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Research Bulletin

‘Trowel and Error’: A Public User Needs Survey for Archaeology

Appendix 1 Literature Review

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1 Summary

The Council for British Archaeology (CBA) carried out *The Publication of Archaeological Projects: a user needs survey* (PUNS), a study of the archaeological community's use and expectations of fieldwork publications in 2001 (Jones et al). PUNS was initiated partly in response to a perceived under-use of archaeological project publications and archives (*Ibid.*). PUNS, however, explored the needs of the archaeological community regarding formal and standard archaeological outputs. PUNS' target audience was researchers, fieldworkers, and those who contributed to fieldwork publications. PUNS did ask, however, if 'fieldwork publications are an appropriate means to disseminate information to the public?' and 78% of respondents felt that they were not; the majority felt that fieldwork publications were 'too technical, too difficult to obtain, and too costly' for 'laymen' (*Ibid*.). Instead, outreach events specifically targeted towards the wider public, such as open days, museum exhibitions, popular audience publications, and television and radio programmes, were considered more appropriate for broader audiences. PUNS identified the need to improve reporting processes through improved standards and good practice, with recommendations to consider future research exploring digital technology, online materials, digital publication, and archiving.

The CBA, in collaboration with MOLA, is updating the original PUNS report with funding support from Historic England, as part of the 21st Century Challenges in Archaeology Project. Twenty years later, 'Trowel and Error': A Public User Needs Survey (PUNS2) aims to build on the original PUNS project by examining the wide range of forms of dissemination that are available today, through both digital and non-digital methods, and targeting a broader range of audiences. It should be noted that museum and exhibition displays have been intentionally excluded from this iteration of the PUNS project due to project constraints.

Data gathered for PUNS2, through surveys, workshops, and interviews with a variety of audiences, will contribute towards an evidence-based framework for improving the sharing of archaeological outputs. Additionally, it will provide recommendations and guidance for creators of archaeological content, such as professional and voluntary organisations, as well as those who commission archaeological work and archaeological communicators.

Ultimately, the project will broaden and underpin the public benefit of archaeological interventions by offering a comprehensive and current understanding of audiences' uses and appreciation of archaeological outputs.

1.1 Recommendations

The following recommendations for creating archaeological content are based on the literature review and data scan (detailed below):

- Consider the intellectual accessibility of outputs, especially for audiences who are not educated to university degree level.
- Provide short summaries, with easy-to-understand content, alongside detailed reports.
- Ensure that outputs can be made available in different languages or can be translated easily into other languages.
- Provide webpages that are compatible with auto-translation tools.
- Combine written text with visual or photographic material to improve knowledge retention and accessibility for non-English speakers.
- Include a variety of stories from different perspectives by incorporating more diverse voices into the production of the output.
- Appeal to audiences through their desire to engage with local archaeology, known landscapes, and their personal connections to place.
- Consider offering pre-recorded talks or question-and-answer-based discussions with archaeologists, deliverable through video and telephone to avoid digital exclusion and isolation.
- Disseminate information about outputs through schools, noticeboards, hoardings, flyers, posters, radio, libraries and traditional broadcasting.
- Make available, and promote, free and open access digital content (such as the ADS).
- Create a social media policy and strategy.
- Identify who your target audiences are from an early stage to retain focus throughout your project.
- Disseminate outputs through at least one social media platform. Target specific audiences through platforms that your target audience engages with the most.

- Deliver outputs and digital content that is high quality, entertaining and more engaging for non-specialist audiences.
- Long and short-form video content, accessible via YouTube and TikTok, is popular and likely to reach a wide range of audiences.
- Offer outputs and digital content that are interactive and invite audience feedback and activity.
- Gain an awareness of ongoing digital and social media trends and try to participate in those trends where possible.
- Make archaeological outputs physically accessible and compatible with a mobile device, older generation mobile devices and varying operating systems.
- Post digital content that features young people or youth engagement in archaeology, newsworthy topics involving archaeology, images of sites, and include hashtags.
- Ensure there are closed captions featured on any social media or other digital content to improve accessibility for those with disabilities.
- Given the breadth of audience needs, both digital and non-digital, it is worth providing a blended approach to archaeological outputs.
- Disseminating outputs through a variety of physical and digital spaces is likely to reach a broader range of audiences and meet their specific needs.

2 Introduction

This report focuses on defining and exploring the various archaeological outputs available and examines how current engaged and non-engaged audiences respond to various forms of presentation. This includes a revised audience segmentation matrix that was adopted for the research stages of the PUNS2 project, encompassing survey creation and distribution, to ensure maximum reach. This methodology will also be relevant to others producing and disseminating archaeological content.

This review was undertaken by Dr Leah Hewerdine and Dr Katrina Foxton between June 2024 and July 2025.

3 Methodological approach

Phase 1 of the PUNS2 project involved reviewing relevant literature, conducting a data scan, and producing a report on the findings. This output will enact the recommendations put forward in this report through the PUNS2 survey design and delivery. This aligns with the CBA's values for inclusivity and participatory archaeology:

> *'Archaeology is for all – it is everywhere, anyone can participate, it is open to everyone. Our role is to help people to discover and explore stories, connections and new perspectives using archaeology as a tool.'*

A literature review was conducted in June 2024 to provide an update for the archaeological sector on recent and relevant research into archaeological outputs and audience engagement. This is intended to bridge the gap between PUNS (Jones *et al.*, 2001) and PUNS2, demonstrating the importance of the PUNS2 project and explaining how it builds upon recent research and recommendations. Data capture involved exploring existing, publicly available, and accessible datasets focused on general media consumption, media literacy, and access and inclusion trends in England. These included We Are Social's Digital Reports, Hootsuite's Social Trends, Environmental Systems Research Institute (ESRI) demographic data, Department for Media Culture and Sport (DCMS) Taking Part surveys, The London Office of Technology and Innovation (LOTI) research, and Office of

Communications (Ofcom) media literacy data and reports. The social media presence of Chartered Institute for Archaeology (CIfA) affiliated archaeological organisations was also analysed. Archaeological organisations based in Wales, Scotland, and Ireland were also examined for their social media presence using specific nation-based historical record websites. High-profile archaeological organisations, with a broad range of social media platforms, were invited to participate in PUNS2 by sharing their organisational social media analytical data. Further archaeological organisations and groups were also reached through a PUNS2 expression of interest sign-up sheet, via Google Forms. Those who completed the sign-up sheet were contacted and asked to provide their social media analytical data. Lastly, an audience matrix has been created to examine and visualise the relationships between audience segments and groups of publication users, informing the dissemination of the public PUNS2 survey and serving as guidance for those who disseminate and create archaeological outputs.

In 2024, the PUNS2 project expanded to include funding from Historic Environment Scotland (HES) and Cadw. As such, deeper literature reviews of Scottish and Welsh archaeological strategy were conducted, along with a presentation of general media consumption trends and social media data scans on relevant archaeological organisations. This led to the development of key opportunities for both countries (Sections 8-10).

4 Literature review

Since PUNS (Jones *et al*., 2001), further research has been conducted into the perception of, and access to, archaeological outputs, as well as a series of workshops, conference sessions and consultations, which concluded there was a distinct need to understand audiences for archaeological outputs better. This section focuses on some of the more recent research surrounding intellectual and physical access to archaeological outputs for broader audiences to bridge the gap between PUNS and PUNS2. This section defines what archaeology is, the various ways archaeology is conducted and practised and offers examples of archaeological outputs.

4.1 Archaeology and the archaeological sector

The CBA definition of archaeology is: ‘archaeology enables us to connect to the world around us. Archaeology helps us question what it means to be human by exploring the traces people leave behind.’ Archaeology as a practice sits within the nexus of science, arts, and the humanities, using techniques and skills from all of these to form a uniquely holistic approach to the study of humanity. Commercial archaeology involves the professional undertaking of archaeological works, mitigation and projects within the planning sector. It may involve commercial archaeology units, developers, consultants, local planning authorities and professional bodies such as CIfA. Commercial archaeology outputs often involve archaeological sites and findings from various time periods found through planning and development. Academic archaeology includes research-led projects and studies conducted and disseminated by higher educational institutions through lecturers, teachers, researchers, and students. Academic archaeological outputs may involve a variety of archaeological sites, findings, and time periods. Voluntary archaeology can include projects conducted in partnership with academics or commercial archaeological organisations or may be entirely community-led. Volunteers may have no links to the commercial or academic archaeological sector. Voluntary archaeology outputs can include a variety of archaeologically related content.

4.2 What is an archaeological output?

It is important to define what we mean by ‘archaeological output’. Archaeological outputs can include a range of different digital and non-digital content. More formal outputs, which are often standard within the archaeological sector and produced by archaeological organisations, are text-based and can include monographs, books, printed media, and grey literature reports. These may be available in both printed and digitised formats. Less formal outputs, which are not necessarily standard within the archaeological sector, may include written, audio, and visual content, such as comics, video games, photographs, podcasts, lecture series, and short- or long-form video content. These may be disseminated through social media and are more likely to be digitally accessible. Archaeological outputs can include anything that is related to, or is about, archaeology and may be produced by archaeological professionals, academics, commercial archaeological organisations,

community or volunteer groups and charities. The following sections (4.3-3.6) discuss some of the archaeological output formats in more depth.

4.3 Grey literature

Grey literature is usually a desk-based document produced by a commercial archaeological organisation for a client. These reports are produced to fulfil UK planning policy obligations (Donnelly, 2016, p.20). Grey literature is word-processed; however, it is not usually assigned an ISBN/ISSN number. Consequently, these reports are not published in the traditional sense and are commonly known as 'grey literature'. They are produced to report on the findings of archaeological fieldwork. They are informed by archaeological fieldwork conducted by professional or volunteer archaeologists on site. Although there is a mass of grey literature produced, many of the reports remain unpublished (Darvill et al., 2019, p.189). This does not mean, however, that they are not available. Many grey literature reports are freely available through digital repositories such as the Archaeology Data Service (ADS). As they are not written with a broader audience in mind, they are often used by audiences within the professional archaeological sector, including academics and researchers.

