

Think Global, Act Local: multi-scalar connections of Iron Age communities in Poole Harbour, Dorset, England

Trade and connectivity are generally considered at a high level and large scale, whereas the productive industries which often fed exchange networks, have tended to be examined at a more intimate scale. The two milieus cannot exist in isolation from each other, but the articulation between the two has generally evaded consideration. This examination of Poole Harbour, Dorset during the Late Iron Age provides an example of a cluster of productive industries linked to regional and international trade networks providing the potential to consider those links. The picture which is provided is of complexity at local level rather than any overarching control or direction in production, and networks which coalesced over time from the personal actions and activity of individuals.

Introduction

Consideration of the two subjects of exchange and production reveals both to have inextricable links through embodied actions and social framing. However, the scale of evidence for each of these themes can place them within opposing investigative frameworks. Exchange, typically a component of macro-scale studies of cultural contact over large geographic areas, is typically studied from a top-down perspective and data is synthesised over a significant area (See discussions in Bauer and Agbe-Davis 2010). Conversely, production is typically explored on a local and sometimes even a micro-scale, with a focus on material processes or embodied practices. Exchange and production cannot exist in isolation (cf Bordieu 1993; Frachetti 2012), yet finding a framework to connect the two in an interpretive discussion can prove problematic. Ultimately, in terms of wider understanding of past communities, it is the larger scale narratives that tend to find prominence (examples include recent publications such as Cunliffe 2018; Roberts 2015).

On one level, the study of production is a way of investigating how people made their world, and in doing so organised and maintained relationships within their wider community (Ingold 2000, 312); however it also acts as a facilitator to exchange, creating and transmitting resources, goods and ideas over long distances. Production requires the physical resources of its landscape catchment area, as well as enough social capital to remove those producers, either temporarily or permanently, from the burden of subsistence. Production is linked therefore to power, through wider social enfranchisement, identity, and social organisation (Budd and Taylor 1995, Pitman 2015).

Production and exchange combine both the collective acts of individual agents (Dobres 2000) and the wider social/economic affordance provided by those moving goods (mariners, traders, facilitators etc). The latter is a vital point because it raises the question of ‘invisible actors’, or perhaps participants, in later prehistoric Britain. As Pacheco-Ruiz (2015, 411) points out, archaeologies of the first millennium BC in Britain are dominated by the highly tangible social fields such as farming or craft production, yet keep a safe distance from those intangible acts that *must* be present (based on the outcomes of their actions) but are harder to touch, namely seafaring and trading. It is typically assumed that societies were organised to a level of complexity that affords specialisms (and in later years proto-market economies), yet these are typically obscured. By considering the evidence for both local scale actions, and regional and continental scale links, from the perspective of skilled, knowledgeable actors (Ingold 2008) it is possible to incorporate both scales of discussion into a single, coherent line of inquiry.

This paper aims to explore this theme through consideration of later prehistoric exchange and industry in Poole Harbour, Dorset, England. This is an important archaeological area in

which there is considerable evidence for locally articulated production, set against a backdrop of longer distance exchange and connectivity. In broader synthesis (Cunliffe 2004, Collis 2003, Moore and Haselgrove 2006) Poole Harbour's role in the later prehistoric social landscape is ultimately reduced to a point on a map where imported goods appear. This approach serves to overlook the intricate social engagements and day-to-day practices that underpin such activity. The underlying mechanics of long distance contact and their relationship to production networks are vital in understanding how communities were organised, their social resilience and how they changed over time. The approach of this paper however draws on concepts of multi-scalar complexity and the affordances provided by physical (facilitating production) and social (exchange, resource procurement, organisation of production, communication etc) landscapes through a comprehensive examination of the rich later prehistoric archaeology of the Poole Harbour region on the southern coast of Britain (Figure 1). Local dating is compared with other European schemes in Table 1.

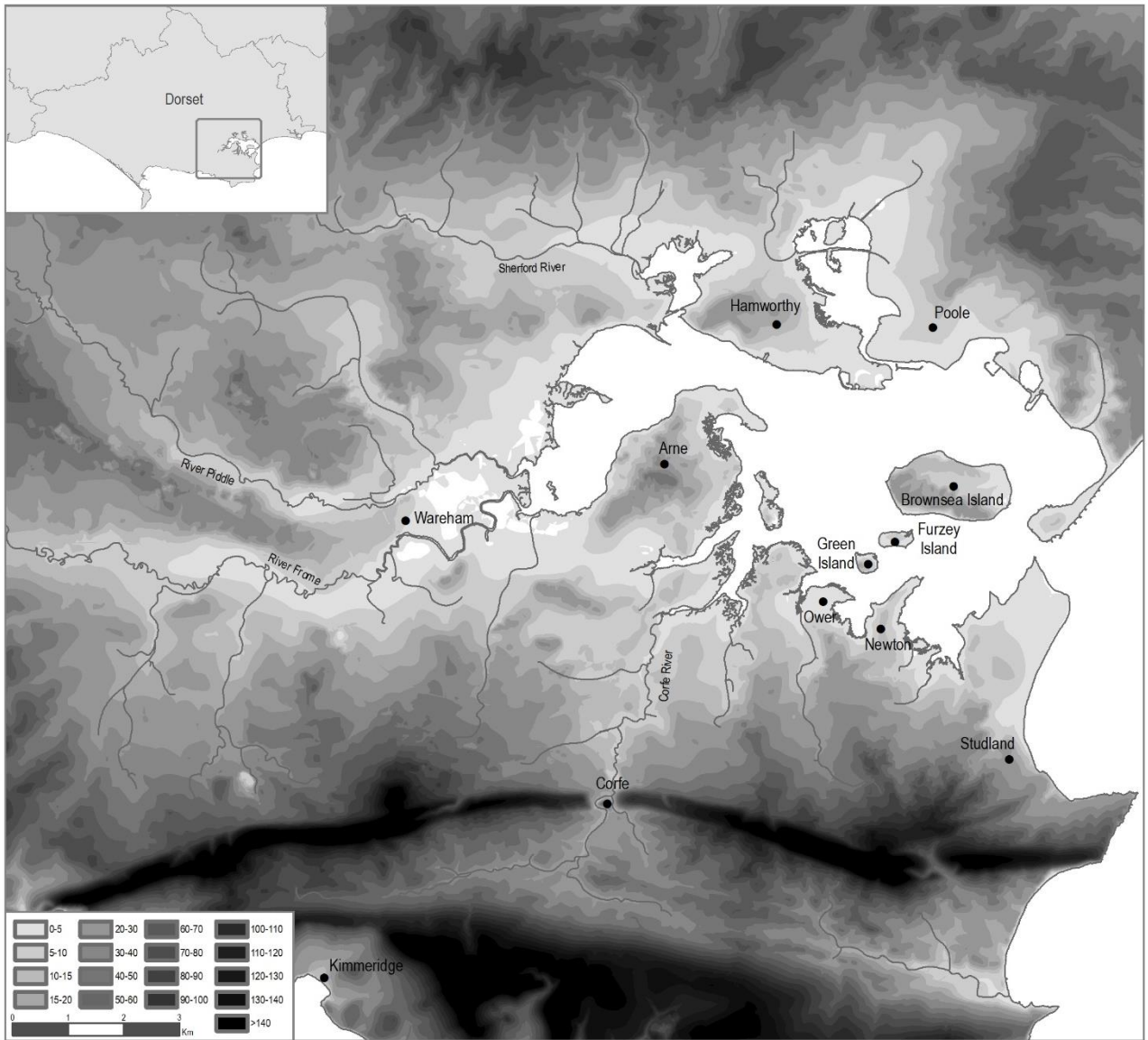


Figure 1. Location of Poole with key places named in the text

Table 1. Comparative dates for Iron Age Britain, Europe and Ireland (adapted from Garrow 2008)

Britain	Europe	Germania	Ireland
Middle Iron Age Pre-100 BC	La Tene B,C and D1	Pre-Roman junction Bronze and Iron Ages	Developed Iron Age 400 BC to AD1
Late Iron Age 80 to 20 BC	La Tene D2	Pre-Roman Iron Age	Late Iron Age AD 1 to 400
Pre-conquest Iron Age 20BC to AD40	Roman Conquest pe- riod	Pre-Roman Iron Age	Late Iron Age AD 1 to 400
Early Roman AD 40 to 65	Roman controlled Eu- rope	Roman-period Iron Age	Late Iron Age AD 1 to 400

Poole Harbour

Poole Harbour and its hinterland are a significant archaeological landscape. Human activity in the area extends nearly continuously back to the Mesolithic. From the Middle Iron Age (c. 350-100BC) onward, abundant and varied local resources – particularly clay, shale and salt – provided raw materials for a variety of industries, which in some cases were to continue into the medieval period and beyond. The Iron Age also marks the beginning of Poole Harbour as a place where the wider world came ashore in Britain. The favourable natural conditions and large-scale investment in landesque capital (cf Håkansson and Widgren 2016) around the islands and peninsulas of the southern harbour provided a burgeoning port with connections to other coastal communities on either side of the English Channel (Wilkes 2004). Once established as a place of connection, various parts of the harbour thrived as coastal and international ports during the Romano-British period, and throughout the medieval period to the modern-day (Pitman et al. forthcoming), connecting the wider world to their hinterland.

