



Leiston Abbey

(First and Second Site)

Updated Project Design



Leiston Abbey

Updated Project Design

2016

Prepared on behalf of:

**Heritage Lottery Fund (East of England)
& RSPB Minsmere**

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Purpose of Document

This document has been prepared as a Project Design for the fourth season of a community-based research excavation at Leiston Abbey (first site - Minsmere RSPB Reserve). Its purpose is to define how DigVentures intends to deliver a project that meets the quality expectations of the Heritage Lottery Fund (project sponsors), landowner (RSPB) and all other stakeholders (Including Historic England and Natural England). DigVentures accepts no responsibility or liability for any use that is made of this document other than by the Heritage Lottery Fund and the landowner (RSPB), for the purposes for which it was originally commissioned and prepared.

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Social Value Act

DigVentures is a social enterprise dedicated to designing and delivering publicly focussed archaeology projects. We are constituted as a limited company, with a constitution reflecting the wider social, economic and environmental benefits of the projects we deliver. We have created one locally based archaeological position for the duration of the 'Leiston's Origins' project (12 months), and intend to train 150 people in archaeological and digital archiving skills in the course of this field project.

Carbon Footprint

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Executive Summary

This document is submitted in support of an application for Scheduled Monument Consent to continue fieldwork for a research project at Chapel Hill field, Minsmere RSPB Reserve. The first stage of fieldwork took place between 28th June and the 14th July 2013, the second between 7th and 20th July 2014, a third stage between 13th and 26th July 2015. The results have been assessed with recommendations for further fieldwork, following up on profitable research leads generated during all field seasons (Wilkins *et al* 2015). A fourth stage of fieldwork is planned for the 10th and 24th September 2016. This will focus on a programme of remote sensing and 3D photogrammetry survey followed by targeted test trenches. The approach to this work is evidenced through the following MoRPHE compliant document, outlining key archaeological research questions, roles, procedures, stages and outputs.

Remote Sensing

A photogrammetry survey of Minsmere Chapel will be completed to create a full metrically accurate 3D model of the structure. This will be supported with a low-level aerial photography survey of the entirety of Chapel Hill field, to place the site into its landscape context and better understand the results of earlier magnetometry and resistance surveys.

Targeted Excavation

Five trenches and two auger transects are proposed for the 2016 field season, focusing on the area surrounding Chapel Hill Field, with a small number of interventions within Cow Marsh Hill, an ancient trackway linking the Leiston's first and second sites. The trenches will investigate the effects of bioturbation and baseline the erosional effects on subsurface remains, assisting with site management, presentation and conservation.

Public Engagement

The project is supported by a comprehensive learning, engagement and activity plan. An innovative digital recording system will be used to enable volunteers to record on smartphones or tablets in the field, making their data available instantly to anyone with an internet connection. This represents an accessibility step-change for archaeological archives in the Yorkshire Dales.

Compliance Matrix

Project background and research priorities	Detailed in Part 1 – this document
Methodology	Detailed in Part 2 – this document, with detailed method statement in Appendix 3
Relevant experience of project team	Detailed in Appendix 1
Organisational capability/quality assurance	Detailed in Part 2; See also ClfA RO reference (ID No. 102)
Public Engagement, promoting understanding, conservation and inclusivity	Detailed in Section 6, with comprehensive Aims and Objectives relating to public engagement detailed in Appendix 4.

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Figure 2 – Proposed Trench Plan

Figure 3 – Extract from Hodkinson's 1783 Map, featuring the abbey and adjacent large rectilinear water feature

Table 1 – Interfaces

Table 2 – Project Review Stages

Table 3 – Project Team Structure

Table 4 – Project stages, products and tasks

Table 5 – Project Task List

Table 6 – Budget by Stage and Financial Year

Table 7 – Linking methods with objectives

Leiston Abbey

Community-based Archaeological Investigation

Project No: LA_16

PART I: DESCRIPTION OF THE PROJECT

Summary Description

The first three seasons of community-based archaeological investigations at Leiston Abbey have highlighted the benefit of undertaking a multidisciplinary approach to the upstanding and subsurface remains, with a programme of remote sensing and 3D photogrammetry survey followed by targeted trial trench evaluation. The results of this work have been assessed, with recommendations for further archaeological fieldwork, followed by analysis and publication. This document formulates those recommendations into a series of aims and objectives, detailing the strategies and resources necessary for completion. The proposed work will complete a non invasive survey of Chapel Hill Field and Cow Marsh Hill, complete a 3D photogrammetry survey of the remaining building in the Chapel Hill Field, and investigate trenches targeted by the results from the survey. Recommendations for analysis and publication of the 2013-2016 project archive are presented with a timetable for delivery.

1 BACKGROUND

1.1 Introduction

- 1.1.1 This document is a project design for delivery of a community-based archaeology investigation at RSPB Minsmere, Suffolk (hereafter 'the Site'). Its purpose is to define how DigVentures intends to deliver a project that exceeds the quality expectations of the Heritage Lottery Fund (project sponsors), landowner (RSPB) and all other stakeholders (Including Historic England and Natural England). (Project Sponsors), the RSPB (Land Owner) and their archaeological advisors and is divided into two related parts:
- 1.1.2 The project is being managed according to Historic England's MoRPHE project model (Management of Archaeological Research Projects in the Historic Environment). This document defines that process, and is divided into two parts: '**Part 1 Description of the project**' provides the project context, including a brief summary of proposed methodology, key sources and activities required to support the delivery of the proposal outcomes. '**Part 2: Resources and Programming**' identifies responsibilities of individual project staff members, outlines completion dates for specific tasks, with all costs itemised for transparency.

1.2 Project Overview

- 1.2.1 The Leiston Abbey project has been designed as a five-year multi-staged research project, encompassing an evaluation and assessment stage (Years 1 – 4), followed by final analysis and publication (Year 5). It's overarching aim is to investigate the Premonstratensian Abbey and associated archaeology at Leiston's first and second sites, and to collate and assess existing material from earlier excavations. To date, the project has focussed on Leiston's second site (List Number 1014520) The aim of this season's field work (year 4) is to investigate the poorly understood field evidence associated with Leiston's first site at Minsmere (List Number 1015687), obtaining potential evidence linking both abbey locations, and produce a metrically accurate 3D model of the upstanding monastic building complex and local landscape context. The principle driver for this research project is to provide baseline information to contribute to the future management and presentation of the monument (see Section 3, Business Case, below).
- 1.2.2 The first Execution Stage of the project took place between 28th June and the 14th July 2013, the second between 7th and 20th July 2014 and the third between the 13th and 26th July 2015. The principle project driver was to provide baseline information contributing to the future management and presentation of the monument (see Section 3, Business Case, below). The results of this work have been assessed with recommendations for further fieldwork, following up on profitable research leads generated during the 2013, 2014 and 2015 field seasons (Wilkins *et al* 2016). Pursuant to further specialist consultation with Historic England, this Updated Project Design is submitted in support of Scheduled Monument Consent for a fourth Execution Stage of. It is scheduled to take place between 10th and 24th September 2016. Section 1 of this document will outline key research questions, detailing the research context and scope. Section 2 will define the roles, procedures, stages outputs and budget for the project.

1.3 Research Context

- 1.3.1 Leiston Abbey (second site) is considered to include some of the finest surviving monastic remains in Suffolk and is one of the most completely preserved examples of a Premonstratensian monastery in England. This overall research value is also increased by proximity to the original abbey site in Minsmere (first site), allowing for direct comparison of two chronologically and topographically distinct sequences in the abbey's history.
- 1.3.2 A late medieval rectangular chapel is all that now remains at Leiston's first site (Scheduled Monument No. 21404), with remote sensing results (cropmarks, magnetometry and resistivity) indicating that the ruin lies within the outline of a much larger cruciform church and claustral complex (Boulter 2003; Black and Black 2008). The chapel structure was partially demolished during WWII and a pillbox constructed into the remains. Minor consolidation and site clearance work was completed by the project team in 2015, to assess and remove a WW2 spoil heap close to the upstanding chapel, in tandem with a desk-based study of historic mapping and documentary sources.

