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Build N Burn: Using Fire as a Tool to Evoke, Educate and Entertain

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The visceral nature of fire was exploited in the Neolithic and Bronze Age periods in Britain by the burning down of timber buildings and monuments, as well as the cremation of the dead. These big fires would have created memories, perhaps even ‘flashbulb memories’, and this powerful mnemonic aspect of fire was likely of significance to the social and religious lives of individuals, families and communities. This article introduces the Build N Burn concept, where fires are recreated and deployed alongside public talks, performances, experimental archaeology activities and demonstrations by craft specialists to create memorable and informative public events. Three public engagements to date, two on the island of Arran and one in Caithness, both Scotland, are described here. In each case, we constructed replica timber structures inspired by local prehistoric sites, and then burned these down in a free-to-attend public event at dusk, evoking the culmination of a prehistoric festival. Build N Burn has, at its core, the principle of delivering memorable experiences for the public inspired by prehistory, underpinned by research and experiment, using events which draw on cross-sectoral collaboration and working with local communities. This article offers a critical reflection on work to date, and discusses future potential for such activities, utilizing the mnemonic power and transformational potential of fire for public engagement and experimental archaeology.
OVERTURE: BURNING THE CIRCLE

The timber circle stands on a plateau in the middle of a hillside field, with one of the highest peaks in Scotland, Goat Fell, acting as a backdrop to the west. Southern and eastern views from the monument are dominated by the townscape of Brodick and the Firth of Clyde, and beyond that is the distant and hazy horizon of the mainland, crowned with wind turbines. This is without doubt a spectacular location, with extensive views in all directions, but the attention of the crowd who have gathered here in the failing light keeps being drawn back to the timber structure. This is Scotland’s newest timber circle, constructed over the past few days, and consisting of eight wooden posts, each taller than average adult head-height, with a single post right in the middle. Most posts have bark peeling from them, and charcoal-black geometric patterns have been smeared on some. One post has a chalk-white eye marked on it. The tops of the posts have slits cut into them from which rags hang, while piles of wood — pyres for the posts’ planned conflagration — have been constructed at the foot of each upright. The central post is broader than the others, and made of oak. A bearded male face has been carved at the top, emerging from the bark, looking out to sea.

Illus. 1 The timber circle constructed in 2013 with decorated posts on the afternoon before we attempted to burn them down; here preparations are being made for burning (Photograph: Joss Durnan)
The timber circle is a hive of activity with kindling being topped up and tools cleared away by a small team of helpers. A small fire burns in a pit within the timber circle. The gathered crowd of sixty or so people stands expectantly, in a ring formed by a rope stopping access to the circle itself. Then, gradually, those within the timber circle start to move away to one side and melt into the audience. Just as the sun is sinking in the sky, and the moon is rising, someone blows a horn and the crowd of spectators falls silent. A single figure remains within the timber circle: an archaeologist, who addresses the audience, talking about the Neolithic and Bronze Age, about rituals, monuments, fire and wood.

He then transforms himself into the role of a shamanic character by donning animal skins and holding a skin drum. He picks up a wooden torch and walks over to the small fire within the timber circle and sets his torch alight; a slow walk to the central carved post follows, then he sets the pyre alight at its base. Eight figures enter the circle, all with wooden torches, which they light from this new fire. They then slowly walk to the eight posts, set the pyres and rags alight, starting a fire at the tops and bottoms of all eight posts. Everyone steps back outside the circle, the ritual completed. Darkness arrives, ash falls like snow, the crowd step back from the blazing posts and pyres. Conversations start, drink flows.

The fire remains a focus of attention for hours, occasionally being fed with new fuel, and finally the audience departs. It is now four o’clock in the morning, the end of the middle of the night. One of the eight posts, finally worn down by fire and at its base charred in width to little more than a twig, falls over.
ACT 1: FIRE AND FLASHBULB MEMORIES

This narrative of a timber circle, constructed simply to be burned down, is one example of the way that fire has been used in a series of public archaeology events planned and delivered between 2013 and 2015. This article outlines our approach to using fire to create memorable educational events and, it is hoped, the impact it had on members of the public who witnessed these conflagrations. We discuss our motivations and the academic underpinning for our events; consider the events themselves; and reflect on the successes and challenges we have faced, not least in assessing the transformational impact that our big fires have on their audiences. Our article concludes with an indication of future plans to further develop what we have called Build N Burn (cf. Brophy et al. 2016). However, before commencing, it is worth outlining why we selected fire as our primary means of public engagement.
What is fire? Dictionaries define fire (in the word’s literal usage and noun form) as variations on ‘The physical manifestation of combustion, characterized by flames and the production of (intense) heat, light, and (typically) smoke, and caused by the ignition and burning of flammable material in the presence of oxygen; the process of burning and its manifestation considered together’ (OED Online 2016).

What does fire do? Typically, it combusts, burns, illuminates, transforms, consumes, and both uses and gives off energy.

