

The 'Real-Time' Team

The future of fieldwork

What does the future of field archaeology look like?
Lisa Westcott Wilkins, co-founder of crowdfunded and crowdsourced archaeological enterprise 'DigVentures' believes her team has some of the answers.

BELOW Overlooking one of the DigVentures trenches at Leiston Abbey in Suffolk, with the monastery's ruins visible in the background. The project is pioneering a new digital recording system, which can be used on mobile devices such as iPads (**INSET**).



ALL IMAGES: DigVentures, unless otherwise stated.

It was a scorching hot afternoon in July 2014 at Leiston Abbey, in coastal Suffolk, when we found the gold object. Very delicate, rather beautiful and clearly out of place on an austere medieval monastic site, our excavation team was stumped. What was it? How did it get here? What was its potential date? Given the location of the trench where the object was found, the answers might have major implications; with just a few days left of digging, we needed answers fast.

Rather than having to wait months for a specialist report, we had our answers by the end of the day: it is a gold Dorset Knob button, from a ladies' riding habit, from the Georgian period (1714-1830) and very similar to examples currently on display at the Victoria & Albert Museum (you can view it here: <http://ow.ly/J5y0v>)

A Digital Dig

How did we do it? The answer lies with the launch of our new online system, called 'Digital Dig Team'. As part of this digital system, the object was first recorded on the mobile phone of the volunteer who found it. We then uploaded a 3D model online within hours of it coming out of the ground, and broadcast this image, along with a link to the primary data record, across our social networks as well as those of our wider volunteer and specialist team.

At the heart of Digital Dig Team is the digital archaeological recording system but, more than that, Digital Dig Team refers to, and is the vehicle for facilitating, the entire way that we work – embracing digital technology and mobilising its potential for funding, fieldwork, community outreach, and publication.

Let's take the project at Leiston Abbey as an example. Previous archaeological works on the site were minimal; with no comprehensive publication or accessioned archive to refer to, numerous important questions about the site were unanswered.

For us, this meant a wide-open playing field with a tremendous amount of archaeology to tackle. There were also other considerations; Leiston Abbey is located in an area that faces deprivation as well as a lack of community resources. How could we use this chance to help



ABOVE A gold Dorset Knob button, dating from the Georgian period (1714-1830), which was found at Leiston Abbey. You can see its record on the Digital Dig Team website at <http://ow.ly/J5y0v>

Pro Corda (the site's guardians) grow the site's accessibility and usefulness? Our research design had to encompass not only research aims and statutory responsibilities, but also core principles including conservation, participation, and education.

The challenges didn't end there: we also had to find a way to fund it, gather a team to dig it, and ensure that everything we discovered would be easily available both to inform future management as well as provide a resource for

the local community. It was clear that we would have to design a new way of working that could satisfy all these requirements: and so, with the enthusiastic and generous help of the Heritage Lottery Fund East of England office, Digital Dig Team was born.

We believe that Digital Dig Team is the biggest innovation in the way that field archaeology is done since the invention of the context sheet; and, using the system encourages us to reach out to other new initiatives as well, including 3D photogrammetry for structures as well as artefacts, using drones for aerial photography, and 3D printing of artefacts – all underpinned by the participation of our wider volunteer team, and the born digital site archive.

Some of these technologies, such as drones, have been in use for archaeology for years. But there are very few projects (if any – we'd be interested to hear about them, if so!) where all of these new tools are brought together on one site, ➔

BELOW This image, showing the abbey precinct, with the DigVentures trenches visible top left, and the excavation team's campsite top right, was taken using Aerial-Cam's quadcopter as part of the project.



PHOTO: Adam Stanford, Aerial-Cam (www.aerial-cam.co.uk)



where volunteers are hands-on with every aspect of the project including post-excavation analysis, and – rather than being written up into a report that will disappear into grey literature – where their contributions are visible, and viewable, in an open-access online site archive.

