

Institution: University of Cambridge		
Unit of Assessment: UoA15 Archaeology		
Title of case study: Archaeology, Development and the Public in the East of England: The Cambridge Archaeological Unit		
Period when the underpinning research was undertaken: January 2000 to December 2020		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
Christopher Evans Mark Knight Marcus Brittain Rachel Ballantyne	Director of Research Senior Project Officer Senior Project Officer Research Associate	March 1991 to present September 1995 to present June 2007 to present January 2018 to July 2020
Period when the claimed impact occurred: August 2013 to July 2020		
Is this case study continued from a case study submitted in 2014? No		
1. Summary of the impact (indicative maximum 100 words)		
<p>The Cambridge Archaeological Unit (CAU) bridges the research and commercial activities of the Department of Archaeology at the University of Cambridge. The impact of two long-term, high-profile projects is detailed here: Must Farm, where unparalleled Bronze Age archaeology has been revealed, and the West and North West Cambridge (Eddington) developments, which provide new windows onto our understanding of rural life in Roman Britain and (by excavations at Cambridge Observatory) the archaeology of astronomy. Through a strong programme of public engagement and innovative collaborations with a wide variety of stakeholders, these research projects have resulted in far-reaching impacts on education, the arts, industry and development both in East Anglia and nationally.</p>		
2. Underpinning research (indicative maximum 500 words)		
<p>CAU undertakes approximately 50 archaeological investigations annually and has been a key research arm of Cambridge's Department of Archaeology for three decades. Its research strategy is led by Executive Director Evans, elected FBA in 2018 for his contributions to archaeology. It boasts a broad portfolio of high-impact projects in eastern England. Two examples are singled out here: Must Farm (building on research at neighbouring Bradley Fen) in Whittlesey, near Peterborough, [R1,R2] and major interrelated developments in West and North West Cambridge (known as Eddington) (e.g. [R3,R4]).</p> <p>At Must Farm, Knight directs CAU fieldwork in the quarries of Forterra Building Products Ltd. A key methodological innovation of Knight's previous research at Bradley Fen was recognising that significant archaeology (beyond 'wet' votive deposits) existed within deeper peat and silt layers than was previously appreciated [R2]. This insight led to many subsequent discoveries at Must Farm. Palaeochannel investigations located nine exceptionally well-preserved logboats, several hurdle-built fish-weirs, more than 20 fish-traps and Bronze and Iron Age weaponry. Most spectacular was a Late Bronze Age settlement of wooden structures built over a slow-flowing watercourse – the Must Farm pile-dwelling settlement. In 2015 to 2016, CAU conducted meticulous excavations of the remains which, following a catastrophic fire, had collapsed into the stream. Waterlogged silts preserved structures, inorganic artefacts and delicate organics such as textiles and foodstuffs, providing a unique opportunity to reveal, in fine detail, life in Bronze Age Britain. In post-excavation analysis, led by Knight and Ballantyne, CAU is now reconstructing a Late Bronze Age community at the individual household level, and exploring its inhabitants' lifeways over its approximately one year of occupation [R1].</p>		

CAU's North West Cambridge (Eddington) Project, directed by Evans and Brittain (e.g. [R4]), entailed excavating six major Bronze Age to Roman sites between 2012 and 2019. This work built on excavations in West Cambridge led by Evans between 1994 and 2018 [R3]. Results of these interrelated projects were enhanced by advances in statistical sampling procedures and artefact density analyses developed by Evans (e.g. [R5]). With four farmsteads, a villa-estate complex and a roadside centre excavated, this research represents one of the most comprehensive landscape investigations of a Romano-British countryside. The research also contributes to the archaeology of astronomy, through excavations at the Cambridge Observatory, including the Newall telescope of 1891, for a time the most powerful instrument of its kind in the world. The Observatory was the site of much scientific research, including a meeting in 1930 between Einstein and renowned Cambridge astronomer Arthur Eddington [R6].

