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Discovering England's Burial Spaces: Supporting community heritage

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Discovering England's Burial Spaces: Supporting community heritage

Discovering England's Burial Spaces (DEBS) was a two-year project to develop new tools and resources in support of community-led recording of the above-ground archaeology and tangible heritage of burial spaces. This article focuses on the role community groups had in the process of designing and building parts of the new surveying workflow, paying particular attention to the design of the recording system, the role of the digital tools in supporting surveys, and the barriers that might prevent community groups from archiving their research. While the focus is very much on these issues as they played out within the DEBS project itself, the challenges encountered and lessons learnt have implications for Citizen Science projects more broadly, and for researchers and heritage professionals developing new methodologies and tools.

Keywords: Gravestones; graveyard; DEBS; cemetery survey; digital heritage; community groups; data standardization; archiving

Introduction

Discovering England's Burial Spaces (DEBS) was a two-year project to develop new tools and resources in support of community-led recording of the above-ground archaeology and tangible heritage of burial spaces. The term 'burial spaces' refers to churchyards, cemeteries and postmedieval burial grounds of all denominations, and the recording was intended to include details of the architecture, design of memorials and grave furniture, and the landscape and layout of the burial space. Burial spaces are important heritage sites and shared community places; they frequently preserve important natural habitats and historic landscapes within urban areas and provide a resource for community history, biography and story-telling (Mytum 2004a). They are often of great interest to local community groups, who enjoy looking after their burial spaces and researching the people that have been interred or cremated there.

Unfortunately, local burial space research is often unsystematic, with different groups applying different survey methodologies and taking conflicting approaches to documentation and dissemination. As archaeologists and heritage professionals, we are accustomed to the idea of ‘preservation by record’, and the need for those records to be durable, comparable and accessible in perpetuity. Individual community groups can have quite different objectives, and conduct surveys or make graveyard plans for a variety of different reasons. More often than not, their research tends to focus on the people documented (on memorials and in burial records) as opposed to the material forms of commemoration. Furthermore, the datasets generated by these groups frequently remain in private possession as local archives and Historic Environment Records generally lack the resources to accession and curate them (Mytum et al. 2015). The lack of standardisation can make it difficult to aggregate data across multiple projects, and it can be hard to discover which burial spaces have previously been surveyed, potentially leading to duplication of effort. The gradual transition from paper to digital datasets could make surveys more amenable to research, but digital data improperly curated can be even more vulnerable to loss.

Funded by Historic England and supported by the University of York’s Digital Creativity Labs (funded by the Engineering and Physical Sciences Research Council), DEBS sought to address these issues. Working with a wide array of stakeholder organisations and community groups, the project created a new standardised methodology and workflow for surveying burial spaces, focused primarily on describing the material form of memorials. Additional outputs included a new burial spaces

module for the OASIS online reporting system, a national framework which is used to notify local and national heritage bodies of ongoing archaeology projects, and the new Burial Spaces Research Database (BSRD) (managed by the Archaeology Data Service) to store survey results and facilitate research that transcends individual people or isolated sites. The project also produced a prototype mobile application, data entry tools, website, guidance documents and video tutorials to further support groups interested in undertaking their own surveys. The result is a complete DEBS workflow, which community groups can follow from forming the seed of a project idea to surveying in the field, and culminating in archiving their research so that it is accessible for years to come.

This article focuses on the role community groups had in the process of designing and building parts of the workflow, paying particular attention to the design of the recording system, the role of the digital tools in supporting surveys, and the barriers that could prevent community groups from archiving their research. While the focus is very much on these issues as they played out within the DEBS project itself, the challenges encountered and lessons learnt have implications for Citizen Science projects more broadly, and for researchers and heritage professionals developing new methodologies and tools.

Graveyards as Heritage

Burial spaces are important heritage resources, of interest to a wide variety of stakeholders, but are often an overlooked aspect of local archaeology (English Heritage 2007). In particular, they are of high symbolic, emotional and cultural value to local

communities, as repositories of and windows to local and family histories. The high level of interest and attachment has been partly facilitated by the increasing use of permanent stone memorials from the eighteenth and nineteenth centuries onwards, which led to a breakdown in the cyclical re-use of burial spaces (Tarlow 1999; Mytum 2006). This has combined with the growing popularity of cremations to mean that use of burial space has declined (cf. The Cremation Society of Great Britain 2014; Ministry of Justice 2007), leading to the heritagization of such spaces: burial spaces are interesting because they are old; they shed light on family history, social history, histories of places, changes in religious practice and attitudes towards death (Mytum 2000; Tarlow 1999; Rugg 2015). However, declining use and increasing age also attract risks, as outlined in the National Heritage Protection Plan (NHPP) part 4D2 (English Heritage 2013: 20):

Extant or visible historic burial grounds and other commemorative locales, significant both at a personal and historic level for local and faith communities, are under threat from vandalism, neglect and development pressure. Their full heritage significance (monumental, design and archaeological heritage values) is often poorly understood, especially for the period after 1500. Knowledge of earlier cemeteries is much better as a result of archaeological investigations, but the basis for protection lies primarily through policy (Ministry of Justice licences, church Faculties and Pastoral Measures etc.), and a clearer articulation of significance is required.