These properties have become entangled in the story of humanity, even if we are now more detached from fire than our ancestors ever were. Within prehistoric archaeology, there are a series of tropes that have emerged from human-fire relationships: the ‘invention’ of fire (which really means the ability to control it (Scarre 2013, 116–17)); the deliberate and opportunistic use of fire to clear woodland and thus enable farming; the hearth acting as the centre of the house and social cosmology; and the use of fire to transform materials into pottery and metals (Renfrew and Bahn 2016, 342–43). We also know that fire is a phenomenon that is materially difficult to define; that it is both a giver and taker of life; and that there is no smoke without fire. Beyond these definitions, characteristics and narratives there is the nature of fire itself when experienced physically by our bodies and senses. All of these qualities and characteristics together confirm what we know: that fire is a powerful phenomenon and one that humans require and respond to at various levels. We would argue that this range of properties and affordances is why fire is the perfect medium through which to carry out public engagement archaeology activities.
The effect of fire has received much attention within the archaeological literature. However, the majority of studies of the use of fire in the past (and in particular prehistory) have tended to emphasize the functional everyday use of fire, pyrotechnology, and the technical craft processes for which fire was needed (cf. Gheorghiu 2007; Gheorghiu and Nash 2007a). For instance, fire has been viewed as central to family and communal life in the form of indoor hearths (e.g. Cooney 2000; Odgaard 2007) and external bonfires (Richards 2005). Fire is the main element of the rite of cremation (Parker Pearson 1999; Williams 2004a; Kuijt et al. 2014; Thompson 2015) and has been the focus of detailed technological and experimental analysis in this respect (cf. Marshall 2011; McKinley 2013; Schmidt and Symes 2015). The role of fire (accidental and deliberate) in clearing woodland ahead of farming has also been the topic of much discussion (e.g. Brown 1997; Moore 1997; Edmonds 1999). Also, the transformative role of fire in the production of ceramics and metal objects has been viewed from technological, quantitative and symbolic perspectives (e.g. Gibson and Woods 1990, 44–56; Heeb and Ottaway 2014). It would be remiss not to note that, in all of these examples, fire is viewed as more than just a mundane part of the human tool kit: these studies reflect the social role of fire; aspects of its symbolism; and the complexities and affordances of fire-human entanglements (Hodder 2012, 71). However, little emphasis has been placed on the visceral nature of fire (Illus. 3), its impact on those who experienced fires both large and small, and the potential use of fire as a component of open-air communal spectacles in the past.
Illus. 3 Fire is a powerful phenomenon, impacting on those who see it (Photograph: Stephen Watt)

One of the few instances where the impact of fire on those who witness them has been considered is within the context of the study of early Neolithic timber monuments in Britain. Gordon Noble (2006a; 2006b) argued, in a discussion about the apparent predilection early farmers in Scotland had for burning down timber buildings and post-defined monuments, that this was done for very a specific reason: to create ‘flashbulb memories’. Noble (2006a, 58) argued that evidence for burning events at Early Neolithic timber halls, mortuary structures, houses and cursus monuments suggests that these were more than just accidental fires or short-lived episodes of destruction (cf. Brophy 2006; Jones 2007; Thomas 2007; Brophy and Millican 2015). Rather these would have been big fires, using lots of fuel and being maintained for several days, in order to create the impact that we now see in the archaeological record: oak posts burnt beneath surface-level, sometimes even charring the natural subsoils. These fires would, potentially, have involved large social gatherings, many participants, and been visceral experiences which created powerful memories that would stay in individual memories and communal biographies long after the conflagration had ceased (Noble 2006a, 57–8). In part, such events were about place-making through memorable acts of destruction, as Julian Thomas has argued for a series of burned-down Neolithic enclosures
he investigated in Dumfries and Galloway (Thomas 2007, 264). The creation and maintenance of memories and messages would have been of fundamental importance to prehistoric societies with their reliance of oral tradition and storytelling. Andrew Meirion Jones has suggested that the burning down of Scotland’s timber cursus monuments had precisely this objective: to generate ‘dramatic events’ that would be memorable (Jones 2007, 120: see also Brophy and Millican 2015). In other words, big fires in the fourth millennium cal. BC in Scotland — and no doubt elsewhere in the British Isles — served a very specific social role: namely the creation of stories – perhaps even myths – that could be passed from generation to generation, lasting longer than a wooden post ever could. Similar arguments could be made for the efficacy of fire for creating memories and place-making in relation to Neolithic and Bronze Age cremations (cf. Williams 2004a; Parker Pearson et al. 2009; Brophy et al. forthcoming).

There is a paradox here: on the one hand fire could completely destroy major structures and bodies, and was very resource-hungry in the immediate term. Yet, on the other hand, fire ensured that these buildings, monuments, individuals and their funerary pyres would never be forgotten because of the means of their destruction and in a sense, offered a kind of resource-good-value due to the durability of the memories created. This property of fire may well have served an important role in what Küchler (1999) terms ‘mnemic memories’, wherein things that have been destroyed are remembered by the experience of that thing when it existed, such as monuments and material objects made specifically for destruction during a mortuary rite. This concept has been applied by Williams (2004b) to the memorialisation of the dead in first-century AD Britain, but as he suggests, could also be helpful in understanding cremation and pyres in prehistoric contexts. Certainly, different scales of temporality exist with regards to timber structures burned down in prehistory: buildings and monuments may have stood for
decades, while pyres may have been constructed in the days and hours after the death of an individual. Fire may have played a fundamental role in presencing these structures once they were gone and was effective at removing timber structures regardless of their permanence or otherwise.