- 1.3.3 One of the most intriguing features on site is a substantial rectangular topographic anomaly to the north of the abbey complex (approximately 100m in length). It has been interpreted as a fish pond, but a close reading of the cartulary hints at the potential for an active, navigable docking facility in an as yet unidentified 'harbour of Minsmere'. The *Curia Regis* Rolls show Leiston engaged in a constant stream of litigation over land and rights, with two particularly note worthy accounts detailing disputes with the Dunwich town bailiffs. These altercations centred on the right to take toll from ships, with allegations of piracy levelled at the Abbot for co-opting shipping that should by rights have been landed at Dunwich:

"Thomas, pleading for the king and himself, said that when on 28th October 1293 he arrested in the port of Minsmere a certain ship of Stephen le Frere containing goods to the value of £20 in order to take toll and placed them within the liberty of Dunwich. The abbot and others, together with others unknown, insulted, beat, wounded and ill-treated him, and the next night took the ship with the goods out of the liberty of Dunwich and into the abbot's liberty along a certain channel leading from Minsmere to Leiston Abbey, and continue to detain the said ship, in contempt of the king, to the damage of the said Thomas of £20. He offers to prove this." (Mortimer 1979,

- 1.3.4 If the 'pond' feature identified through remote sensing was a navigable channel (and potentially also identified on Hodkinson's 1783 map of Suffolk – see Figure 3), then it is entirely possible the cannons continued this revenue generating activity even after the abbey moved to it's final destination. In this instance the hermetic chapel structure at Minsmere may be the latest phase of monastic use, and further evidence of site use post the 1363 move remains to be found. The landscape setting of Cow Marsh Hill and Ha'penny Bridge is significant in this context, situated at the intersection between the of a navigable channel and the principle road link to Leiston's second site. Unfortunately, Minsmere has never previously been excavated to help test such ideas, ground truth geophysical results or contextualise contemporary textual sources, and this lack of knowledge has resulted in minimal presentation and public understanding of the site. Prone to seasonal flooding, a 'managed retreat' from chapel field is likely to result in permanent inundation of the site in the medium term, with the consequent loss of opportunity for this important heritage asset.

1.4 2016 Fieldwork Proposals

- 1.4.1 The goal of the 2016 fieldwork season will be to build on this work, continuing remote sensing work and small scale excavation trenches into areas around the site of Leiston's first Abbey, this follows-up on profitable research leads generated during the first three field seasons. It will comprise:
- **Intervention 1:** not a subsurface trench as such, this is a continuation of work to sieve and record medieval building debris from the WW2 pillbox spoil heaps.
 - **Intervention 2:** 10 x 2m test trench targeting a potential apsidal end at the east of the original Abbey church, characterising the archaeological deposits and assessing survival.
 - **Intervention 3:** 5 x 5m test trench to ground truth anomalies identified by resistance survey interpretations of a walkway or building connecting the cloister with an activity area to the north of the precinct.

- **Intervention 4:** 3 x 15m test trench to assess the previously identified crop marks (1977) recovering dating evidence and establishing potential phasing.
- **Intervention 5:** not a subsurface trench as such (though listed on Figure 2), an Auger survey of the large rectangular topographic 'fish pond' anomaly completing two transects with an Eijkelkamp hand-held gouge auger.
- **Intervention 6:** 10 x 2m trench to test a strongly magnetic anomaly to the north east of the standing building, interpreted as debris from the installation of the WWII building.
- **Intervention 7:** 3 x 5m trench to test topographic features on Cow Marsh Hill (outside the scheduled area).

- 1.4.2 A site visit has been undertaken to identify the practicalities with the Minsmere RSPB land management team, and an application has been made to Natural England for a small team to complete site work.

2 RESEARCH AIMS & OBJECTIVES

2.1 Aims

- 2.1.1 The overarching aim of the project is to define and characterise the physical extent of the site through a programme of non-intrusive investigations and intrusive excavation, obtaining baseline data that will facilitate its future management. This project model is framed as overarching aims and key questions/objectives that provide a framework for the methods, stages, products and tasks set out in Part 2 of the Project Design below.

2.2 Aim 1 – To define and establish the precise physical extent and condition of the Site with a programme of remote sensing and metric survey

- 2.2.1 This aim will entail a combination of non-intrusive remote sensing (low-level aerial photography and digital terrain modelling).

- Q1. Can the layout of the monastic complex and any associated subsurface archaeology be determined and refined by remote survey?
- Q2. What are the topographic anomalies visible immediately to the north of the monastic complex, and is this evidence for a navigable channel feature?
- Q3. Is there any evidence for phasing in the topographic or remote sensing results indicative of an extended period of use?

2.3 Aim 2 – Characterise the results of non-invasive survey, refining the chronology and phasing of the site with a programme of trial trenching

- 2.3.1 In the light of the evidence base collated for Aim 1, this aim will be addressed with two targeted trenches. The purpose will be to identify and investigate any archaeological features encountered, and obtain appropriate samples for archaeological, artefactual and palaeoenvironmental assessment.

- Q4. Can we corroborate chronological phasing for the Site, including the presence of earlier and later features and structures, as defined in Aim 1?

- Q5. What are the typical and atypical features of the monastic complex and did this influence the functions and activities that took place?
- Q6. What is the landscape setting and character surrounding the Site, and how did this shape its location, design and development?

2.4 Aim 3 – Understand the archaeological and palaeoenvironmental conditions at the Site.

2.4.1 This aim will be achieved with an assessment of the samples as defined and recovered in Aim 2, using appropriate palaeoenvironmental and archaeological techniques to establish preservation and significance.

- Q7. What is the current state of the archaeological and palaeoenvironmental material across the site?
- Q8: How well do deposits and artefacts survive, and how deeply are they buried?
- Q9. Can the palaeoenvironmental data recovered from sampling in the trenches inform us about farming regimes, specialised food processing or industrial activities that may have taken place at the site?
- Q10: Can we increase our understanding of the local environment in the medieval period?

2.5 Aim 4 – Making recommendations, analysis and publication

2.5.1 This will require all data from Aims 1-3 to be collated and assessed alongside the 2013, 2014 and 2015 archive, in light of any further information recovered from the unpublished trenches excavated in the 1980s. This material will then be analysed and published, with management recommendations to conserve and enhance the heritage significance of the site.

- Q11: What can an integrated synthesis of the results of this work with previous remote sensing and building survey tell us about the site and its setting?
- Q12: In light of the evidence recovered from this and previous season's work, can we articulate a link Leiston's first and second sites?
- Q13: Formulate recommendations for further archaeological and palaeoenvironmental analysis at Leiston Abbey based on Aims 1-3, and implement a programme to publish and disseminate the results.

3 BUSINESS CASE

3.1 SHAPE Sub-Programme

3.1.1 The project has been designed in accordance with priorities articulated in Historic England's Action Plan 2015-18 (informing Heritage 2020, the successor to the National Heritage Protection Plan) and detailing how heritage organisations will work together to benefit the historic environment. In addition to these priorities, the project drivers can also be articulated in accordance with the fundamental principles of SHAPE (Strategic framework for the Historic Environment Activities and Programmes in Historic England, 2008).

3.1.2 In line with Historic England working practice and the fundamental principles of SHAPE (Strategic framework for the Historic Environment Activities and Programmes in Historic England, 2008) to understand, manage, and promote

archaeology, the project has a primary driver (SHAPE sub-programme number 11111.130) in addition to other research outcomes that will address other Historic England and sector priorities, delivering significant value added benefit.

3.1.3 The main aim of the project is therefore to increase our understanding of the character of the Site:

- SHAPE sub-programme number 11111.130: development of a sound evidence base for specific locales and historic assets in order to ensure appropriate management information is available and effective communication possible to community.

3.1.4 This research also has the potential to generate insight and recommendations with a local and national applicability, assisting the Client and Statutory Stakeholders in establishing best practice conservation and management measures.

- SHAPE sub-programme number 31521.110: building heritage issues into wider change-management considerations, taking account of conservation principles and heritage legislation whilst efficiently reducing management burden for given areas.

3.1.5 As a consequence of the innovative digital and cross-platform approach, in addition to the unique way that the Leiston Abbey project is community funded and staffed, there is a significant 'value added' dimension to this project:

- SHAPE sub-programme number 12212.110: developing wider understanding of the value of the historic environment; enhancing lifelong learning, encouraging support and enthusiasm for all aspects of heritage whilst contributing to quality of life.
- SHAPE sub-programme number 51311.110: increasing public awareness, building direct support and engaging enthusiasm from which multiple benefits flow; encouraging knowledge transfer through enjoyment.
- SHAPE sub-programme number 51332.110: high-profile outreach hitting potentially millions of people. Targeted to raise key issues or encourage wider understanding.