Poole Harbour itself consists of approximately 3600 hectares of shallow estuaries, intertidal salt marsh and mudflats together with a network of deep-water channels (May 2010; Wilkes 2004). Whilst some areas are bordered by cliffs, much of the land adjacent to the intertidal zone is low lying. Four rivers (the Corfe, Frome, Piddle and Sherford) feed it, draining an extensive inland area to the north and west, making connections available at the local and regional scale. The harbour mouth is on the eastern side, the whole being sheltered from the prevailing seaward south-westerly winds by the high hills of the Purbeck ridge. The scale of Poole Harbour, and the numerous islands and promontories with shallowly shelving littorals, afforded a myriad of landing places, including many actively utilized during later prehistory (Cox and Hearne 1991; Markey 2003; Wilkes 2004).

The boundary between land and water has always been dynamic and during the Iron Age sea level was approximately 1m below the current maximum high tide (Edwards 2001; Jarvis 1992; Wilkes 2004, 173). During this time a single island (South Island) can be inferred to

have encompassed modern day Green and Furzey Islands (Cox and Hearne 1991; Wilkes 2004). However, the complexity of processes such as sediment deposition make accurate environmental reconstruction difficult (Wilkes 2004). Not all changes were naturally driven. Anthropogenic deforestation during the Bronze Age precipitated lasting changes to areas surrounding the harbour, creating what are now environmentally valuable heathlands (Scaife 1991). There was cereal cultivation in the area throughout later prehistory (Carruthers 1991; Gale 2012; Scaife 1991) with various phases of arable and pastoral agriculture (Scaife 2009). However, the nature of the soils meant that once woodland was cleared the soils became poor (Allen and Scaife 1991). On the one hand poor soil limited arable production, a possible impetus to other activities. On the other hand, the heaths were exploited for fuel with shrubby plants and heather used for industrial processes (Gale 1991).

The particularly complex geology of the harbour basin and its immediate surroundings provided a range of opportunities for exploitation both in extraction of raw materials and creation of a range of products (Pitman et al. forthcoming). This was facilitated by the abundant availability of water and fuel. The underlying geology of the basin itself comprises a complex series of gravels, sands, lignites and a range of clays (Jones 2017, 10-17). There are some iron ore bearing deposits in the surrounding heathlands, whilst the Isle of Purbeck to the south of the harbour provides Kimmeridge shale, limestone (known as Purbeck Marble) and chalk (Pitman et al. forthcoming; Cox and Mills 1991; Thomas 2016). These raw materials were part of a rich resource landscape in the region, which supported and encouraged industrial activity throughout prehistory (Jones 2017). In the later Iron Age the extensive industrial practices carried on within the immediate environs of the harbour (Figure 2) would have had shared concerns over access to fuel, raw materials, skills, and similar possibilities of flexibility around seasonal working. All of these were co-located within a relatively confined productive landscape. Each industry individually appears to have

increased in scale, output, and intensity during the later Iron Age. Another shared commonality of those industries, and indeed of general agricultural production, was the opportunities of connectivity offered within the harbour and with areas beyond it.

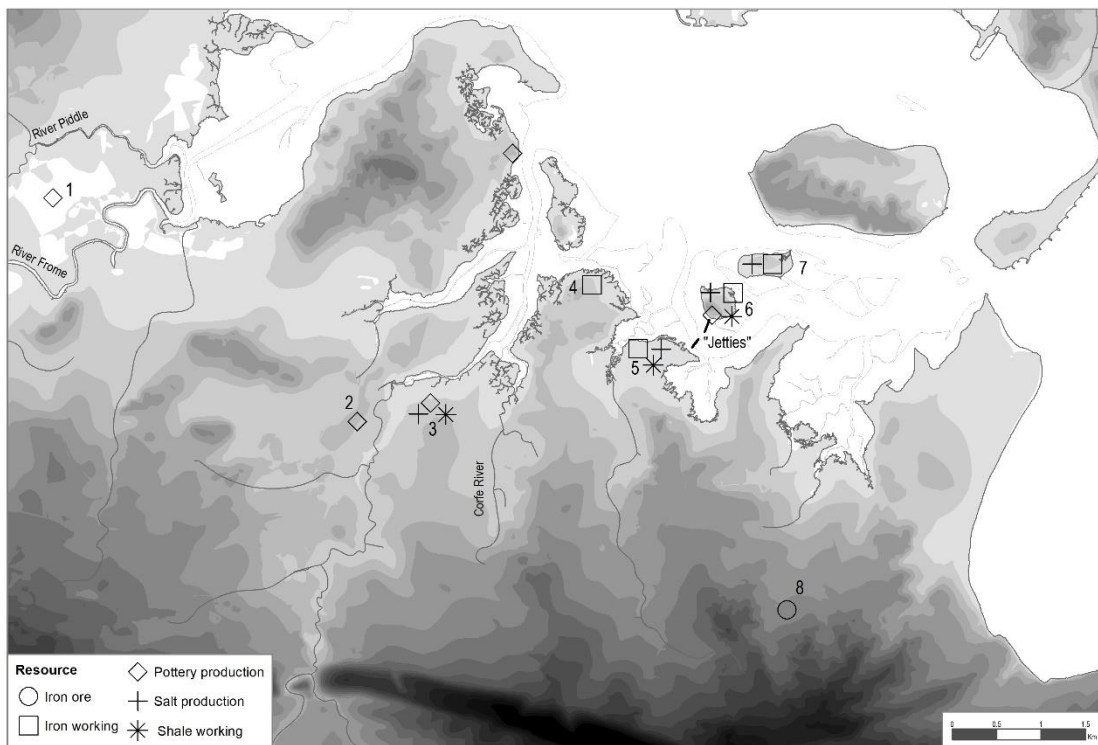


Figure 2. Sites with of Iron Age industrial production named in the text. 1 Bestwall Quarry; 2 West of Corfe River; 3 East of Corfe River; 4 Fitzworth Point; 5 Ower; 6 Green Island; 7 Furzey Island; 8 Godlington Heath.

Production and connectivity

In order to explore the multi-scalar articulation between local production and contact, travel and exchange on the regional and international level we need to consider the evidence for Iron Age production within Poole Harbour, and the commodities and items which demonstrably ‘travelled’. The evidence can then be examined as to the operation of Poole Harbour as a port and the evidence of imports and exports.

The productive industries of the harbour

Whilst the general physical parameters and available local raw materials in Poole Harbour remained largely similar through time, the utilisation, scale of activity, location, methodology and distribution of products changed during the Iron Age (Pitman et al. forthcoming). A nexus of production and connectivity emerged by the Middle Iron Age when a number of factors coalesced. There is not a great deal of evidence for general settlement on or near the shores of Poole Harbour during this period which did not relate to one or more productive process (Pitman et al. forthcoming). These processes were more often than not co-located, with for example, iron smelting and smithing slag occurring largely on the same sites which show evidence of salt working, at Ower, Green Island, Furzey Island (Cox and Hearne 1991; Wilkes 2004) and Fitzworth Point (Calkin 1949, 42). However, as heat-related industries they would have been utilising, and potentially competing with the ceramics industry for woodland and agricultural by-products, necessitating a degree of local co-operation and negotiation.

The clay deposits in the Poole Harbour environs have been exploited by potters for millennia (Jones 2017; Ladle and Woodward 2009, 253-5). During the later Iron Age sites were predominantly close to the shores of the harbour (Fig 1; e.g. Hamworthy [Jarvis 1994]), or on the adjacent river channels (e.g. both sides of the Corfe River [Cox and Hearne 1991], often located near an interface between clay deposits and sand (Jones 2017). The Poole Harbour sandy wares were not only used locally, but more unusually for the period, became widely distributed throughout Dorset and adjacent areas of Hampshire and Somerset from the 1st century BC onward. In the Late Iron Age a limited suite of vessels, often bead rimmed jars and bowls and flat rimmed or necked jars (which have been termed 'Durotrigian' after the local tribe), came into being, some influenced by Armorican styles. The industry continued into the Romano-British period, developing into the almost ubiquitous Black Burnished ware

(BB1) (Jones 2017). The standardisation in Late Iron Age forms and fabric has been suggestive of organised production and apparent commercialisation (Williams 1977, 168).

