
RESEARCH FRAMEWORK FOR THE ARCHAEOLOGY OF EARLY MEDIEVAL WALES c. AD 400–1100

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Summary

Early medieval archaeology in Wales is particularly challenging. There is little diagnostic material culture and comparatively few sites have been identified and excavated. Nevertheless, the period since the last review has witnessed significant advances and knowledge. The publication of Professor Nancy Edwards' monograph on Life in Early Medieval Wales (2023, Oxford University Press) heralds a major watershed, to which readers are referred for a comprehensive and detailed overview of the current state of knowledge. This revision of the Research Framework offers an opportunity to re-evaluate its content, structure and scope. The fundamental issues that were set out in the three earlier versions of this Research Framework are still relevant. Thus, key research priorities remain: the identification and investigation of settlements, cemeteries, and ecclesiastical sites; improvement of chronological frameworks; analysis of artefacts, ecofacts, paleoenvironmental and osteological data; the further of understanding of power and authority; and also of the development of understanding of frontiers and dyke systems. The failure to significantly address and move on from these priorities demonstrates the severity of the challenges to the realisation of research potential for the early medieval period in Wales. In the light of this and the fact that Professor Edwards' monograph offers an up-to-date synthesis of the archaeology of the period, this revision of the Framework aims to set priorities that will facilitate and maximise opportunities for research, funding, and collaboration. This document considers nine overarching themes: working better together; maximising fieldwork potential; improving resources; sharing knowledge; improving and refining chronology; landscape perspectives on sites, monuments, social and economic processes; artefact and ecofact/biofact analysis; burials; power and authority; and community and engagement. Recent publications (post 2016) are noted in a separate bibliography.

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Introduction

The early medieval centuries in Wales (c. AD 400 to 1100) constitute one of the most enigmatic and challenging periods in the history of Britain. This was a formative period for regional and national development, but its archaeological record in Wales is highly ephemeral and exhibits little diagnostic material culture. This material poverty is compounded by the prevalence of acidic burial environments across much of Wales, a scarcity of contemporary historical sources and early placename records, and comparatively low levels of development-led excavation. Type-sites are therefore hard to define and the techniques of landscape archaeology that have been crucial to the transformation of the understanding of early medieval England, such as test pitting, field walking, aerial photography, and earthwork survey, have limited efficacy for Wales in this period. Moreover, pressures on funding, the loss of numerous academic positions and the contraction of teaching provision in archaeology and history at Welsh universities, alongside Anglocentric traditions of scholarship have constrained research potential. These factors present significant challenges, but nonetheless a healthy and vibrant research culture exists, albeit lacking in critical mass in some areas. In the period since publication of the last research framework in 2017 a series of significant milestones has been achieved, including: the launch of the open access *Offa's Dyke Journal*; publication of major excavations including Llangorse crannog (Lane and Redknap 2020), the South Wales Gas Pipeline (Darvill *et al.* 2020) and Parc Cybi (Kenney 2021); the initiation and completion of a number of PhD projects (including Comeau 2020; Hedley 2017; Shiner 2022; Vousden 2022); and continuation of ground breaking excavations at St Patrick's Chapel. The publication of Professor Nancy Edwards' monograph on *Life in Early Medieval Wales* (2023, Oxford University Press) heralds a major watershed for our understanding of early medieval Wales and offers an opportunity to re-evaluate the content, structure and scope of the Research Framework, the origins of which are now 20 years old.

Despite these and other recent advances, the fundamental issues that were set out in the three earlier versions of this Research Framework are still relevant (Edwards *et al.* 2017; Edwards *et al.* 2011; Edwards *et al.* 2005). Thus, the following key priorities align largely with those defined by Edwards *et al.* (2017: 1-3):

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- Identification and investigation of settlements, cemeteries, ecclesiastical sites, assembly places, industrial and agricultural sites and landscapes
 - Improvement of chronological frameworks
 - Analysis of artefacts, ecofacts, industrial residues, paleoenvironmental and osteological data
 - Development of understanding of power and authority and related social and economic processes.
 - Development of understanding of frontier landscapes and dyke systems

The failure to significantly address and move on from these priorities, which were first defined 20 years ago, demonstrates the severity of the challenges to the realisation of research potential for the early medieval period in Wales. In the light of this and the fact that Professor Edwards' monograph now offers a comprehensive and detailed overview of the current state of knowledge, this revision of the Framework will not attempt to synthesise new work since 2017. Rather, it aims to set priorities that will facilitate and maximise opportunities for research, funding, and collaboration.