It is important that we develop records of our burial spaces before memorials become too weathered and eroded to read, and before they get moved or removed as part of efforts to make monuments safe or re-purpose burial spaces. Fortunately, recording burial spaces is a popular activity for community groups, but Mytum et al.'s (2015)

Developing Local Assessment Toolkits – a scoping study to look at developing a standard model for recording cemeteries and burial grounds, conducted as part of the NHPP, identified a number of challenges. For example:

The absence of a readily available, easy-to-use standard model for recording items within cemeteries and burial grounds is widely felt among those with a professional and research interest in the subject and volunteers interested in local sites.

There is also a need for a national approach to data collection and data sharing (Mytum et al. 2015: 6):

The results from this survey reveal much lack of confidence, or independent, ad hoc, decision-making often leading to private collections of data not made available to anyone outside the group, and rarely archived.”

DEBS aimed to respond to these challenges by establishing a national recording project and system, developing recording and archiving protocols, and creating a training programme (including training materials, skills development through burial space recording, and the redesign of the Council for British Archaeology (CBA) Practical Handbook, *Recording and Analysing Graveyards* (Mytum 2000). The project sought to interconnect data on burial spaces collected by national, regional and local-level heritage-related bodies, such as through the OASIS reporting system, local authority Historic Environment Records and the Church Heritage Record. There was also a need to link with other aspects of graveyard management and conservation. For example, the Beautiful Burial Grounds project, run by our collaborator Caring for God’s Acre - a charity committed to the conservation of burial sites - encourages biodiversity surveys of burial grounds, which are then fed into the National Biodiversity Atlas. Joining up

these different databases could support a more holistic understanding of burial spaces (cf. Ray et al. 2014), leading to complementary management plans and actions.

Community Engagement: Designing the recording system

Two core aims of DEBS were to address the lack of standardisation in community graveyard studies, and promote research focused on the material forms of memorials, as opposed to simply documenting inscriptions and the people that they commemorate. These demanded a recording system that could dovetail seamlessly with new digital tools for field recording, data entry, archiving and research. To encourage standardisation and improve compatibility with previous surveys, the recording system developed during DEBS is based on Mytum's (2000) method of classifying monument types. This was adapted in consultation with members of six community groups - each with different levels of experience, working at differing burial grounds, and undertaking different kinds of work. Table 1 details the different community groups and their interest in DEBS. During a series of workshops, site visits, survey days, and via email correspondence, these community groups also guided decision making relating to the archive database, and played an important role in user testing DEBS resources (Figure 1). These interventions were documented informally using notes, flipchart sheets and audio recordings, and are recollected throughout the article below.

[Insert Table 1 near here]

[Figure 1]

Mytum's (2000) recording system was designed to encourage the surveyor to examine

the material form of grave monuments, and the DEBS system builds on this. That means, in addition to a basic set of measurements and an assessment as to the year of the memorial's erection, the surveyor is asked to record the materials used in its construction, the presence of tooling marks, the shape of the memorial and whether it incorporates external features, such as kerb stones or gravel infill, and the shape of carved features, like text panels. Symbolism and decoration are also important, as recorded via the types of decorative motifs and text styles employed. To support graveyard management, the DEBS system also involves a simple assessment of condition, both of the inscription and the memorial as a whole. The DEBS guidance inducts surveyors into a system of numeric codes, which are used to describe particular features or characteristics of memorials. For example, a memorial might be assigned the code 4112 for its type, which denotes a headstone with a round top (41**), that has indented sides (**1*) and quarter-circular shoulders (**2). This method reduces the need for making extensive handwritten observations in the field, and helps to standardise descriptions - a key requirement of the project.

Our community groups' reactions to the recording system were mixed. One participant in particular thought that community groups would be able to learn the system quickly, albeit with some training: "This is absolutely brilliant. Anybody with any experience could easily fill this out". However, the question of training came up several times, as both our trial recording sessions involved extensive tuition from Mytum (Figure 2). There were concerns that without his experience, knowledge and enthusiasm to draw from, groups would struggle to get to grips with the complexity of the process. This was underlined when one participant questioned what was meant by 'orientation' and how it

should be ascertained. This was a useful reminder that processes, techniques and concepts familiar to trained archaeologists (or indeed experienced amateurs) might not necessarily be familiar to everyone interested in surveying burial spaces.