Salt, a crucial component in preserving food, was produced in Poole Harbour from the later Iron Age onward, but its wider distribution is necessarily more difficult to discern. Nationally salt production appears to have become more important at that time (Maltby 2006; Morris 2001, 390-1). In Poole Harbour it was extracted via the evaporation of sea water, either naturally or by the application of heat (Hathaway 2013). The harbour is an ideal place for salt extraction as there are multiple locations where the topography enables the sea to be fed or channelled into receptacles for settling prior to boiling. No Iron Age boiling hearths have been identified in Poole Harbour, but salt production is indicated by the presence of briquetage (ceramic containers and related hearth furniture for use in the boiling process) (Hathaway 2013). Briquetage has been noted at numerous locations on Green Island (Wilkes 2004) and Furzey Island (Cox 1989; Cox and Hearne 1991); the promontories of the southern harbour and to the south, east of the Corfe River (Cleal 1991). The findspots of material related to salt production are therefore many, but clustered. Secondary processing inland is evidenced by briquetage finds (e.g. Calkin 1948), indicating wider local linkages.

Elsewhere in Iron Age Britain, salt extraction appears to have been a seasonal activity, perhaps tied to the agricultural calendar (Bradley 1975) varying according to local conditions (Foster 1990; Gurney 1982; Kinory 2012). Poole Harbour's position at the end of several freshwater river catchments means that, along with the effects of tidal penetration, salinity levels probably fluctuated, possibly influencing both the timing and location of extractive activities (Maltby 2006). Salt working may have taken place around the labour needs of agriculture and other industries, but may have also been related to it. The late Iron Age animal bone assemblage from Ower contained an unusually high abundance of pig remains, with cranial bones particularly well represented (Coy 1987). This contrasts with most other

contemporary assemblages, generally (Hambleton 1999, 133-41) and locally (Randall 2018, 257). One interpretation is that pigs were being brought to Poole Harbour for slaughter, butchery and preservation using salt to render them suitable for export, possibly seasonally, as curing requires cool temperatures (Maltby 2006).

Shale is a highly specific local product with a limited geographic availability, useful in the present context as its subsequent distribution is traceable. Shale is a finely laminated rock with a high oil content, relatively soft, which splits along the laminations, and can take fine decoration and a high polish with an attractive lustre. The main beds exploited occur within the Jurassic deposits of Kimmeridge clay south of the Purbeck ridge, within 10km of the south harbour settlements (Cox and Mills 1991, 170). It had a long currency of use, with significant production of armlets taking place as early as the later Bronze Age at Purbeck coastal sites such as Eldon's Seat (Cunliffe and Phillipson 1968). Initially the material was worked by hand, with production increasing in the later Iron Age with the introduction of the lathe by the 1st century BC (Calkin 1955; Cox and Mills 1991). The working of shale required the use of flint blades, even once lathes were introduced (Cox and Mills 1991), maintaining a specialised, if basic, flint-working tradition until the end of the Iron Age and into the Romano-British period. As a by-product, waste shale, because of its oil content, can be used as a fuel. Burnt shale whether used in domestic or industrial processes, occurred at several sites (Cox and Hearne 1991; Cox and Mills 1991, 174).

It is in this later period that shale working becomes an almost ubiquitous feature of sites within the harbour (Cox and Mills 1991), and particularly abundant at Ower (Denford 2000). The overall number of sites involved in shale working increased in the Late Iron Age (Cox and Mills 1991) but the sites with the highest volume of production were now located away from the southern coast of Purbeck (e.g. Eldon's Seat, Rope Lake Hole, Worth Matravers [Cunliffe and Phillipson 1968; Woodward 1987; Ladle 2018]). During the Bronze Age it

appears that the material may have acquired associations with transformation, purification and otherworldly power (Bruck and Davies 2018). Whether there were similarities in the social role of shale in the later Iron Age has not been examined. However, despite the necessity for negotiation between individuals and communities over a longer distance, there was some imperative during the later Iron Age to move production of objects away from the raw material source into a centralised location where it was integrated with other industries all of which were operating at much greater intensity and scale. There was some reason for the concentration of craft workers within the Poole Harbour basin, which brings us to the evidence for the opportunity of connectivity.

The infrastructure of connectivity

The Ower peninsula and adjacent islands possess all the attributes needed by a trading node as explored by Wilkes (2004), and operated as such throughout the later Iron Age. It provides a sheltered anchorage, as well as access to routes inland and provides space for people, livestock and trade goods. The earliest evidence of the use of the area for settlement and as an industrial and trading centre dates to the Middle Iron Age (Cox and Hearne 1991) or perhaps marginally earlier (Wilkes 2019). Its role in maritime connectivity has been clearly demonstrated by the amount of imported material recovered from the Ower and South Island sites (Wilkes 2004) and is discussed in more detail below. With the sea level *c.* 1m lower during the Late Iron Age (Edwards 2001; Jarvis 1992; Wilkes 2004, 173) Green Island and Furzey Island were one entity, 'South Island'. This was separated from the mainland at Ower before the Middle Iron Age by the South Deep Channel (Wilkes 2004, 183). The most impressive elements of the archaeology are the two opposing stone and timber 'jetties' dating to the Middle Iron Age.

Initially named as the Green Island Causeway, these structures run discontinuously between Cleavel Point and Green Island (Figure 1). They are in fact two distinct structures, one leading from Green Island and the other from the Ower Peninsula. These were interpreted as 'jetties' (Markey et al. 2002; Markey 2003). Excavation revealed them to be constructed of timber piles. The whole structure was capped with a surface of creamy-white Purbeck marble slabs (Markey et al. 2002). Excavation of the northern 'jetty' revealed the same construction style (Wilkes 2004, 186). Survey shows that the southern 'jetty' is at least 160 m long, and eight metres wide across its top surface. The northern 'jetty' (on the Green Island side of South Deep) is at least 55 m long, and again, eight metres wide. The gap between the two 'jetties' is *c.* 70 m. No evidence has been found that the structures bridged the South Deep channel. Radiocarbon determinations for both 'jetties' suggest a Middle Iron Age date for construction confirming the contemporaneity of the two structures (Wilkes 2004, 187). When initially constructed they would have appeared truly monumental (Wilkes 2007).

There is some doubt, however, that these structures would have functioned solely as jetties. It has been suggested that the features could also serve as access control points, situated at the most topographically suitable location. Control could have been physical or symbolic or have elements of both. The structures are situated at the narrowest crossing. With the striking appearance of the white Purbeck marble topped structures further enhancing the 'gateway' this would control access to the inner harbour basin and riverine routes beyond South Deep (Wilkes 2007). The importance of the activities carried on within, and of the people operating it, may have been reflected in the monumentality, and the investment required (Wilkes 2004, 212).

From 50BC onwards, a major shift in settlement to the mainland began. By *c.* 20BC activity had ceased on Furzey Island and a formal settlement was beginning on the Ower peninsula. This appears to have covered the entirety of the headland (Cox 1989; Cox and Hearne 1991),

and originally spread into areas which are littoral today (Wilkes 2004). In this one place, manufacturing of various materials was carried on alongside evidence of control of the space via ditched enclosures. In this later phase, the impact on visitors of the sense of place may have come purely from the intensity of varied activities carried out on the headland.

The evidence of connection

Connection and communication clearly operated at a number of scales during the later Iron Age within and beyond the Poole Harbour basin. Beyond the immediately local connections within the harbour and its immediate surroundings (e.g. Purbeck) this operated to different extents in three broad categories, that of the inland hinterland, the coastal hinterland and a wider regional and international scale (Figure 3). Clearly the mechanics of the relationships with each of these are specific to each, but there will have been complex social engagements within and between each. By examining these in detail we can begin to ascertain or suggest the potential web of relationships.