3.2 Research Frameworks

3.2.1 There is no overarching national research agenda or framework specific to Ecclesiastical or Monastic sites. As such archaeological work at Leiston Abbey will be undertaken with regard to regional priorities in *The East Anglian Research Frameworks* (Glazebrook 1997; Brown and Glazebrook 2000; and Medlycott 2011) in particular the Anglo Saxon and Medieval Rural sections by Wade (1997; and 2000). This framework does not have a specific Ecclesiastical or Monastic agenda or theme, and this may be expanded as part of the on-going review of the *East Anglian Research Frameworks*.

4 PROJECT SCOPE

- 4.1.1 This Project Design covers the fourth Execution Stage, designed to ensure that appropriate management information is available to decision makers and that this is communicated as effectively as possible to the wider community (SHAPE sub-programme number 11111.130: development of a sound evidence base for specific locales and historic assets).
- 4.1.2 The purpose of this work will be to continue remote sensing work and small scale excavation trenches into areas of the site at Minsmere, following-up on profitable research leads generated during the previous field seasons. This season's work will therefore focus on the area around chapel Hill Field at Minsmere and Cow marsh Hill.
- 4.1.3 This will specifically comprise:
- Remote Sensing: including a full photogrammetry survey of the Site to create a 3D Digital Elevation Model of Chapel Hill field.
 - Building Recording: including a full photogrammetry survey of the upstanding remains to create a 3D Digital Elevation Model.
 - Excavation: including trench evaluation and hand-dug test pits.

5 INTERFACES

- 5.1.1 This project will interface with a series of other projects, stakeholders, and initiatives, summarised in the table below:

Interfaces	Description
<i>Remote sensing Team</i>	Aerial Survey will be completed by Adam Stanford of Aerial-Cam, a CAA licensed UAV pilot with extensive experience undertaking similar landscape level photogrammetry surveys. Stanford is research active, and will ensure that the project interfaces with other project teams undertaking innovative fieldwork on Monastic sites.
<i>Core Project Team</i>	The core project team and specialist staff have consulted widely during the project planning and first, second and third execution stages, and will continue to build on this as the project develops, forging strong links with local, national and international professionals and institutions actively engaged in a broad range of Ecclesiastical sites.
<i>Heritage at Risk</i>	The crowdsourcing aspects of this project also interface with recent English Heritage initiatives such as the 'National Heritage at Risk Grade II' scoping project. Though not directly involved with the project team, Director of Pro Corda Trust (and principal of HAR East of England) John Ette will be on site regularly to explore how similar HE initiatives to involve the public in in citizen science can work in practice.

Interfaces	Description
Local Stakeholders	The project interfaces with active development-led projects currently being undertaken in the immediate vicinity, and the project team will consult with Suffolk County Council curatorial staff; and Dr Rhodri Gardner (Archaeological Service - Suffolk County Council) to ensure that all project outputs remain relevant and opportune. Local Archaeology Societies (such as the Suffolk Institute of Archaeology and History and the Waveney Archaeology Group) have been invited to participate, ensuring the project interfaces with all local initiatives.

Table 1 - Interfaces

6 COMMUNICATIONS

6.1 Project Team and Management Responsibilities

- 6.1.1 The Project is both crowdfunded and supported by the Heritage Lottery Fund, so there are in effect several hundred Project Sponsors. Project Assurance will therefore be allocated to the Project Executive (Lisa Westcott Wilkins, DigVentures, and Erin O'Grady, Heritage Lottery Fund) who will monitor compliance against the deliverables detailed in this document.
- 6.1.2 The project team have all worked closely together before (at Flag Fen 2012, and Leiston Abbey 2013, 2014 and 2015). Brendon Wilkins (Project Director) will undertake day-to-day Project Management supported by Nigel Steel, and Raksha Dave (Project Support). There will be six core DigVentures archaeological staff on site throughout the fieldwork, and all will be retained throughout the post-excavation phase of the project. All core staff are employed in line with ClfA guidelines, and are practicing field archaeologists of good standing at ACIfA level or above. The Expert team has been retained from the 2013, 2014 and 2015 field seasons, and is drawn from various university departments and laboratories with a considerable range of experience in the undertaking and delivery of similar research projects. This includes Hugo Anderson-Whymark (Chipped Stone); Paul Blinkhorn (Ceramics); Sara Brown (Conservation); Lisa Gray (Palaeoenvironmental); Richard Madgwick (Zooarchaeology); Keith Wilkinson (Geoarchaeology); Stuart Noon (Small Finds); Natasha Powers (Human Remains); Phil Mills (CBM); Adam Stanford (Photogrammetry); and Jonathan Madden (Topographic Survey). The wider specialist team fully intend to continue their existing association with Leiston Abbey, and continue into the analysis and publication stage.

6.2 Communication and Archive

- 6.2.1 The Project Director will produce Monthly Status Reports for the Project Executive and Project Team throughout this Execution Stage up to the review of the Assessment Report/UPD (Review Point 9). This will present an overview of progress, list tasks completed or part completed, including any on going work and issues affecting progress.

- 6.2.2 All communication between DigVentures and Historic England will be directed through DigVentures' Project Manager (Brendon Wilkins) who will also serve as the main point of contact for any broader issues. The principal structure for routine communication with Historic England (including Highlight Reports) will be the project review mechanisms described in the following section. Communication with stakeholders and other interested parties (as set out in Section 5 above) will be directed through the Project Manager in the first instance.
- 6.2.3 The Project Manager will be responsible for ensuring that the project runs to schedule, keeping track of key resources (notably staff time) on the basis of weekly Work Records. The Project Team will have a project meeting at each milestone described on the Gantt chart to ensure that all major tasks are briefed / debriefed as necessary. Provision will be made for the project in 'Basecamp', which is a web-based project communication package used by DigVentures, enabling project participants to generate and record notes, tasks, milestones and other project-related communication.
- 6.2.4 The project archive will be prepared in accordance with DigVentures guidelines for Archive Preparation, following Appendix 1, P1 of MoRPHE PPN 3 (Historic England 2011), fulfilling the *Guidelines for the preparation of excavation archives for long term storage* (UKIC 1990). All reports produced by the project will be openly and freely disseminated through Suffolk County Council Historic Environment Record, Archaeological Data Service, OASIS portal and Scribd website. Copyright on all reports submitted will reside with DigVentures, although a third party in-perpetuity licence will automatically be given for reproduction of the works by the originator, subject to agreement in writing with Historic England.

6.3 Project Management

- 6.3.1 DigVentures operates a computer-assisted project management system. Projects are undertaken under the direction of the Project Director who is responsible for the successful completion of all aspects of the project. All work is monitored and checked whilst in progress on a regular basis, and the Project Director/Managing Director checks all reports and other documents before being issued. A series of guideline documents or manuals form the basis for all work.
- 6.3.2 The Project Manager is a full member and elected councillor of the Institute for Archaeologists (MIfA), and full member of the Chartered Institute of Archaeologists of Ireland (MIAI). DigVentures is an CIfA Registered Organisation (No. 102), and fully endorses the *Code of Conduct*, the *Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology*, and the Standards and Guidance documents of the Institute for Archaeologists. All DigVentures staff are employed in line with the Institute's Codes and will usually be members of the Institute.

6.4 Outreach – and HLF sponsored 'Leiston's Origins' Project

- 6.4.1 The community-based and outreach aspects will broadly come under a Heritage Lottery Funded project running alongside the archaeological research project. The 'Leiston's Origins' project is an HLF supported digital archiving, education and outreach initiative, aiming to develop a learning

resource for community archaeology. This will include a dedicated educational programme of schools visits, traveling exhibition and events programme designed to with the ultimate aim to increase local awareness of the original Abbey site and amplify this with a coordinated social media strategy. This will be measured with an audience evaluation of all site visitors to establish baseline data and assist with future management strategies and promotion.