Participants in our user testing also raised concerns about the code-based recording system itself. Some pointed out that it was hard to visualise memorials based on the codes, and that errors were harder to spot within a numeric system. Moreover, the list of codes to either memorise or carry into the field is itself lengthy - the system allows for nearly 3000 possible memorial types. Our community groups questioned this complexity on the basis that, while the development of a controlled vocabulary of description will help standardise classification, most users (whether they are supplying data or searching the online database) are not likely to be familiar with a sizeable and somewhat arbitrary specialist vocabulary. Mytum's (2000) system for recording memorials addressed the question of exceptional variation by allowing for 'local codes', which can be created to describe monument forms and detailing that is locally and regionally important, but not accounted for in the national guidance (Mytum 1999, 2004b). However, accommodating local codes within an otherwise standardised national recording system is a significant challenge, and the frustratingly insufficient solution that has been adopted for the time being is to describe rare monument forms only in very broad terms (simply as a 'headstone', code 4000, for example).

[Figure 2]

The involvement of community groups in the design and testing of the new recording

system resulted in numerous material changes. For example, a keen interest in stone masons amongst one of our community groups led to several fields being incorporated within the new online database that were dedicated to the subject. There were also discussions about how best to record the date of erection - i.e. as a single year or range of years - and whether new fields should be added to accommodate memorials clustered in contiguous plots. However, whilst it is true to say that community views and input were sought at various stages throughout the project, and changes made as a result, these could only occur within the constraints of the original decision to build upon and adapt Mytum's method, as described in his earlier (2000) CBA-published handbook. An alternative design approach might have yielded different results. For example, co-design is a design methodology or ethos in which all the participants have a broadly equal potential to guide the creative process, disrupting the more common hierarchical relationship between designer and client. A co-design approach could have employed broader parameters from the start, using Mytum's system more as a starting point than a model for DEBS tools and resources, and resulting in a system that better responds to the needs of community groups. Such an approach could, however, have introduced a degree of complexity to the recording system that would have diminished the likelihood of generating the kind of consistent standardised survey data that has been shown to be valuable in studies of regional trends in Pembrokeshire (Mytum 2002), and ensures searchability and comparability within the new Burial Spaces Research Database.

The experiences documented here raise a general point about the tension between, on one hand, processes and procedures that enable and reflect diversity, and the interests of multiple groups, and, on the other hand, approaches that encourage standardisation at

the expense of flexibility. Whatever the subject matter, when designing for community groups project teams will need to think carefully about what their collaborative process aims to achieve - a usable universal resource, or an exceptionally well tailored product for a smaller audience. While the choice of design method does not preclude either of these outcomes (and more), some methods will be more suited than others.

Digitally-assisted surveying

At its outset, the DEBS project envisaged the creation of a mobile application to aid surveying in the field. Part of the reasoning for the mobile app was to address some of the potential problems of paper recording, including the complexity of the code system. Other benefits include basic data validation to ensure standardisation and, potentially, a simplified submission process, reducing the need for dedicated human support. Initially, the app was intended to build upon existing open source solutions, such as FAIMS (Ballsun-Stanton et al. 2018) and Cemetery Surveyor (Université du Luxembourg 2020). However, it was later decided that a bespoke solution, designed around the recording system, would work best. With that in mind, a finished application would:

- Enable in-field recording, including in areas without mobile reception.
- Support multiple users and devices.
- Retain a degree of flexibility in terms of what groups prefer to record.
- Walk users through Mytum's code system by incorporating a 'memorial identifier' function.
- Store and export data in a form that would allow easy ingest into the new online

Burial Spaces Research Database - an online, publicly accessible and searchable archive of survey results, created as part of the DEBS project.

The resulting prototype application runs on Android mobile phones (Figure 3). Within the application, users can set up new sites and surveys, they can record basic characteristics of monuments, and the data is stored on a central server, ensuring multiple devices can be used for a single survey. The data is ordered to reflect the schema of the Burial Spaces Research Database. Recording is supported by the 'memorial identifier', which presents users with images organised within a logic tree. As users select images based on the memorial that they are trying to identify, they work through the logic tree, resulting in the app displaying the appropriate corresponding code to be recorded either digitally or on paper forms. It was not envisaged or expected that the prototype produced during the project would be suitable for release to the general public. Consequently, missing in this iteration of the application were user management and data validation functions, data entry fields that are fully customised for their purpose, and a completed user interface with high quality graphic design.