This is significant as fire itself has the potential to leave few tangible or recognizable traces, although the true nature of the impact of big fires in prehistory has yet to be fully understood, and differing opinions exist on this matter. Noble (2006a, 57) has suggested that some of the firing events referred to above were carried out until ‘every last trace of the structure was burnt’ although it is not clear if he is referring merely to extant elements of such structures. However, it has also been argued that the burned down shells of Scotland’s Early Neolithic timber halls may have lingered in the landscape for generations or even centuries, with their locations likely marked by being left alone and not ploughed, through differential vegetation growth, and perhaps also the presence of the stumps of blackened posts (Bradley 2002; Brophy 2007). Parker Pearson (1999, 6–7) noted that ‘cremations can be outrageously extravagant affairs but they may leave few or even no archaeological traces’. One month after witnessing a cremation ceremony in Bali, Downes (1999, 24) returned to the location and felt that ‘the traces evoked little of the spectacle’. Our experimental fires left no visible surface traces beyond a few months after each event (we have yet to test what subsurface traces remain of our fires), and our contention is that spectators will continue to remember the burning events with or without such evidence, regardless of what remains in the location where the big fire took place. All this leads to two conclusions: firstly, that experimental archaeology with a view to the taphonomic impact of fire with a long-term perspective is necessary. Secondly, big and memorable fires could be an effective means to ensure remembering (or not-forgetting) through fiery destruction. In other words, fire destroys things
but creates memories. As noted above, Noble used a very interesting concept to describe these big fire events:

‘The creation of memory may have been aided by a phenomenon known as ‘flashbulb memory’ where people have particularly clear recollections of circumstances associated with a dramatic event…While not exact copies of the original event, flashbulb memories are associated with a high level of recall clarity and vividness.’

(Noble 2006a, 58)

The flashbulb memory concept was first proposed by Roger Brown and James Kulik (1977) with regards to powerful individual and communal memories associated with a series of high-profile assassinations in the USA. For them, flashbulb memories were those ‘in which one first learned of a very surprising and consequential (or emotionally arousing) event’ (ibid., 73). Since then, the phrase, particularly in popular culture, has come to be applied more generally to powerful memories associated with traumatic or shocking events witnessed first-hand, or through secondary sources such as the media. These need not be bad events, but are usually memorable, significant, rare and consequential (Davidson et al. 2005; Radvansky 2010). Furthermore, flashbulb memories are often regarded as communally experienced, commonly cited examples being the explosion of the Challenger space shuttle in 1986, the attack on the Twin Towers in September 2011 (Davidson et al. 2005) and the events surrounding the death of Princess Diana in 1997 (Hornstein et al. 2003). Common responses include a need to memorialize these events in some way, often strongly associated with a particular place, person(s), date or time of year.
There are a number of well-established characteristics of flashbulb memories that fit well with events like large fires burning down socially significant and familiar structures and buildings, or (to move beyond Noble’s examples) watching a human body, perhaps of someone you knew, being cremated on a pyre (Brophy et al. forthcoming). Despite such events being well-planned out and anticipated in advance rather than happening spontaneously or out of the blue, they probably had a shocking quality, given the social significance and investment in such structures, or the emotions associated with mourning and loss, which would be combined with the visceral intensity of the burning of the corpse or big posts. Flashbulb memories are, by definition, generated by uncommon events that can create vivid memories which, even reliving, can be a traumatic and powerful experience. Again, this seems a good fit for significant burning events we can identify in the archaeological record. Such burning events (and by this we do not mean camp fires, but rather huge fires which may have been maintained for one or more days, or pyres which would have burned for on average six hours) had the potential to become part of social fabric, and in time, mythologized and even subject to political or ideological exploitation.

Therefore, fire, under the right conditions, can generate powerful experiences, physically and emotionallly impact upon participants and spectators, transform materials and bodies, create long-lived individual and social memories, and connect memories and meanings to places. We would argue that these properties of fire, as well as the various uses fire had in prehistory, make it the perfect tool to help the public learn about prehistoric lives and activities, and not just about big fires in prehistory. Learning experiences such as prehistoric festivals, hands-on craft activities, performances and public talks adjoining to ‘flashbulb memory’ events could help to make a lasting (positive) impression on the public. There are several present-day examples of fire festivals and processions in Scotland which utilize fire, such as Up Helly Aa
in Shetland, the Beltane Festival in Edinburgh, and the former Wicker Man Festival in Dumfries and Galloway, which attest to the enduring popularity of fire spectacles. This is why big fires have been a key element in all our Build N Burn projects, although, unlike the aforementioned fire festivals, our motive for using fire as a tool is to evoke, entertain and educate.

