. Oxford: Berg.

Tudor, C. 2014. *An Approach to Landscape Character Assessment*. Report no. NE579. Sheffield: Natural England.

Tully, G. 2017a. Volunteer Feedback Salmonsbury Fieldwork [online] [accessed 12 December 2017]. Available at: https://docs.wixstatic.com/ugd/8af791_17091e1e49c64585a387a61aa2a9b853.pdf.

Tully, G. 2017b. Volunteer Feedback Bagendon Fieldwork [online] [accessed 12 December 2017]. Available at: https://docs.wixstatic.com/ugd/8af791_45a8f9761a8242469209d7031bccdaa0.pdf.

Tully, G. & Ridges, M. eds. 2016. *Collaborative Heritage Practice*. New Jersey: Gorgias Press.

Turney, C., Canti, M., Branch, N. & Clark, P. 2005. *Environmental Archaeology: Theoretical and Practical Approaches*. London: Routledge.

United Nations Educational, Scientific and Cultural Organization (UNESCO). 2013. Operational Guidelines for the Implementation of the World Heritage Convention [online] [accessed: 12 December 2017]. Available at: www.whc.unesco.org/en/culturallandscape/.

Waterton, E. 2005. Whose Sense of Place? Reconciling Archaeological Perspectives with Community Values: Cultural Landscapes in England. *International Journal of Heritage Studies*, 11(4): 309–25.

Watson, S. & Waterton, E. 2010. Heritage and Community Engagement. *International Journal of Heritage Studies*, 16(1–2): 1–3.

Wilkinson, K. & Stevens, C. 2003. *Environmental Archaeology: Approaches, Techniques*. Stroud: Tempus.

Williams, R. 1980. Ideas of Nature. In: R. Williams, ed. *Problems in Materialism and Culture*. London: Verso, pp. 67–85.

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