4.4 Monographs

Archaeological monographs are published written studies. They are usually informed by grey literature reports and focus on sites of significance, historical landscapes, or time periods and tend to be more specialised. Commercial archaeological organisations, or collectives of archaeological authors and academics, may produce them. They are assigned an ISBN/ISSN number and are available for purchase or through libraries and digital libraries. Unlike grey literature reports, monographs often come with a price tag. Some monographs are also available through digital repositories, such as the ADS. Their audience base is likely to be professionals, academics, researchers and interested others.

4.5 Lecture series

Some archaeological organisations, such as commercial archaeology units or volunteer archaeological groups, provide a lecture or lecture series to inform audiences of

archaeological fieldwork findings. These may be organised by volunteers, where speakers from within the professional archaeological community are invited to take part, or a commercial archaeology unit could arrange them to inform local people about the archaeological mitigation they are, or have, conducted in a particular area. Professional archaeologists are usually paid a small fee for their attendance, which is usually outside of working hours. These lectures are often recorded or streamed online for broader digital audiences to engage with. Audience engagement with these lectures may extend beyond the professional, academic, research and voluntary groups to the wider non-specialist public. Recorded lectures are sometimes available on digital platforms such as YouTube, widening accessibility.

4.6 Alternative archaeological outputs

There are a variety of ways to engage with archaeology. These can include popular Television programmes such as *Digging For Britain* and *Time Team*. Other long or short-form videos and photographs may be created and disseminated on popular websites or social media. As discussed above, lecture series may be recorded and posted online for digital audiences to enjoy. Additionally, some commercial archaeology organisations or volunteer groups may record and disseminate videos of archaeological site tours, features, finds or findings. These, along with photographs, may be posted to their social media accounts for the wider public. Further outputs may include other visual, audio or written content in the form of printed or digital archaeological comics, podcasts or videogames.

5 Bridging the gap between PUNS and PUNS2

PUNS played an important role in the early 2000s, including changes in approaches to publications and the evolution of digital archiving practices. These developments occurred in tandem with the ongoing development of the ADS and Online Access to the Index of Archaeological Investigations (OASIS), all of which aim to make archaeological materials and knowledge generated through the planning-led system more accessible to various audiences. Since the 2001 report was generated, the sector has faced many challenges and developed in response to changing planning policies. The sector has come together to undertake the 21st Century Challenges in Archaeology project (21 CAP), a major workstream of which relates to publication outputs and audiences. PUNS2 also stems from *Work Package 4. Turn data into knowledge by synthesising discoveries, and by sharing research*

findings in more accessible ways of the 21st Century Challenges in Archaeology project (21CAP). The various relevant recommendations from Workshop 6 of that project have been incorporated into this document. The UKRI Future Leaders Fellowship, 'Measuring, maximising and transforming public benefit from UK Government infrastructure investment in archaeology', also has relevance to PUNS2, as the sector seeks to increase opportunities for public engagement with development-led archaeology and assess its social value (MOLA, 2021).

PUNS identified that there was 'widespread dissatisfaction' within reports and publications amongst the archaeological community, but the survey did not focus on the broader public (Jones *et al.,* 2001). It also recognised the electronic revolution that was taking place at the time, and the impact this would have on disseminating archaeological outputs, as publication and dissemination are not synonymous (*Ibid*.). The ADS was founded in 1996 and, today, has over 70,000 unpublished grey literature reports. In addition to the ADS, some commercial archaeology organisations provide their own digital library or catalogue of grey literature through their websites. The AIP (Archaeological Investigations Project) also collected data for over 80,000 archaeology projects between 1990 and 2010 (ADS, 2018; Darvill *et al*., 2019) which signposts to locations and provides brief details for sites throughout the UK. Although grey literature may be publicly available through the ADS, it is not necessarily intellectually or physically accessible. Their purpose as a client report impacts the structure, style and content (Donnelly, 2016, p.25). PUNS2 aims to explore if, and how, the attitudes of the archaeological community have shifted over time, especially in response to the digital archaeological environment. Additionally, PUNS2 will capture the feedback from broader non-specialist audiences.

PUNS recommended that different types of archaeological outputs should be disseminated to suit a variety of audiences. 88% of PUNS respondents felt that archaeological reports and publications were too technical and that the cost of publications was off-putting for broader audiences (Jones *et al.,* 2001). Indeed, the Southport Group report found that archaeological reports were too technical and received little public attention (2011, p. 67). PUNS respondents suggested that less formal archaeological outputs, such as popular audience publications, television and radio programmes, were more appropriate for a non-specialist audience (*Ibid*.). A good example of a less formal, accessible output is the free

publication regarding the archaeological investigations conducted as part of the Bloomberg project (MOLA, 2017).

Regarding readership of formal archaeological outputs, it is worth clarifying that although formal archaeological outputs may receive a professional and academic audience, expertise and knowledge within that audience are usually limited to a specific area. In other words, we are all laymen (Hills & Richards, 2006, p.304). Grey literature and formal publications, such as monographs, can expect a great deal of prior knowledge from the reader. Therefore, availability may not equate to accessibility. PUNS2 will seek to understand audiences' knowledge of archaeological outputs and discuss their accessibility. Since PUNS, further recommendations have been made by those within the archaeological community to address this issue, with the concern that if people cannot understand the content, they are less likely to engage with it in future (Pitts, 2015, p. 250).
Research into the efficacy of grey literature reports has identified that although outputs may not be intellectually accessible for broader non-specialist audiences, they have the potential to engage wider audiences (Bradley, 2006; Hills & Richards, 2006; Seymour, 2010, p.228; Donnelly, 2016, p.49; Trow, 2018, p. 94). Some simple recommendations have already been made and can serve as guidance for creating archaeological outputs with a broader audience in mind. These involve considering the differing perceptions of 'jargon' among audiences, explaining terms in full, removing redundant passages of text, maintaining a narrative and story within the analysis, and including photographs or visual elements in outputs (Pitts, 2015, pp. 249-251). Archaeological drawings and features, however, possess a visual language that may be unknown to a broader audience (Shanks & Webmoor, 2013, p. 87), and this should be considered when creating outputs. It is also important to consider where visual content is placed within grey literature, monographs, and other reports, as photographs, maps, GIS, and LiDAR data are often placed in the appendices and may go unseen or unused. Within archaeology articles, for example, only 1% of users engage with the appendices or deposited data (Štular & Lozić, 2023, p. 81).

Grey literature may be freely available through digital libraries and repositories but is less likely to be printed and available to audiences who cannot access digital content. Monographs are published, and often a physical copy is available; however, these can come at a financial cost, which poses a financial barrier for some audiences. Additionally, access can be restricted to specific locations and is often available only through designated

libraries. Their specialised language and style can also be an intellectual access barrier. Similarly, journal articles often sit behind a paywall, and these may require an institutional or private subscription to gain access. They, too, can be intellectually inaccessible for a wider non-specialist audience. Providing journal articles through open access, however, can come with a cost to the author or their institution. Provision of open access physical and intellectually accessible outputs, for both digital and non-digital users, is essential to broader audience engagement.

PUNS2 also builds on recent research that considers how audiences receive archaeological outputs by exploring their users, uses and demonstrating opportunities to improve dissemination and content for broader audiences. Projects such as *Transforming Data Reuse in Archaeology* (TETRARCHs), which explores how archaeological reports can be repurposed for broader audiences, aim to benefit diverse audiences and provide meaningful storytelling experiences (Chanse, 2023). The Archaeology Data Service (ADS), in collaboration with The Archaeology Audience Network (AAN), a body comprising leading archaeological organisations committed to delivering public benefit within archaeology, highlighted the lack of shared data on audiences within the archaeology sector and our understanding of those who engage with archaeology (ADS, 2023). The AAN identified that there is a lack of understanding of audiences, resulting in outputs that cater towards a narrowing demographic of people (Ibid., p.12). Indeed, there are fears that shifts towards digital engagement replicate the established archaeological audiences online (Bonacchi, 2017; Walker, 2014a, 2014b). The AAN's recommendation for overcoming this issue aligns with the aims of PUNS2: identifying barriers to engagement, how to mitigate those barriers, and determining practical methods for including audiences through an exploration of their perspectives.

Further archaeology audience research was conducted for the CBA as part of the *Archaeology for All* project (Tricolor Associates, 2019). Unlike PUNS2, *Archaeology for All* explicitly focused on the CBA through an analysis of CBA members, non-members, and audience needs regarding archaeology and heritage on a regional scale. The Tricolor report identified five key groups relevant to the CBA who experienced barriers to engaging with archaeological outputs: young people, older people, BME groups, people with additional

needs and the unemployed (Tricolor Associates, 2019, p. 33). *Archaeology for All* identified that many participants did not understand what archaeology is, or its purpose, and that archaeology as a discipline is too academic for non-specialist audiences (*Ibid.* p.34). Participants within the *Archaeology for All* project, however, were open-minded to learning about archaeology if it were more relevant to them and their skill set (Ibid.).

Digital and social media development studies, such as research into audience engagement for Must Farm (Wakefield, 2020), have also demonstrated the need to broaden our understanding of audience needs within the digital landscape. Must Farm social media engagement research identified low-cost, scalable methods for disseminating archaeological information through Facebook and called for further research into how this can be achieved on a broader scale (*Ibid.*). PUNS2 answers this call through an exploration of the digital environment of archaeology outputs in more depth and scope, offering a framework for best practice in digital dissemination and engagement. Consequently, PUNS2 demonstrates the value provided by archaeological outputs and thereby maximises the public benefit of archaeological work.