Our document groups these priorities under eight overarching themes:

- 1 - Working Better Together
- 2 - Maximising Fieldwork Potential
- 3 - Improving Resources and Sharing Knowledge
- 4 - Improving and Refining Chronology
- 5 - Landscape Perspectives on Sites, Monuments, Social and Economic Processes
- 6 - Artefact and Ecofact/Biofact Analysis
- 7 - Burials; Power and Authority
- 8 - Community and Engagement.

Brief discussions of the priorities and key references are offered. These are supplemented by a separate bibliography which seeks to note the majority of new publications on early medieval Wales that have become available since the last Research Framework in 2017.

1. WORKING BETTER TOGETHER

- Research culture and environment
- Cross-period and cross-border collaboration
- Collaborative fieldwork projects

An outward-looking research culture will help to set the evidence from Wales within a broader context and foster collaboration in well-funded international research projects. Despite the difficulties noted above, the evidence from Wales can contribute to a range of topical international agendas (Davies 2004; Wickam 2010), including, but not restricted to: social identity and gender; the life course; ethnogenesis; migration and mobility; social and political change; burial and society; landscape and agriculture; technology and economy; climate and resilience; power and authority; ritual and religion. The development of collaborations that examine evidence from Wales alongside that from other regions (including 'big data' projects), offer significant research potential. The ***Early Medieval Wales Archaeology Research Group*** (EMWARG) and its online platforms offer an accessible and inclusive research network that facilitates sharing of information and development of research initiatives.

Cross-period/border collaboration is essential where sites and processes/activities span period and geographic boundaries. Research that spans traditional period divisions (late Roman – early medieval – later medieval) offers better perspectives on key period of change and transition and helps to address the challenges of studying this materially poor period. Similarly, projects that span the English/Welsh border, Irish Sea and Severn Estuary have significant research potential for better understanding major processes such as migration and the formation of the frontier in the Welsh Marches. Key aspects of the period, such as Christian conversion and the (re)occupation of hilltop sites can be traced across Europe, and greater collaboration with Continental colleagues through forums such as the European Archaeological Association is encouraged. Early medieval evidence is often fragmentary and ephemeral and can easily become swamped by the masses of data produced from large, multiperiod excavations. Since even single features can provide significant new data, it is essential that early medieval archaeology is appropriately recognised in programmes of post-excavation analysis and publication and in HER records.

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Collaboration between commercial, curatorial, community, and academic sectors is a proven and highly effective strategy for leveraging funding and instigating major programmes of fieldwork. A vibrant research culture is also dependent upon cooperation and collaboration between key institutions, including Amgueddfa Cymru, CADW, Royal Commission on the Ancient and Historical Monuments of Wales, Welsh Archaeological Trusts, commercial units and universities. Recent high-profile successes, funded through the European Regional Development Fund, that provide models for future projects include the [CHERISH](#) project and [Ancient Connections](#) which provided funding for excavations at [St Patrick's Chapel Whitesands](#).

2. MAXIMISING FIELDWORK POTENTIAL

- Targeted investigation of sites with strong research potential
- Portable Antiquities Scheme
- Maximise opportunities for data recovery

Sites with high research potential should be targeted through well-designed programmes of fieldwork. These include, but are not limited to: hillforts with indicators of early medieval activity; *in situ* inscribed stones and stone sculpture; and open areas adjacent to early church sites. Consideration should also be given to re-investigating key sites using modern methods and techniques (e.g. Seaman and Lane 2019). Programmes of fieldwork should be guided by formal Written Schemes of Investigation (WSIs) and include desk-based assessment and where possible geophysics and remote sensing.

Active collaboration with the ***Portable Antiquities Scheme*** is essential for the investigation of early medieval find spots. All findspots have significant research potential and should be targeted with remote sensing and excavation, but particular attention should be given to clusters of finds from the same locality and finds associated with known earth/crop-marks or significant placenames (Redknap 2022).