3. References to the research (indicative maximum of six references)

[R1] Knight, M., Ballantyne, R., Zeki, I.R., Gibson, D., 2019. The Must Farm pile-dwelling settlement, *Antiquity* 93, 645-663. <https://doi.org/10.15184/aqy.2019.38>. (Peer reviewed international journal article; winner of the Antiquity Prize 2020; REF 2 submission)

[R2] Knight, M., Brudenell, M., 2020. *Pattern and Process, Landscape Prehistories from Whittlesey Brick Pits: The King's Dyke & Bradley Fen Excavations 1998-2004*, McDonald Institute for Archaeological Research, Cambridge. ISBN 9781902937939. (Peer reviewed excavation monograph; REF 2 submission)

[R3] Evans, C., Lucas, G., 2020. *Hinterlands & Inlands: The Archaeology of West Cambridge and Roman Cambridge Revisited*, McDonald Institute for Archaeological Research, Cambridge. ISBN 9781902937892. (Peer reviewed excavation monograph; REF 2 submission)

[R4] Brittain, M., Evans, C., 2019. *The War Field Villa (Site VII) and other Phase 2 Investigations (Sites I, VI & X)* (NWC Report No. 9), Cambridge Archaeological Unit, Cambridge. <https://doi.org/10.17863/CAM.54349>. (Detailed first report on excavations of a Roman villa in the North West Cambridge development)

[R5] Evans, C., 2012. Archaeology and repeatable experiment: A comparative agenda, in: Jones, A.M., Pollard, J., Allen, M.J., Gardiner, J. (Eds.), *Image, Memory and Monumentality: Archaeological Engagements with the Material World*, Oxbow Books/The Prehistoric Society, Oxford, pp. 295-306. ISBN 9781842174951. (Invited book chapter based on major excavations at Mucking and Earith; publication available from HEI)

[R6] Evans, C., Newman, R., 2011. An 'Imperial Philosophical Machine': The archaeology of the Cambridge Observatory and early modern science, *Antiquity* 85, 1369-1384. <https://doi.org/10.1017/S0003598X00062116>. (Peer reviewed international journal article)

4. Details of the impact (indicative maximum 750 words)

CAU's impact is rooted in long-term engagement with archaeological research and stakeholders in eastern England. Developing impact is a cornerstone of the Unit's research strategy, with far-reaching contributions to education, the arts, development and industry. Must Farm and Eddington provide important examples.

1. Educational Pathways and Impacts (Must Farm)

Investigations at Must Farm in 2015 to 2016 were promoted proactively, capturing extensive press attention: television (e.g. BBC, ITV, CNN), documentaries (e.g. BBC4, PBS), radio (e.g. BBC R4) and print (e.g. *Guardian*, *New York Times*, *Washington Post*) [E1]. The project adopted an active social media policy [E2,E3]. As of July 2020, its Facebook page had 22,971 followers and a total post reach of 4,563,976. Its Twitter account had 6,792 followers and its content made 3,938,979 Impressions. Seven post-excavation videos about Must Farm's textiles have been viewed 101,662 times and attracted almost 500 comments [E3]. Must Farm's social media impact is indicated by strong viewer engagement. The number of engaged Facebook users (who

interacted with page content) was 381,292 between September 2015 and July 2020. Evaluation of 4,361 comments on Facebook posts between October 2015 and August 2016 indicates that the project inspired archaeological thinking among the general public, with followers asking informed questions and suggesting interpretations (e.g. regarding the function of artefacts) [E2].

CAU's engagement with Peterborough Museum, where the site archive will be deposited, has had important educational impacts. A Must Farm exhibition (May to September 2017) attracted 27,884 visitors, 'by far the highest average number of visitors per month' among the museum's temporary exhibitions [E4]. Evaluation-form feedback shows that visitors left informed about archaeological finds from the local area. Thanks to connections made while engaging with Cambridge University, this local museum is now supported nationally through partnerships with the British Museum and the Victoria and Albert Museum, leading to the development of major exhibitions such as *Treasures* (25 August 2018 to 6 January 2019) [E4]. Moreover, as a result of working on Must Farm materials, museum staff across all areas have undertaken professional skills development, resulting in workforce upskilling [E4].

CAU's research and impact activities have embedded knowledge of Must Farm and archaeology nationally; evidence ranges from political caricature to the site being named by Historic England (HE) as one of the top 10 archaeological discoveries of the decade (Figure 1) [E1]. Moreover, Must Farm is now included in HE's national curriculum teaching provision, with an online education pack for Key Stage 2 [E5] and a recommendation for its inclusion in Key Stage 4 (GCSE) Biology and Combined Science [E6].