The remainder of this article will focus on three Build N Burn events which we carried out in Scotland between 2013 and 2015. Two took place on the island of Arran, North Ayrshire, in the grounds of Brodick Castle, where we were able to work in partnership with the National Trust for Scotland which owns the property. The first was branded ‘Burning the Circle’ (Illus 1 and 2) and focused on a timber circle we constructed in July 2013; the second revolved around a ‘Walk with the Shaman’ (Illus 3 and 4) which ended with the conflagration of a series of experimental pyre structures in September 2014 inside the remains of the timber circle. The third event took place at Yarrows, Caithness, Highland, in August 2015. This was part of a wider festival celebrating the Scottish antiquarian Joseph Anderson (1832–1916) and the Build N Burn element in this case centred on a wooden tomb façade and was part of a performance called ‘The Mysteries of Prehistories’. In each case, the large fires at the end of the event (which were free for the public to attend and widely advertised locally and by social media) were the culmination of many months of extensive planning and preparation, and preceded by up to a week of building and preparatory activities, often involving the public and local school children. Our accounts of these events are interspersed with text and images that evoke our activities.

This article is not merely intended to offer a description of these three projects, but also to propose that our use of big fires as the central focus for innovative, co-produced, high-impact
public archaeology activities has wider application. It is the context, and the research-led nature of our events, that underpins their potential effectiveness, not simply the fact that a big fire is involved. For instance, aspects of experimental archaeology lend themselves well to public engagement (Stone and Planel 1999) such as an experimental pig cremation undertaken on a beach on the island of Bute, Argyll and Bute, in 2011, by archaeologist Paul Duffy as part of a ‘midsummer celebration’ where ‘the reaction of the onlookers to the spectacle’ was noted as of more interest than the science of the process (Clarke and Duffy 2012, 65). The public benefit of experimental approaches is nowhere more apparent than at successful experimental archaeology parks like Lejre in Denmark which draw many visitors (Rasmussen and Grønnow 1999). The use of performance and storytelling is also a powerful medium for communication, offering a context for the audience and a means to create memorable narratives for prehistory (e.g. Reynolds and Adams 2014). Then, of course, there is the presence of fire: just as fire would have been a powerful and visceral force in prehistory, so too it can play a key role in teaching and learning about the past in the present as well.

**INTERMISSION: THE WALK WITH THE SHAMAN**

‘At nightfall, you will embark on a journey from the shore side through the castle grounds to the reconstructed timber circle and fire lighting ceremony. You will be led by our Bronze Age ‘shaman’, encountering several audio-visual installations on the way. The journey will draw your senses into Bronze Age cosmologies through encounters with light, scents and sounds. This unique walk will take place prior to the lighting of the pyres, and has been scripted by a team of Glasgow University Public Humanities Ph D students.’

(extracted from publicity material for The Walk with the Shaman).
Illus. 4 The walk with the shaman (Photograph: G MacGregor)

*Tir na nóg,*

*Tir na nóg*

*Fosgailte elan*

*Tir na nóg,*

*Tir na nóg*

*Fosgailte fairge*

Translation:

‘Land of the ever young,

Open island.

Land of the ever young,

Open sea’

(chant led by the shaman as the procession approached the timber circle at dusk)
ACT 2: THE BUILD N BURN CONCEPT

There are several key principals that underlie our Build N Burn events. These can be summarized as: research-based practice, creating memorable experiences, soft experimentation, and collaboration and co-production. These principals derive from our main objectives: to engage with the public in meaningful and innovative ways, and assessing and exploiting the potential impact of big fires on spectators. To this end, all our events are open and accessible to the public; free to attend (with occasional exceptions due to logistics such as constraints on numbers); and have specific bespoke themes with branding and marketing based on local archaeological sites, the theme of the event, and details of public engagement and involvement. All three events to date have had recurring elements. These are:

1. The construction of a timber structure or structures of some kind over several days, based on a local Neolithic or Bronze Age site and using a combination of authentic and inauthentic materials and techniques;

2. A prehistoric festival, held over one or two days at a weekend, involving the participation of a series of craft specialists and demonstrators, such as prehistoric pottery making and firing, metalworking, organic crafts, burnt mound experiments, pit roasting venison and brewing;

3. An event based on a series of big fires, including performance and public talks, and culminating in the burning down of the timber structure(s) just as darkness falls;

4. Recording the remnants of the structure(s) the morning after the fire.

This formula has played itself out in several different ways depending on the local archaeological context, the partners we have worked with, and the requirements of the landowners. We are not always directly in control of content or delivery of all activities that
take place and thus these are very much partnership events, usually utilizing a patchwork of local funding sources and a team of volunteers.