Maximise opportunities for data recovery. Early medieval features are often only identified through scientific dating during post-excavation phases of projects, but where they are encountered or suspected within ongoing excavations, all opportunities should be taken to maximise data recovery. Interventions should be undertaken at a sufficient scale to fully

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understand the archaeology and retrieve good-quality dating evidence (see below for further guidance). Where possible 100% of features should be excavated and samples collected for scientific dating, environmental and geoarchaeological analysis (links to specific guides are given below). Spoil from significant deposits should be sieved to maximise artifact recovery, and collaboration with experienced metal detectorists is essential for maximum retrieval of metal artefacts. Early consultation with subject specialists via the EMWARG network is also encouraged. Notices setting out basic details of all fieldwork projects should be submitted for publication in the annual 'Gazetteer of Site Explored' published in *Archaeology in Wales*. Grey literature reports should be filed with the National Monuments Record of Wales and relevant Historic Environment Records.

3. IMPROVING RESOURCES: SHARING KNOWLEDGE

- Open access publication and online resources
- Standardization of terminology and continuing review of records
- Publication of legacy excavations and re-analysis of archive material

Open access publication facilitates dissemination of information and promotes an inclusive research culture and should be considered as the 'gold standard' for publication. Where possible new and existing datasets, including grey literature, should be made available as **online open access resources**. Use of the Archaeological Data Service (ADS) is encouraged, as demonstrated by the corn-drying kiln database (Comeau and Burrow 2021; the modest one-off setup costs were covered by a grant from the Cambrian Archaeological Association), and the ADS also publishes [Guides To Good Practice](#) on data structure and formats. The UCL [Early Medieval Atlas Project](#) archive provides a possible model for one-stop access to a diversity of projects which could be emulated for early medieval Wales.

Standardization of terminology in HERs and national databases (guided by vocabularies curated by the [Forum On Information Standards In Heritage](#) and by [Canmore](#)) and continuing **review and enhancement of records** is required to maintain the research potential of [Coflein](#) and [Archwilio](#) (the online databases of the National Monuments Record and regional HERs) and maximise cross-sector collaboration. Information concerning the recovery of early medieval dates or artefacts should always be included in, or added to, the HER record for the site, along with the

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source of the information. Separate HER records for different aspects of the site should be set up where the nature of the location requires it.

Archives from both old and more recent excavations hold very significant research potential and are particularly suited to reanalysis in postgraduate projects (e.g. Hemer *et al.* 2013; Campbell *et al.* in press). Publications of important excavations at Llanbedrgoch (Anglesey) and Brawdy (Pembrokeshire) are expected shortly (Dark forthcoming; Redknap in prep.). Other important but not yet fully published **legacy excavations** include, but are not restricted to, those at New Pieces (Powys), Dinorben (Conwy), Burry Holmes (Swansea), Maenclochog (Pembrokeshire), and Carew Castle (Pembrokeshire).

4. IMPROVING AND REFINING CHRONOLOGY

- Scientific dating and Bayesian analysis
- Best practice in reporting of radiocarbon dates
- New innovations in dating: field systems and ceramics
- Crucial periods: Romano-British to early medieval transition, the 'long 8th century' and the late 11th century
- Corn-drying kilns

Systematic application of scientific dating techniques is essential on sites where the presence of early medieval features is likely or suspected and should be factored into post-excavation budgets. A ceramic features and contexts containing late Roman material culture that could be re-used/residual should also be considered for scientific dating. The value of dating archive material (where suitable samples can be identified) has also been demonstrated (Campbell *et al.* in press). The Intcal20 calibration curve significantly improves the effectiveness of radiocarbon dating for the early medieval period, particularly the critical fifth and sixth centuries, but it is essential that sufficient numbers of dates are obtained and that best practice on selection of samples is followed (e.g. Bayliss and Marshall [2022](#)). Securely stratified, non-residual, short-life samples obtained from well-understood carbon reservoirs should be selected for dating; examples include articulated bone groups and single entity plant macrofossils that have been identified to species level. Contextual information should be considered to avoid residuality. If human bone is dated, carbon and nitrogen stable isotopes should also be analysed so that the impacts of

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dietary offsets can be understood. Consideration should also be given to using other forms of scientific dating, including dendrochronology, archaeomagnetism, and luminescence. Guidance on scientific dating can be obtained through [Historic England](#).