[Figure 3]

Evaluation of the mobile application was undoubtedly impacted by differing levels of digital literacy. While some quickly got used to the interface, others struggled to manipulate the device in the correct manner. This led to questions as to whether the application was truly an aid or, for some, a hindrance. It was pointed out that the likely demographic profile of community heritage groups, generally skewing towards the

older generation, means that few would want to use the application in the field: “you're not going to get 12 people that are app savvy.” To emphasise this, a number of participants regarded paper recording as the quicker method, partly because they felt hindered by the application's user interface, which only imperfectly mirrored the traditional paper recording forms. For example, on the paper forms the inscription is recorded as it is written, using annotations to highlight particular characteristics or changes in typeface. This is not possible within the mobile application, and nor can the new Burial Spaces Research Database accommodate such annotations.

In the ensuing discussion with the community groups, there was a growing recognition that digital working could and, arguably, should facilitate new ways of working, rather than simply providing a digital substitute for an analogue method. For example, was descriptive transcription of the inscription necessary if the plain text of the wording was accompanied by a digital photographic record of the memorial? As one person noted, there is potential value in using the phone's camera to create an instant visual record. Furthermore, it was noted that using the app could remove an additional desk-based data entry step, which might make the application workflow more time efficient overall, and, more generally, help make burial space surveys more attractive to a new, younger audience. Whilst the weight of opinion within the community groups appeared to side with rejecting the mobile application as a means of replacing paper-based recording, participants were less negative about the role a mobile application could play in *supporting* paper recording - a digital, fully searchable version of the DEBS guidance and code sheets were considered useful. Likewise, were it to be developed more fully, some participants saw the possibilities of the ‘memorial identifier’ feature - an image-

based identification helper, which guides users through a ‘tree’ of options, resulting in the full numeric code of the identified monument type being displayed (Figure 4).

[Figure 4]

Here again, the members of our community groups played an important role in prompting further thoughts amongst the academic team: What might have been possible if an entirely different approach had been taken to the design of the application? Could the technology afford an entirely new approach to graveyard recording?

Digitisation and archiving

With the mobile application only reaching the prototype stage, and with lukewarm feedback from participants in community groups, it was important to develop a way of linking up the newly designed recording system with the new Burial Spaces Research Database. Created as part of DEBS and managed by the Archaeology Data Service, the database is intended to act as a publicly accessible national repository for burial space research (Figure 5). Designed in tandem with the recording system, it is hoped that the database will enable new studies on how commemoration has changed over time and space (Pillatt et al. 2020). The database contains fields that directly map to the recording system outlined above, and it also stores a range of metadata relating to each survey - the individual or group undertaking the survey, site names and locations, the religious denomination of each burial space, OSGB grid references, and project start and end dates. As part of the ongoing upgrade (OASIS 2019) of the OASIS system for reporting investigative work to regional and national heritage bodies (OASIS 2016), the DEBS

project has developed a new burial space module for reporting graveyard surveys. Consequently, there is a matching OASIS ID field within the database, which will also help support cross-platform linkages between, for example, the Church Heritage Record (Church of England 2020) and the National Biodiversity Network Atlas (National Biodiversity Network 2020).

[Figure 5]

It was necessary to develop a new system for converting survey data recorded on paper pro forma into a structure and form that could easily be ingested into the database - if community groups are not going to use a mobile application for recording, then this represents the key digitisation (data entry) step within the DEBS workflow. A structured digitisation process supports the aim of greater standardisation of datasets, and helps to keep archive costs down by reducing the amount of time digital archivists at the ADS need to spend supporting accessions. Feedback from our community groups was essential in developing this process, both during its design and in an evaluation workshop.

An initial attempt to support digitisation was trialled using Qualtrics, a third party online survey platform (Qualtrics 2020). Within one Qualtrics survey, users were asked questions about their site and burial space survey before being directed to a different Qualtrics survey, where they answered questions about each memorial. Participants quickly found numerous problems with this system. Some of these could be easily

addressed, such as ensuring questions on-screen precisely matched fields on the recording forms, or by enhancing the contrast of the text. Other issues were more pernicious. For example, while Qualtrics offers a sophisticated question logic branching system that helps tailor surveys in response to the data being recorded, users cannot go back across branches, making it impossible to correct errors earlier in the digitisation process. An attempt to address this problem using a Google Sheets spreadsheet was deemed wholly insufficient, with complaints that it was confusing and technically unreliable. Despite these problems, there was a general feeling that a form-based data entry system could be useful - features like drop-down menus and explanations of fields were recognised as helpful in making the process easier to understand and for limiting errors. One participant in our user testing argued that spreadsheets can require fairly developed digital skills, and that it should not be assumed that they are easy to use. Indeed, when asked directly, members of our feedback group were split as to whether they would prefer a spreadsheet or form for data entry.