It is important for our events that our practice is research-led. Therefore, in preparation for our constructions and conflagrations, we ensure that local Neolithic and/or Bronze Age sites form the basis for our activities. For instance, in Arran we based the timber circle we constructed in 2013 on Machrie Moor 11, a stone circle on the opposite side of the island that had been shown during excavations in 1985–86 to have been preceded by a rather unusual, simple Neolithic timber circle (Haggarty 1991). The circle at site 11 was elliptical, with a diameter varying from 13 m to 14.7 m, while our monument was circular and 14 m in diameter. Our timber circle was set out by digging eight widely spaced post-holes, on average 0.7 m in diameter and 0.45 m deep. The posts at Machrie Moor site 11 (probably oak but this is not specified in the excavation report) seem to have been in the order of 0.3 m in diameter, and were probably less than 2 m long; our posts were of similar size girth but between 2.5 m and 3 m in length, and of non-native Sitka spruce timber (except the central post, which was made of oak, much more difficult to source with our resources but included to ensure we used a more authentic material for at least one post). Packing stones were only evident in one of the Machrie Moor post-holes but we found it essential to safely support our posts. This was a porous timber circle compared to the many other examples known in Scotland (Millican 2007) in the sense that the posts were widely spaced from one another and thus ideal for hosting activities for spectators. On the other hand, there was no indication that the timbers here had been burned, and so we transposed the Early Neolithic timber burning activities outlined above onto a Late Neolithic monument form. This process was, however, still underlain by a series of research questions:

- How easy would the timbers be to move, and handle (Illus. 5)?
• Would the post-holes at Machrie Moor have been able to support the size of posts used in our timber circle? Is it possible to completely burn a timber post?

• How far away can the fires be viewed from in daylight, during dusk, and in darkness?

• What is left after the burning ends (Illus. 6)?

• Does burning leave a mound or bank of burnt material, or stumps, and how far down into the posthole might the charring go?

Illus. 5 (above) A timber circle post being erected. Some of the organic digging tools we used to dig postholes are in baskets (Photograph: Joss Durnan)

Illus. 6 (below) Recording the burnt posts the morning after the Burning the Circle fires (Photograph: K Brophy)
A similar process was undertaken for the ‘Walk with the Shaman’ event in 2014 where we wanted to explore a local prehistoric burial tradition for which there is evidence in Arran: cremation (e.g. nearby Sannox Quarry (Arabaolaza 2014)). This was an important form of mortuary rite in the Late Neolithic and Early to Middle Bronze Age (3000–1500 BC) in the British Isles (Parker Pearson et al. 2009; Darvill 2010), and while experimental archaeology has been carried out previously looking at the processes of firing and the material outcomes (cf. McKinley 1997, 2013; Tonno and Konsa 2007; Marshall 2011), little work has been done on the visual and sensory spectacle of such an event (Brophy et al. forthcoming). Our key question here, with the construction of five different pyres, three of which were based on the previous experiments of others and archaeological evidence (from Marshall 2011, see Illus. 7) was: how did the process of cremation affect those who participated and witnessed the event, and what kinds of things might they have experienced? The five pyres were constructed within the partially charred timber circle, which offered a clear, safe and bounded space to carry out our experiments. As they burned (see Illus. 3) we observed the reactions of the spectators, with bodily responses evident such as people moving away from the intense heat, to ‘oohs’ accompanying each sudden pop and bang from the fires. Our observations here have contributed to academic outcomes and a re-evaluation of the role of cremation in the impact on the bodies of the dead and the living in Late Neolithic Scotland (Brophy et al. forthcoming).
In other words, we aim to create memorable experiences, in essence flashbulb memories, and we perhaps have been most successful at doing this in Caithness, our third event, which was carried out on a larger scale than the Arran projects. As our event was to be held on the shore of the Loch of Yarrows, we were able to draw inspiration from a rich record of megalithic tombs and stone rows of Neolithic and Bronze Age date within this landscape (Davidson and Henshall 1991; Baines and Brophy 2006; Heald and Barber 2015). Some of these monuments form part of the Yarrows Heritage Trail, a walking trail that connects a series of prehistoric sites on the southern and western sides of the Loch, which after a period of neglect was ‘re-opened’ during summer 2015 around the time of our event. The Build project in this case was a spectacular timber ‘fence’ which evoked, although did not directly copy, stone façades of Neolithic tombs in the immediate vicinity (Illus. 8). In plan, a cairn was laid out using sticks
which acted as torches ready to be set alight. This structure sat on a hanging peninsula, at the shoulder of a slope, with the Loch and hills as a backdrop. Furthermore, we used ideas of tomb forecourt rituals, deposition and activities (cf. Edmonds 1999) as a focal point for various performative aspects of the evening in the lead up to a spectacular conflagration. This dramatic event, at dusk, showed the awesome power of fire and created — we propose — an unforgettable experience. By happy chance, a full moon rose directly over our structure as it burned. This provided a genuine flashbulb moment (Illus. 9), with the aspiration that the archaeological information imparted by the narrator of the evening events (a team member posing as Joseph Anderson himself, Illus. 10) and tales told by a local storyteller would become entangled with this amazing place, the spectacular fire, and associated memories in the minds of the audience.

At this stage, we must acknowledge some weaknesses in our work to date, namely the methods used to establish the assertions made above regarding the impact our fires and other activities have had on the audience. From anecdotal evidence, conversations, monitoring crowd behaviour and actions, and following social media coverage of our events, we have a good sense that our events are entertaining and memorable. Yet, are they transformational for audience members, in terms of their knowledge levels, their desire to find out more about prehistoric people, or their propensity to further engage with our partner organisations and their activities and facilities? Is entertaining the public enough to make these events memorable and transformative in this sense? We would suggest that entertainment as an outcome should not be downplayed in academic contexts and can form a valuable part of public archaeology projects. However, to assess how spectators are changed by Build N Burn events, what they learned and how likely they are to remember the experience, in future we plan to introduce rigorous before-and-after analyses and other feedback mechanisms to
capture this valuable information. In a sense the three events to date have demonstrated that we can deliver complex public archaeology events, and the next step is to better evidence the impacts and outcomes of our aspirations to inform, educate and entertain the public about aspects of prehistoric life.