6.4.2 Relationships have been built with local organisations including RSPB, Minsmere, University Campus Suffolk and the Long Shop Museum in Leiston. DigVentures and RSPB are collaborating on two Family Weekends, including a 'Dig Camp' parent and child activity programme. A dedicated welcome tent will be erected on site, and will be permanently staffed by DigVentures throughout the dig. Special activities and trench tours will be offered, as well as a lunchtime chat with the archaeological team. This has been widely advertised locally on radio, newspapers and the parish council newsletter, and flyers have been distributed through the existing RSPB networks as well as in pubs, shops, businesses and venues. Signposts will also be erected on all roads leading to the Site to encourage passing traffic to visit. The End of Site party is also open to the public and will feature a presentation of the initial results as well as a barbeque, medieval cookery demonstration and evening drinks for all attendees.

6.4.3 As a crowdfunded and crowdsourced archaeological project, every aspect of the project is cognisant of a wider outreach agenda. Engagement will be both on and offline, with a digital platform (called 'The Site Hut') developed to engage a new local and global audience, inviting external communities (and those not usually engaged with archaeology) to take an active role in knowledge production. Public Archaeologists working in conjunction with the project team will critically assess the breadth, depth and diversity of engagement, with a quantitative and qualitative study. This will be undertaken with a visitor survey conducted throughout the field season, targeting both excavation participants and casual visitors.

6.4.4 All major social media channels will be used to amplifying daily blog content. A digital video specialist will be on site throughout the excavation, and broadcast quality footage will be uploaded to YouTube daily. The project will feature nightly lectures open to the public where the day's findings will be discussed, followed by presentations by the on site specialist team. These will also be filmed and broadcast live, with the recorded archive made available on the project website.

6.5 Dissemination

6.5.1 Rapid dissemination of the results to, and involvement of, stakeholders of the project is vital throughout. This will take place through multiple channels, addressing a multitude of established and new audiences. Dissemination outlined below will all be undertaken during 2015 & 2016, and will include, but not be limited to:

- Dedicated website with daily news updates on a blog and all major social media channels (Facebook, Twitter, Google+, Flickr and Instagram) amplified through third-party coverage by the networked blogging community: <http://digventures.com/leiston-abbey/>

- Daily broadcast quality video feature released on YouTube throughout excavation stage: <http://digventures.com/leiston-abbey/timeline/types/videos/>
- Follow up feature articles in *Current Archaeology* (scheduled for September) and *Past Horizons* (scheduled for August) – see here for 2014 coverage: <http://ow.ly/NMID2>
- Conference presentation (European Association of Archaeology).
- Wide circulation of Assessment and Final Report, Updated Project Design and links to the OASIS record: Oasis ID: digventu1-212051
- Site publication in an appropriate local/national journal commensurate with the final results.
- Deposition of the Assessment Report with the Suffolk Historic Environment Record, and summary article in the *Proceedings of the Suffolk Institute of Archaeology and History* (following on from submissions in 2013, 2014) and 2015).
- Public Seminar and Exhibition hosted at RSPB Minsmere presenting the final results (Autumn 2016).

7 PROJECT REVIEW

7.1.1 The project will be continually reviewed by the Project Executive and Project Manager, with a formal review undertaken at the end of each Stage as follows:

Stage	Description	Review Point	Completion Date
Initiation	Consideration of Project Proposal (submitted for competitive tender)	RV1 – Assemble Project Team and liaise with English Heritage	Completed – March 2013
Stage 1	Project Start-up, finalising Project Design and definition of scope	RV2 – Sign-off on MoRPHE Project Design, and liaison with stakeholders and landowners	Completed – June 2013
Stage 2	Archaeological Fieldwork – First Season	RV3 – assemble site archive and distribute pertinent data to specialists	Completed – August 2013
Stage 3	Assessment Report & Updated Project Design	RV4 – critically review findings, making recommendations for	Completed – May 2014

Stage	Description	Review Point	Completion Date
		further work or closure	
Stage 4	Archaeological Fieldwork – Second Season	RV5 – assemble site archive and distribute pertinent data to specialists	Completed – July 2014
Stage 5	Assessment Report & Updated Project Design	RV6 – recommendations for further work, analysis and publication	Completed – Jan 2015
Stage 6	Archaeological Fieldwork – Third Season	RV7 – assemble site archive and distribute pertinent data to specialists	Completed – July 2015
Stage 7	Assessment Report & Updated Project Design	RV8 – recommendations for further work, analysis and publication	Completed – Feb 2016
Stage 8	Archaeology Fieldwork – Fourth Season	RV9 – assemble site archive and distribute pertinent data to specialists	Scheduled – September 2016
Stage 9	Assessment Report & Updated Project Design	RV10 – recommendations for further work, analysis and publication	Scheduled – Feb 2017
Stage 10	Analysis & Publication	RV11 – final publication sign-off, and prepare archive for accession	Scheduled – May 2017
Closure			Scheduled – June 2017

Table 2 – Project Review Stages

7.1.2 It is anticipated that each of the Review Points will be conducted internally, with input from Historic England on the basis of deliverables (draft reports etc.) submitted by DigVentures. The Project Executive will undertake continuous review of the project through receipt of internal Highlight Reports and by Monitoring Meetings. A schedule of Monitoring Meetings (if necessary) will be agreed with the HE Inspector on commencement of the project.

8 HEALTH AND SAFETY

8.1.1 DigVentures shall undertake the works in accordance with English Heritage's and RSPB's Health and Safety requirements and Health and Safety Plan. This

document should take account of any design information pertaining to above ground hazards such as buildings and structures and below ground hazards such as services, utilities and infrastructure. Risk Assessments should also consider below ground contaminants such as unexploded ordnance, due to the adjacent WW2 pill box.

- 8.1.2 DigVentures will ensure that all work is carried out in accordance with its company Health and Safety Policy, to standards defined in *The Health and Safety at Work etc. Act 1974*, and *The Management of Health and Safety Regulations 1992*, and in accordance with the SCAUM (Standing Conference of Archaeological Unit Managers) health and safety manual *Health and Safety in Field Archaeology* (1996).

Leiston Abbey

Community-based Archaeological Investigation

Project No: LA_16

PART 2: RESOURCES AND PROGRAMMING

9 PROJECT TEAM STRUCTURE

9.1 Team Structure and Key Responsibilities

9.1.1 DigVentures' Project Team will be as follows. A summary CV, setting out the skills and expertise of each team member is set out in Appendix 1, with CVs for the wider specialist team available on request. Expert ecofactual and artefactual support will be provided by a range of partner organisations as needed, including MOLA, York Archaeological Trust and Suffolk County Council (Field and Post-Excavation Team).

Name	Initials (see resources and programming)	Project Role	Key Responsibility
Lisa Westcott Wilkins	LWW	Project Executive	Overall project responsibility, and project assurance
Erin O'Grady	EOG	Project Executive	Overall project responsibility, and project assurance
Brendon Wilkins	BW	Project Manager – Archaeological Site Director	Budget responsibility, archaeological direction (on and off-site), liaison with project team, partners and Stakeholders
Nigel Steel	NS	Site Supervisor	On-site field-work, and post-excavation assessment
Raksha Dave	RD	Site Supervisor and Field School Manager	On-site field-work, responsible for field school, and assessment
Matt Juddery	MJ	Site Supervisor	On-site field-work, and post-excavation assessment
Adam Stanford	AS	Expert – Photogrammetry	3D Modelling and Photogrammetry

Table 3 – Project Team Structure

10 METHODOLOGY

10.1 Introduction

- 10.1.1 The methods reflect the project Stages set out in Section 7 above. A task list, with allocation of staff time and team member is set out in Section 11 below, along with a GANTT chart in Section 15, setting out a provisional programme. Detailed method statements relating the specific techniques or approaches detailed below to their constituent research questions can be found in Appendix 3 at the end of this document.

10.2 Stage 7 - Assessment Report & Updated Project Design

- 10.2.1 Stage 7 (completed February 2016) culminated in Review Point 8 with the results of the 2015 season circulated for peer review and consultation with the wider specialist team. An updated Project Design (this document) has been subjected to Historic England for consultation and review (Review Point 8).