Bayesian analysis can enhance and refine chronologies where multiple scientific dates have been obtained from well-stratified sequences (Bronk Ramsey 2009). Use of Bayesian models should be fully documented and follow best practice guidelines (Bayliss 2015; Bayliss and Marshall 2022).

Following **best practice in reporting of radiocarbon dates** it is essential to ensure that radiocarbon dates can be properly interpreted, recalibrated and analysed. The following information should be published for each date (see Bayliss and Marshall 2022: 55-9 for further information):

- Details of the facility or facilities that produced the results, and how samples were pretreated, prepared for measurement and dated.
- Details of the radiocarbon results and associated measurements and how these have been calculated.
- Details of the material dated and the context from which it came.
- Details of any replicate analyses, statistical tests on replicate groups of measurements, although sometimes more extensive discussion may be merited.
- Details of the calibration protocols used, including any reservoir corrections employed.

New innovations in scientific dating include the potential to date field systems (Griffiths *et al.* 2022; Vervust *et al.*, 2020a; 2020b) and ceramics (Casanova *et al.* 2020). These techniques are still in development and have not yet been applied in Wales, but display significant research potential, especially for the investigation of multi-period landscapes, and should be pursued where opportunities arise in the future.

Crucial periods: Romano-British to early medieval transition, the 'long 8th century' and the late 11th century. Key questions surround the extent of continuity and change between the late- and post-Roman centuries and the impact of the ending of Roman state administration on society and economy. Some archaeological evidence (corn dryers and hillforts) also points to a significant period change in the early 7th century that should be investigated further (Comeau *et al.* 2023). Archaeological data can also be used to explore whether there is evidence for the 'long 8th

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century' agricultural developments seen in England (e.g. McKerracher 2018), or – conversely - if it shows the decline revealed in radiocarbon dating of large datasets in Ireland (e.g. McLaughlin et al 2018 & Hannah & McLaughlin 2019). The nature and extent of continuities and changes associated with the Norman and Edwardian conquests and their relationships (if any) to evolution of religious foundations, settlement patterns, and agricultural landscapes are also priorities.

Corn-drying kilns, when closely dated, are shown by recent research to be crucial to our understanding of the early medieval period (Comeau and Burrow 2021; Comeau *at al* in press). Careful dating of their contents is vital for facilitating analysis: a minimum of two radiocarbon dates should be obtained for each kiln. Each kiln should be assigned a separate HER record, and recorded using the standard term 'corn drying kiln' as specified by RCAHMW site classifications (<https://heritagedata.org/live/schemes/10/concepts/71827.html>).

5. LANDSCAPE PERSPECTIVES ON SITES, SOCIAL AND ECONOMIC PROCESSES

- Investigation of the wider context of sites
- Recognition of polyfocal and seasonal patterning
- Written sources and placenames
- Movement through the landscape
- Mapping and dating relict field systems

Investigation of landscape context through multi-disciplinary programmes of research is essential for developing a fuller understanding of sites and monuments, taking account of historical records, placenames, geomorphological/ecological setting, and patterns of movement through the landscape. New developments in geophysics, such as cart-based GNSS survey, offer a step-change in the scale and resolution and a shift to **landscape-scales of research** (e.g. Seaman 2023). This research potential is enhanced when used in combination with paleoenvironmental analysis and other forms of remoting sensing data, such as LiDAR and aerial photography, including drone survey and photogrammetry.

Recognition of polyfocal patterning has been a key development in the understanding of early medieval settlement in Anglo-Saxon areas (e.g. Blair 2018) and in Scandinavia. Recent research in Wales (Comeau 2020)

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demonstrates that it is equally significant here, in combination with ***seasonally-variable patterns of activity***. The GIS mapping used to reveal this patterning relies on a diversity of datasets, underlining the need for open access archives.