As a result of the initial testing of Qualtrics, a new system was built. In this system, users now have the option of working directly into spreadsheets if they feel comfortable doing so, or they can use a more sophisticated online form system, using the Google Apps platform, which walks users through the process of digitisation. In both methods, users have full control of the data they submit such that they can edit their inputs to correct errors, and a complex 'code breaking' spreadsheet automatically converts numeric codes employed in the field into accompanying text descriptions, which are essential for searching the online database. These text descriptions, coupled with direct mapping from the online guidance, to questions on the forms, to the associated fields

within the database, ensure that the work of the digital archivists is kept to a minimum. While the system was not designed for surveying in the field, the Google Forms display well on mobile devices, and so they could be used for that purpose, allowing users to dispense with paper forms altogether should they wish to. Although this system is newly launched, early anecdotal feedback is positive, with one user describing the online forms as “easy to complete”, and the “whole process a deal easier than I feared it would be”.

Barriers to Adoption

Although DEBS has developed this new workflow for graveyard surveys, along with a data entry, archiving and dissemination tools to support it, there is a question as to whether community groups will want to engage with the new workflow. The above quote, “easier than *I feared it would be*” implies that there are some barriers to be overcome. The issue referred to here is principally one of skill. As participants noted during user testing of the mobile application, the demographics of most community heritage groups tend to skew towards the more mature section of the population, amongst whom digital literacy tends to be less well developed, in spite of the growing number of highly skilled individuals. Yet this is only one part of the workflow, and it is important to recognise that it takes time for people to familiarise themselves with the system and become competent surveyors.

For those starting out, the number of variables to observe and take account of are likely to be daunting. While the project aimed to encourage surveyors to focus more on the

material form of monuments, it was recognised that many groups, and many existing datasets, are more orientated towards documenting inscriptions and the people at rest within burial grounds. For these groups, refocusing on monumental forms demands new learning. Here, and amongst groups completely new to burial ground heritage, good guidance and simple tutorials are the key to building confidence. Particularly important in this regard is imagery, both in static form and as video, but unfortunately the production of videos has been impacted by the Covid-19 pandemic. Experience has shown that in regards to the recording system, it is not the words that matter, but the forms themselves - how memorials look. Consequently, the 'memorial identifier' was designed within the mobile application to employ a step-by-step image-based decision-making process. Likewise, a similar online system has been designed for searching the database (Pillatt et al. 2020). Nevertheless, it remains to be seen whether the guidance resources produced during DEBS are sufficiently accessible, particularly in terms of supporting work undertaken without additional in-person tuition and supervision by trained archaeologists or experienced graveyard surveyors. In this respect, newly simplified guidance produced for the Young Archaeologists' Club (Mytum 2020) could represent a way forwards for community groups: firstly, the resource is intended to accompany a 'train the trainers'-type scheme to ensure surveyors have skilled support; secondly, the recording system, although simplified and less daunting to learn, is compatible with the full DEBS typology and the Burial Spaces Research Database.

Another barrier to adoption stems from the rigidity of the recording system. The need for standardisation demands that surveyors adhere to a very prescriptive set of instructions and responses. This is true in spite of the numerous options afforded within

the system of numeric codes. This lack of flexibility raises issues for groups that already contain skilled surveyors, that have developed their own ways of recording memorials, and have accumulated large datasets using these alternative methodologies. Working with the DEBS team, the Embsay with Eastby Research Group represents one such group (Figure 6). Their detailed and diligent survey records are outstanding examples of well executed community archaeology, but as a group they do not relish the prospect of converting all their existing 'legacy data' into the DEBS format. There is guidance on the website to support conversions of legacy data, but again there remains a question as to whether groups such as these will be inclined to invest the extra time and resources into conversion projects. Perhaps as more data becomes available for combining and comparing surveys, the value of participating will become more apparent, but regardless it seems clear that future work on the legacy data workflow needs to retain aspects of burial space surveying that we know people find worthwhile: the gentle challenge of structured observation and interpretation, and the social interactions fostered by working together to describe and interpret memorials.

[Figure 6]

Perhaps most fundamentally, there is the question of how the costs of digital preservation costs are covered. The ADS is the only accredited digital repository in the UK for heritage data. It has a business model whereby users can access data for free but depositors must pay a one-off deposition fee to ensure the preservation of their data into perpetuity. This covers the costs of accessioning and validating data, and ensuring metadata is adequate, as well as migration to open formats. This works fine for

commercial archaeology or funded research projects but presents a challenge in the community sector. The ADS cannot support graveyard surveys and archive results for free. There is a monetary cost - outlined on the DEBS website - and this may prove insurmountable for many groups. Of course, there are organisations willing to fund this kind of activity and research, most notably the National Lottery Heritage Fund, but nevertheless the need to raise money does represent a significant hurdle to community groups that are interested in graveyard surveys, but not comfortable with writing funding applications or setting up formal project infrastructures to manage grants. The danger is that groups will start using the resources that are available for free from the DEBS website, largely adhering to the methodology, but not then proceeding onto the archiving stage because of the financial cost implications. If the survey is not archived, and the data not made available within the Burial Spaces Research Database, then that dataset will not reach its full potential in terms of supporting new research that transcends individual sites.