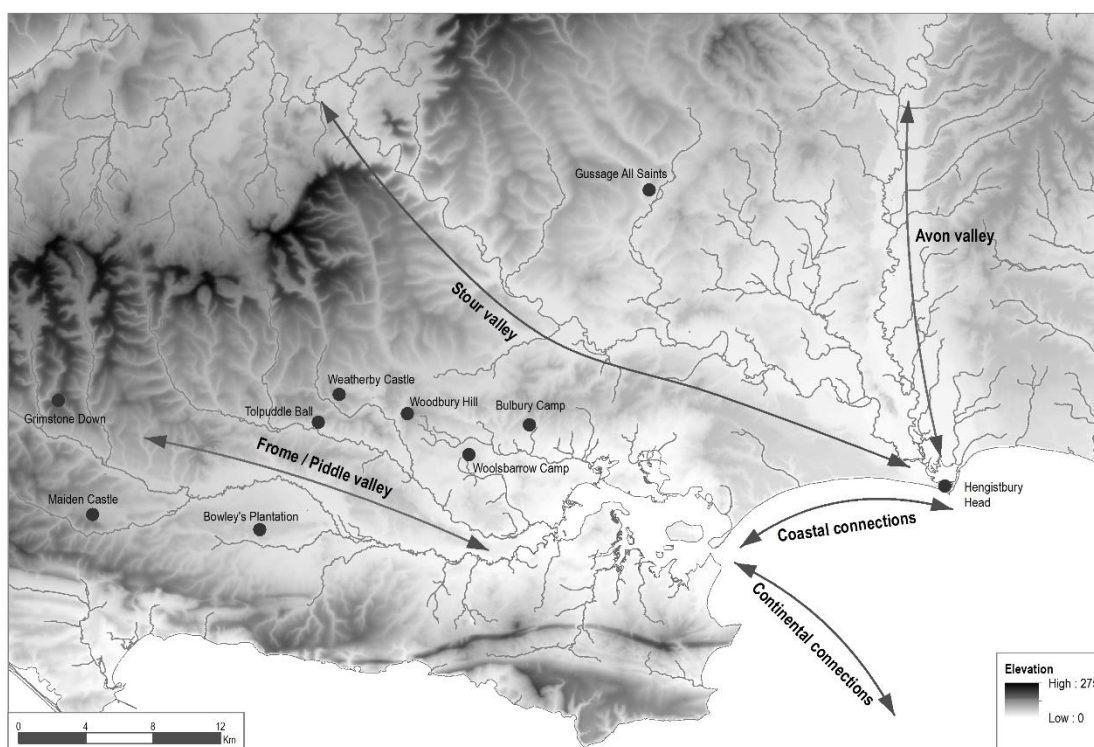


Figure 3. The connections of the Poole Harbour area

The inland hinterland

A direct link can be established between maritime activity with the harbour and the immediate hinterland on its northern side. Bulbury Camp, Lychett Matravers (RCHME 1970a, 492-493) is situated *c.* 4.5km to the north of the harbour littoral. Presumably established in the Middle Iron Age, and now much degraded by ploughing, the hillfort is best known for the Bulbury Anchor, an iron anchor and length of chain of Roman type. The anchor and other objects have been interpreted as a smith's hoard of 1st century BC date, although the inclusion of mirror and tankard handle fragments necessitated proposing in addition the presence of both a male and female grave (Cunliffe 1972). The iron anchor and chain are obviously associated with Late Iron Age maritime activity, and it is possible it came from a ship (of Roman origin or with access to Roman technology) in Poole Harbour and was transported the short distance to Bulbury for reworking (Wilkes 2004 2010). However, given the propensity for deliberate deposition of a range of objects during this period, including

metals, a non-utilitarian purpose may be envisaged, one which emphasised the links between Poole Harbour and this high ground enclosure site (Wilkes 2004, 210), and which spoke to the maritime concerns of the people who carried out the deposition.

Coastal nodes probably operated with each other and the sites in their hinterland not in an exploitative, but in a reciprocal fashion (Wilkes 2004, 263). Whilst it has been suggested that the role for hillforts in nodal networks was to command key traffic routes (Sherratt 1996,217-8), it is considered that rather than social and economic domination (*cf* Cunliffe1993; 1994) they represent enclosure of a special place showing the pride and cohesion of the community (Hill 1996,101; Sharples 1991a; 1991b). The prominent location of Bulbury as a high ground element in a coastal complex suits this interpretation (Wilkes 2004, 255), being the first elevated ground to the north, but accessible up the Sherford River.

A key factor in considering the productive industries of Poole Harbour in the later Iron Age is that there is evidence of movement of at least some of its products beyond the basin itself. The most likely route ways by which material spread are the river valleys. Gateway points occur in a larger nodal communication networks (Burghardt 1971; Hirth 1978), Their hinterlands are described as "elongated fans" (Hirth 1978, 37) that radiate outward, like branches (dendritic networks). Rivers potentially act in the same way (Wilkes 2004) and provide immediate access to communication links. Hirth (1978, 37) has suggested that such gateway locations often occur in sparsely populated areas, and this is true of Poole Harbour. Settlements have been identified particularly around the rivers entering the harbour, at the confluence of the rivers Frome and Piddle at Bestwall Quarry (Ladle 2012), Worgret and Stoborough (Hearne and Smith 1992) in the mouth of the Frome Valley, and either side of the Corfe River (Cox and Hearne 1991). Next to the confluence of two streams which create the Corfe River is the Late Iron Age probable shrine excavated at Norden (Woodward u.d.).

Connections between the harbour and the riverine hinterland can be demonstrated via movement of materials and other connections. Bowley's Plantation, Crossways, situated on the Frome gravels, is an unusual square double bank and ditched enclosure with an east facing entrance. It has produced bead rimmed Poole Harbour ware pottery (Field, 1959), and excavation of the ditch demonstrated that it was being backfilled in the Late Iron Age (Randall 2017). Not only was this within the distribution area of Poole Harbour pottery, but the form of a Middle and Late Iron Age enclosure on Furzey Island (Cox and Hearne 1991) is remarkably similar in scale, morphology and orientation. Much further up the Frome River is Maiden Castle, which was receiving Poole Harbour pottery in its latest phases. A classic element of the style includes the 'War Cemetery' bowl, a bead rim design named because they furnished graves in the cemetery in the east gateway (Wheeler 1943). The tributaries of the River Piddle would have linked the harbour with central Dorset hillforts such as Weatherbury Castle, Milborne St Andrew (RCHME 1970b, 179-181), Woodbury Hill, Bere Regis (RCHME 1970a, 485-486), and Woolsbarrow Camp, Bloxworth, c. 6km to the north-west of the harbour (RCHME 1970a, 487). Bulbury Camp, Lychett Matravers, c. 4km to the north-east (RCHME 1970a, 492-493) is located near the source of the River Sherford.

Late Iron Age Poole Harbour pottery spread west and north across Dorset (e.g. South Down, Weymouth [Cooper and Brown 2014]; Tolpuddle Ball [Laidlaw 1999]; Gussage All Saints [Wainwright 1979]; Alington Avenue [Seager Smith 2002] Grimstone Down [Mepham 2016] and well into Somerset, having reached the environs of Cadbury Castle during the 1st century BC (Tabor 2008). Pottery in local fabrics derivative of north-western French ceramics, seen in Poole Harbour and at Hengistbury Head, occurs in the Stour Valley and on several sites across Somerset (Brown 1987, 312). Along with coinage and the establishment of a definable burial tradition, Poole Harbour fabric pottery is so ubiquitous that it has been used to define the tribal region of the Durotriges (*cf* Papworth 2008). However, in this context what it

establishes are the networks of connection from Poole Harbour. Shale products are not as commonly found, but they are also not infrequent on Late Iron Age sites throughout this area and beyond (e.g. Tolpuddle Ball [Cox and Loader 1999] and Southdown Ridge [Shaffrey 2014] in Dorset; Cadbury Castle [Bellamy 2000] and Meare [Coles 1987] in Somerset) and both rough outs and finished objects in the periods of occupation at Danebury (Cunliffe 1984, 396). Between them the pottery and shale indicate an extensive and deep series of inland connections.

The coastal hinterland

When considering the ‘neighbours’ along the coast, Hengistbury Head is the immediate relationship to be considered. A defended promontory, Hengistbury Head shelters the mouth of Christchurch Harbour and operated as an international port of trade from at least the 1st century BC (Cunliffe 1987). The main topographic difference between the two locations lies in the inland areas which are accessible from each nodal site. Poole Harbour was linked to west Dorset; Hengistbury Head's links were to north Dorset and Wessex via the rivers Avon and Stour (Wilkes 2004, 265). Woodward has argued that Ower and Green Island along with Hamworthy, on the north-western side of Poole Harbour, acted as connecting trade points to export products via a coastal relationship with Hengistbury Head (Woodward 1987, 6).

Wilkes (2004) however has suggested that the relationship may be more complex, and Poole Harbour may not be entirely subsidiary. It may have operated as an international port alongside Hengistbury Head, had a different role in the coastal network, or was not exactly contemporary (Wilkes 2004, 169). That there was contact between Poole Harbour and Hengistbury Head is not in doubt. Poole Harbour pottery was reaching Hengistbury Head (Brown 1987) in quantity during the 1st century BC. Kimmeridge shale also occurs.

Unworked lumps, partly worked blanks and finished objects indicate that raw material was

moved along the coast for working, although some finished objects may also have been imported. However, there is no indication of large scale manufacturing (Cunliffe 1987, 176).

The continental material culture found within Poole Harbour, comprise very similar groups of material to that found at Hengistbury Head. It is possible that these indicate that it had independent links further afield, or it may have obtained imports via Hengistbury Head. If the two sites were contemporary, Poole Harbour had the elaborate structural features and links with the south-west (Allen and Fulford 1996; Holbrook 2001) and could have been the primary port, surviving the re-focussing of activity to the south east of England in the Late Iron Age (Wilkes 2004, 265). Whilst the nuances of the relationship are currently difficult to discern - and the question of the ebb and flow of goods and influence between the two places is an argument for significantly more absolute dates to be obtained - it seems likely that there was a dynamic relationship between the two places, and what we may regard as dispersed components of activity around Poole Harbour were just as significant or perhaps more so as a trading place than Hengistbury Head.