Illus. 8 The vision for the timber facade we constructed and burned at Loch of Yarrows, Caithness (drawing by G. MacGregor)

Illus. 9 Flashbulb memory? The facade burns (Photograph: Alex Carnes)
We also know from other public archaeology projects that performance, music and sound can be transformative for those participating, and help evoke a sense of prehistoric experiences. The element of experimental archaeology adds to the attraction of such endeavours (Stone and Planel 1999). A project working with school children in 2011 at the Tinkinswood burial chamber, Vale of Glamorgan, Wales (an early Neolithic chambered tomb of the Cotswold-Severn tradition), demonstrated this effectively (Reynolds and Adams 2014). There, children participated in experiments related to the use of sound through instruments and voices within and around the burial chamber, explicitly aiming to reconstruct the types of ceremonies believed to have happened in such locations in the Neolithic. The aims of this project were very similar to those of Build N Burn: ‘experiencing the site with new eyes and ears, expanding the being of the viewer, allowing the music to enhance the imagination, and ultimately for the performance to be transformative’ (ibid., 19). The positive results suggest that this experience was indeed mind-expanding for the children who took part, but also shed some light on the way that tomb forecourts may have been used in prehistory.
Our working practice is similarly experimental, with three strands to this: (1) reconstructions of prehistoric monuments and structures; (2) re-enactments of prehistoric activities such as processions and ceremonies, and (3) the investigation of taphonomic processes associated with fire. The former two also give us an opportunity to consider the impact large fires within specific contexts have on spectators and participants. All of these research strands could be characterized as *soft experiments*, because to date there has not been a high level of emphasis on authenticity in terms of materials, or recording quantitative details of what we are doing and making. Therefore, commentators such as Reynolds (1999) and Outram (2008, 3–4) would perhaps characterize our events not as experimental archaeology at all, but rather ‘experiences and demonstrations’ (ibid., 3) and ‘at best theatre…’ (Reynolds 1999, 156).

Marshall (2011, 14) has noted that public cremation experiments are ‘part of a recent trend towards mounting such events for the purposes of public ‘edu-tainment’ an excellent motive, but usually unmatched by scientific content’. Outram (2008, 4) also warns strongly against what he calls ‘compromises over authentic materials’ and the adoption of materials and processes which could lead to inauthentic or unhelpful results.

These are all valid comments, but there is also an acknowledgement that re-enactments, experiences and reconstructions ‘have huge pedagogical benefits and are an excellent way to translate archaeological research into a presentable form for the public’ and allow skills to be practiced and ideas to be tested (Outram 2008, 3). We would also suggest that the notion of replicating ceremonies and experiences falls very much within the remit of experimental archaeology, what Coles (1979, 1) would have characterized as the ‘reproduction of former circumstances and conditions’. Re-enacting prehistoric ceremonies and experiences will always lack authenticity, to the extent that our ideas about how such ceremonies took place
are contingent on a good deal of interpretation; something that was also apparent when performing music in the forecourt area of the tomb at Tinkinswood (Reynolds and Adams 2014). In this sense, sometimes there is simply little to qualitatively record, while authenticity is a relative concept.

However, when it comes to experimental reconstructions of structures, or using materials, authenticity becomes more significant when the aspiration is to derive scientifically rigorous results. During Build N Burn, we make no claims to use exactly the same materials or technologies as would had been used in prehistory: as noted above, our Arran timber circle was constructed from Sitka spruce, our fires lit using accelerants such as paraffin, our cremated body was that of a supermarket-bought chicken, and the Yarrows façade was held together at the back by six-inch nails and four-by-two sawn lumber bought from a DIY store. Such decisions were made pragmatically due to issues related to cost, practicality, stage-management and even health and safety. Holtorf and Schadla-Hall (1999, 231) note that the ‘experience of authenticity and age can be deliberately manipulated’ for various motivations; in the case of Build N Burn the details may well not always be authentic but we hope the overall effect will be. Interestingly, Colin Richards (2013) has argued recently that some monument-building techniques in the Neolithic employed imaginative techniques and materials to give the impression the structure was more elaborate and solid than it actually was, suggesting our stage-management and pragmatism today shares some similarities with prehistoric practice. Importantly, the public are informed about interpretive decisions and material inauthenticities at all our events.