Conclusion

The DEBS project developed a new methodology and set of resources to support the community-led research into England's burial spaces. Throughout the project, representatives from community groups were asked to give feedback and help design aspects of the workflow, including the recording system, a mobile application and digital data entry tools. At each stage, the insights gained from this process were valuable, but they also highlighted a series of tensions that have only been partially resolved: the rigidity of the recording system might make for a more powerful database, enabling studies that transcend sites, but it reduces the ability of the groups to record

memorials in their own way, focusing on their own interests. It might make sense to develop a mobile application that helps to ensure standardisation and support the recording process, but it can only achieve this if surveyors find the application easy to use. This is something dependent on the quality of the user interface and software, the nature of the hardware, and the skills of those using it - only a few aspects of these affecting factors can be easily accounted for during development. Whilst a suite of tools has been developed to support the digitisation/data entry process, the use of these tools is dependent on commitments of time and money from community groups, which might not be willing or able to offer either. Future iterations of the project will need to focus on making this process more manageable and less daunting. Reviewing these tensions, one might make the argument that a more comprehensive collaborative design process could have better navigated the project towards different solutions - an insight that other projects might bear in mind - but in this particular case it is perhaps an understanding only born of hindsight.

Despite the issues outlined above, there are reasons to be positive. Throughout the project the team was struck by the huge variety in forms of memorials and methods of commemoration, and the complexity that this engendered in the DEBS methodology, data schema and standardised vocabulary. Impressive too was the great enthusiasm of community groups for their own research, their sites and the project itself. There remains great potential in encouraging community-led research in burial spaces, in terms of discovering and telling fascinating and poignant historical stories, promoting engagement with heritage, and fostering skills development and senses of place. As one community group member commented, this “research challenges the public perception

of [burial spaces] as being merely ‘old stones and bones’”, and “reignites debate about death in modern society”. At the beginning of the project, burial space research was described as “a long-overlooked area of academic, public and practical importance” - hopefully in its culmination, DEBS has gone some way to addressing this oversight.

DEBS resources and guidance can be accessed here: <http://debs.ac.uk>

The Burial Spaces Research Database is available at:

https://archaeologydataservice.ac.uk/archives/view/debs_he_2018/index.cfm

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Ethics Declaration

This research was authorised by the Ethics Committee of the Department of Archaeology at the University of York. Written informed consent to take part in the research was obtained from participants prior to their involvement with the project. This included the provision of an information sheet outlining the aims and objectives of the research, and detailed information about how participants’ data would be collected, stored and used.

Declaration of Interests

None

References

Ballsun-Stanton, Brian, Shawn A. Ross, Adela Sobotkova, and Penny Crook. 2018. "FAIMS Mobile: Flexible, open-source software for field research" *SoftwareX* 7, 47-52. DOI: <https://doi.org/10.1016/j.softx.2017.12.006>

Church of England 2020. "Church Heritage Record". Available at: <https://facultyonline.churchofengland.org/churches> [Accessed:5 October 2020]

English Heritage. 2007. *Paradise Preserved. An introduction to the assessment, evaluation, conservation and management of historic cemeteries.*

English Heritage. 2013. *National Heritage Protection Plan Framework 2011-2015.*

Ministry of Justice. 2007. *Burial Grounds. The results of a survey of burial grounds in England and Wales.*

Mytum, Harold. 1999. "Welsh cultural identity in nineteenth-century Pembrokeshire: the pedimented headstone as a graveyard monument." In S Tarlow and S West (eds) *The Familiar Past? Archaeologies of later historical Britain*, edited by Sarah Tarlow and Susie West, 215-230. London: Routledge.

Mytum, Harold. 2000. *Recording and Analysing Graveyards* (Practical Handbooks in Archaeology, 15), York: Council for British Archaeology.

Mytum, Harold. 2002. 'A Comparison of Nineteenth and Twentieth century Anglican and Nonconformist Memorials in North Pembrokeshire'. *The Archaeological Journal* 159, 194-241.

Mytum, Harold. 2004a. *Monuments and Burial Grounds of the Historic Period.* New York: Kluwer Academic/Plenum.

Mytum, Harold. 2004b. "Local traditions in early eighteenth-century commemoration: the headstone memorials from Balrothery, Co. Dublin and their place in the evolution of Irish and British commemorative practice." *Proceedings of the Royal Irish Academy* 104C, 1-35.