Continental connections

The continental ceramics found in various locations within Poole Harbour demonstrate its longer distance connections, however these were obtained. The agglomeration of industries within the harbour whilst servicing the immediate inland and coastal hinterland, also appear to have been deliberately located to take advantage of maritime connectivity. We must therefore consider the wider distribution of Poole Harbour products. Whilst there is evidence for some continental distribution of Black Burnished ware during the Romano-British period (Fulford 1977), there is as yet no evidence of Late Iron Age Poole Harbour produced ceramics in France. Iron, salt and potentially preserved meats which were produced in the area are presently invisible, although they chime with the organic products which Strabo

suggests were exported from Britain (*Geography* IV.5.2). Another ‘product’ of these islands according to Strabo, slaves, has been similarly hard to identify. However, consideration of later Iron Age burials utilising an osteobiographical approach has identified a number of individuals from Dorset who exhibit aspects which could be associated with the practice of captive taking and keeping (Redfern 2020). Kimmeridge shale is potentially more visible. However, whilst shale armlets have been found at sites throughout southern and central Britain, spreading to the east as well as the west, as yet there are few well provenanced examples known on the continent, although some occur in north-west France (J Collis, pers. comm.) [in Wilkes 2004, 204]. It does seem that the primary distribution for the locally made products was on the regional scale on the north side of the Channel.

The role of the Ower peninsula and islands as a port can be attested via the concentration of continental pottery recovered. Wilkes (2004, 381) has shown that the cumulative proportions of imported wares which have come from the various excavations at and around Ower, versus those locally sourced, are comparable to that recovered from Hengistbury Head. This is the case despite the limited nature of the investigations at Ower (Woodward 1987; Cox and Hearne 1991) compared to the more extensive Hengistbury Head excavations (Cunliffe 1987). However, the role of Ower as an international port appears to have been relatively short lived, with the bulk of the imported pottery evidence presenting a date range from the late 1st century BC to the 1st century AD. This is supported by the range of Late Iron Age imports noted on Furzey Island (Cox 1985).

The imported material at Ower included Black Cordoned ware of the first half of the first century BC (Timby 1987). Considerable quantities of this pottery, along with other types of Armorican ceramics with origins in the Côte du Nord were also found at Hengistbury Head (Brown 1987). Armorican micaceous wares were also represented at Hamworthy, with an additional sherd from Maiden Castle (Brown 1987), possibly relating to distribution up the

Frome rather than from the coast. Dressel 1 amphora sherds, wine containers produced in Italy, occurred at Ower (Williams 1991). Wider distribution in Britain comprises two main clusters, one in the east of England centred around Colchester, and a south-central grouping comprising Poole Harbour and Hengistbury Head (Tyers 1996). A similar distribution is mirrored in the locations of Pascual 1 amphorae (Tyers 1996), which derive from Eastern Spain and Southern France, and most likely contained wine. Fragments of Pascual 1 amphorae have been recovered from Hengistbury Head, but also Ower (Williams 1991), Cleavel Point (Williams 1987) and Worgret (Hearne and Cox 1992). At Green Island non-local sherds accounted for *c.* 2.4% of the total assemblage and included granite-derived fabrics known in south-west Britain and north-west France (B Cunliffe, personal communication). Samian and Arretine finewares were also recovered, and copies of continental forms in local fabrics suggest familiarity with a wider repertoire. Amphora sherds of Dressel IA (dating to the first half of the 1st century BC) and possibly Dressel 2-4 were also present (Wilkes 2004, 201).

Whilst Poole Harbour ceramics and shale seem to have spread inland to the west and north during the Late Iron Age to the point of ubiquity, a more limited amount of continental material has been recovered from inland sites within the distribution network of Poole Harbour. That is not to say that it did not occur. The Bulbury Anchor and associated objects, albeit on the fringes of the harbour are informative of the potential network of connections. The anchor itself is of a Roman type but apparently deposited before the invasion. It was deposited along with a variety of other materials, including two copper alloy bulls, which may be cart/chariot fittings and which have continental parallels dating to around the end of the first century BC or beginning of the first century AD. Other objects included mirror and tankard fragments, part of a fire dog, part of a sword hilt, a chape and glass annular beads (Cunliffe 1972). These artefacts typically had distributions in north-west France and south-

west Britain (Wilkes 2004, 210). In addition, a bronze figurine, probably from Maiden Castle is of a type which has parallels in Gaul, possibly deriving from Italian examples of the 2nd and 3rd centuries BC. A further figurine, from Roke Farm, Bere Regis, is probably a response to similar objects from pre-Roman Gaul (Henig 1991). Both of these findspots are within the Frome Valley.

Some imported pottery reached south of the Purbeck Ridge with both Dressel 1A and Pascual 1 fragments recovered at Bucknowle (Seager Smith and Fitzpatrick 2009), and a single fragment of Dressel 1 amphora and a small number of sherds of north-western Gaulish origin at Worth Matravers (Lyne 2018). Imported pottery in the form of Dressel 1 and Pascual 1 fragments have been found on Cranborne Chase (Corney 1991), alongside Gallo-Belgic wares and a single Arretine sherd at Gussage All Saints (Wainwright 1979). It is likely however that this material, found in the catchment of the River Stour originated at Hengistbury Head, rather than arriving via an overland route from the south. The small amounts of imported ceramics found suggest that obtaining this pottery or its contents was not a primary interest in inland areas.

Consideration of distribution in relation to the river valleys is also informative with respect to early coinage. Only small numbers of 1st century BC coins, either of continental origin or influenced by continental precursors, reached Dorset, which was on the edge of a south-east England focussed distribution (cf Leins 2012, 74 Fig 4.1). Some continental gold staters, generally of the earlier 1st century BC have a coastal distribution (e.g. Gallo-Belgic types at Portland [Coin Index CCI-680602; CCI-690498], Armorican coin of the Namnetes on Chesil Beach [CCI-700065]; Armorican stater of the Veneti at Abbotsbury [CCI-953526]). Another group is associated with the Stour Valley (e.g. a Gallo-Belgic quarter stater at Badbury Rings [CCI-840643]; Gallo-Belgic stater at Horton [CCI-00486]; Armorican stater of the Coriosolites at Chapel Down [Corney 1991]). This also includes globular staters dating to *c.*

100-50BC which were probably locally produced but reference continental types (e.g. Tarrant Crawford [PAS DOR-7D3F2C]). The British B series of silver staters of the later 1st century BC, known as Durotrigian, are focussed in the Stour Valley and Hampshire (Leins 2012, 126), underlining an eastward facing influence. A number of other types have their focus of production in central southern England, with the Stour Valley as the western edge of distribution, presumably from Hengistbury Head (Leins 2012, 148). By way of contrast there are few coins of any description in Poole Harbour or throughout southern Dorset until the appearance of later struck silver and base metal coinage which may have had ‘a restricted local function’ (Leins 2012, 149). Of the imported coins only two Armorican gold staters are known from the Poole Harbour basin and its hinterland, at Corfe Mullen (CCI-940704) and at Bere Regis (CCI-980349). Both however were staters of the Baiocasses, a tribe not represented in the Stour Valley series. This provides a tantalising suggestion of a differing set of personal contacts creating the differences between the sources of these distributions. Of later ‘Durotrigian’ silver issues, it is perhaps telling that they appear in greatest concentration in the putative shrine at Norden, Corfe Castle (Ann Woodward personal communication), part of a highly particular act of deposition, and one which perhaps mirrors the deposition of material at Bulbury Camp.

Discussion – Acting locally and thinking globally

The foregoing discussion has established that in its role as a location for trade, Poole Harbour was much more than just a point on a map where later Iron Age imported goods have been recognised. The creation of a coastal node in this location was entirely dependent on the affordances of the place combined with highly complex daily practice and social engagements which facilitated the creation of products. The articulation of networks of relationships which enabled the production of goods, with a seaborne network of long-distance contacts, not only linked each with the other, but can also be seen to have changed

over time. It also had effects on communal deployment of effort, in the creation of monumental focal places, and the commemoration via acts of communal or individual deposition of objects in special places. There is clearly multi-scalar complexity in the physical, local, aspects of production and the social landscapes of communication and exchange both within the inland Dorset hinterland and more broadly along the southern coast of Britain and across the Channel to continental Europe.

It is a reasonable assumption, from a functional perspective, to see Poole Harbour and Hengistbury Head as two components of a single 'contact zone' (Cunliffe 2005), especially given their geographic proximity. There may be crossover, but it begs the question, why have two? Their proximity might be secondary to the existence of two entirely separate nodes, facilitating the movement of goods, and the maintenance of local industries, across two catchments. The area afforded by each harbour, by way of wider access via water ways, is significantly different. The Frome/Piddle catchment, upstream from Poole Harbour and the Stour catchment, accessed from Hengistbury Head show slight, but important variations in material evidence. There is potential for the existence of two nodes to relate to the availability of access to the catchments rather than purely relating to the affordances of the harbours themselves. There are indications here of embedded social relationships potentially affecting longstanding networks of distribution. Crucially, when this evidence is considered from a human-scale perspective the outcome is more complex. From this perspective, a trading route, via any mode of exchange, is not carried out in isolation from human beings. Trading communities, groups or individuals tend to act in a routine way, likely engaging with the same groups over many years, or even generations. As such, it is conceivable that a single port of trade may attract a consistent suite of traders, maintaining long standing relationships. Abiding personal links were probably developed and entrenched over generations becoming

habitual contacts predicated on prior experiences and relationships. This may have created the potential for the creations of familial links between communities as a result of or prerequisite to maintaining the connections and trading arrangement. Ultimately this may have resulted in the development of what became tribal groups on either side of the Channel during the Late Iron Age. This could be explored via further consideration of material culture or directly ascertained from biological relationships.