Recording and observing our events to date has yielded interesting results which merit further investigation and experimentation. For instance, we have been recording the subsoil beneath
and around the burnt timber posts on Arran periodically to enable us to better understand how post burning might show up in the archaeological record (see Illus. 6). Antler picks and cattle shoulder blades were used to dig 10% of the post-holes for the timber circle (with the former being particularly effective at removing turf). Moreover, opportunistically, we have experimented with materials. A large dried pottery vessel was placed within a void in our smallest improvised pyre in 2014, and was successfully fired overnight (Illus. 11). Meanwhile a reproduction Bronze Age sword was thrown into the main central pyre and we were able to watch the sword transform and melt, which in turn enabled us to estimate the temperature in the heart of the fire (in the region of 900°C). We therefore see the Build N Burn approach of blending together different traditions, practices and materials as what could be termed an ‘experimental mash-up’. As far as we can tell, the impact on audience experiences in terms of learning about the past is not negatively impacted upon by the decisions made during the design process, although, again, this is something we could assess better in the future.

Illus. 11 A whole pot, fired in a pyre, the morning after. The pot was made by Graham Taylor / Potted History (Photograph: K Brophy)
Illus. 12 The audience watches the Yarrows facade burn (Photograph: James Dilley)

The fundamental reason why we have worked on these projects is to bring our archaeological knowledge to a broad audience. At a practical level, we have attracted modest audiences to our three evening events (around sixty to seventy people to both Arran Build N Burns, and just over one hundred in Caithness (Illus. 12)) but when added to those attending prehistoric festivals, and the participation of children before the event, the reach of the three projects has been in the order of 750 individuals, at least half of whom have been children. However, we do not simply see the public as a passive audience, but also having the potential to become involved in the development of these projects; something that has emerged more clearly as we have evolved our practice. It is very important that Build N Burn is not imposed on locations and communities, but rather is collaborative and co-productive. In each case, we have worked with a range of partners to deliver various aspects of the event and, indeed, it would not have been possible without the input of a range of collaborators and volunteers, not all of whom have been archaeologists (see Acknowledgements).

On Arran, we worked closely with the Ranger Service of the National Trust for Scotland (NTS), who in turn sourced wood from the Forestry Commission. We collaborated with a local artist who is a wood carver; he was able to use replica Bronze Age cutting tools while
carving the central post of the timber circle, and in turn, could comment on their efficacy and suggest design improvements to the craftsman who made the tools (Illus. 13). We also worked with volunteers from a NTS Thistle Camp who helped build the pyres and offered advice on how to burn them down (during the same week they also built a log boat and a coracle, both of which were seaworthy). ‘The Walk with the Shaman’ was researched and choreographed entirely by postgraduate research students from various academic subject areas within the University of Glasgow: music, history and theatre studies. This same collaboration was of fundamental importance when scripting and designing ‘The Mysteries of Prehistories’ in Caithness: information about pacing, delivery, movement, light and sound were shared within our multi-disciplinary team, while the script had multiple authors (with extracts reproduced below). In addition, this event would have been impossible to deliver without the locally based Yarrows Heritage Trust who sourced funding for the event, and whose members offered practical and creative contributions from providing wood and vehicles to move it, to creating wooden sculptures to be used during the ceremony (Illus. 14), to rowing a boat onto the loch carrying the shaman.

These relationships have been exciting and creative, with, for instance, the authors of this article embedded within academia, a charity and a social enterprise small business; while cross-disciplinary collaborations in the planning of events has helped us all learn new skills and move outside our comfort zones. Collaborations with schools have also been incredibly valuable, with, for instance, pots made by children as part of the events at both Arran in 2014 and Caithness in 2015. The latter involved close interaction between archaeologists Amelia Pannett, professional potter Jenny Beaumont, and over one hundred children from local primary schools, making a creative contribution to the events surrounding the Andersonfest our Build N Burn was part of. This in turn led to children bringing their parents along to see
the festival (where their pots were fired) and big fire. The involvement of locals in the creation of the fires and the preparation of associated performances is the next step we need to take to make our projects truly co-productive.

Illus. 13 Co-production at work: a wood carver and Bronze Age replica tool maker deep in conversation (Photograph: Joss Durnan)

Illus. 14 A wooden disc sculpted by Ian Giles after it had been placed on the fire during the shamanic performance in Caithness (Photograph: G MacGregor)
Our Build N Burn events have not happened in isolation. Aside from the festivals, other activities have taken place, some of which overlapped with our work. In some cases, we were able to catalyze these; in others they happened independently but parallel to the Build N Burn, examples of which have been given above. This sense of event, community and momentum was an important element of our burning events. Primary school children visited our wooden installation at Yarrows, for instance, and decorated the posts with paint and dye made from locally available pigments, which in turn was a skill they were taught on the loch side by a local craft specialist (Illus. 15). As noted, the prehistoric festivals which have accompanied all our Build N Burn events have attracted bigger audiences than the fires themselves, and involved a range of enthusiastic and highly skilled practitioners, many of whom have attended and helped out during our evening burning events, often adding some much-needed last minute creativity and suggestions (such as the pot firing discussed above).

These are highly collaborative and team-based activities, and could not work on any other basis.

Illus. 15 The painted Caithness facade (Photograph: G MacGregor)
CLOSING ACT: THE MYSTERIES OF PREHISTORIES

These are brief extracts from the script for the evening Build N Burn performance in Caithness. Directions are in CAPITALS, spoken words are in italics. The conclusion of the evening has been reached at this point, the audience having heard archaeological and folk tradition accounts of the prehistoric monument in the Yarrows landscape.