Mytum, Harold. 2006. "Popular attitudes to memory, the body, and social identity: the rise of external commemoration in Britain, Ireland and New England." *Post-Medieval Archaeology* 40(1), 96-110. DOI: <https://dx.doi.org/10.1179/174581306x143061>

Mytum, Harold. 2020. *Burial Ground Recording Projects Guidance for YAC Leaders*. Available at: https://www.yac-uk.org/userfiles/file/1601307782_Burial_Ground_Activities_YAC_Leader_Guidance.pdf [Accessed: 5 October 2020].

Mytum, Harold, James Cameron, and Kate Chapman. 2015. "Developing Local Assessment Toolkits – a scoping study to look at developing a standard model for recording cemeteries and burial grounds." *National Heritage Protection Plan: NHPP 4D2 Cemeteries and Churchyards*, EH 6358

National Biodiversity Network. 2020. "NBN Atlas." Available at: <https://nbnatlas.org/> [Accessed: 5 October 2020].

OASIS. 2016. "OASIS: Online AccesS to the Index of archaeological investigationS." Available at: <https://oasis.ac.uk/pages/wiki/Main> [Accessed: 5 October 2020].

OASIS. 2019. "OASIS: Herald." Available at: <https://oasis.ac.uk/pages/wiki/HERALD> [Accessed: 5 October 2020].

Pillatt, Toby, Gareth Beale, Katie Green, Deborah Maxwell, Harold Mytum, Kieron Niven, Julian Richards, and Nicole Smith. 2020. "Data Paper: The Burial Space Research Database." *Internet Archaeology* 55. DOI: <https://doi.org/10.11141/ia.55.3>

Qualtrics. 2020. "Qualtrics: Leading Experience Management & Survey Software." Available at: <https://www.qualtrics.com/> [Accessed: 5 October 2020].

Ray, Janette, Julie Rugg, Sarah Rutherford, Louise Loe, Jill Hind, and Klara Spandl. 2014. *Cemeteries, churchyards and burial grounds: devising and applying a significance framework*. Historic England.

Rugg, Julie. 2015. *Churchyard and Cemetery: Tradition and modernity in rural North Yorkshire*. Manchester: Manchester University Press

Tarlow, Sarah. 1999. *Bereavement and commemoration: an archaeology of mortality*,
Oxford: Blackwell

Université du Luxembourg 2020. "Project RIP: Survey Tool." Available at:
<https://transmortality.uni.lu/Survey-Tool> [Accessed: 5 October 2020]

Figure Captions



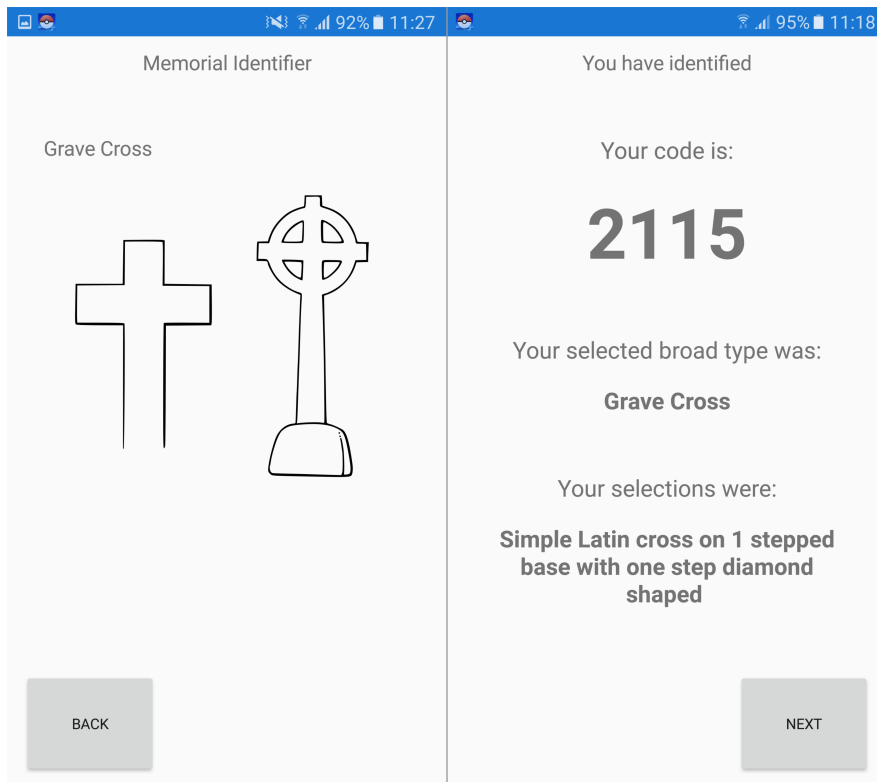
1 - Community participants gather in York at the start of the project



2 - Harold Mytum training members of Slingsby Local History Group



3 - Testing the prototype mobile application



4 - The 'memorial identifier' function within the mobile app

Discovering England's Burial Spaces (DEBS)

University of York, Historic England, 2020

[Introduction](#)