Figure 1. Must Farm has propelled knowledge of archaeology into British daily life. Left: The Daily Telegraph (13 January 2016) deploys it to portray Jeremy Corbyn as a voice from the past [E1]; Right: CAU staff pictured in coverage of Historic England's top 10 finds of the decade (BBC News, 28 December 2019) [E1].

The project's impact is widely recognised. In 2016, Must Farm was awarded Best Archaeological Discovery at the British Archaeological Awards. In 2017, it was named Rescue Project of the Year, and Mark Knight Archaeologist of the Year, by *Current Archaeology*, a popular magazine with 45,000 readers [E1]. In May 2020, a project publication [R1] received the Antiquity prize [E1].

2. Contributions to the Arts (Must Farm and Eddington)

Must Farm and Eddington generated new artistic outputs, directions and career opportunities for artists. With CAU collaboration, artist Laura Wilson 'developed new artworks on a far more ambitious scale than I have ever attempted before' [E7]. In 2017, she collaborated with CAU in an Arts Council-funded project having Must Farm as focus. Wilson received GBP25,000 towards the performance piece and film *Deepening*, performed at the Must Farm quarry and shown at Norwich Castle Museum and Art Gallery (from 18th January 2020 until COVID lockdown). 'Working with CAU, hearing about and experiencing their research firsthand, has changed the way in which I think about landscapes ... [and] pushed my work in new directions which I could

not have imagined two years ago [E7]. Collaboration on *Deepening* 'led to new professional opportunities' [E7], including commissions for the Usher Gallery and The Collection (Lincoln).

The arts practice *Somewhere* were artists in residence with CAU at the Eddington development (May 2013 to April 2014). Work with CAU was a 'very positive collaboration and experience' resulting in a public art project at Eddington '*engaging with the transient nature of the site and this fleeting, unique archaeological access to the past*' [E8]. In May and June of 2014, with 60 volunteers, they created an on-site 12.5 scale cob model of the development (Figure 2). Volunteers included individuals supported by Inclusion Drug and Alcohol Service, Riverside English Churches Housing Group and Cambridge City Council Streetchamps. All responded that the experience was overwhelmingly positive (e.g. '*life changing for me*') [E8].

Since February 2014, *Somewhere* have run a follow-on project, *Prospection*, documenting '*the evolution of the new Eddington community*'; it creates an annual 'finds box' of records, deposited with Cambridgeshire Archives [E8]. In September 2014, Kettle's Yard Gallery invited a major *Somewhere* exhibition, including work with CAU. Inspired by their archaeological experiences, the artists have since collaborated with the British Museum on its project *ResearchSpace* and created new artworks by distilling soil samples – leading to a touring show for the UN Year of Soil and artistic fellowships with the National Trust and UCL [E8].



Figure 2. The CAU-inspired cob model of Eddington, by the arts practice *Somewhere* and 60 volunteers (images: Nina Pope) [E8].

3. Contributions to Development and Industry (Must Farm and Eddington)

In January 2020, a masterplan for Whittlesey's development was released by Fenland District Council and Cambridgeshire and Peterborough Combined Authority. Must Farm is recognised as '*a precious town asset*' and '*a majority of people felt that Bronze Age heritage should be promoted as a tourist attraction*' [E9]. Of the masterplan's eight recommendations, two are for a new heritage centre and a heritage walk. Following approval of the Market Towns Programme Investment Prospectus in June 2020, Whittlesey is now invited to bid for funding from the Combined Authority for these initiatives [E9].

CAU's work with Forterra at Must Farm has led to changes in quarrying. With 2000 staff at 24 sites, Forterra is among the UK's largest heavy buildings products manufacturers. The Head of Land & Mineral Resources [E10] notes that it now acts with '*enhanced awareness and foresight during our quarrying*', recognising '*the enormous potential of this archaeological resource*'. Further, '*CAU's inclusion of "outreach" ... and wider community involvement via social media, as part of the research design, has provided Forterra with an improved insight into the interest and importance of local history to the communities in which it is found*', causing a '*change of perspective in our organization*'. Forterra is '*now much more aware of the potential of archaeology in helping us be a "good neighbour" to the communities in which we operate*'.