The lack of penetration of imported ceramics into the Dorset hinterland of Poole Harbour, beyond places which were on edges of its productive landscape, must say something about the nature of either the value placed upon those imported ceramics versus the widely distributed local products, or the nature of the relationships or social structure of the people involved in the complex networks of production. Whilst we should not discount the idea that amphorae may have been reused for return trade, refilled with local products, within the networks of nearby Purbeck, and the Frome and Piddle catchments, it seems there was more value, either social or practical, placed on pottery in practical and hardwearing Poole Harbour fabrics than more exotic tableware or the unfamiliar food and drink which vessels contained. This underlines how the nature of procurement of products feeding an international trade potentially needed to be mediated via production of goods which fitted local social arrangements and needs. Local trade with the hinterland may have generated surplus perishable goods which were then transported further afield in exchange for more exotic materials. It is also possible, from the evidence of violence on human remains from Dorset that, akin to other parts of Britain, captive taking and enslavement were routinely practiced in the Dorset region (Redfern 2020) and may have fed both inward and outward trade. The likelihood is that these processes required the engagement of a range of participants within each stage to provide the mediation between areas, needs and production.

Aside from the physical affordances of the harbour in providing sheltered beaching points as well as access to a range of products or tradeable resources, what made it the 'right' place to do business, and how did the expression of that change over time? In the Middle Iron Age, before we see the emerging evidence of an alignment of inhabitants of the Stour catchment towards the east (over and above a general similarity to Wessex, and more so than Purbeck and South Dorset), and at broadly the same time of hillfort use, someone in Poole Harbour not only settled on one part of the harbour as 'good to trade' but then monumentalised that place. The Green Island Causeway jetties may have a practical purpose but this cannot have been much easier to use than beaching. If the monumental suggestion is accepted, it must be about creating the 'right' place in the same way as hillforts might be the 'right' place. This implies a collective action at that particular point in time which was clearly a deliberately outward facing act— it was a deliberate action to facilitate engagement with the 'beyond' but demonstrating that the interaction would be contained and controlled on the terms of the people who built the 'Causeway'.

A clear difference between the Middle Iron Age and the Late Iron Age, is not only in the increasing complexity of productive processes taking place in one locale, but in the absence of any evidence of imported goods in the earlier period. Shale was distributed well beyond the harbour in the Middle Iron Age but its production had not yet been centralised there. Perhaps during the Middle Iron Age trade was mainly in perishable goods in both directions, largely coastal, and the sense of place was articulated in terms which made sense in the southern British context with the similarity between a hillfort entrance and the 'gateway' between the 'jetties' leading to a collective mediated space. Later, a perhaps less centrally organised and devolved arrangement appears to have developed. This did not seem to need a statement installation, and given the increasing complexity of the industrial processes

included may have involved many more individual participants. Both production and trade were indeed linked to power, but expressed in terms which tessellated with the prevailing broader social situation.

The assumption is that tasks, be they involved in production or in movement across space were carried out by specialists. There are obviously highly specific areas of knowledge, practise and expertise which are likely to lead to an individual being specialised in a single activity or skill (e.g. seafaring and navigation; metalworking) but we cannot dismiss areas where what appear to us as specialised tasks (metalworking, pottery production, and shale turning) actually have overlapping skill sets (e.g. similarities between control of resource exploitation/control; knowledge of high temperature processes; making pottery vs. making briquetage; using a slow wheel to finish pottery vs. turning shale). This is also apparent where resource access collides (e.g. low intensity grazing and arable agriculture/fuel gathering; digging for clay and sand temper/iron ore extraction), tasks might be carried out seasonally (salt production in summer fitting within the agricultural year), and individuals had the capacity to learn more than one practical skill in a community where skill and applied knowledge may provide additional social capital. The skills of the makers would perhaps predispose them to be travellers, explainers. Whilst only some may gain the full skill of a mariner, with knowledge of tides and routes, many may have had local, inshore, experience of moving on water. The possibility exists that in some cases the makers were also travellers, facilitated by other, maritime, specialists. The link between the processes of production and connectivity at micro and macro scale was actually individual, flexible, knowledgeable people.

These multiple participants were also working at multiple scales and in some cases these may have been the same people utilising their technical knowledge, experience and expertise but

also exploiting familial, kinship and personal relationships. This created a mesh of relationships between the complexity of multiple related production chains and communities, but via individuals and groups to other communities on a local, regional, and even international scale. Thereby, the person able to negotiate access over a 10km distance for Kimmeridge shale, may also be the person with contacts to provide distribution of pottery into the local river valleys, but also having contacts with those plying coastal seaborne trade. The person able to create pottery may also be the person able to control other high temperature processes, but also have the capacity or contacts to source raw materials from other local communities. Thus the meeting of the two models – the highly localised production processes, enmeshed in their physical landscape, and the large scale mechanisms of trade and exchange which can be understood at continental level, are actually conjoined by the personal action, connections and relationships of, probably numerous, individuals. The degree to which communities acted consciously in a communal fashion and/or the mechanism arose via the coalescing of circumstance deserves further exploration. One way of examining this might be to understand better the individual or communal nature of structured actions of deposition such as Bulbury Camp or the Norden Shrine.

Conclusion - The ‘invisible actors’ of Later Prehistoric Britain

This examination of the Poole Harbour and its hinterland has provided an opportunity to consider the combining of two models or systems, that of the macro-scale of regional and international trading, and the localised and complex social arrangements around resource exploitation and production. The two could not exist independently but the mode of their articulation is harder to approach. The Iron Age Poole Harbour example indicates the complexities within one defined region, but it is clear that there was a reflexive and constantly changing series of relationships between the broader narrative of regional and

international connections and the intimate and local arrangements within one place. Whilst communities as an entity may have had a role in directing some of this, the fundamental basis of interactions, on which wider relationships were built over generations, lay in personal action by individuals. By regarding the two interlocking mechanisms of connectivity and trade and local productive industries as connected by people, we have a glimpse of the human scale.

References

Allen, J. R. L., and Fulford, M G 1996. "The Distribution of South-East Dorset Black Burnished Category I Pottery in South-West Britain." *Britannia* 27: 223-281.

Allen, M. J., and Scaife, R. G. 1991. "The exploitation of the flora and fauna and its impact on the natural and derived landscape." In *Redeemed from the heath. The Archaeology of the Wytch Farm Oilfield (1987 – 90)*. by P Cox and C M Hearne . Dorset Natural History and Archaeological Society Monograph 9: 216-220. Dorchester: DNHAS.

Bauer, A. A., and Agbe-Davies, A. S. 2016. *Social archaeologies of trade and exchange: Exploring relationships among people, places, and things*. London : Routledge .

Bellamy, P. 2000. "Kimmeridge shale armlets." In *Cadbury Castle Somerset The later prehistoric and early historic archaeology*. by J Barrett, P W M Freeman and A Woodward English Heritage Archaeological Report 20: 190-192. London : English Heritage.

Bourdieu, P. 1993. *Field of cultural production: Essays on art and literature*. New York: Columbia University Press.

Bradley, R. 1975. "Salt and settlement in the Hampshire-Sussex borderland." In *SALT: The study of an ancient industry*. by K W De Birsay and K A Evans, eds. Colchester: Colchester Archaeological Group.

Brown, L. . 1987. "The establishment of a ceramic sequence." In B Cunliffe, *Hengistbury Head, Dorset: the Prehistoric and Roman Settlement, 3500 BC-AD500. Vol. 1.* Oxford University Committee for Archaeology, Monograph No. 13: 289-303. Oxford: Oxford University Press.

Brown, L. 1997. "Marketing and commerce in Late Iron Age Dorset: the Wareham/Poole Harbour pottery industry." In *Reconstructing Iron Age Societies.* by A Gwilt and C Haselgrove, eds. Oxbow Monograph 71, Oxford: Oxbow Books.

Brück, J., and Davies, A. 2018. "The Social Role of Non-metal 'Valuables' in Late Bronze Age Britain." *Cambridge Archaeological Journal* 28 (4) : 665-688.

Budd, P., and Taylor, T. 1995. "The faerie smith meets the bronze industry: magic versus science in the interpretation of prehistoric metal-making." *World archaeology* 27 (1): 133-143.

Burghardt, A . 1971. "A hypothesis about gateway cities." *Annals, Association of American Geographers* 61: 269-85.

Calkin, J. B. 1949. "The Isle of Purbeck in the Iron Age." *Proceedings of the Dorset Natural History and Archaeological Society* 70: 29-59.

Calkin, J. B. 1954. "'Kimmeridge Coal Money', the Romano-British Shale Armlet Industry." *Proceedings of the Dorset Natural History and Archaeological Society* 75: 45-7.