The nuts and bolts

Digital Dig Team is the world's first mobile digital archaeological recording and community management system for archaeology and heritage to also allow instant access to data online. Entered straight from the trenches on iPads, tablets and smartphones, archaeological data is instantly accessible via open-access on a dedicated website.

The system is based on the open-access Archaeological Recording Kit database developed by our tech partner L-P Archaeology. Using its NASA-level technology and digital

expertise, we built our own relational, searchable database overlaid by a suite of new functions, as well as a user-friendly interface aimed expressly at enabling Digital Dig Team to be used on community projects by non-expert archaeologists.

At present, the system is composed of three parts: a robust digital recording and storage system for primary archaeological data; a crowdfunding platform where anyone can fund projects and become a team member; and a media broadcasting hub including live action from the dig, instant communication with the dig team, videos, news updates, important announcements, and social network updates.

The crowdfunding and engagement aspects of Digital Dig Team are perhaps the most unusual in terms of what might be considered 'normal' archaeological fieldwork considerations, however these capabilities are our direct response to the challenges that face archaeology and the wider heritage sector. Worldwide austerity is changing everything about actually doing archaeology; technology is enabling creative responses and exciting collaborative possibilities. Where are we – and where should we be – in this brave new digital world?

A digi revolution

Most of us either have a computer in our pocket, or in our home – or both – and these have become our tools for constant connection and convenience. For archaeology, this should mean time-saving, financially efficient, streamlined yet diverse and inclusive new ways of working – as well as access to an unlimited potential audience, and the capability to involve them in our work.

ABOVE All of the project's volunteer diggers were given digital training as well as archaeological field skills instruction. Each record created by the volunteers is visible on their Team Profile at <http://digventures.com/leiston-abbey/team>. The system is designed for use on all mobile devices.

RIGHT Some of the finds unearthed by the team at Leiston Abbey: the skeleton of a huge dog (dubbed 'Black Shuck' by the popular press), which was found in 2013 near the medieval kitchens, and one of the most recent season's star finds: a medieval bone knife handle, which was recorded in 3D photogrammetry within hours of its excavation and initial cleaning, and can be seen online at <http://ow.ly/J5y6Q>



When *Time Team* was cancelled three years ago, it wasn't because people lost interest in archaeology – it was cancelled because television has been changed completely by new technology and on-demand services such as Smart TV, Netflix, YouTube, and mobile viewing devices. Television, and people's viewing habits, moved on and *Time Team* could not move with it. But how then do we feed the proven public appetite for archaeological content? At DigVentures, we joke that we've built the 'real-time' team, by employing the same principles and commitment to immersive storytelling that made *Time Team* such a fantastic public archaeology project – but reinvented for the digital age of immediate accessibility.

Technology moves incredibly quickly, and what was new last year is old news today. We're already working with several pilot projects in the UK, Europe and the USA to further refine and roll out bespoke versions of Digital Dig Team suited to their specifications – and we're having a great time figuring out ways to make it work in other languages and cultures, and for different archaeological processes.

What's next for Digital Dig Team?

But what has it all meant for our project at Leiston Abbey? The site's profile is growing; in the two years we've been working there, we've built up a strong local, regional, national and international community of crowdfunded participants, and brought thousands of visitors to the abbey to watch us work. Anyone that can't come and dig

Saints and secrets at Leiston Abbey

Nearly 800 years old, the ruins of Leiston Abbey are more than just a prime example of monastic architecture. As one of the best-preserved examples of a Premonstratensian abbey in the United Kingdom, they are a window into the life and economy of a little-known medieval community.

Established at Minsmere in 1182 on wet, swampy ground, the site was inundated and catastrophically weakened in 1363. The abbey was dismantled and moved, stone by stone, five miles down the road to its current site at Leiston. Following the Dissolution in 1535, the site became a farm, with various structures added in the Tudor and Georgian periods. The ruined abbey and surrounding farm were purchased in 1918 as a religious retreat.