At Eddington, CAU's research '*informed and inspired*' the new 150 hectare sustainable community of 3,000 homes, accommodation for 2,000 students, a school, a community centre,

shops, a care village and sports facilities; 'knowledge of the underlying archaeology supplied by CAU has been used to inform aspects of the built form and layout on the site', such as with the Roman villa, the incorporation of which is being planned [E11]. 'Moreover, CAU's outreach work ... has been an important mechanism for community engagement with the whole project'. Drawing on the Unit's research on the Cambridge Observatory, 'even the name of the new community, Eddington, was suggested by Christopher Evans' [E11].

5. Sources to corroborate the impact (indicative maximum of 10 references)

[E1] Media coverage (selected): (BBC) Bronze Age Houses Uncovered in Cambridgeshire are Britain's 'Pompeii'; (ITV) Britain's Version of Pompeii Discovered in Cambridgeshire; (CNN) History Made: In an Astonishing Bronze Age Discovery a 3000-year-old Community has been Unearthed; (BBC Four documentary) Britain's Pompeii: A Village Lost in Time; (PBS documentary) After Stonehenge: Discovery of the Must Farm, the 'British Pompeii'; (BBC Radio 4) Today; (BBC Radio 4) Start the Week: Lost and Found: Ancient Egypt to Modern Art; (BBC Radio 4) Costing the Earth: Digging Climate Change; (BBC Radio 4) Open Country: Return to the Fens; (*Guardian*) Bronze Age Site in Cambridgeshire Revealed; (*New York Times*) Archaeologists in England Tackle Mystery of Prehistoric Village's Rapid Demise; (*Washington Post*) A Bronze Age Fire Yields Unparalleled Artifacts; (BBC) Historic England: 10 English Archaeological Finds of the Decade; (*Daily Telegraph*) Prehistoric Ruin Found; (British Archaeological Awards) Best Archaeological Discovery; (*Current Archaeology*) Mark Knight Wins Current Archaeology's Prestigious Archaeologist of the Year Award; (*Antiquity*) Prize Winners

[E2] Publication: Wakefield, C., 2020. Digital public archaeology at Must Farm: A critical assessment of social media use for archaeological engagement, *Internet Archaeology* 55. <https://doi.org/10.11141/ia.55.9>

[E3] Social media statistics: Must Farm Digital Content Outreach Officer, Cambridge Archaeological Unit (October 2015 to August 2017), and PhD Student in Digital Public Archaeology, University of York (October 2019 to present)

[E4] Testimonial: Director of Operations, Vivacity Culture and Leisure, Peterborough

[E5] Website: Historic England. Must Farm: What was Life Like in Bronze Age Cambridgeshire? (Teaching activities for Key Stage 2). <https://historicengland.org.uk/services-skills/education/teaching-activities/must-farm-life-in-bronze-age-cambridgeshire/>

[E6] Report: Smith, A., Pye, K.C., 2016. *Heritage science resources for the National Curriculum in England: A review of science programmes of study for Key Stages 3, 4 and 5*, Pye Tait Consulting/Historic England, Harrogate/Portsmouth. See pages 39 and 47. <https://historicengland.org.uk/images-books/publications/heritage-science-resources-for-national-curriculum-england/>.

[E7] Testimonial: Artist (Creator of the Performance Piece and Film *Deepening*).

[E8] (i) Testimonial: Co-director, *Somewhere* (Arts Practice); (ii) Report: 2014. *Tomorrow, today: Cob coordinator's report*.

[E9] (i) Website: Growing Fenland <https://www.fenland.gov.uk/growingfenland/>; (ii) Report: Metro Dynamics, 2020. *Growing Fenland: Whittlesey – A market town fit for the future, final report*, Fenland District Council, March, Cambs. https://www.fenland.gov.uk/media/16893/Growing-Fenland-Whittlesey-Final-Report/pdf/Growing_Fenland_-_Whittlesey_Final_Report.pdf?m=637272072717070000

[E10] Testimonial: Head of Land & Mineral Resources, Forterra Building Products Ltd.

[E11] Testimonial: Project Director, North West Cambridge (Eddington) Development