Carruthers, W. 1991. "Carbonised plant remains." In *Redeemed from the heath. The Archaeology of the Wytch Farm Oilfield (1987 – 90).* by P Cox and C M Hearne, Dorset Natural History and Archaeological Society Monograph 9:203-209. Dorchester: DNHAS.

Cleal, R. 1991. "Briquetage." In *Redeemed from the heath. The Archaeology of the Wytch Farm Oilfield (1987 – 90)*. by P Cox, and C M Hearne, Dorset Natural History and Archaeological Society Monograph 9:144-149. Dorchester: DNHAS.

Coles, J. M. 1987. *Meare Village East: the excavations of A. Bulleid and H St. George Gray, 1932-1956*. Somerset Levels Paper 13, Exeter.

Collis, J. 2003. *The European Iron Age* London: Routledge.

Cooper, A., and Brown, L. 2014 "Later prehistoric and Romano-British pottery." In 'Down to Weymouth town by Ridgeway' *Prehistoric, Roman and later sites along the Weymouth Relief Road*. by L Brown, C Hayden and D Score, Dorset Natural History and Archaeological Society Monograph 23: 197-213. Dorchester: DNHAS.

Corney, M. 1991. "Iron Age metalwork coins and imported pottery from Cranborne Chase." In *Papers on the prehistoric archaeology of Cranborne Chase*. by J Barrett, R Bradley and M Hall, eds. Oxbow Monograph 11: 242-251. Oxford: Oxbow Books.

Cox, P. W. 1989. "Excavation and Survey on Furzey Island, Poole Harbour Dorset." *Proceedings of the Dorset Natural History and Archaeological Society* 110: 49-72.

Cox, P., and Hearne, C. M. 1991. *Redeemed from the heath. The Archaeology of the Wytch Farm Oilfield (1987 – 90)*. Dorset Natural History and Archaeological Society Monograph 9, Dorchester: DNHAS.

Cox, P., and Loader, E. 1999. "Kimmeridge shale." In *A35 Tolpuddle to Puddletown Bypass DBFO, Dorset, 1996-8 incorporating excavations at Tolpuddle Ball 1993*. by C M Hearne and V Birbeck, Wessex Archaeology Report 15: 147-9. Salisbury: Wessex Archaeological Trust.

Cox, P. W., and Mills, J. M. 1991. "Kimmeridge Shale." In *Redeemed from the heath. The Archaeology of the Wytch Farm Oilfield (1987 – 90)*. by P Cox and C M Hearne, Dorset Natural History and Archaeological Society Monograph 9: 170-6. Dorchester: DNHAS.

Coy, J. 1987. "The animal bones." In *Romano-British Industries in Purbeck: Excavations at Norden, Ower and Rope Lake Hole*. by N Sunter and P J Woodward, Dorset Natural History and Archaeological Society Monograph 6: 114-118. Dorchester: DNHAS.

Cunliffe B. 1972. "The Late Iron Age Metalwork from Bulbury, Dorset." *The Antiquaries Journal* 52: 293-308.

Cunliffe, B. 1984. *Danebury An Iron Age hillfort in Hampshire Vol 2. The excavations 1969-78: the finds*. CBA Research Report 52 , London: Council for British Archaeology

Cunliffe, B. 1987. *Hengistbury Head, Dorset: the Prehistoric and Roman Settlement, 3500 BC-AD500. Vol. 1*. Oxford University Committee for Archaeology Monograph No. 13. Oxford: Oxford University Press.

Cunliffe, B. 1993. *Danebury*. London: Batsford.

Cunliffe, B. 1994. "After Hillforts." *Oxford Journal of Archaeology* 13 (1): 71-84.

Cunliffe, B . 2004. *Iron Age communities in Britain: an account of England, Scotland and Wales from the seventh century BC until the Roman conquest*. London: Routledge.

Cunliffe, B. 2005. *Iron Age communities in Britain: an account of England, Scotland and Wales from the seventh century BC until the Roman conquest*. London: Routledge.

Cunliffe, B. 2018. *The Ancient Celts*. Oxford: Oxford University Press.

Cunliffe, B., and Phillipson, D.W.1968. "Excavations at Eldon's Seat, Encombe, Dorset." *Proceedings of the Prehistoric Society*, 34: 191-237.

Denford, G. 2000. *Prehistoric and Romano-British Kimmeridge Shale*. Archaeology Data Service. Available from:

https://archaeologydataservice.ac.uk/archives/view/denford_na_2000/index.cfm.

Edwards, R. J. 2001. "Mid- to late Holocene relative sea-level change in Poole Harbour, southern England." *Journal of Quaternary Science* 16: 221–235.

Field, N. 1959. "An excavation at the earthwork in Bowley's Plantation, Owermoigne – interim report." *Proceedings of the Dorset Natural History and Archaeological Society* 81:102-3.

Frachetti, M. D. 2012. "Multi-regional emergence of mobile pastoralism and non-uniform Institutional complexity across Eurasia." *Current Anthropology* 53 (1): 2-38.

Fulford, M. 1977. "Pottery and Britain's Foreign Trade in the Later Roman Period." In *Pottery and Early Commerce: Characterisation and Later Ceramics*. by D P S. Peacock, ed, London: Academic Press.

Gale, R. 1991. "Charcoal identification." In *Redeemed from the heath. The Archaeology of the Wytch Farm Oilfield (1987 – 90)*. by P Cox and C M Hearne, Dorset Natural History and Archaeological Society Monograph 9: 201-203. Dorchester: DNHAS.

Gale, R. 2012. "The Charcoal." In *Excavations at Bestwall Quarry, Wareham 1992-2005. Volume 2: The Iron Age and Later Landscape*. by L Ladle, Dorset Natural History and Archaeological Society Monograph 20: 275-289. Dorchester: DNHAS.

Garrow, D. 2008. *Rethinking Celtic Art*. Oxford: Oxbow Books

Gurney, D. 1982. "Salt production in the Roman Fenland." *Britannia* 13: 304-5.

Håkansson, N. T., and Widgren M. eds. 2016. *Landesque Capital: the Historical Ecology of enduring Landscape Modifications*. London: Routledge.

Hambleton, E. 1999. *Animal husbandry regimes in Iron Age Britain: a comparative study of faunal assemblages from British Iron Age sites*. British Archaeological Reports (British Series) 282, Oxford: Archaeopress.

Hathaway, S. J. 2013. *Making the Invisible, Visible. Iron Age and Roman Salt Production in Southern Britain*. PhD Thesis, Bournemouth University.

Hearne, C. M., and Smith, R. J. C. 1991. "A late Iron Age settlement and Black Burnished ware (BB1) production site at Worgret, near Wareham, Dorset 1986-7." *Proceedings of the Dorset Natural History and Archaeological Society* 113: 55-105.

Henig, M. 1991. "Two bronze figurines of Iron Age date from Dorset" *Proceedings of the Dorset Natural History and Archaeological Society* 113: 186-7

Hill, J. D. 1996. "Hillforts and the Iron Age of Wessex.", In *The Iron Age in Britain and Ireland: recent trends*. by T C Champion and J Collis, eds.: 95-116. Sheffield Academic Press, Sheffield.

Hirth, K. G. 1978. "Interregional trade and the formation of prehistoric gateway communities." *American Antiquity* 43: 35-45.

Holbrook, N. 2001. "Coastal trade around the south-west peninsula." *Proceedings of the Devon Archaeological Society* 53: 149-158.

Ingold, T. 2008. "When ANT meets SPIDER: Social theory for arthropods." In *Material agency: towards a non-anthropocentric approach* by C Knappett and L Malafouris (eds) : 209-215. London: Springer.

- Jarvis, K. S. 1992. "An Intertidal zone Romano-British Site on Brownsea Island.." *Proceedings of the Dorset Natural History and Archaeological Society* 114: 89-95.
- Jarvis, K. S. 1994. "Excavations at Hamworthy in 1974." *Proceedings of the Dorset Natural History and Archaeological Society* 115: 107-108.
- Jones, G. P. 2017. *Sourcing the Clay: Iron Age pottery production around Poole Harbour and the Isle of Purbeck, Dorset, UK*. PhD Thesis, Bournemouth University.
- Kinory, J. 2012. *Salt production distribution and use in the British Iron Age*. BAR British Series 559, Oxford: Archaeopress.
- Ladle, L. 2012. *Excavations at Bestwall Quarry, Wareham 1992-2005. Volume 2: The Iron Age and Later Landscape*. Dorset Natural History and Archaeological Society Monograph 20, Dorchester: DNHAS.
- Ladle, L. . 2018. *Multi-period occupation at Football Field, Worth Matravers, Dorset Excavations 2006-2011*. BAR British Series 64,3 Oxford: BAR Publishing.
- Ladle, L., and Woodward, A. 2009. *Excavations at Bestwall Quarry, Wareham 1992-2005. Volume 1: The Prehistoric Landscape*. Dorset Natural History and Archaeological Society Monograph 19, Dorchester: DNHAS.
- Laidlaw, M. 1999. "Prehistoric and Romano-British pottery." In *A35 Tolpuddle to Puddletown Bypass DBFO, Dorset, 1996-8 incorporating excavations at Tolpuddle Ball 1993*. by C M Hearne and V Birbeck, Wessex Archaeology Report 15: 110-126. Salisbury: Wessex Archaeology.
- Leins, I . 2012. *Numismatic data reconsidered: coin distributions and interpretation in studies of late Iron Age Britain*. PhD Thesis, Newcastle University.