10.3 Stage 8 – Archaeological Fieldwork – Fourth Season

- 10.3.1 Stage 8 (scheduled for 10th – 25th September) will comprise the fourth fieldwork stage required to meet Aims 1 and 2, and will entail a combination of 3D photogrammetry survey and targeted trenching. It will aim to answer the following research questions some of which also helped to guide fieldwork during the first five stages of the project:

- Can the layout of the monastic complex and any associated subsurface archaeology be determined and refined by remote survey?
- Q2. What are the topographic anomalies visible immediately to the north of the monastic complex, and is this evidence for a navigable channel feature?
- Q3. Is there any evidence for phasing in the topographic or remote sensing results indicative of an extended period of use? Q4. Can we corroborate chronological phasing for the Site, including the presence of earlier and later features and structures, as defined in Aim 1?
- Q5. What are the typical and atypical features of the monastic complex and did this influence the functions and activities that took place?
- Q6. What is the landscape setting and character surrounding the Site, and how did this shape its location, design and development?

- 10.3.2 Stage 8 fieldwork will target areas of the site that remain 'unknown' or partially characterised, continuing into areas of the original Abbey at Minsmere. This includes the fields surrounding the church structure containing poorly understood cropmarks and an area a mile to the west of the Abbey site, due to its prominent landscape position and potential strategic importance concerning the navigable waterway. Sub-surface survey will be supported by a photogrammetry survey of the built remains, completing a survey of the Abbey Church with a full metrically accurate 3D digital elevation model. A low-level aerial photography survey using UAV's will also be undertaken, aiming to place the site into its landscape context. An auger survey of the large 'pond' feature at the northern extent of the site will also be undertaken as part of this stage of works, using an Eijkelkamp hand-

held gouge auger to complete two transects across the feature (See Appendix 3 of this document for detailed method statements for all proposed work).

- 10.3.3 Five trenches are proposed for the 2016 field season, focusing on the claustral and outer precinct area to the east and north of the original Abbey complex, in addition to an auger survey of a large 'pond' feature and spoil heap removal adjacent to the present chapel. This stage will culminate in Review Point 9, distributing all relevant finds and data to the wider specialist team.
- 10.3.4 Intervention 1 will be a continuation of work to sieve and record medieval building debris from the WW2 pillbox spoil heaps.
- 10.3.5 Intervention 2 (10 x 2 metres) will target a geophysical anomaly indicating a potential apsidal end at the east end of the Abbey Church, characterising the archaeological deposits and assessing the survival in light of recent ploughing. Vegetation and topsoil will be removed by hand, and any archaeological deposits or structural remains observed will be cleaned, recorded and photographed to assist with future management.
- 10.3.6 Intervention 3 (5 x 5 metres) will target a resistivity anomaly indicating a walkway or building connecting the cloister with an activity area to the north of the claustral precinct. Magnetometry survey was less clear in this area although there are indications of a rectilinear building layout. This trench will enable a comparison with the 2013/2014 excavation at Leiston's second site (which identified the reredorter drain in a similar location) and help to characterise the layout of the Claustral buildings.
- 10.3.7 Intervention 4 (3 x 15 metres) will aim to identify the presence or otherwise of the Abbey's fresh water channels. Previously identified as crop marks (1976) a complex of ditches and channels are known in this area, and have subsequently become less visible due to ploughing and the dredging of the main drain. This trench will target ditch intersections identified on the magnetometer survey, reassessing their current interpretation (freshwater channels for fishponds) recovering dating evidence and establishing potential phasing.
- 10.3.8 Intervention 5 (two transects) will investigate the largest feature on the site, a huge rectangular depression visible as both crop mark and on geophysical survey. This will be assessed using a borehole transect survey (NW-SE and NE – SW) to assess the form and function of this feature, currently interpreted as a fish pond but potentially a navigable dock. The transects will be investigated using an Eijkelkamp hand-held gouge auger, taking points every 5m, with the location of all points recorded using a Global Positioning System (GPS).
- 10.3.9 Intervention 6 (10 x 2 metres) will target strong magnetic features interpreted as potential WWII debris but could equally represent industrial or economic activity during the monastic period.
- 10.3.10 Intervention 7 (3 x 5 metres) will be sited at Cow Marsh Hill, a gravel island approximately one mile west of the Chapel. Much of the 'hilltop' has been quarried, but an ancient route way passes through here, connecting with

the main track to Leiston's second site, and intersecting with the head of probable tidal channel. As this site is unscheduled and off the main nesting areas, it will provide a relatively 'low risk' alternative area should that present any problems

10.4 Stage 9 – Assessment Report & Updated Project Design

10.4.1 This Stage will address Aim 3, culminating in Review Point 10, and focusing on answering the following research questions:

- Q7. What is the current state of the archaeological and palaeoenvironmental material across the site?
- Q8: How well do deposits and artefacts survive, and how deeply are they buried?
- Q9. Can the palaeoenvironmental data recovered from sampling in the trenches inform us about farming regimes, specialised food processing or industrial activities that may have taken place at the site?
- Q10: Can we increase our understanding of the local environment in the medieval period?

10.5 Stage 10 – Further work, Analysis and Publication

10.5.1 Addressing Aim 4, this is the main reporting and recommendation Stage of the project, culminating in Review Point 11 and focussing on the following research questions

- Q11: What can an integrated synthesis of the results of this work with previous remote sensing and building survey tell us about the site and it's setting?
- Q12: In light of the evidence recovered from this and previous season's work, can we articulate a link Leiston's first and second sites?
- Q13: Formulate recommendations for further archaeological and palaeoenvironmental analysis at Leiston Abbey based on Aims 1-3, and implement a programme to publish and disseminate the results.

11 STAGES, PRODUCTS AND TASKS

11.1 Methodological Linkages

11.1.1 It is anticipated that fieldwork will be undertaken in four stages; these are set out in the table below and are set against the project aims and questions that will be met at each stage, the products that will be produced and the tasks undertaken. For transparency, task numbers are linked directly to the project GANNT chart (for full sequence including milestones see chart in Section 15) and this is linked to the Project Budget in Section 14 below).

Stage	Description	Project Aims/Questions	Products	Task & ID Number
Stage 7	Assessment Report & Updated Project Design	Aim 1-4 Q1-14 (2016 UPD)	1. Assessment Report 2. Finalised UPD & Risk Log	3. Consult with wider project team and stakeholders to define

Stage	Description	Project Aims/Questions	Products	Task & ID Number
			3. Educational Plan & Information Pack 4. Digital Communication Plan 5. Risk Assessment & Health and Safety Plan	milestones and delivery timetable. 4. Core Archaeology Team Meeting. 5. Design project database. 6. RV8 – Sign Off on MoRPHE
Stage 8	Archaeological Fieldwork – Fourth Season	Aim 1 Q1-3 Aim 2 Q4-7	6. Field Archive 7. Survey Archive 8. 3D Survey Archive	8. Site Preparation 9. Fieldwork (remote sensing & Excavation) 10. RV9 – assemble site archive & distribute to specialists
Stage 9	Assessment Report & Updated Project Design	Aim 3 Q8-10 Aim 4 Q11-14	9. Stratigraphic & Assessment Report	13. Specialist finds and palaeoenvironmental assessments 14. Integrated assessment report 15. RV10 – recommendations for further work
Stage 10	Analysis and Publication	Aim 1-4 Q1-14	10. Final report 11. Publication 12. Completed and accessioned archive	18. Specialist analysis 19. Finalise report and publication 20. Prepare data and archive for deposition. 21. RV11 – final sign-off 22. Closure

Table 4 (continued) – Project stages, products and tasks

11.2 Task List by Person days and Team Member



11.2.1 DigVentures projects are managed according to the English Heritage MoRPHE project model (Management of Archaeological Research Projects in the Historic Environment) based on a PRINCE2 framework. This is further detailed in the project GANNT chart (Section 15), including project milestones, and linked by Stage with the project budget (Section 14).