6 Digital engagement

As previously discussed, PUNS (Jones *et al*., 2001) acknowledged that a digital revolution would likely impact the dissemination of archaeological outputs. Since PUNS (*Ibid.*), social media and internet use have grown in popularity and are key to engaging with current archaeological audiences and reaching new audiences. For this report, 'digital' refers to any content or outputs that are disseminated or accessible via a device that uses electronic technology. Further terminology regarding digital engagement, reach, impressions, posts, and insights is also provided below, in Table 1. It is important to consider that the understanding of digital archaeology outputs may be different for various audiences. Digital heritage outputs may range from online lecture series to digital 3D archaeological sites. PUNS2 explores the importance of digital engagement through data collection that offers evidence for best practice guidance in digital dissemination of archaeological outputs through websites and social media. This section provides information from communication and marketing research into good social media strategy for reaching and engaging with digital audiences that can be applied to the archaeological sector. Additionally, social media analytical data was kindly provided by archaeological organisations to demonstrate how the

sector is navigating the digital landscape with examples of social media posts that have performed well amongst digital audiences.
This section provides some information on the shift to digital engagement, a guide to social media platforms, their key phrases and terminology, an analysis of their use for archaeological outputs, and finally provides recommendations for reaching digital audiences.

6.1 Social media and websites

The previous section demonstrates the importance of having a digital presence. Social media plays a key role in digital presence and the dissemination of outputs. This section focuses on how social media can be utilised to reach, engage, and develop digital audiences.

In the UK, 84.4% of the population is active on social media (We Are Social 2023a). Table 1 provides a brief description of how we define ‘engagement’ within social media analytics. There is a key distinction between ‘engagement’ and ‘reach’. Engagement encourages the user to interact with the digital content through liking, commenting, sharing, or saving the content and thereby the user connects with it through specific actions. Whereas ‘reach’ involves passive viewing of the material (Hootsuite 2023a).

Key Term	Definition	Further Information
Engagement	Total clicks on digital content by users. Engagement requires the user to interact with the digital content.	This can include clicks, comments, likes, reactions and shares.
Reach	Total number of views by users. Reach requires no interaction from the user.	This can include views of websites or social media pages and accounts.
Impressions	Total number of times content is displayed to users within a specified period.	Users may see digital content displayed numerous times, resulting in numerous impressions from the user.
Posts	Digital content created and disseminated. This can include written text, images, and videos.	Social media posts can take various forms depending on the platform used.
Insights	Insights are an analysis tool that provide social media analytical data for owners to understand their digital audiences.	Insights can be used to find methods for improving audience reach and engagement.

Table 1: Table showing the definitions of key terms used in the discussion of digital content

6.2 Digital presence and general guidance

Having a digital presence and providing digitally accessible archaeological outputs is more important now than ever before. When PUNS (Jones et al., 2001) was published, only 8% of the world population used the internet (World Bank, 2001) compared to the 64.4% of people who are online in 2023 (We Are Social, 2023a). 97.8% of the UK population (67.62 million) are internet users, with 84.4% of them active on social media (We Are Social 2023b). Prior to the Covid-19 pandemic, engagement with digital content was high; however, the government-imposed lockdowns during 2020-2021 resulted in lifestyle changes for a large portion of the UK public. 1.5 million more people engaged with online content between 2020 and 2021, and 65% of people used video calling for the first time (Good Things Foundation, 2021). In 2023, people spent more than 2.5 hours on social media per day (We Are Social, 2023a), and the typical working-age internet user spent 30% more time on social media platforms than watching traditional broadcasting (*Ibid.*) This demonstrates that dissemination that goes beyond traditional broadcasting, which is also one-directional, is critical. Post-pandemic, however, people are prioritising quality over quantity when it comes to time spent online because of the media fatigue from 2020-2021 and the cost-of-living crisis in 2023 that impacted access to digital devices, consumption of paid content and subscription services (*Ibid.*). Therefore, a digital presence alone is insufficient to attract audiences. Streamlining digital content and outputs so that they are high in quality and, therefore, worth engaging with, is required. Having said that, keeping outputs informative and educational is still key to maintaining interest amongst internet users, as their primary reason for accessing the internet is to find information (*Ibid.*), as it offers opportunities to learn something new and broaden their view of the world (Ofcom, 2023a, p.1). Maintaining trust with digital audiences is also crucial, as internet users worry that the content they consume online may not be factual (We Are Social, 2023b; Ofcom, 2023a, p. 2). When disseminating archaeological outputs digitally, it is worth ensuring that information is provided regarding how the data presented was produced and sought. Providing clear and transparent sources

through verified websites and social media platform accounts builds trust with audiences.

A further consideration for digital archaeological output provision should be the devices that outputs are compatible with. Digital exclusion, discussed in more depth in Section 17, can also extend to those with internet access at home and a digital device (Ofcom, 2023a, p. 26). Nearly a fifth of the UK population accesses the internet exclusively via a smartphone (We Are Social, 2023b; Ofcom, 2023a, p. 2), with the average user spending 4.25 hours on the device per day (We Are Social, 2023b). Not only is it preferable for a large percentage of the population, but it may also be the only digital device available to them (Ofcom, 2023a, p.27). Making archaeological outputs physically accessible and compatible with a mobile device avoids digital exclusion for mobile-only device users. Additionally, it is worth noting that mobile phone users own a range of devices that vary in operating systems and age, which can lead to further digital exclusion issues (Ibid., p. 5; Ofcom, 2023c, p. 29). Therefore, digital outputs should be made available for use by older generation smartphones and operating systems, where possible.

Social media platform:	***Purpose:***	***Uses:***	***Popular user demographics:***
Facebook	A free social media website allowing users to connect with both known and unknown people. Users can share pictures, videos, music, articles and post their own thoughts.	Facebook pages and groups can be used to connect with audiences through posted content.	- 13-17 year olds. - Women aged between 45 and 54. - Men aged between 25 and 44. - Most used and favoured platform amongst social media users.
Instagram	A free social network application used for sharing photo and video content.	Instagram accounts can be used to connect with audiences through visual content.	- 12–17-year-olds. - Women aged between 16 and 34. - Men aged between 16 and 24. - Second most used and favoured among social media users.
LinkedIn	A professional online social	LinkedIn can be used to disseminate ongoing research or projects with	- Useful for reaching professional audiences.

	networking website typically used for work-related purposes.	professional audiences and build networks between professionals and organisations.	- Less useful for reaching broader non-specialist audiences.
TikTok	A social media platform for creating, sharing, and discovering short video content that allows users to share across a community.	The application can be used to share short-form video content with a wide range of younger audiences.	- 8–24-year-olds. - Third most favoured among social media users. - Fourth most used amongst audiences.
X (Twitter) / BlueSky	Social networks used for microblogging. Posts are often referred to as 'tweets.	Twitter / X / BlueSky accounts can be used to connect with audiences through short written textual information that can be engaged with by users.	- Third most used among social media users. - Fourth most favoured amongst social media users. - More popular amongst male audiences.

WhatsApp	A mobile application providing encrypted end-to-end instant messaging across mobile networks and the Internet.	WhatsApp accounts can be used to allow users to connect as individuals or within 'groups'.	- Women aged between 35 and 44. - Men aged 35-64. - Second most favoured amongst global social media users.
YouTube	A website that hosts video content uploaded, watched and commented on by users.	YouTube channels can be used to disseminate long and short-form video content to a wide range of audiences.	- Most popular among all internet users. - Most used website for 3-17-year-olds.

Table 2: Social media platforms, their purposes, uses and popular user demographics (informed by data gathered from publicly available and accessible datasets

Table 2 provides a brief description of the popular social media platforms that will be discussed in this section, as well as some helpful information regarding their uses and popular user demographics. Each social media platform will be discussed, in turn, and can be used to inform output reach and engagement with a variety of digital audiences.

Globally and within the UK, Facebook is the most widely used social media platform, the most favoured, and comes third in advertising reach (We Are Social, 2023b, 2023a). Table 1 demonstrates that it is a valuable platform for reaching 13–17-year-olds, women aged between 45-54, and men aged between 25-44 (We Are Social, 2023a). Facebook allows users to create Facebook pages and groups that can be used to disseminate information to both open and closed audiences. Its advertising reach rates third, amongst the popular social media platforms, for those ages 18 and over in the UK (We Are Social 2023b). Although Facebook is popular, and its pages and groups are helpful regarding disseminating archaeological outputs and content, only 0.11% of Facebook page fans engage with the written or photographic content available on the page (*Ibid.*). Higher engagement with these pages is achieved through posts that provide external links to other sources and websites for further information (*Ibid.*). The use and popularity of Facebook is also declining amongst younger audiences (Ofcom, 2023b).

Instagram is a valuable platform for posting more visual content, including photographs and videos known as ‘reels. The platform is beneficial for reaching some younger audiences, especially females in their teens and early twenties, on a global scale (We Are Social, 2023a; Table 2). Within the UK, it is the second most used and favoured of the popular social media platforms (We Are Social 2023b). It is less valuable, however, for reaching audiences aged 13-15 (*Ibid.*), but very effective for reaching audiences aged 16-17 (Ofcom, 2023b). Regarding advertising reach, it ranks fourth in the list for the UK amongst popular social media platforms (We Are Social, 2023b).

LinkedIn is a professional networking website that can be used for staying connected to colleagues, organisations, searching for job opportunities and following research. It is a valuable platform for reaching academic and professional audiences, but is less likely to reach wider, non-specialist audiences, especially those under the age of 18. Its advertising reach for those aged over 18 is, however, the second most effective within the UK (*Ibid.*). Regarding reaching those within the archaeological sector, it is a useful platform for disseminating outputs.