[Overview](#)

Search:

[Memorial](#)

[Person](#)

[Memorial Broad Type \(Image\)](#)

[Text Panel Type \(Image\)](#)

[Site List](#)

[Metadata](#)

[Usage Statistics](#)



Historic England

Resource identifiers

ADS Collection: 3302



UNIVERSITY
of York

DEBS

Discovering
England's
Burial Spaces

Memorial Details	
IDs	Local Memorial ID: [122] Legacy ID: [122] DEBS Memorial ID: [126]
Memorial Year	1900 <i>Inferred date from first mentioned individual</i>
Start - End Years	
Comments	
Plot ID	
Number of people commemorated	
Original Position	
Tooling	
Repairs	
Orientation (degrees)	82
Elements	
Condition & Notes	Sound.
Memorial Type: Broad Type: Detailed Type [code] Description	Headstone: Round top [4100]
Decorative Motifs: Type [code] (location) Interpretation	
Material(s)	White marble
Measurements: GENERAL	Height: 1355 Width: 665 Thickness: 73 Height: 1355 Width: 665 Thickness: 73

5 - The Burial Spaces Research Database online interface



6 - Members of the Embsay with Eastby Historical Research Group conduct a survey

Table 1: The community groups and projects involved in DEBS

Community Group	Survey Project
York Area Meeting Burial Ground Committee - York Quakers (Friargate and Bishophill)	The burial ground at The Retreat in York (now housing a Mental Healthcare Provider), active since 1855, has over 1,000 people represented in its grounds. Stones are weathered, some heavily. The Friargate Burial Ground Committee have photographed around 800 stones, but this survey is incomplete. The committee were interested in cataloguing the photographs with the existing burial records, and archiving the results.
Slingsby Local History Society	<p>Like many local history groups around the country, the Slingsby group meet regularly to hear about recent research by members and visiting speakers. They have created a series of exhibitions and publications as well as tours and trails of the village for residents, visitors and the local school. The village church was recently awarded money from the National Lottery Heritage Fund to effect urgent repairs and develop a new Local History Resource Centre and exhibition area within the building, opening it up to new uses and new user communities.</p> <p>Although the group has undertaken research on individuals and families within the village, there has been no systematic survey of the monuments and memorials within the churchyard. The group are therefore interested in using the survey to understand the significance of their churchyard, and as the foundation for further research and future exhibitions.</p>
Embsay with Eastby Research Group	Developing from an interest in documenting memorials at their local church, the Embsay with Eastby - Historical Research group (a working group within the Upper Wharfedale Heritage Group) have become keen burial space researchers. Through their relationship with the project and its precursors, they have developed their own methods and approaches to surveying and RTI photography. Their work has now expanded to other churchyards, including at nearby Conistone, and to support other local groups in North Yorkshire and beyond.
Friends of Raikes Road Burial Ground, Skipton	The Friends of Raikes Road Burial Ground originally wanted to clear up their overgrown and underloved burial space. This spawned a National Lottery Heritage Fund bid to set up a small project to restore the burial ground, which led to a community excavation of a subterranean mortuary, the installation of interpretation boards, and set of ongoing

	<p>ecological surveys. The focus of attention has now widened to the precursor to Raikes Road - the churchyard of Holy Trinity Church in Skipton. There they have devised their own recording methodology for documenting inscriptions and matching hundreds of moved ledger stones with their paper burial records.</p>
<p>Leavesden Hospital History Association</p>	<p>Leavesden Hospital History Association (LHHA) was founded in 2011 by Martin Brooks and works towards preserving the history and cultural heritage of the of Leavesden Asylum/Hospitals (1870-1995) and several other institutions which occupied a 180 acre site in Abbots Langley, Hertfordshire. The LHHA is frequently contacted by individuals who are looking for information about family members who they believe are buried in the Hospitals cemeteries. Consequently, the cemetery grounds and its burial records have become a focal point of the LHHA's cemetery renovation and conservation work, which commenced in early 2019. Supported by the local council and its recent National Lottery Heritage Fund grant, the LHHA has recorded a number of oral histories from former staff of the hospital, but there are still questions over how to properly research, record and make public information about those people who are at rest in the cemetery.</p>
<p>Friends of St Matthew's Churchyard, Lightcliffe</p>	<p>Formed in 2012, the Friends of St Matthew's Churchyard have worked hard to clear overgrown vegetation and make the churchyard respectable and respected. With the support from the Heritage Lottery Fund, they've installed interpretation boards and developed a short walking tour. They have also created an index of all graves, which is searchable online. The churchyard has recently experienced a surge of visitors, as it contains the graves of many people dramatised in the BBC television series <i>Gentleman Jack</i>, including that of Ann Walker. The group is interested in doing further work to document and research their churchyard.</p>