Task ID Number	Aims	Task Description	Performed by:	Person days	Start (no later than)
Stage 5: UPD					
3	1	Consult with wider project team and stakeholders to define milestones and delivery timetable	BW, LWW	1	1 st May 2016
4	1	Core Team Meeting	BW, LWW, RD, , JA, EW, AS	0.25	6 th June 2016
5	1	Design project database	BW, EG, RD	0.5	6 th June 2016
6	1	RV8 – Sign Off on MoRPHE	Project Team & HE	0.25	23 rd June 2016
Stage 6: Fieldwork					
8	1 & 2	Site Preparation	BW, LWW, RD,	2	9 th September 2016
9	1 & 2	Fieldwork (remote sensing & Excavation)	BW, LWW, RD, EG, KE, JA, EW, AS	12	10 th – 24 th September 2016
10	1 & 2	RV9 – assemble site archive & distribute to specialists	Project Team	5	October 2016
Stage 7: Assessment					
13	3	Specialist finds and palaeoenvironmental assessments	Expert Team	10	November 2016
14	3	Integrated Report	BW, LWW & Project Team	5	January 2017
15	3	RV10 – recommendations for further work	Project Team & HE	1	January 2017
Stage 8: Analysis and Publication					

Task ID Number	Aims	Task Description	Performed by:	Person days	Start (no later than)
18	4	Specialist Analysis	BW, LWW & Project Team	7	February 2017
19	4	Finalise report and publication	BW, AG, CB, TG, IP	7	March 2017
20	4	Prepare data and archive for deposition.	TG	2	March 2017
21	4	RV11 – final sign-off	Project Team & HE	1	April 2017
22	4	Closure	Project Team & HE	1	

Table 5 (continued) – Project Task List

12 OWNERSHIP

- 12.1.1 The Copyright on all reports submitted will reside with DigVentures, although a third party in-perpetuity licence will automatically be given for reproduction of all products, subject to agreement with Historic England. The original copyright holder will retain copyright in pre-existing data. Any publications resulting from the project will be subject to agreement with HE and will bear an acknowledgement of the support of Historic England.

13 RISK LOG

- 13.1.1 A Risk Log is appended as Appendix 4 to this document.

14 BUDGET

- 14.1.1 The estimated overall budget for the project is set out in the table below, and will be delivered entirely within the 2014-15 financial year.

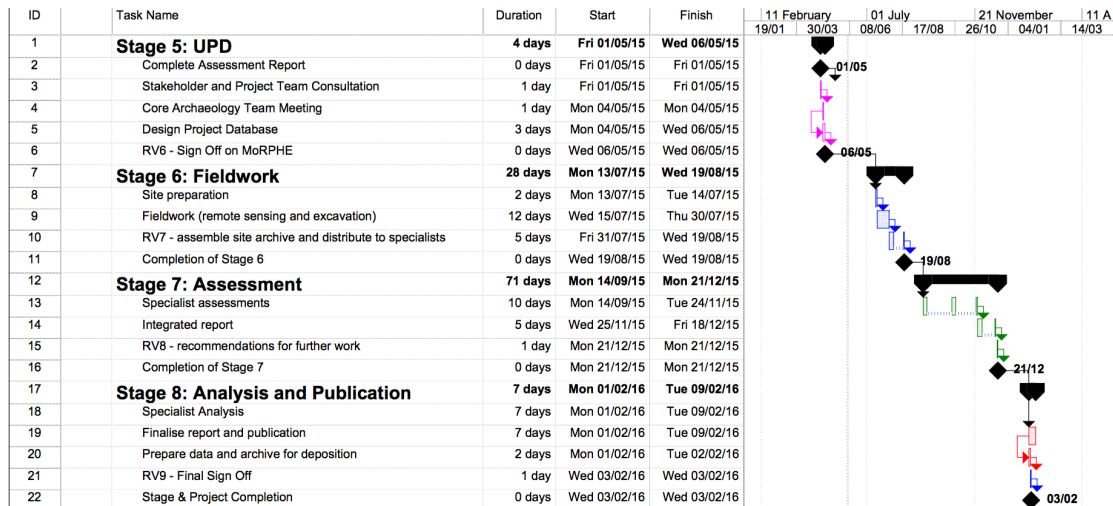
Item	Budget	Year	Total
Project Costs			
Staff Costs	DigVentures Crowdfunding	2016	£6,000.00
Subcontractor Costs	DigVentures Crowdfunding	2016	£1,000.00
Machinery + Plant	DigVentures Crowdfunding	2016	£750.00

Item	Budget	Year	Total
Survey Equipment	DigVentures Crowdfunding	2016	£250.00
Tools	N/A	2016	Provided by DV
Site Accommodation	N/A	2016	Provided by RSPB
Vehicles + Fuel	DigVentures Crowdfunding	2016	£250.00
Crew Accommodation + Subsistence			
Campsite + Welfare	DigVentures Crowdfunding	2016	£200.00
Subsistence	DigVentures Crowdfunding	2016	£2,000.00
Assessment & Analysis			
Staff Costs	DigVentures Crowdfunding	2016	£1,500.00
Specialist Assessment Costs	DigVentures Crowdfunding	2016	£2,500.00
Contingency	DigVentures Crowdfunding	2016	£2,000.00
Dating	DigVentures Crowdfunding	2016	£2,000.00
Deliverables			
Seminar	DigVentures Crowdfunding	2016	£250.00
Conference Fees	DigVentures Crowdfunding	2016	£250.00
Publication	DigVentures Crowdfunding	2016	£750.00

Table 6 – Project Costs (By Year)

15 PROJECT GANNT CHART

15.1.1 It is anticipated that the project will be completed in four stages. These are set out in the GANNT chart below; with specific task ID numbers and milestones linked to the project Aims and Objectives in Table 4, and the project budget in Table 6.



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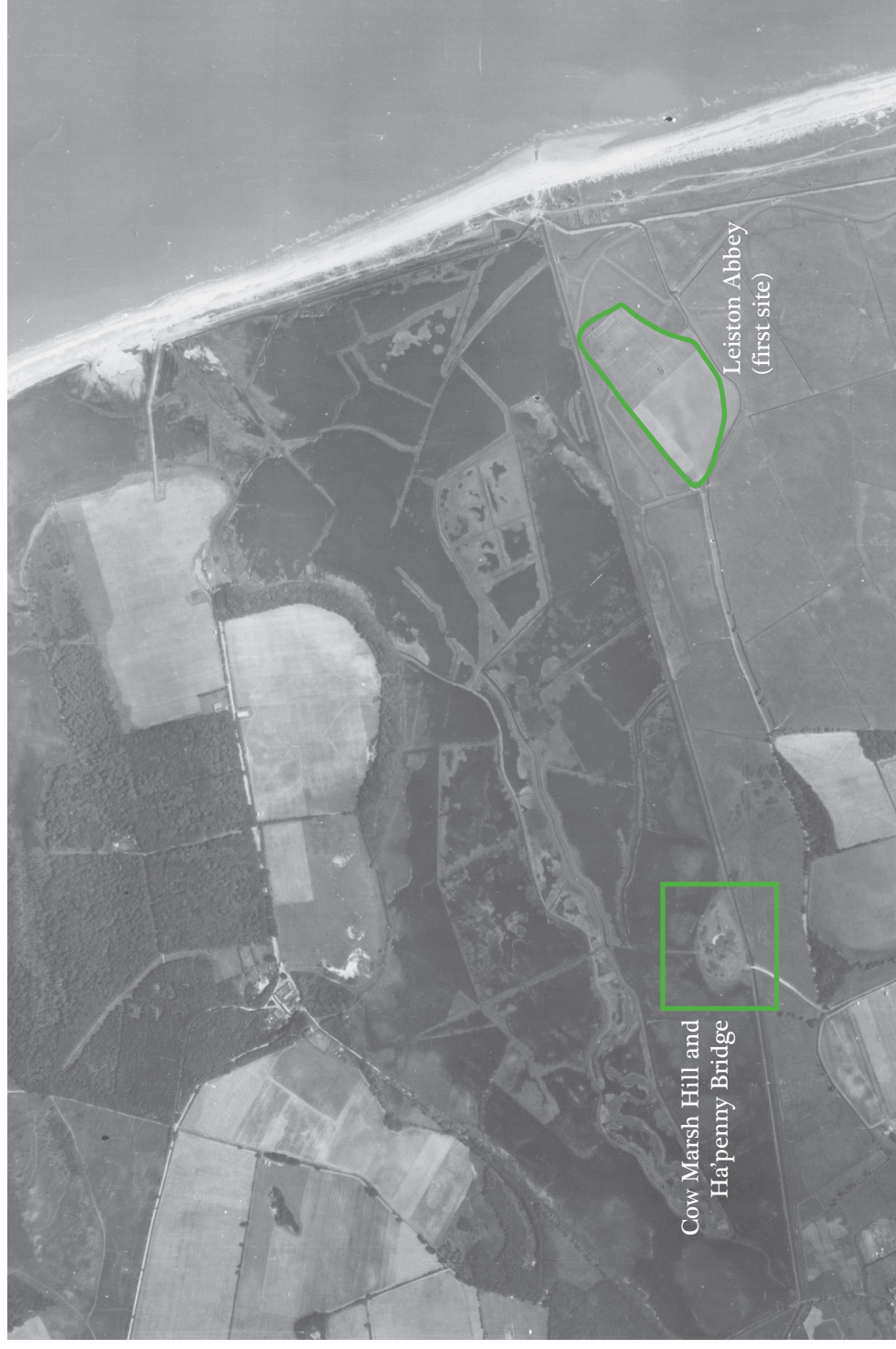


Figure 1 - Site Location indicating Cow Marsh Hill and Chapel Hill Field (Leiston Abbey First Site). Source: RSPB.