TikTok is a social media platform primarily used by younger audiences aged between 8 and 24 years (We Are Social, 2023b; Ofcom, 2023b). The application can be used for creating, sharing and discovering short-form video content created by users. Digital culture now incorporates 'for you' pages, which TikTok provides. These utilise specific algorithms to disseminate content that may appeal to the user's interests based on their previous engagement history. This results in content reaching newer audiences, as opposed to established audiences such as those found through Facebook groups and pages (We Are Social, 2023b). Creating and sharing video content through 'for you pages' can broaden and diversify audiences. Digital marketing research reports recommend that organisations market their material through short-form video hosting websites and applications (We Are Social, 2023a), such as TikTok. 43.7% of TikTok users are aged between 18 and 24, and 31.9% of users are aged between 25 and 34 (Statista, 2022). TikTok is considered an excellent tool for reaching younger audiences, and The New York Times has proclaimed that TikTok is the new search engine for Generation Z (Hootsuite, 2022). Although it may not be the most popular social media platform yet, its user base has increased every year since 2021 (Ofcom, 2023a). Although TikTok may sit in eighth place for advertising reach, it has risen each quarter by 10.9% whereas other older social media platforms have steadily decreased (We Are Social, 2023b). TikTok was also the most downloaded social media platform in 2022 (*Ibid.*). Additionally, time spent on TikTok by users was higher, at 27 hours per month, than all other social media platforms (*Ibid.*; Ofcom, 2023a). TikTok's high user growth rate and long periods of time spent by users on the social media platform demonstrate that gaining an audience on the application early on will be beneficial long-term and assist in developing younger audience engagement.

Twitter, which changed its name to ‘X’ in 2023, is a long-standing social media platform for microblogging that connects audiences through short-form written text, which can include photographic and video content. The platform is the third most used amongst UK social media users (We Are Social 2023b), and fourth most favoured amongst social media users (*Ibid.*). It ranks sixth in advertising reach (*Ibid.*); however, the application has seen a decline in users since it was relaunched as ‘X’ in 2023 (Kantrowitz, 2023). X (Twitter)can be a valuable method for disseminating quick updates to audiences who follow accounts, and hashtags are a useful way to engage with trends that can help develop audiences.

WhatsApp is a mobile messaging service offering end-to-end encryption across mobile networks. It is considered a social media networking platform within social network marketing datasets; however, it is unlikely to be a helpful tool for disseminating archaeological outputs. It is worth discussing here, nonetheless, as it can be a useful platform for engaging with communities or archaeological volunteer groups and managing informal activities. The platform is most popular with women aged 35-44 and men aged 35-66 (We Are Social, 2023b) and is the second most favoured among global social media users (We Are Social, 2023a).

YouTube hosts video content that is uploaded, watched, and shared by users, and is the most visited website in the UK, with the average user spending 38 minutes on the site per session (We Are Social, 2023b; Ofcom, 2023a). It is the most widely used website among 3–17-year-olds (Ofcom, 2023b) and is a valuable platform for reaching younger audiences. Users spend around 15 hours using the YouTube Android mobile application per month (We Are Social, 2023b), which boasts the highest number of active users among social media applications (We Are Social, 2023a) as well as the best advertising reach (We Are Social, 2023b). A wider variety of audiences highly seek video content (We Are Social, 2023b), and We Are Social (2023a) recommends prioritising YouTube for this purpose.

Based on Ofcom (2023b) findings, reaching audiences aged between 3 and 17 years of age through YouTube requires a tailored approach. There are positive benefits to

disseminating outputs for children through video content on YouTube, especially as 95% of children aged 6-17 years old said they liked using digital content to learn new things (*Ibid.*). Educational outputs are valuable and highly desired by both adults (We Are Social, 2023b) and children (Ofcom, 2023b). Video content and digital materials used in educational settings, such as tutorial-related content, are more likely to be positively received when they encourage adults and children to act independently (*Ibid.*). It is worth noting that 3–7-year-olds are more likely to use YouTube Kids.

An important point to consider regarding disseminating information via social media is that there is a great deal of audience overlap between social media platforms. People use a wide range of platforms and do not limit themselves to just one. Disseminating anything through at least one social media platform is still a good practice, especially for organisations that lack time, budget, and staffing. Focusing on one of the big social media platforms is still going to reach audiences. If, however, targeting specific audiences, then it is worth focusing on the platforms that your target audience engages with the most, for example, Instagram for 16–24-year-olds. We Are Social suggests that having a blend of social media presence that includes both Facebook and YouTube could potentially reach more than 9 in 10 internet users aged over 18 per month (2023a).

No other social media platform boasts the unique reach that YouTube does (*Ibid.*), especially given that one of the highly cited reasons, by internet users, for using social media is to be ‘entertained’ (Hootsuite, 2024). Video content should be a more frequent output used for disseminating archaeological information, such as on YouTube, TikTok, or Instagram Reels. When appealing to younger audiences, creating video content that includes choppy transitions, multiple video content on one screen with dramatic footage is highly recommended (Ofcom, 2023b). Essentially, following popular trends and producing outputs that align with those trends is far more likely to attract a younger audience to an organisation. Regarding archaeological outputs, this translates to producing content and outputs that are less dry, stuffy and more engaging for non-specialist audiences.

There are negative impacts to consider when using social media to connect with audiences, and this includes low-quality content, poor engagement with audiences, challenges regarding finding organisational presence on social media, and absence from social media entirely (Hootsuite, 2024). Posts on social media should feature high-quality content that is delivered frequently. Be sure the content you produce engages the audience you want to reach, in terms of both content and quality. Simply paying for advertising will not yield a good return on your investment. It is not the money you spend on advertising reach, but what you are creating that is key (*Ibid.*). You can pay a lot to reach audiences through social media advertising, but still not get good audience engagement, because your content is not serving the audience's needs.

Reflecting on how archaeological social media posts are enjoyable and relatable is also worth exploring, as entertainment boils down to enjoyment (*Ibid.*). This relates to the archaeological outputs produced, as well as how they are presented through social media, as audiences want to engage with digital content that is not simply one-directional and can involve audiences in the discussion. Making outputs and digital content interactive will improve audience engagement (*Ibid.*), and this is where social media plays a key role, as it allows audiences to comment and share feedback. Ensuring a social media policy is in place is beneficial to this process, as it allows a trained member of staff to engage with active discussions on the organisation's social media accounts and improve the interactivity of the content disseminated. A social media policy and strategy enables organisations to stay current with social media trends, facilitating audience engagement in the process. Social media trends come and go quickly, but the audiences reached can be maintained on a long-term basis.

Being aware of these trends and engaging in the ones that suit your organisation could lead to reaching people who have never engaged before. An example that is relevant to the archaeological sector is the ‘how often do you think of the Roman Empire?’ and ‘my Roman Empire is…’ trend on TikTok in 2023. This offered a golden opportunity for archaeological organisations to engage with a younger audience. This trend was not foreseeable, and therefore it is essential to understand

that you cannot simply assume what audiences want to see or engage with (*Ibid.*). The beauty of social media is that it can be used to seek feedback from audiences. Perhaps asking current audiences what they would like to engage with is a step towards creating outputs that are more accessible to broader audiences. This is where PUNS2 is a helpful exploration of this on a much broader scale.

Some practical examples of social media-related posts that improve digital audience engagement are provided by Hootsuite (2023):

- Host a giveaway
- Hold a caption competition
- Be relatable
- Host a poll
- Ask for stitching/duets
- Reply to comments with videos
- Ask for advice
- Pose a question
- Invite questions
- Post high-quality photos
- Be specific to your niche
- Share personal updates
- Post helpful and informative content
- Share user-generated posts
- Post timely content
- Reply to comments
- Post memes
- Copy or challenge a competitor
- Share a hot take

6.3 The digital heritage environment

DCMS introduced a new 'Participation Survey' during the COVID-19 pandemic, as the annual Taking Part survey dissemination process was disrupted due to government-imposed social distancing restrictions. The Participation Survey is a web-based survey of adults aged 16 and over in England and began in October 2021. DCMS found that physical engagement with heritage was significantly higher, at 63% of those surveyed, compared to digital engagement at 20% (DCMS, 2022a). There is a significant divide, of 43%, between physical and digital engagement. The

43% are made up of respondents who are clearly interested in physical access to heritage, so addressing that divide is key to improving digital reach. Seventeen per cent were engaged with heritage both physically and digitally, and 2% were engaged exclusively with digital heritage (DCMS, 2022b). Additionally, digital engagement with heritage was also less frequent than physical engagement (*Ibid).*

The two most cited reasons for a lack of engagement with digital heritage were a lack of interest and a lack of incentive (DCMS, 2022a). Sharing how and why people should access digital outputs at physical heritage venues and activities could be a way to address this disparity. An important factor to consider here is that for the survey, 'digital engagement' had a broad definition that encompassed virtual tours of heritage sites, viewing digital archives and listening to podcasts (DCMS, 2022b). Therefore, engagement with traditional digital outputs, such as grey literature, monographs, and other digitised academic or professionally produced content, could be lower than 20%.

For those who engaged in digital heritage activities, the most popular reason was to research their local history (*Ibid.*). Appealing to audiences through their desire to engage with local archaeology, known landscapes, and their personal connections to a place may be a helpful strategy. Making those outputs locally centric and built around their community is an avenue to gain attention from both digital and physical audiences.

6.4 The archaeological sector and social media

To further understand the use of social media by archaeological organisations, several organisations were selected and contacted to provide social media analytical data and examples of posts that have performed well with their audiences. Other organisations were found through a Google Form contact sign-up sheet created by the CBA. Data provided by organisations has been anonymised.

The data gathered is presented in Table 3 and demonstrates that most organisations use X (Twitter), Facebook and Instagram to engage with audiences. Platforms such

as TikTok are not being used, despite being a handy tool for reaching younger audiences. YouTube is the fifth most used by archaeological organisations and could be adopted by more organisations.

Table 4 provides a summary of popular topics and content amongst digital audiences. One of the common topics that appears to perform well with audiences is content that features young people or youth engagement in archaeology. Additionally, providing hashtag content, keeping up to date with newsworthy topics involving archaeology, and including images of sites, is key to boosting audience engagement.