There are comparatively few **historical sources and placename records** from early medieval Wales, but when used appropriately these sources can significantly enhance understanding of sites and monuments and their local and regional contexts. The value of later medieval sources and fieldnames for programmes of retrogressive analysis has also been demonstrated (e.g. Comeau 2020). Charles-Edwards (2013) provides a useful summary of many important early medieval sources, and key texts and discussions have been published by Coe (2001), Davies (1979), Dumville (2002); Sims-Williams (2019). Placename surveys have been published for much of Wales (for example Charles 1992; Morgan 2018; Owen and Morgan 2007). The RCAHMW maintains a [List of Historic Placenames](#) that can be searched online and the [Cymdeithas Enwau Lleoedd Cymru/Welsh Place Name Society](#) also provides information on an excellent range of resources.

Archaeologies of movement and mobility. Consideration of movement through the landscape, including sea and river navigation, can enhance our understanding of sites and monuments. New forms of scientific investigation, including analysis of stable isotopes, aDNA, and morphometrics, present opportunities for exploring movements of animals and humans over regional and international scales. Exploration of patterns of seasonal transhumance using archaeological, historical, and place-name evidence is key for understanding rural settlement patterns (e.g. Hooke 2019). GIS-enabled analysis of movement, landscape affordance and phenomenological perspectives can offer insights on the organization of the early medieval landscape and its relationship to the articulation of power and authority (Seaman and Sucharyna Thomas 2020; Murrieta-Flores and Williams 2017).

Mapping and dating relict field systems. Systems of infield/outfield agriculture were an important feature of the early medieval landscape (Comeau 2019; Silvester 2019). Mapping and dating of field systems and the identification of *pen clawdd* (head dyke) locations are important for understanding agricultural systems and characterising different zones of landscape. As noted in Section 4, the innovatory approaches to dating

landscapes that have been used in England would be of considerable benefit in Wales.

6. ARTEFACT AND ECOFACT/BIOFACT ANALYSIS

- Artefacts and their contexts
- Archaeometallurgy
- Paleoenvironment
- Zooarchaeology
- Ecofacts

Detailed analysis of early medieval artefacts and their contexts and the characterisation of site assemblages remains a fundamental research priority. Research should include finds reported to the PAS, small finds from excavations, and archive material from old excavations.

Archaeometallurgical structures and finds are frequently encountered on early medieval sites and have significant research potential (e.g. Young 2010). Key research priorities are elucidating the nature of metalworking technology and the identification of the sources of the natural resources being exploited. There is also potential for exploring the social contexts of metalworking activities, including international connections. Fieldwork projects should follow best practice for maximising data recovery through sampling and recording with consultation of specialists as required ([Historic England](#) 2015: 7-15). Archaeometallurgical material from old excavations (which may have been misidentified or not fully analysed) could also be reinvestigated.

There is a need for more **paleoenvironmental analysis** across all parts of Wales, with clusters of samples from lowland locations close to core areas of settlement and agriculture offering particularly strong research potential (e.g. Davies 2015; Davies *et al.* forthcoming). Samples should be collected where viable deposits are encountered in both on- and off-site contexts. Pollen analysis remains crucial, but consideration should also be given to the application of other available techniques including diatoms and sedimentary DNA. Paleoenvironmental analysis is most effective when high-resolution sampling is applied to cores with secure age-depth modules derived from multiple radiocarbon dates (e.g. Davies *et al.* forthcoming).

Animal bone rarely survives in the acid soils found across much of Wales, so where material is encountered every opportunity should be taken to

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maximise data available for **zooarchaeological analysis**. Excavators should follow best practice on recovery methods, deploying sieving where appropriate ([Baker and Worley 2019](#): 15-22), and comparing with both earlier and later assemblages. The research potential of small animal bone assemblages should be maximised by complementing standard qualitative osteological and metrical analyses with new approaches, such as Zooarchaeology by mass spectrometry, and analysis of isotopes and tooth microwear abrasion. Given the diverse geological/hydrological landscape of Wales, programmes of stable isotope analysis should include biosphere mapping.

Ecofacts (including micro/macro fauna/flora, such as charred grains, mollusc shells, and insect remains) offer potential for good survival across Wales, and waterlogged deposits and fills of corn drying kilns have particular potential. Projects must identify appropriate sampling strategies during the planning stages, seeking advice from specialists as necessary. Excavators often sample from layers expected to be productive, but it is essential that samples are collected from all types of deposit that are relevant to the aims of the sampling strategy ([Campbell et al. 2011](#): 8-15). Quantitative analysis of ecofacts can now be supplemented by isotopic analysis that can provide further evidence on agricultural systems (e.g. [Lodwick et al. 2021](#)).