Figure 2: Proposed excavation and borehole targets for 2015 field season, Chapel Hill Field, Minsmere (source Black & Black 2008, unpublished Geophysical Survey Report)



Figure 3: Extract from Hodkinson's 1783 Map of Suffolk, Featuring Leiston's First Site (marked as 'Old Chapel') and adjacent large rectilinear water feature.

Brendon Wilkins MA MIAI MIFA

PROJECTS DIRECTOR



EDUCATION AND QUALIFICATIONS

- **Member, Council of the Institute for Archaeologists** 2013
- **MA in Archaeology** (Distinction) University of Bradford 2007 - 2008
- **Member of the Institute for Archaeologists** 2004
- **Member of the Institute of Archaeologists of Ireland** 2004
- **Irish License Eligibility** 2004
- **BSc Archaeology** (Hons) University of Bradford 1996 - 1999

KEY COMPETENCIES

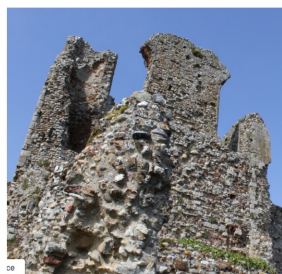
- Archaeological Desk-Based Assessment
- Design and Management of Archaeological Works
- Fieldwork and Survey Management
- Cultural Heritage Environment Statement
- Heritage Consultancy
- Community Archaeology
- Historic Research
- Digital Heritage

CAREER SUMMARY

Brendon is an award-winning field archaeologist and researcher, with over a decade of experience directing and managing large-scale projects. He has held senior posts in two of the largest commercial contractors in the EU, with equal experience in operations, procurement, sales and marketing. Brendon has a consistent publications record, and has lectured internationally on alluvial and estuarine wetland archaeology, mortuary archaeology and quality assurance on large-scale archaeology projects.



Archaeological Fieldwork



Heritage Consultancy



Field Skills Training



Audience Development



Community Participation

SELECTED PROJECTS

Infrastructure (Road and Rail) Client: Vinci/Bam Nuttall/Lancashire County Council

Full executive responsibility for the archaeological management of major infrastructure developments, including a multiphase London city centre development requiring built heritage recording, geoarchaeology and excavation (Victoria Station Upgrade); a complicated evaluation and excavation project in advance of a new Motorway service station on the M25; and a geoarchaeological, topographic and trial trench evaluation of the M6 link road to contribute to final project design.

DBA/EIA/Master Planning

Client: WSP Environment

Project Managed the Cultural Heritage dimension to a major 420-hectare mixed-residential development, including built heritage, desk based assessment, historical landscape survey, geophysics and trial trenching, leading to DBA, EIA and Master Planning for final development. This involved liaison with clients, project design teams, regulatory authorities and interaction with engineering and other environmental disciplines to ensure that projects were delivered on schedule and budget.

Wetland

Client: National Roads Authority

Alluvial and estuarine wetland excavated on the banks of the river Suir in advance of the located on the eastern edge of an area of deep Holocene sediments that accumulated in response to a progressive rise in sea level. I devised and managed a strategy for recording the complex wooden structures and palaeoenvironmental evidence in a method that has subsequently been cited as a model of best practice.

Urban

Client: Countryside Properties

Permanex Site, St Ives, Cambridgeshire, a town centre redevelopment involving an open area excavation of a river frontage site. Working closely with the developer and other stakeholders, I successfully negotiated a phased scheme of archaeological works to run concurrently with the development schedule. The site revealed a medieval industrial complex comprising a series of associated large pits and ditches.

Greenfield

Client: National Roads Authority

Carrowkeel, Co. Galway, an early medieval cemetery settlement excavated in advance of the M6. Testing on this area revealed burials within a sequence of ditch enclosures, requiring an urgent review of schedule. I successfully negotiated to bring the excavation stage forward to ensure no delays to the overall project, and then managed both the excavation of this site and the testing of the rest of the road scheme on time and budget.

PROFESSIONAL EXPERIENCE

Operations Director, Rubicon Heritage Services
London (2012 - 2013)

Senior Project Manager, Wessex Archaeology
South East (2010-2012)

Sales and Marketing Manager, Headland Archaeology
Cork, Ireland (2008-2010)

Site Director/Project Manager, Headland Archaeology
Cork, Ireland (2004-2008)

Project Officer, Hertfordshire Archaeological Trust (2002-2004)

PUBLICATIONS

Wilkins, B. 2013. Knowledge, Value and the Celtic Tiger. In Aitchison, K., Jameson, J. and Eogan, J. (eds.) *Archaeologists of the world: globalizing archaeological practice*. Springer

Bermingham, N., Delaney, F., Johnston, B., Molloy, K., O'Sullivan, K., Shiels, D., Shine, D., Skehan, G., Tierney, J. and Wilkins, B. 2013. *The Quiet Landscape: Archaeological Investigation on the N6 Galway to Ballinasloe Scheme*. National Roads Authority: Dublin

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O'Sullivan, J., Tierney, J., and Wilkins, B. and 2010. The Early Medieval Settlement Cemetery in Co. Galway. In Corlett, C., and Potterton, M. (eds.) *Medieval Rural settlement in Ireland in light of recent excavations: Research papers in Irish Archaeology No. 1*. Wordwell and the Royal Society of Antiquaries of Ireland: Dublin

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Wilkins, B. 2009. Rumsfeldian Archaeology. *Current Archaeology*. 231: 43.

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SELECTED CONFERENCE PAPERS

Wilkins, B. 2012. Social Contract Archaeology: a business case for the future. EAA. Helsinki/TAG Birmingham

Wilkins, B. 2011. Excavating Death on the N6: 3500 BC to 1500 AD. Past Times, Changing Fortunes. NRA Conference, Gresham Hotel, Dublin.

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Wilkins, B. 2009. Heritage in Danger. Archaeology Festival 2009, Cardiff University. Session organiser and chair.

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Wilkins, B. 2007. Borderline archaeology: quantity and quality in the commercial sector. Theoretical Archaeology Group. York, UK.

Wilkins, B. 2007. Where the rubber hits the road: a critical evaluation of archaeological decision making on highways projects in Ireland. 13th Annual EAA meeting, Zadar, Croatia.

Lisa Westcott Wilkins MA FRSA

PRINCIPAL HERITAGE CONSULTANT



EDUCATION AND QUALIFICATIONS

- **Institute for Archaeologists Registered Organisation** 2013
- **Fellow in Heritage and Conservation, Clore Leadership Programme** 2010 - 2011
- **Fellow of the Royal Society of Arts** 2011
- **MA in Archaeology** (Distinction) UCL Institute of Archaeology 2001 - 2002
- **BA Communications** Ithaca College USA 1989 - 1993

CAREER SUMMARY

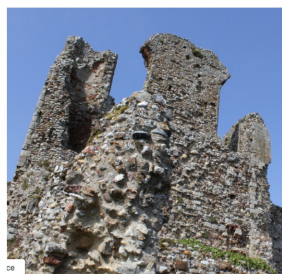
Lisa has extensive experience delivering successful, high-profile projects and programmes in the heritage and culture sectors, having held leadership posts in several organisations. An accredited coach and facilitator, Lisa is skilled in brokering and developing partnership working relationships and building communities. She has a thorough knowledge of evaluation, interpretation, education, events and visitor services, and is a sector innovator in engagement with digital technology and consumer trends in a heritage context.