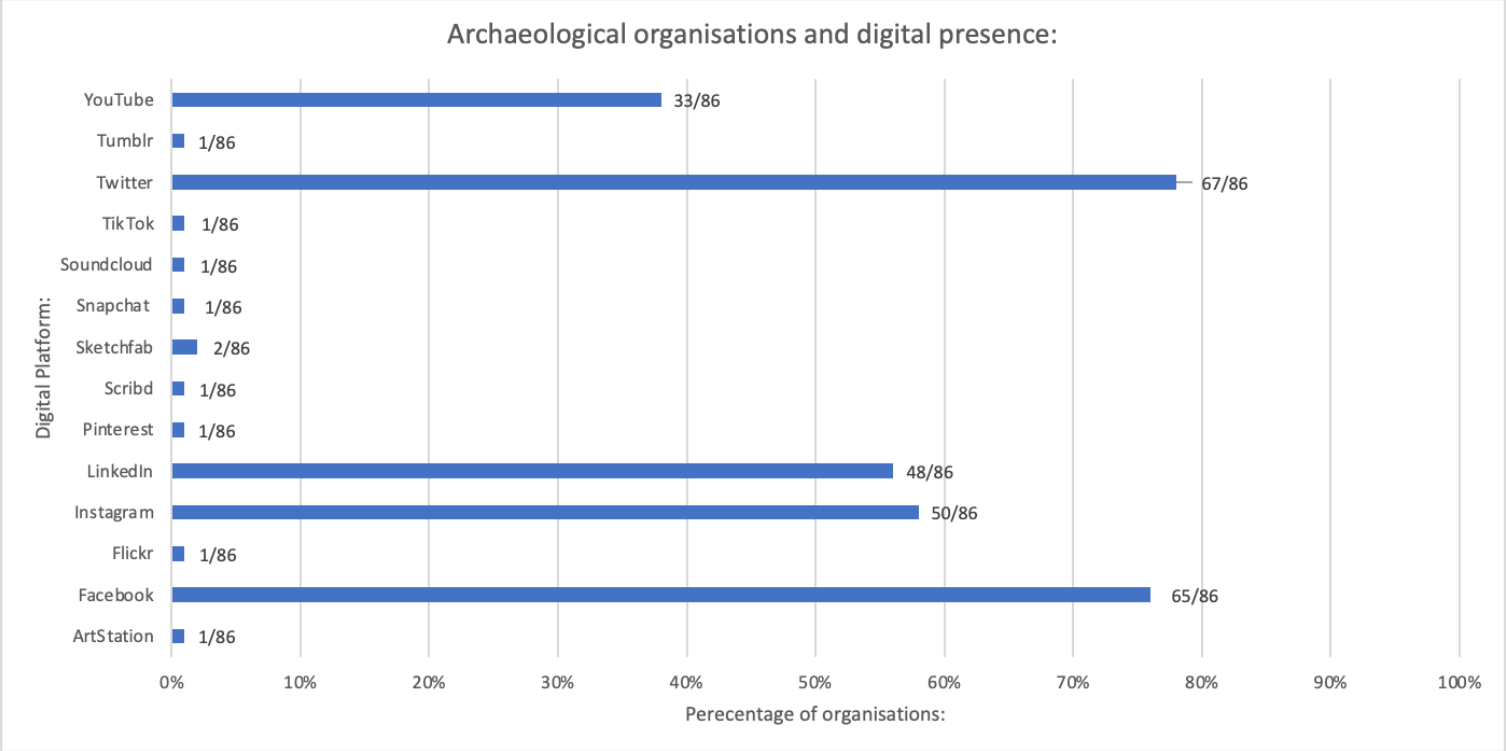

Table 3: Graph showing the number of archaeological organisations present on various digital platforms (n=86). Data sourced from CIfA-affiliated organisations and Welsh Archaeological Trusts.

Digital Platform:	High Engagement Topics:
Facebook	- Content that involves non-traditional outputs such as creative or interactive engagement opportunities. - Photographs of archaeology (using hashtags) from active sites. - Information on high profile and newsworthy sites or issues. - Fieldwork related posts that include visual elements (such as photographs of archaeological processes).
Instagram	- Content that featured young people and young audiences. - Youth engagement with archaeology.
X (Twitter)	- Hash-tagged content. - Skill building content. - Topics that include issues or threats to the archaeological sector. - Newsworthy issues that impact communities. - Content that features younger audiences and people.
YouTube	- Content that involves popular archaeological topics and cultures e.g. Roman Britain or Egypt. - Content featuring young people.

Table 4. Table showing the examples of topics and content that have performed well amongst archaeological organisation audiences on digital platforms.

6.5 Non-digital engagement

With a shift to digital dissemination of outputs, there is a risk that non-digital audiences can get left behind. 12.6 million adults in the UK lack basic digital skills, and 5.8 million people have never used the internet (LOTI, 2023a, p.13). Furthermore, in 2023, after several years of government-imposed Covid-19 restrictions, people are dedicating less time to social media due to a return to in-person social events (Ofcom, 2023c, p.23). For those audiences that cannot access digital technologies, they are at risk of digital exclusion, which can be summarised as 'the activities necessary to ensure that all individuals and communities, including the most disadvantaged, have access to and use of technology' (*Ibid.*, p. 4). For digitally

excluded audiences, a different archaeological output design and method should be considered. During the COVID-19 pandemic, the risks of digital exclusion were highlighted, as older adults, in particular, lacked digital expertise in the shift towards digital environments and became further isolated (Nedeljko & Bogataj et al., 2022, p. 156). Audiences aged 65 and over are the least likely to have access to digital technology (Ofcom, 2023a, p. 15). Additionally, adults aged 80 and above were less likely to engage both physically and digitally with the heritage sector (DCMS, 2022b). Furthermore, in 2023, during the cost-of-living crisis in the UK, 1 in 20 UK households had no home internet access (Good Things Foundation, 2022). A recent project into mapping the digital exclusion in London also found that the groups mentioned above, and ethnic communities, unemployed individuals and people with disabilities or vulnerabilities, are more likely to be digitally excluded (LOTI, 2023a, p. 6). Despite digital audiences growing year on year, the project found that more than a third of respondents, who identified as belonging to a group that is digitally excluded, had no interest in engaging with digital technology and would not be persuaded to take steps towards engaging (*Ibid*., p. 23-24). For the over-60s, lack of interest in digital technology was a key reason for not taking steps towards learning digital skills (*Ibid.*, p.26). Therefore, to maintain reach with this audience, non-digital methods are necessary. Libraries may be a valuable method for engaging with older audiences.

Digital archaeological outputs are a helpful tool for reaching digital audiences, but not low-income households and non-digital users. For low-income audiences, ensuring outputs are provided at little to no cost is also necessary. Although archaeological outputs can be disseminated with ease and can quickly reach a wide range of audiences, it is not considered “ethical” to provide only digital outputs (Dennis, 2020, p. 213). In other words, digital outputs overcome some barriers to engaging with varied audiences, but they should not replace traditional and physical outputs. Consequently, when designing archaeological outputs, a blended approach to dissemination should be considered. This may involve both digital and non-digital outputs and dissemination methods.

Digital outputs are also less likely to produce a feeling of connectivity between people and places (LOTI, 2023b) and can lead to digital isolation. Over half of social media users felt that they spent too much time using social media (Ofcom, 2023a; Ofcom, 2023c). Non-digital-based outputs are still required for general reach and to accommodate those who prefer to limit time spent using digital technology. Some might prefer telephone conversations as an alternative to digital outputs (*Ibid.*). Perhaps pre-recorded talks or question-and-answer-based discussions with archaeologists can be provided to avoid digital exclusion and isolation. These could be arranged through networks associated with care and support for older people or those with different needs. Disseminating information about non-digital outputs could be through traditional methods such as noticeboards, hoardings, flyers, posters, radio and traditional broadcasting. BBC news, radio, and television programming remain the most cited methods for accessing news content, and they are a valuable resource for disseminating information to non-digital audiences (Ofcom, 2023b, p. 40). Once again, printed media outputs for this group are still popular. This is unlikely to change, and although this trend may 'age out,' for now, it is important to maintain engagement through traditional methods to avoid leaving this group behind.

6.6 General accessibility considerations

When designing archaeological outputs, both digital and non-digital, it is essential to consider accessibility more generally. Traditional literature styles can be challenging for those with learning difficulties, poor vision, and non-native speakers. 17.3% of internet users, each week, use the internet to translate text into different languages (We Are Social, 2023b). Ensuring that outputs can be made available in different languages or can be translated easily into other languages would be beneficial. Additionally, non-English speakers face challenges with websites that cannot be auto-translated (LOTI, 2023b); therefore, providing webpages that are compatible with auto-translation tools is key to engaging with non-English speakers. There are physical limits when interpreting written text (Dehaene, 2009, pp. 15-17; Willingham, 2017, p. 3), which are further impacted by language background and our ability to scan text; readers of Latin script possess a different visual span than those who can interpret logographic symbols (Dehaene, 2009, p. 17). One way to combat this is to

combine written text with visual or photographic material, as visual information, such as symbols and shapes, can be interpreted more quickly than textual information (Cartuyvels et al., 2021) and improve knowledge retention (Holsner & Boomer, 2011, p. 315; Eilam & Poyas, 2010). This assists in making scientific information, such as archaeological outputs, more accessible for broader audiences (Farinella, 2018; Holsner & Boomer, 2011, p. 310). We Are Social recommends ensuring that closed captions are featured on any social media or other digital content to improve accessibility for those with disabilities.