7. BURIALS AND CEMETERIES

- Analysis of human remains
- Cemeteries: chronology, styles of burial and relationship with other sites and activities
- Excavation and recording practices

Analysis of human remains can provide information on demography, osteobiography, the life course, migration and mobility, health and disease. Since human remains are only preserved in exceptional circumstances in Wales, every effort should be made to maximise data recovery by following best practice in excavation and recording ([Mitchell and Brickley 2017](#)). The excavation of early medieval cemeteries where human remains survive should be undertaken in consultation with an osteologist, who should be on site wherever possible. This is to ensure that minimal skeletal material (in particular the very small bones of infants which can easily be overlooked)

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is lost during excavation and that a strategy can be put in place early on for the subsequent post-excavation analysis of the remains. Every effort should be made to maximise the interpretive potential of human remains by supplementing osteoarchaeological analysis with bioarchaeological approaches, including analysis of ancient DNA and stable isotopes (the latter supported by biosphere mapping). Any destructive sampling (e.g. for isotopic/aDNA analysis) should only take place once the human remains have been recorded by an osteologist. It is essential that bioarchaeological data generated from the analysis of cemetery populations continues to be interpreted in relation to the wider funerary, archaeological, and historical context in order to provide a holistic understanding of life and death in early medieval Wales, and to allow for comparison with similar studies from Ireland, England, Scotland and beyond. To ensure that comparative analyses of cemetery populations can be undertaken, it is essential that the human remains storage facility at National Museum Cardiff, established in 2009 for skeletal collections excavated in Wales, receives ongoing support to maintain, expand and provide access to its collections.

Cemeteries: chronology, styles of burial and relationship with other sites and activities. Recent research has shown that cemetery spaces could be multifunctional (Shiner 2021). Examination of regional and temporal variation in burial practice, associations of burials and cemeteries with settlements, ecclesiastical sites, and association with socio-economic activities including grain processing and metal-working are key priorities. Particular attention should be paid to establishing cemetery chronologies using radiocarbon dating and Bayesian analysis; this would make it easier to address questions concerning cemetery organisation and enclosure, continuity and change in the burial rite and associated features (such as square-ditched grave enclosures), the significance of associated artefacts, practices such as the deposition of white quartz pebbles, variation in the funerary treatment of individuals and groups, conversion to Christianity and other aspects of belief. It is particularly important to examine the spatial relationship between cemeteries and the wider early medieval landscape, including settlement sites.

Excavation and recording practices. Research is hindered by a confusing and inconsistent terminology surrounding the recording of grave type. Standardised terminology should be adapted, following Shiner (forthcoming). Archaeothanatalogical analysis of burials – particularly

those in dug, rather than cist, graves – should be undertaken at cemeteries containing well-preserved human remains.

8. POWER AND AUTHORITY

- Assembly sites
- Dykes - frontiers and contested landscapes
- Render, tribute and exchange: new perspectives
- Territoriality

Outdoor **assembly sites** were a key feature of the political landscape of early medieval Wales and north-west Europe (Charles-Edwards 2004; Pantos and Semple 2004). Welsh examples have hitherto attracted little consideration outside of a small number of studies, most notably Comeau's (2020) pioneering examination of the *cantref* of Cemais which demonstrates the effectiveness of a multidisciplinary GIS-based approach for identifying these sites. There is a need for a systematic national survey, as already exists for England and Scotland. Studies that examine these sites as loci of governance and kingship within broader perspectives of 'places of power' are to be welcomed, preferably integrated with longue durée perspectives that encompass considerations of prehistoric activity. Work on hillforts is a particular case in point here (Seaman 2022).

Frontiers and contested landscapes: The frontier in the Welsh March formed during the early medieval period, but comparatively little is understood of the pre-Norman history and contestation of the frontier. Programmes of cross border/period research on the wider frontier should be complemented by research focused on elucidating the location, chronologies, and landscape setting of Offa's Dyke and Wat's Dyke and their associated features (Delaney 2021; Ray *et al.* 2021; Williams 2021). The importance of short dykes has been further confirmed by recent studies (e.g. Seaman 2019) and more research is needed on the date/chronology of these linear earthworks and their relationship with surrounding landscapes/ settlements/ estates/ polities.