Joseph Anderson: “The basis of science is the plenitude of its ascertained facts

Derived from recorded observations

And archaeology is still poor in this respect”

Science can bring light but it cannot stop darkness falling

Science can bring truth but it cannot silence other voices

Science can reassure, but it cannot stop doubt from being sown

Science can suggest possible pasts but it cannot propose certain pasts

Science can open new possibilities for the future, but it cannot determine where we go

There is – perhaps - little difference between the scientist and the shaman.

8.50pm A CHAOTIC DANCE INVOLVING TEAM MEMBERS DRESSED IN WHITE LAB COATS COMMENCES AT THE TIMBER FAÇADE. THIS REPRESENTS THE STRUGGLE BETWEEN SCIENCE AND TRADITION, ACCOMPANIED BY PERCUSSIVE SOUNDS AND DISCORDANT MUSIC.

9.00pm TORCHES AND THEN THE FAÇADE ARE LIT, UNDER THE RISING FULL MOON. THEY BURN LONG INTO THE NIGHT.
Joseph Anderson: ...150 years later I am still inspired to explore the past, to endeavour to illuminate the mysteries of our prehistories.

Illus. 16 The lab-coat wearing assistants during the Mysteries of Prehistories performance
(Photograph: G MacGregor)
CODA

The model of working practice we have established and call Build N Burn is still very much a work in progress, but has potential to deliver larger and more complex events, although the principals outlined above will remain. Our objective is to deliver meaningful, creative and positive flashbulb memories focused on and around fire events, utilizing research-based practice, soft experimentation and collaboration. However, although we have to date been successful in delivering events with these aspirations underpinning them, it is imperative that future events build on these experiences. The next stage in the development of the concept is to build sustainable funding and revenue streams; expand our activities to bigger population centres and urban spaces; collaborate more closely with local communities in the planning of these events; and build in more effective feedback and impact assessment mechanisms.

In this article we have outlined the principals which underlie our Build N Burn projects, and attempted to give a flavour of the character of the three events we have delivered to date. The combination of the fire-based events with prehistoric festivals and other educational and creative activities adds depth to the visitor experience and, we hope, allows us to evoke something of being prehistoric in a way far removed from traditional dissemination strategies. Furthermore, our overall objective is very much to create flashbulb memories from this cocktail of information, performance and big fires which will be long-remembered (or not-forgotten) by audience members and participants alike. Central to Build N Burn is the visceral power of fire, both as a means to entertain, but also to create visceral experiences that impact on the body as well as the mind. The attributes of fire, and its role in performance, ceremony and memory creation have probably been recognized by people since prehistory; a possibility which we find inspiring and which adds depth to our activities.
Illus. 17 The audience watch the Burning the Circle posts burn (Photograph: Stephen Watt)

Fire transforms but it also ‘animates objects in the dark’ (Gheorghiu and Nash 2007b, 20). We hope that our events have transformed the audiences who experienced it, to ‘change the learner’s consciousness’ as Reynold and Adams (2014, 9) put it, through the creation of memorable, informative, exciting and entertaining experiences.

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these events, as well as the festivals and other activities that have accompanied them. Our Arran events took place thanks to the support and staff of the National Trust for Scotland (NTS), Northlight Heritage and students from the University of Glasgow. The wood was supplied by the Forestry Commission. Branding for the 2013–2014 events was designed by Ingrid Shearer, and special thanks to all of those who helped out while attending the NTS Thistle Camp in September 2014, without whom we could not have built the pyres. The Walk with the Shaman performance was scripted and choreographed by Cara Berger, Brianna Robertson (who also wrote the shaman’s chant) and Hannah Baxter; funding for this was provided by the Graduate School of the Arts at the University of Glasgow. The Andersonfest concept was developed with Amelia Pannett and Steve Mills, and without their input and hard work the events in Caithness could not have happened. A wide range of activities took place over summer 2015, funded by the E.On and Foundation Scotland community fund, Enico and Venture North, and we were helped greatly by Thrumster Estate on whose land the event took place, and who provided the wood; thanks also to James and Sybil MacKay, the farmers of the land we temporarily took over. Thanks to all of those who helped with the arduous process of gathering wood, and building the timber structure at Yarrows, especially Tom, and for those who took part in the Mysteries of Prehistories performance (Andrew Baines, Nan Bethune, Alex Carnes, James Dilley, Helen Green, Catherine MacLeod). All of this would not have been possible without the support and enthusiasm of the Yarrows Heritage Trust members, notably Islay Macleod and Ian Giles. Branding was provided by Cole Henley. All the photographs used in this article have been credited in the photo captions to the source, and in each case have been reproduced with permission. Thanks to Wessex Archaeology for permission to reproduce Illus. 7. The Caithness façade sketch (Illus. 8) was drawn by Gavin MacGregor. Excerpts from the Mysteries of Prehistories script are included
in the article (the Final Act); the full script we used on the evening was written by Kenneth Brophy, Gavin MacGregor and Alex Carnes.

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