People who are educated to a degree level or above and are from professional occupations are currently more likely to engage with physical and digital heritage (DCMS 2022b). Consider the outputs you are disseminating and whether they are intellectually accessible to audiences who are not educated to university degree level. Furthermore, recommendations from LOTI suggest that providing short summaries, with easy-to-understand and digestible content, alongside detailed reports, is helpful for a broader range of audiences (2023a), especially for those who do not have the time or skillset required for in-depth material. LOTI also found that free digital content was more commonly accessed than paid content (*Ibid.*). The ADS is free and open access and could be promoted to broader audiences.

When advertising or engaging with audiences, it is important to ensure that those audiences feel represented by your content and can see themselves in your content. This is especially true when considering that certain religious groups, ethnicities, and people with disabilities are less likely to engage with physical and digital heritage (DCMS, 2022b). This can be achieved through the imagery and content disseminated through social media, as well as the content of the outputs produced. Are a variety of audiences represented within the social media content, and is the output exploring a variety of stories from different perspectives? If not, perhaps incorporating more diverse voices into the production of the output and associated digital content would be a helpful method for reaching and engaging with broader audiences.

Given the breadth of audience needs, both digital and non-digital, it is worthwhile to provide a blended approach to archaeological outputs. Offering both digital and non-digital options and disseminating these through a variety of physical and digital spaces is likely to reach a broader range of audiences and meet their specific needs.

7 Audience Matrix

The data gathered and presented in this report inform the audience matrix for the PUNS2 public survey delivery and can be used as guidance for those who create and deliver archaeological outputs. This section maps the four publication user categories onto the CBA audience segments and proposes methods for reaching those audiences (presented as an audience matrix framework in Table 5). The CBA networks, which include youth engagement, membership, events, casework and advocacy, publications, and communications, are included in the audience matrix. This will determine how the CBA network can also be utilised to reach the target audiences for PUNS2.

The PUNS (Jones *et al*., 2001) target audience was the archaeological community. PUNS2 aims to explore how broader audiences engage with, or would like to engage in, archaeological outputs. To do this, the CBA has identified four groups of archaeological output users (Professional, Academic, Voluntary, Wider non-specialist public) and mapped these four groups onto three CBA audience-defined segments. These three segments are based on the results of Historic England's (HE) audience segmentation exercises (2023). Amalgamating the HE audience segments into three CBA segments is a pragmatic and resource-led approach that allows the CBA to focus on audience development and utilise the known CBA networks, such as its voluntary, community and youth groups. The relationship between the CBA target audience segments and CBA networks is discussed and mapped in the audience matrix.

The three CBA segments are as follows:

- Current Audience - **‘Known to Archaeology’**: This group comprises existing audiences, CBA members, and the established archaeological community. Together, they represent the wider public most likely to engage with archaeological outputs and events.

This group corresponds to the following Historic England audience segments:

  - Green (nature, active, discovery)
  - Yellow (progressive, creative, social)
  - Purple (nostalgic, traditional, professional)

In total, this group makes up 27% of the general population and 49% of heritage professionals.

- Target audience 1 - **’New to Archaeology’**: This audience is supportive of, or works in heritage, but may not directly engage in or with ‘archaeology’ as a particular subset of ‘heritage’. They are most likely to encounter archaeology via other heritage activities.

This group corresponds to the following Historic England audience segments:

  - Pink (cultured, fascinated, open-minded)
  - Orange (mainstream, proud, family)
  - Red (escapists, enjoyment, trips out)

In total, this group makes up 45% of the general population and 44% of heritage professionals.

- Target audience 2**: ’Archaeology Why me?’**: This audience may not immediately see the relevance of archaeology to them, but their inclusion is critical for addressing matters of representation and shaping new perspectives on archaeology.

This group corresponds to the following Historic England audience segments:

  - Blue (dynamic, passionate, outgoing)

This group makes up 27% of the general population and 5% of heritage professionals.

The four groups of publication users that will be considered in relation to these audience segments are as follows:

- **Professional:** This category includes developers, consultants, curators, developer-led archaeological companies, local authorities, and professional bodies (e.g., Chartered Institute for Archaeologists, Federation of Archaeological Managers and Employers). They will be solicited for participation via existing networks, professional platforms, and through social media.
- **Academic:** This includes teachers and researchers employed in educational institutions, from primary levels through university, and students in higher education. This group will be targeted through existing networks, posts on academic forums, and through social media.
- **Voluntary:** Active, informed and engaged. Often part of groups that deliver community archaeology projects. The CBA has 11 ‘CBA Groups’ operating geographically across England and Wales. The groups support volunteer archaeology and the dissemination of information, as well as deliver events. The CBA has an affiliate membership programme with over 350 groups and societies, which, according to the 2018 survey of community archaeology (Frearson, 2018), had approximately 9,000 members.
- **Wider non-specialist public:** This segment relates to people who engage with archaeology across a range of levels and interests, but who are not employed in the sector or active participants in archaeological events. We are interested in hearing from those we serve well (e.g., current consumers of archaeological content); however, we are particularly keen to hear from those who engage infrequently or not at all with our profession. The latter tends to include young people, those for whom English is not their first language, and other traditionally disadvantaged groups. The non-specialist public will be contacted through targeted social media campaigns, as well as through non-archaeological networks, such as national charities and social enterprises.

CBA Audience Group	HE audience segments	Who they are	Publication users	Their values	Reaching them
Known to Archaeology	- Green (nature, active, discovery) - Yellow (progressive, creative, social) - Purple (nostalgic, traditional, professional)	- 27% of the general population and 49% of heritage professionals. - Aged 25-44, and elderly audiences.	Professional, **academic**, **voluntary**, wider non-specialist public.	- Discovering something new. - Accessible archaeological outputs. - More, and better, archaeological storytelling. - Digitally accessible archaeological outputs. - Making archaeology more accessible to diverse audiences. - New/creative outputs. - Connect with diverse audiences. - Listening to, and amplifying, diverse voices. - How we tell archaeological stories about the history of the UK. - Archaeological outputs that are more accessible for dis/abled users and older adults. - Inclusion in archaeology. - Connections between people and local historic landscapes.	- Known heritage networks, and their social media accounts and podcasts. - Websites and social media related to heritage. - All social media (especially Facebook and Instagram). - Targeted social media campaigns, through non-archaeological networks, such as national charities and social enterprises. - CBA volunteer network. Community groups. - TV. - Radio. - Non-digital methods, e.g.

					Printed media. - Critical friends of PUNS2. - CBA Stakeholders.

New to Archaeology	- Pink (cultured, fascinated, open-minded) - Orange (mainstream, proud, family) - Red (escapists, enjoyment, trips out)	- 45% of the general population, 44% of heritage professionals. - Aged 55+, mixed ages with families, close to retirement.	Professional, academic, voluntary, **wider non-specialist public.**	- How we tell archaeological stories about the history of the UK. - Connecting people to their local historic landscape. - Encourage more, and better, archaeological storytelling. - More storytelling about the places they live and work, for them and for future generations. - How archaeological outputs can be enjoyable and visual.	- Known heritage networks. - Heritage site websites. - Heritage podcasts. - Festival of archaeology. - CBA volunteer network and community groups. - PUNS2 critical friends. - Schools. - TV. - Radio. - Printed media. - Facebook. - YouTube. - MOLA's community network. - Posters in social settings and community clubs. - Posters at heritage sites and social spaces.

					- CBA Stakeholders, Media and influencers.
Archaeology: Why me?	- Blue (dynamic, passionate, outgoing)	- 27% General population, 5% of heritage professionals. - Youngest and most ethnically diverse.	Wider non-specialist public.	- New, creative, and fun archaeological outputs. - Connecting with diverse audiences. - How archaeological outputs can be enjoyable and visual. - Making archaeological outputs more accessible for broader audiences e.g. dis/abled users and older adults.	- All social media (especially YouTube and Instagram). - Digital methods. - Video gaming networks. - Targeted social media campaigns, as well as through non-archaeological networks, such as national charities and social enterprises.

				- More digitally accessible archaeological outputs. - Making archaeology more accessible to diverse audiences. - Listening to diverse voices.	- PUNS2 critical friends.

8 Welsh Literature Review

8.1 Summary of Challenges and Advances in Wales

This section briefly outlines the challenges and thus the desired advances sought within recent Welsh commentary and strategy about archaeological engagement and dissemination of outputs.

A recurring concern is the fragmentation of and barriers to accessing archaeological data and information through digital means, a challenge raised across multiple sources (see particularly: Groom, 2020, Welsh Government, 2018 & 2025). There is a strong push within the new *Priorities for Culture* document for digital training for organisations towards 'good digital practice' (Welsh Government, 2025), better digital integration, up-to-date online presence (also History Ventures, 2024; Funding Eye Ltd, 2024) and cohesive presentation amongst currently disparate cultural institutions (also Rhondda Cyon Taf County Borough Council, 2024).

However, there is an awareness that focusing on digital forms of engagement can preclude others' involvement, due to a lack of suitable provision for those with disabilities and that many audiences are 'non-digital users' (RCT, 2024). Indeed, broader accessibility concerns are discussed in the literature in terms of access to digital, multi-media, or in-person access (Cadw, 2012; History Ventures, 2024). Whilst advances towards better accessible options for heritage audiences are undeniably sought (Welsh Government, 2025, and particularly noted within Cadw), evidence in the literature of actual steps taken to cater for accessibility issues within archaeology more specifically are limited; exceptions include a focus on proactive, codesign and multisensory engagement practices with audiences (Marsden, 2023; RCT, 2024; Funding Eye, 2024), and there is a call to collaborate with partners such as Disability Wales (History Ventures, 2024).