Render, tribute and exchange: new perspectives that integrate consideration of non-monetised areas of the early medieval economy with artefact and ecofact analysis are offered in recent work on other areas of Britain and Scandinavia (cf. Kershaw and Williams 2019; Naismith 2021;

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Lambert & Leggett 2022). Similar perspectives on Wales are to be welcomed.

Territoriality The territorial structures through which early medieval landscapes were controlled and exploited are fundamental to the reconstruction and interpretation of patterns of power. If we want to understand how societies developed between the 5th and the 11th centuries AD, we must produce coherent images of the landscape and its attendant economic and administrative structures through the reconstruction of territorial units at all levels from *tref* to *cantref*. Digital mapping of territorial units through map regression and analysis of later medieval records and placenames has significant research potential and some digital datasets are freely available, for instance the RCAHMW datasets of commotes and cantrefi as understood from later medieval records ([RCAHMW Historic Boundaries](#); cf. Brookes 2020 and [RCAHMW Mapping Estate Archives](#)).

9. COMMUNITY AND ENGAGEMENT

- Sustainability of research culture
- The History Curriculum for Wales
- Wider engagement and impact
- Experimental reconstruction
- Sustainable landscape practice

Sustainability of research culture is a significant challenge in many fields of scholarship. The continued vitality of research on early medieval Wales is dependent upon new scholars entering the field. The identification and support of avenues of engagement with the research community, such as postgraduate funding opportunities and early career networks, is essential.

The new 2022 school ***Curriculum for Wales*** provides excellent opportunities to enhance and invigorate the archaeology of early medieval Wales. The teaching of Welsh history is now compulsory in primary and secondary schools and the new Humanities Curriculum's core concept of *cynefin* (sense of place) and its relationship with the individual learner provides further scope for the integration of early medieval archaeology. Opportunities should be sought to engage actively with school-level education, including exploration of the human experience in school

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localities as manifested in the archaeological and place-name record, and how the people of Wales, its communities, history, culture, landscape, resources and industries, interrelate with the rest of the world ([Curriculum for Wales: Humanities](#); Jones 2022).

Community engagement and research impact beyond academia are important national agendas and core elements within the requirements of many funding schemes. The early medieval period was formative for the history of Wales as a nation, and benefits from significant public interest. Excellent community engagement work has derived from research on a range of topics including stone sculpture, burials, sites linked to saints' cults, and Offa's Dyke. The early medieval period also provides excellent opportunities for exploring wider engagement themes including cultural hybridity, language, and shared heritage, which could grow the profile of early medieval research and lever new sources of funding (cf. [Ancient Connections](#)).

Experimental reconstruction, e.g. of corn-drying kilns or habitations, also offers a largely untapped potential for community and volunteer engagement (cf [Rendlesham pottery kiln project](#)). Online digital platforms also offer avenues for outreach and engagement through gamification of research (cf [Shaftesbury Abbey Minecraft Reconstruction](#)). Appropriately framed and constituted, such projects could significantly advance research agendas.

Sustainable landscape practice: early medieval archaeology is uniquely positioned to offer historically-informed perspectives on major contemporary issues, such as sustainable landscape practice and agriculture. Opportunities should be sought to engage with stakeholders in government, farming and industry.

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Weblinks to resources noted in bold blue in text