English Heritage gained control of the ruins in 1964, and the Pro Corda Trust, a registered charity and school devoted to nurturing young musical talent through ensemble and performance training, acquired the rest of the site in 1977. Pro Corda (www.procorda.com) continues to manage Leiston Abbey, which is a Scheduled Ancient Monument, thoughtfully stewarding and using the existing facilities to deliver its courses and performances. Today, the standing remains are a living, breathing building whose walls bear the signs of a remarkable history.

The site will be directly impacted in coming years by the looming infrastructural development of the Sizewell C nuclear project just a few miles down the coast. As such, in early 2013 DigVentures was invited by Pro Corda to collaborate on a multi-year project designed to better understand the heritage of Leiston Abbey.



ABOVE Digital digging is hungry work...

with us can watch all the action on the Leiston Abbey Digital Dig Team website, which has grown a pretty impressive audience for archaeology, reaching close to 50,000 unique views per month.

We've made a metrically accurate, 3D photographic model of the entire abbey structure (equivalent to a Level 4 English Heritage Buildings Survey) with Adam Stanford of Aerial-Cam, assisted by one of our volunteers, Hugh Fiske, using a combination of aerial mast photography and drone footage. This year, Adam will be bringing one of the newest quadcopters available, the DJI Inspire 1, to do flyovers in search of other lost abbey structures – including the original gatehouse. This tech is a fraction of the cost of traditional aerial photography, and having it embedded in our team means that we have the ability to locate the gatehouse on one day, and be excavating it the next. ➡



ABOVE During the course of the DigVentures excavation, the team created a 3D model of the abbey's ruins with the help of archaeological photographer Adam Stanford, and one of the project volunteers, Hugh Fiske.

We've not only tested previous assumptions about the site, we've also discovered a previously unknown Bronze Age phase, as well as located (via drone footage) what may be the lost infirmary building that would have been so important to the monastic community. Everything we've discovered thus far is recorded in Digital Dig Team, and this season's work will be made available online the same way.

We're collaborating with English Heritage and Pro Corda to produce a dynamic 3D visualisation video, with a soundtrack composed, performed and produced by Pro Corda and its students. These successes have shown the potential of incorporating the heritage on offer at Leiston Abbey into the rich musical life at its school (see

SOURCE

Lisa Westcott Wilkins is the Founder and Managing Director of DigVentures. DigVentures is a Chartered Institute for Archaeologists Registered Organisation, and the first-ever ClfA-accredited Field School in the UK.

BELOW Just a few miles from the coast, Leiston Abbey's early history was inexorably tied to extreme weather. What would the monks have made of this storm?

box), and how archaeology and the arts can, and should, converge as compatible activities in a holistic approach to heritage-led regeneration.

And that's only the beginning – with at least three more years to go at Leiston, ideas are taking shape to investigate the wider landscape context of the abbey, possibly even including the site of its founding. And big questions still remain, including the mysterious lack of evidence for industrial activity on the site. How were the Premonstratensians supporting themselves? Early research is turning up surprising evidence for piracy, nefarious economic tactics and more than a little competition with their neighbours at Dunwich. There's plenty for us to be getting on with, and we look forward to welcoming even more people on board the Digital Dig Team in seasons to come. See you on site! [@](#)

FURTHER INFORMATION

Want to dig at Leiston? The team is digging from 13-26 July 2015 (see our Digs Special on p.42), and to be a part the crowdfunding campaign please see www.digventures.com. To discuss Digital Dig Team, please email lisa@digventures.com
Read more: Leiston Abbey Interim Archaeological Assessment Report and Updated Project Design, DigVentures 2013 www.digventures.com/leiston-abbey/reports

ACKNOWLEDGEMENTS

Digital Dig Team was supported by the Heritage Lottery Fund. The team would like to thank its tech partners, L-P Archaeology and The Pixel Parlour; English Heritage for facilitating the work on site, and all of the people who supported the Leiston Abbey project as funders and volunteers.



PHOTO: Adam Stanford, Aerial-Cam (www.aerial-cam.co.uk)