Similarly, inclusivity issues are raised around overly jargonistic, technical or even overly niche (i.e. religious) presentations of archaeological information (Groom, 2020; Langlands, 2024), which are also recognised to marginalise or exclude

audiences. Again, the same sources highlighting codesign and various forms of storytelling (including multi-layering) can be upheld as best practices. Notably, both advances in accessibility and inclusion have the potential to align with the principles of the *Well-being of Future Generations (Wales) Act* (2015), in promoting archaeology as contributing to the well-being of its citizens by fostering collaborative partnerships and developing skillsets (History Ventures, 2024; Future Eye Ltd, 2024). Notably, there is a call for Heneb (the new Archaeological Trust for Wales formed out of the four Welsh Archaeological Trusts in 2024) to broker meaningful co-creative relationships within commercial archaeology between developers, communities and wider heritage bodies (Langlands, 2024), which could further this priority.

Whilst such challenges above are shared beyond Wales, the Welsh literature highlighted a specific puzzle around the notion of inclusivity and cultural identity: specifically, the call for 'a pan-Wales narrative' in relation to 'regional specificity' within archaeological dissemination. Regional heritage topics are shown to engage local communities or interest groups; for example, research shows that visitors from South Wales connect more with narratives of the industrial past. At the same time, those from North Wales, especially regions like Gwynedd, are likely to engage with the early medieval historic environment and contestable themes around conquest (Lewis, 2020). Culturally sensitive storytelling and multi-layered approaches are employed to cater to these varied perceptions and maintain engagement (Lewis, 2020; RCT, 2024).

Another related challenge is raised by bilingual complexity: interpretations are often presented in both English and Welsh, which often leads to dense academic translations in the latter (Lewis, 2020). These translations are raised as potentially risking the originality/authenticity of meaning and can fail to engage Welsh audiences effectively, thus posing a significant challenge in dissemination and engagement. Thus, there is a call to create translations that both maintain originality and resonate with a broader audience (see also Marsden, 2023; RCT, 2024).

A final challenge, which arguably impacts all the above, is the identified lack of 'public-facing' infrastructure, resources, and capacity for smaller archaeological or heritage organisations to understand their audiences (Marsden, 2023; Funding Eye Ltd, 2024). There are considerations regarding the need to cater to accessibility, inclusivity, and youth audiences, but more understanding is required (Lewis, 2020; Langlands, 2024; History Ventures, 2024; Welsh Government, 2025). Moreover, while the recent Priorities for Culture highlights an audience-centred approach to digital interactions, an audience-aware approach should also be applied to multimedia and in-person access.

To summarise, the Welsh literature demonstrates a keen awareness of the issues around barriers to archaeological information to the broader public. It seeks to broaden access, particularly through harnessing 'storytelling' which explores both pan-Welsh and regional narratives, and further resourcing towards building stronger collaborative partnerships across the sector. The literature review findings suggest that increased consideration of audiences, their needs, and how they want or tend to engage with archaeological information (and resources to do so) would further the advances already sought and would also align with the Wellbeing Act to the benefit of Welsh audiences and beyond.

8.2 Welsh general media consumption and archaeology social media practices

To inform the development of recommendations for the Welsh Archaeological sector, this section presents a data scan of media consumption in Wales and archaeological practices in relation to social media.

The following table is indicative of the broader trends in media consumption, where traditional television remains a dominant source of information despite the prevalence of digital and social media platforms:

OFCOM results 2024

Television	% of Adults
BBC One	47%
ITV1 / ITV Wales	34%
Sky News Channel	20%
BBC News Channel	14%
Channel 4	11%
Channel 4 / Channel 4+ (All 4)	10%
Social Media	% of Adults
Facebook	32%
YouTube	16%
Instagram	12%
X (Twitter)	9%
WhatsApp	7%
Other online	% of Adults
BBC News Online	20%
Google (Search Engine)	14%
Newspapers	% of Adults
Daily Mail / Mail on Sunday	13%
The Guardian / Observer	8%
Western Mail / Wales on Sunday	8%
Radio	% of Adults
BBC Radio 2	11%
BBC Radio 4	10%

The data suggests that BBC Radio 2 and BBC Radio 4 have a significant reach, covering 11% and 10% of adults respectively. This highlights the powerful influence of traditional media. However, as discussed elsewhere in this report, the landscape has evolved with the rise of digital platforms.

Accordingly, archaeology organisations have turned to social media to broaden their reach and engagement. A selection of Welsh CIfA-accredited and non-accredited

organisations was examined for their social media usage and reach, as shown in the table below.

Organisation	Facebook	Instagram	TikTok	X	YouTube	LinkedIn	Platforms Active	Approx. Reach via followers + comments	Est. Reach
Amgueddfa Cymru – Arch. Consultancy	X*	X*	X*	X*		X*	5*	• Uses National Museum Wales' channels (FB ~10K+, IG ~17K+, TikTok ~500+, X ~19K, Linked in ~5K followers). • High engagement via cultural campaigns.	50,000+
Heneb	X	X		X	X	X	5	• Facebook (774 followers) & X(Twitter) (414 followers) reach can include former trusts, plus active YouTube (735), Insta (649) and growing LinkedIn page (397). - Also have very active Sketch Fab (8.8K views) and BlueSky (420 followers)	8,000+

Wessex Archaeology (Welshpool)	X	X		X		X	4	• UK-wide accounts: X (Twitter)~23K, FB ~17K, IG ~8K. • Steady professional engagement.	30-40,000+
Archaeology Wales Ltd	X			X		X	3	• LinkedIn ~600, FB ~3K but no posts since August 2023 & X (Twitter)~900 (no posts)	1,500–2,000
Trysor Heritage	X			x		X	2	• Facebook ~50 followers, LinkedIn ~50. • No current X account, although previously did. • Content is active, specific and local.	50-100+

Table 5: social medial platforms used by Welsh organisations

Trysor Heritage: Facebook page references a past Twitter (X) handle, which is now inactive → marked with a small x.
Amgueddfa Cymru: Uses National Museum accounts for all social media → * to denote indirect presence.

Notably, considering different audiences focus on different platforms (and specifically age groups which PUNS2 has explored), this data scan included a sweep of TikTok sites (that might attract younger audiences). Archaeology-specific videos about Welsh sites do exist and are generally well-received: @archaeodeath is one site which is very active and engages in educational outreach (139.1K followers – 2.9 Million likes).

8.3 Opportunities for the Welsh Archaeological Sector

This section summarises potential opportunities for the Welsh Archaeological Sector consideration based on the specific Welsh literature review, the data scans above and the recommendations of the more exhaustive literature review covered in the first sections of this document:

- Combine digital and non-digital methods to disseminate archaeological outputs, ensuring inclusivity and broader reach.
- Continued use of traditional methods like printed media, radio, and television to reach non-digital audiences and those at risk of digital exclusion.
- Whilst cohesion and pan-narratives can be sought, it is still possible to create outputs that emphasise local archaeology and personal connections to place to attract and engage communities.
- Develop interactive and educational materials, such as video content for platforms like YouTube and TikTok, to engage younger audiences and promote skills development (i.e. offer digital archaeology placements, etc).
- Include a variety of stories and perspectives by incorporating more diverse voices in content creation and dissemination via approaches such as codesign and early onset collaboration, crucial for commercial archaeology.

- Ensure outputs are available in different languages and compatible with auto-translation tools to engage non-English speakers and vice versa.
- Make content interactive and encourage in-situ feedback and participation from audiences to increase engagement and enable evaluation practices.
- Develop comprehensive audience strategies to reach and engage with broader and more diverse audiences, including evaluation of these.
- Opportunity for funders and advocates to support these initiatives and increase infrastructure around audience-focused practices.

9 Scottish Literature Review

9.1 Challenges and Advances in Scotland

This section outlines several key challenges and advances identified within recent Scottish archaeology and heritage strategy documents. Many of the challenges identified in the wider sector and Wales were highlighted again in Scotland, with a similar weighting, including:

- Concerns that traditional forms of engagement (e.g. archaeological reports, lectures) were 'one-directional' forms of archaeological engagement and do not lead to deeper understanding or nuance for audiences.
- Inaccessible archaeological data, due to lack of access (e.g. physical or digital barriers).
- Inaccessible archaeological data, due to technical aspects of archaeology and overtly expert-focused data, and exclusion of diverse audiences.

Considerable progress is being made to address these challenges in Scotland. Firstly, Scotland's *Archaeology Strategy* (Scottish Archaeology Strategy Committee (SASC), 2016) informs the archaeology sector of five key goals which tackle all elements and holistic systems of archaeology, from planning processes to engagement, and is supported by Scotland's heritage bodies. This framework effectively enhances the sector's approach to challenges around public benefits and engagement concerns. The impact of the *Strategy* has been noted (SASC, 2021). Current engagement initiatives appear to prioritise events and educational activities.

However, there is also attention given to diverse methods of presenting archaeological information to audiences (see *Archaeology of Dun Deardail*, p. 25). Additionally, the successful Heritage Hero Awards have played a significant role in promoting youth engagement.

Other complementary schemes include the Our Place in Time (OPiT) pre-consultation project delivered by Historic Environment Scotland (HES) and led by the Scottish Government, which revealed the strength of personal connections to place, especially after the pandemic (HES, 2022). Through extensive consultation with a wide range of community groups, findings have prompted a shift away from solely focusing on the physical status of heritage towards seeing them as social assets and placing people and community at the heart of ongoing strategies. The *Our Place, Our Future* (HES, 2024) strategy furthers this by highlighting the importance of incorporating diverse voices within archaeological content creation, echoed also by Archaeology Scotland's *Strategy* (2022): both highlight wellbeing outcomes as part of this involvement.

This people-centred approach is also reflected within HES's archaeological research framework, with key goals being to 'Strengthen Communities' and 'Tackle Inequalities' (HES, 2023). To put audiences first (and indeed HES reinforces non-professionals as 'communities' who can be empowered to make or influence heritage decisions) is anticipated to have a considerable impact on the way archaeological data is conceived of within the Scottish archaeological research environment.