- ADS guides to good practice
<https://guides.archaeologydataservice.ac.uk/g2gpwiki/>
- Ancient Connections <https://ancientconnections.org/>
- Archwilio - Historic Environment Records (HERs) for Wales
<https://archwilio.org.uk/>
- Canmore Thesauri <https://canmore.org.uk/thesaurus>
- CHERISH <http://cherishproject.eu/en/>
- CifA Updated Guidelines to the Standards for Recording Human Remains (Mitchell and Brickley 2017)
<https://babao.org.uk/assets/Uploads-to-Web/14-Updated-Guidelines-to-the-Standards-for-Recording-Human-Remains-digital.pdf>
- Coflein – online database for the National Monuments Record of Wales
<https://coflein.gov.uk/>
- Curriculum for Wales: Humanities <https://hwb.gov.wales/curriculum-for-wales/humanities>
- Cymdeithas Enwau Lleoedd Cymru/Welsh Place Name Society
<https://www.cymdeithasenwaulleoedd.cymru/en/>
- Early Medieval Atlas Project
https://archaeologydataservice.ac.uk/archives/view/medproj_lt_2019/
- Forum on Information Standards in Heritage <http://www.heritage-standards.org.uk/fish-vocabularies/>
- Historic England Guidance: Archaeometallurgy Guidelines for Best Practice (2015) <https://historicengland.org.uk/images-books/publications/archaeometallurgy-guidelines-best-practice/heag003-archaeometallurgy-guidelines/>
- Historic England Guide: Environmental Archaeology (Campbell *et al.* 2011) https://historicengland.org.uk/images-books/publications/environmental-archaeology-2nd/environmental_archaeology
- Historic England Handbook: Animal Bones and Archaeology (Baker and Worley 2019) <https://historicengland.org.uk/images-books/publications/animal-bones-and-archaeology/animal-bones-archaeology-handbook/>
- Historic England overview of Scientific Dating
<https://historicengland.org.uk/advice/technical-advice/archaeological-science/scientific-dating/>

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- RCAHMW Historic Boundaries <https://rcahmw.gov.uk/mapping-the-historic-boundaries-of-wales-commotes-and-cantrefs/>
 - RCAHMW List of Historic Place Names <https://rcahmw.gov.uk/discover/list-of-historic-place-names/>
 - RCAHMW Mapping Estate Archives <https://deep-mapping-estate-archives-rcahmw.hub.arcgis.com/pages/1869-1874-ordnance-survey-county-mapping>
 - Rendlesham pottery kiln project - <https://heritagesuffolk.wordpress.com/2022/11/18/kiln-project-begins/>
 - Shaftesbury Abbey Minecraft Reconstruction <https://www.shaftesburyabbey.org.uk/events-1>
 - St Patrick's Chapel Whitesands <https://www.dyfedarchaeology.org.uk/wp/discovery/projects/st-patricks-chapel-whitesands-st-davids/>

Summary list of relevant research, in alphabetic order (for references see separate list of literature for 2017-2022):

Excavation and evaluation undertaken or published 2017-2022:

Bayvil corn-drying kiln (Comeau 2021; Parker Pearson et al 2018)

Carn Goedog (Schlee et al 2018)

Clawdd Mawr dyke, Abergwynfi (Mason 2019)

Dinas Powys (Seaman and Lane 2019; Seaman and Thomas 2020)

Dolbenmaen (Kenney and McNicol 2017)

Felindre Farchog cemetery (Casswell et al 2017)

Five Mile Lane (Gilbert et al 2019)

Fonmon (Seaman 2023)

Glanfred (Jones et al 2018)

Llanbedrgoch cemetery (Evans and Jones 2019)

Llangefni cemetery (also known as Coleg Menai and Llandrillo/Llangefni campus cemetery) (Parry 2016, 2017; Thomas 2018; Joyce 2019)

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Llangorse (Lane and Redknap 2019)

Llaniestyn cemetery (Evans and Jones 2019)

Offa's Dyke (Belford 2019; Delaney 2021; Grant 2017, 2018, 2019; Jones 2017; Logan 2019)

Parc Cybi, Holyhead (Kenney 2021)

Pillar of Eliseg (Murrieta-Flores and Williams 2017)

Rhuddgaer (Hopewell and Edwards 2017)

South Wales Gas Pipeline (Darvill et al 2020)

St Bride's cemetery (Schlee and Murphy 2018)

St Patricks Whitesands cemetery (Murphy and Hemer 2022)

Wat's Dyke (Grant 2017, 2018; Jones 2017; Logan 2019)

Wylfa (Bain 2017)

Other relevant projects:

Ancient Connections <https://ancientconnections.org>

CHERISH <http://cherishproject.eu/en/>

Corn Drying Kilns in Wales <https://doi.org/10.5284/1085018>

Manifestations of Empire: palaeoenvironmental analysis and the end of Roman Britain <https://www.canterbury.ac.uk/arts-and-humanities/school-of-humanities/archaeology/research/manifestations-of-empire.aspx>

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