- Light, T. 2009. "Briquetage." In *Bucknowle A Romano-British villa and its antecedents: excavations 1976-1991*. by T Light and P Ellis, Dorset Natural History and Archaeological Society Monograph 18: 122. Dorchester: DNHAS.
- Lyne, M. 2018. "Late Iron Age and Roman pottery." In *Multi-period occupation at Football Field Worth Matravers Dorset Excavations 2006-2011*. by L Ladle, BAR British Series 643: 181-191. Oxford: BAR Publishing.
- Maltby, M. 2006. "Salt and animal products: linking production and use in Iron Age Britain." In M Maltby *Integrating Zooarchaeology Proceedings of the 9th ICAZ Conference Durham2002*: 119-124. Oxford: Oxbow Books.
- May, V. 2010. "Introduction", In *The Book of Poole Harbour* by B Dyer, and T Darvill: 16, Wimborne Minster: Dovecote Press.
- Markey, M. 2003. *South Deep jetties, Poole Harbour. 2003 fieldwork*. Unpublished fieldwork report , Poole Bay Archaeological Research Group.
- Mepham, L. 2016. "The prehistoric pottery." In "On the edge of the chalk: an Iron Age settlement at Grimstone Reservoir, Dorchester, Dorset." by C E Randall, *Proceedings of the Dorset Natural History and Archaeological Society* 137: 239-248.
- Morris, E. 2001. "Salt production and distribution." In *A millennium of salting: Prehistoric and Romano-British salt production in the Fenland* . by T Lane and E Morris, eds. Lincolnshire Archaeology and Heritage Reports 4: 369-404. Sleaford: Heritage Trust of Lincolnshire.
- Pacheco Ruiz, R. 2015. *Maritime lives in Iron Age Britain*. PhD Thesis, University of Southampton.

Papworth, M. 2008. *Deconstructing the Durotriges A definition of Iron Age communities within the Dorset environs*. British Archaeological Reports (British Series) 462, Oxford: Archaeopress.

Pitman, D. 2015. *Craft Practice and Resource Perception in the Southern Urals During the Middle Bronze Age*. PhD thesis, University of Sheffield.

Pitman, D., Wilkes, E., Randall, C. E., Brown, A., Manley, H., and Carter, D., and forthcoming "Gateway to the world: Current understanding of the later prehistoric to medieval archaeology of Poole Harbour and future directions for research." *Proceedings of the Dorset Natural History and Archaeological Society* 141.

Randall, C. E. 2017. *Land south of Warmwell Road Crossways Dorset: An archaeological evaluation report*. Unpublished client report, Wincanton: Context One Heritage and Archaeology.

Randall, C. E. 2018. "The faunal remains." In *Multi-period occupation at Football Field, Worth Matravers, Dorset Excavations 2006-2011*. by L Ladle, BAR British Series 643: 234-266. Oxford: BAR Publishing.

Redfern, R. 2020. "Iron Age 'predatory landscapes': a bioarchaeological and funerary exploration of captivity and enslavement in Britain." *Cambridge Archaeological Journal* 30: 1-24.

Roberts, A. 2015. *The Celts*. London: Heron Books.

Royal Commission on Historical Monuments (England) (RCHME), 1970a. *An Inventory of the Historical Monuments in the County of Dorset, Volume 2 – South East; Parts 1-3*. Royal Commission on Historical Monuments (England), London: HMSO.

Royal Commission on Historical Monuments (England) (RCHME), 1970b. *An Inventory of the Historical Monuments in the County of Dorset, Volume 3 – Central; Parts 1-2*. Royal Commission on Historical Monuments (England), London: HMSO.

Scaife, R. G. 1991. “Pollen Investigation and Vegetational History.” In *Redeemed from the heath. The Archaeology of the Wytch Farm Oilfield (1987 – 90)*. by P Cox, and C M Hearne, Dorset Natural History and Archaeological Society Monograph 9: 180-197. Dorchester: DNHAS.

Scaife, R. G. 2009. “The changing prehistoric vegetation and environment of the Poole Harbour region.” In *Excavations at Bestwall Quarry, Wareham 1992-2005. Volume 1: The Prehistoric Landscape*. by L Ladle, and A Woodward, Dorset Natural History and Archaeological Society Monograph 19: 16-18. Dorchester: DNHAS.

Seager Smith, R. 2002 “Late prehistoric and Roman pottery from graves.” In *Excavations at Alington Avenue Fordington Dorchester Dorset 1984-87*. by S M Davies, P.S. Bellamy, M.J. Heaton, and P. Woodward, Dorset Natural History and Archaeological Society Monograph 15: 66-170. Dorchester: DNHAS.

Seager Smith, R., and Fitzpatrick, A. 2009. “Amphorae.” In *Bucknowle A Romano-British villa and its antecedents: excavations 1976-1991*. by T Light and P Ellis, Dorset Natural History and Archaeological Society Monograph 18: 140-142. Dorchester: DNHAS.

Shaffrey, R. 2014. “Shale.” In *‘Down to Weymouth town by Ridgeway’ Prehistoric, Roman and later sites along the Weymouth Relief Road* . by L Brown, C Hayden and D Score, Dorset Natural History and Archaeological Society Monograph 23: 229-233. Dorchester: DNHAS.

Sharples, N. 1991a. *Maiden Castle: excavations and field survey 1985-6*. Historic Buildings and Monuments Survey for England Report 19, London: English Heritage.

Sharples, N. 1991b. *Maiden Castle*. London: Batsford.

Sherratt, A. 1996. "Why Wessex? The avon route and river transport in later British prehistory." *Oxford Journal of Archaeology* 15 (2): 211-234.

Tabor, R. 2008. *Cadbury Castle the hillfort and landscapes*. Stroud: History Press.

Thomas, J. 2016. "Note on the Use of Tertiary 'Heathstone' in Buildings Over the Area of Outcrop of the Palaeogene in the Isle of Purbeck, South-Central and East Dorset."

Proceedings of the Dorset Natural History and Archaeological Society 137: 129-136.

Timby, J. 1987. "First century imports and native fine wares." In *Romano-British Industries in Purbeck: Excavations at Norden, Ower and Rope Lake Hole*. by N Sunter, and P J Woodward, Dorset Natural History and Archaeological Society Monograph 6: 73-79. Dorchester: DNHAS.

Tyers, P. 1996. "Roman amphoras in Britain." *Internet Archaeology*, 1.

https://intarch.ac.uk/journal/issue1/tyers_index.html .

Wainwright, G. 1979. *Gussage All Saints: An Iron Age Settlement in Dorset*. London: English Heritage.

Wheeler, R. E. M. 1943. *Maiden Castle, Dorset*. Oxford: OUP.

Wilkes, E. 2004. *Iron Age Maritime Nodes on the English Channel Coast: An Investigation into the Location, Nature and Context of Early Ports and Harbours*. PhD Thesis, Bournemouth University.

Wilkes, E. 2007. "Prehistoric Sea Journeys and Port Approaches: The South Coast and Poole Harbour." In *Prehistoric Journeys* by V Cummings, and R Johnston (Eds), Oxford: Oxbow Books: 121-130.

Wilkes, E. 2019. "Environmental and archaeological background to prehistoric Poole Harbour." In *The Poole Iron Age Logboat*. by J Berry, D Parham and C Appleby (Eds): 5-10. Oxford: Archaeopress.

Williams, D. F. 1977. "The Romano-British black-burnished industry: an essay on characterization by heavy-mineral analysis." In *Pottery and early commerce. Characterization and trade in Roman and later ceramics* by D P S Peacock ed.: 163-220. London: Academic Press.

Williams D. F. 1991. "Amphorae." In *Redeemed from the heath. The Archaeology of the Wytch Farm Oilfield (1987 – 90)*. by P Cox and C M Hearne, Dorset Natural History and Archaeological Society Monograph 9: 119-121. Dorchester: DNHAS.

Willis, S. 2006 "Sea, coast, estuary, land and culture in Iron Age Britain." In *The Later Iron Age in Britain and Beyond*. by T Moore and C Haselgrove, Havertown: 107-129. Oxford: Oxbow Books.

Woodward, P. J. 1986. "Rope Lake Hole." In *Romano-British Industries in Purbeck: Excavations at Norden, Ower and Rope Lake Hole*. by N Sunter, and P J Woodward, Dorset Natural History and Archaeological Society Monograph 6: 125-180. Dorchester: DNHAS.