Alongside the SAS and HES's commitment, the Scottish Government has incorporated further public benefit 'activities' into the National Planning Framework 4 (Mann, 2023). It highlights the value of Scotland's heritage to its identity and economy (Nichol, 2024). ALGAO Scotland posits that publication and dissemination are key components of delivering public benefit through archaeology, and encourages sharing findings widely and accessibly (beyond academic reports) through:

- Clear, non-technical summaries

- Public-friendly digital content
- Printed materials for communities
- Contributions to local archives or displays
- Open-access digital repositories

Interestingly, clear, non-technical summaries are noted to help build trust and credibility with audiences (also echoed in PUNS2 data) (Mann, 2023), and the 'Dig It!' initiative is well placed to deliver such a goal. The Society of Antiquities of Scotland (SOAS) and the associated Scottish Archaeological Research Framework (ScARF) are also well positioned to ensure that access to archaeological data (including HERs and other archival material) can reach broad audiences. However, deeper challenges have been identified in finding the right balance of accessibility and scholarly depth, as well as issues surrounding the legacy of community projects and a more pragmatic understanding of how to evaluate media use and engagement by audiences (and how to act on their needs) (Gilmore & O'Riordan, 2017; SOAS, 2022). HES (2024) also highlights the need for more robust engagement tracking and more unmistakable evidence of archaeology's societal value.

According to the literature review, there has been a great deal of progress over the last decade in Scotland's Archaeology sector towards reorienting the relationship between audiences, archaeology and its systems through various strategies that give space for communities to be involved in the discussion about what the past is, and what it means to them. There is, however, some concern that audience focus is still not thoroughly reflected upon to inform ongoing strategies.

9.2 Scottish general media consumption and archaeology social media practices

To inform recommendations for the Scottish archaeology sector, specifically regarding audiences' needs and interests, OFCOM has compiled recent data on trends in general media consumption in Scotland.

OFCOM results of Scottish media use:

Media Type	Platform	2020	2021	2022	2023	2024
Television	BBC One	64%	54%	42%	51%	43%
	ITV1/STV	54%	51%	42%	45%	40%
	Sky News Channel	24%	19%	26%	26%	20%
	BBC News Channel	17%	16%	16%	25%	16%
	Channel 4	13%	14%	13%	17%	13%
	BBC Scotland TV channel***	–	–	24%	15%	14%
	BBC iPlayer**	–	–	–	–	25%
	ITVX / ITVX Premium**	–	–	–	–	9%
Social Media	Facebook	33%	34%	37%	38%	40%
	Twitter	11%	17%	15%	20%	22%
	Instagram	6%	9%	10%	18%	15%
	WhatsApp	7%	11%	9%	12%	14%
	TikTok***	–	–	0%	6%	11%
	Snapchat	4%	7%	6%	6%	9%
Online	BBC website/app	14%	15%	19%	19%	16%
	Google (search engine)	7%	13%	14%	14%	10%
Newspapers	Daily Mail / Mail on Sunday	8%	9%	9%	15%	12%
	The Sun / Sun on Sunday	10%	12%	10%	10%	10%
	Daily Record / Sunday Mail***	–	–	–	12%	11%
Radio	Clyde 1 / Forth 1 / West Sound / etc.***	–	–	13%	11%	12%

Television remains a dominant platform, with BBC One continuing to be a primary source of information and entertainment. The rise of online streaming services, social media, and interactive digital content mirrors global trends, reflecting a broader move towards diverse and participatory media formats. Interactive platforms and long & short-form video content (i.e., YouTube and TikTok) are particularly influential among younger demographics and wider ethnic minorities (see Scotland Heritage Social Media Group (SHSMG), 2022; Fitzpatrick, 2022). Podcasts and community-generated podcasts are also gaining traction in Scotland (Mahon, 2025),

with podcasts such as Jennifer Johnstone & Annie MacDonald's 'Stories of Scotland' and the Glasgow City Heritage Trust's 'If Glasgow Walls Could Talk,' providing alternative avenues for information dissemination and public engagement, which can also reach visually impaired communities. These formats align well with the evolving landscape of media innovation in Scotland, emphasising regional narratives and citizen curation. Evaluating such trends and 'lesson learning loops' alongside national and regional media practices is crucial for understanding the effectiveness of various dissemination strategies to ensure they resonate with diverse audiences meaningfully (and can also include co-design methodologies).

The table below demonstrates the social media footprints of a sample of archaeological organisations active in Scotland across multiple platforms, including Facebook, Instagram, TikTok, Twitter, YouTube, and LinkedIn. The number of active platforms increases the ability to engage with larger and potentially more diverse audiences.

Organisation	Facebook	Instagram	TikTok	X	YouTube	LinkedIn	No. of Platforms Active	Approx. Reach via followers + comments	Est. Reach
AOC Archaeology Group	X	X		X	X	X	5	X (Twitter)~9 K; FB~6.5K & IG ~1K; LinkedIn ~2.6 K	~19,000
Archaeology Scotland	X	X		X	X	X	5	FB ~17 K, IG~5K X ~32K; YouTube “Dig It! TV” series (50+ episodes); active ~761, LinkedIn ~2K	~57,000
Perth & Kinross Heritage Trust	X	x		X	X	X	5	FB~2.2K, IG~500 (link on webpage not working), YouTube (53) hosts CPD video series; LinkedIn active (238) via workplace updates.	~3,000
GUARD Archaeology Ltd	X			X	X	X	4	FB ~1.9K; X ~2.5K; YouTube (94) and LinkedIn (1.7K) are active	~4,000

								with project videos; also note Tumblr usage.	
Highland Archaeology Services Ltd	X				X		2	FB ~3.5 K; YouTube channel with community dig and outreach videos	~3,500
Cameron Archaeology	X			X	X		3	FB ~1.1K; X (Twitter)@AliTheArchaeol ~856; YouTube channel hosting talks & dig footage	~2,000

Table 6: social media platforms used by Scottish organisations

Whilst exact figures of audience reach (beyond followers) could not be discerned at the time of writing, two Scottish commercial archaeology organisations consulted (one large, one small) were able to contribute both quantitative and qualitative insights into their social media strategies.

Both organisations were asked whether they had spotted any social media trends in the last 3 years: both responded that there had been a decrease in the number of X (Twitter) followers after Spring 2023, and one also reported a decrease in the number of Facebook followers, which was attributed to ‘toxic politics’ on these platforms. Another observation was an increase in the ‘silo-ing effect’ across social media, where areas of interest overlap less across platforms.

The respondent from the larger organisation was able to share that they had strategies in place for reaching out to non-traditional groups, managing engagement from those with political or extremist views and evaluation practices. Their organisation was attempting to reach beyond the heritage and history audiences by aligning with interest groups or general interest podcasts, such as tagging an engineering podcast with an active online following in a post about engineering history. They also made frequent use of trending hashtags to cast a wider net. This organisation also had strategies in place to counter any perception or accusation of ‘hiding’ evidence or being inaccessible. It has adopted an evidence-based approach and shares ‘behind the scenes’ views to demonstrate openness.

This organisation also logs its public outreach activities and has a dedicated social media team that can track usage and analytics, thereby driving content. The respondent shared, however, difficulties in reaching out beyond their usual audience of older people:

Engaging with young people is difficult when you are limited to what can be regarded as 'legacy social media’, and I would hope that leadership can understand the benefits of using platforms that skew younger, such as TikTok. Currently, our main age group of followers are the over-65s, which can be problematic in that if we

change the 'vibe' of our posts to attempt to reach younger audiences, we risk alienating our older followers.

The smaller archaeological organisation shared that they did not have the resources or capacity to address issues such as spotting trends, attracting under-represented groups, strategies for dealing with political or extremist uses of archaeology or evaluating their reach. It is clear, therefore, that there is a genuine disparity between archaeological units in their approach to and use of social media.

9.3 Opportunities for the Scottish Archaeological Sector

Considering the advances in Scotland (in terms of publicly accessible strategies for archaeology), which exceed Wales and England, the opportunities are as follows:

- Approach to Digital Content: Although there is active engagement with a variety of digital platforms, the Scottish archaeological sector could benefit from audience mapping and further evaluation practices (in addition, the SHSMG team may have further ideas about how to undertake this with Scottish heritage bodies).
- Do not forget non-digital outreach: To avoid digital exclusion, it is essential to continue producing traditional outputs and ensuring they are distributed through physical means such as libraries, schools, and community centres.
- Different forms of evaluation will be necessary for different engagement activities, and potentially with different audiences. There lies a challenge in creating cross-comparable data to demonstrate the value of archaeology to commissioners (the MOLA Public Impact team have been working on these challenges recently and would be happy to discuss further).
- There will be a capacity gap between different organisations able to do this work; commissioners and advocates may need to be brought on board to enable evaluation and audience-led strategies to manifest comprehensively within the sector – there is an opportunity for further funded work here.

Methodologies presented in the main PUNS2 report (and reflections on these) and the main recommendations will also be relevant to the Scottish archaeology sector.

10 Comparison of Key Strategies in the UK

England, Scotland, and Wales each have unique approaches to archaeological engagement, but they share several overarching goals and strategies.

10.1 Similarities

- Digital and Non-Digital Engagement: To varying degrees, data from all three countries emphasise the importance of both digital and non-digital methods to ensure inclusivity and avoid digital exclusion. This includes utilising social media, websites, and traditional methods such as physical publications and community events.
- Accessibility and Inclusivity: There is a strong shared focus on making archaeological content accessible to diverse audiences, including non-native speakers and people with disabilities. This involves providing translations, closed captions, and content in non-technical language.
- Community Involvement: Engaging local communities through collaboration with local communities and wider interest groups is a common strategy. This fosters a sense of ownership and interest in heritage and archaeological discovery and interpretation.
- Educational Outreach: All regions aim to create educational materials for different age groups and educational levels to promote archaeology as a field of study and career.

10.2 Differences

- Focus on Localised Content: Scotland has more thoroughly embraced local history and heritage in content production to attract audiences interested in their immediate surroundings and localised stories. England and Wales also value local content but may adopt a broader regional approach.

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