KEY COMPETENCIES

- Heritage Consultancy
- Project design and delivery
- Audience evaluation design and analysis
- Stakeholder relationship management across the media, public, private and third sectors
- Fundraising and marketing campaign execution
- Community archaeology
- Historic Research (Desk Based Assessment)
- Digital Heritage



Archaeological Fieldwork



Heritage Consultancy



Field Skills Training



Audience Development



Community Participation

SELECTED PROJECTS

The Grave Trade

Date: Feb 13 - Oct 13

Engaged as Specialist Factual Consultant for Observational Documentary television series. Completed historical research to identify eight UK and European sites. Developed over-arching archaeological narrative for the series, as well as individual site storylines encompassing live archaeology and scientific research. Assistant Producer on all shoots.

Client: ITV/The History Channel

Saints & Secrets

Date: Mar 13 - July 13

Raised over £18k from bespoke crowdfunding campaign to complete the first-ever programme of excavation and audience evaluation at medieval Leiston Abbey, a Scheduled Ancient Monument located in Suffolk. Completed first-ever audience research for heritage attraction, and compiled initial heritage plan for site, including strategic development of physical asset.

Client: Pro Corda

Flag Fen Lives

Date: Feb 12 - Aug 12

Designed and delivered the world's first ever crowdfunded and crowdsourced archaeological excavation, raising more than £30k for a field school at the Bronze Age monument of Flag Fen. Engaged an international community of digital and on-site funders and participants. Raised visitor numbers by over 30%, and increased revenues by 29%, earning 1/3 of the total site income for 2012. Coordinated stakeholder group including English Heritage, academic advisory committee, monument stewards, city and county statutory archaeologists, landowners, press, and participants from 11 countries.

Client: Vivacity

RECENT PROFESSIONAL BACKGROUND

Managing Director

Nov 11 - present

DigVentures is an innovative organisation committed to providing seed capital and building audiences for archaeology projects worldwide. In 2013, we launched the 'DigStarter' funding platform, and were the first-ever community archaeology business to achieve Institute for Archaeologists Registered Organisation status. We are also the first organisation to receive IfA National Vocational Qualification Field School Accreditation.

DigVentures

Project Manager

May 11 - Oct 12

Commissioned the Institute for Cultural Capital to complete evaluation of the £118m, four-year Cultural Olympiad programme. Managed process including brief, monitoring, reporting and budget. Coordinated the Steering Group, comprising LOCOG senior staff, DCMS, Arts Council, Legacy Trust, Greater London Authority, commercial sponsors and external consultants.

London 2012 (LOCOG)

Editor

2007 - 2010

Responsible for the production of Britain's best-selling archaeology magazine, including writing, editing, and management of the design team. Initiated and grew social media communities to over 5,000 participants within four months. Delivered sold-out Archaeology Live! 2008 - 2011 conferences at the British Museum in partnership with the Portable Antiquities Scheme.

Current Archaeology

Raksha Dave BSc

PROJECT SUPERVISOR



EDUCATION AND QUALIFICATIONS

- BSc Archaeology UCL Institute of Archaeology 1996-1999
- Trustee, Council for British Archaeology, London
- Patron and Advocate, Young Archaeologists' Club, UK

KEY COMPETENCIES

- Archaeological Desk-Based Assessment
- Fieldwork and Survey Management
- Community Outreach and Volunteer Coordination
- Extensive multi-period excavation experience from prehistory to Second World War conflict archaeology
- Interpretation of the historic environment in a broadcasting context
- Community Archaeology

CAREER SUMMARY

Raksha is an experienced field archaeologist, broadcaster and researcher, with a focus on communities and outreach within the heritage and education sector. With over a decade of project management and leadership experience on high profile archaeological and community projects, Raksha has a successful track record of supervising teams, meeting project design objectives, and delivering training. As an on-screen member of the Time Team for ten years, Raksha is one of the UK's most well-known archaeologists.



Archaeological Fieldwork



Heritage Consultancy



Field Skills Training



Audience Development



Community Participation

SELECTED PROJECTS

Saints & Secrets

Date: Mar 13 - July 13

Managed field school of over 100 participants at a previously unexcavated medieval abbey in Suffolk. Delivered hands-on archaeological skills training, conducted one-to-one skills assessments and exit interviews, and acted as primary interface for public outreach including the Young Archaeologists' Club, local archaeological societies, other interest groups and casual visitors. Responsible for executing daily trench work plans, coordination with specialists, and regular YouTube broadcasts.

Client: Pro Corda

Flag Fen Lives

Date: Feb 12 - Aug 12

Field School Manager for the world's first-ever crowdfunded and crowdsourced archaeological excavation. Trained over 125 participants in archaeological field skills and specialist techniques. Key point of contact for local organisations and schools to enable access to heritage attraction. Coordinated 'DigTent' for children, hosting 60 young learners over three weeks.

Client: Vivacity

Çatalhöyük Research Project

Date: 2003

Supervisory role managing a team of 40 international students and local staff as part of joint university research project with Berkeley University (USA) and University College London. Supervision and excavation of a deep urban stratigraphy multi-period tell settlement dating from the Chalcolithic to the Byzantine periods. Teaching and mentoring international students in excavation techniques and field methodology. Liaison with specialists and Turkish government heritage officials.

Koyuk, Turkey

RECENT PROFESSIONAL BACKGROUND

Field Archaeologist

2000-2003; 2011 - present

Field archaeologist for high-profile commercial companies based in London. Experience in Desk-based Assessments, Environmental Impact Assessment, pro-forma recording, post excavation analysis, finds processing, surveying, archiving, report writing and research. Projects include St Mary Spital, Spitalfields; Blossoms Inn, Gresham Street; Plantation House, Fenchurch Street.

MOLA, PCA, AOC

Archaeologist (on-screen)

2000 - 2010

Archaeologist and presenter for internationally televised programme. Extensive knowledge of rural, deep urban stratigraphy, SSSI and scheduled sites. UK projects include: Westminster Abbey (World Heritage Site) and the Royal Palaces of Holyrood House and Windsor Castle. Other UK experience in Wales, Channel Islands, Isle of Man, Scotland and Northern Ireland. International projects include D-Day excavations Gold Beach, Normandy and the Liedse Rijn Roman Boat.

Time Team

Deputy Manager

2003 - 2010

Delivered government strategies and policies in Early Years and Extended Services within a local authority. Marketing and communications lead for the Westminster's Early Years department and Children's Centres. Project Manager for community, training and family outreach projects and events.

Westminster City Council

Family Information Service

Maiya Pina-Dacier

COMMUNITY MANAGER



EDUCATION AND QUALIFICATIONS

- **MSc in Skeletal and Dental Bioarchaeology** (Distinction) UCL Institute of Archaeology 2008 - 2009
- **BSc Archaeology** (First class honours) UCL Institute of Archaeology 2005 - 2008

KEY COMPETENCIES

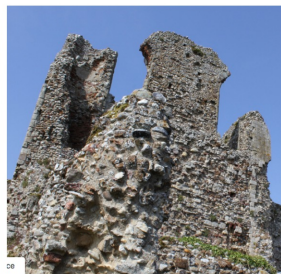
- Designing content marketing strategies
- Using social media to build, manage and maintain online audiences
- Writing and editing for digital and print publication
- Digital Heritage projects
- Project development and delivery
- Community archaeology
- Field archaeology

CAREER SUMMARY

Maiya is an experienced community builder, both online and in person. Starting out in commercial archaeology, liaising with local interest groups and running community events, Maiya went on to develop content strategies to drive online engagement as a Marketing Consultant for start-ups in the financial sector. She is now the hub of DigVenture's social media activity and online community, responsible for a thriving newsroom and ever-expanding network.



Archaeological Fieldwork



Heritage Consultancy



Field Skills Training



Audience Development



Community Participation

SELECTED PROJECTS

Digital Dig Team

Date: July 14 - Present

As part of a Heritage Lottery Funded archaeology project, Maiya is breathing life into DigVenture's open-access archive. Driven by social content, Maiya is building new and existing audiences into sustainable online communities who are able to both experience digs online, in real time and participate in post-excavation interpretation. After beta-testing in the field this summer, Maiya co-ordinated community feedback, ensuring it is included in the next phase of development and is currently working on bringing the system to wider use among archaeologists.

DigVentures Ltd

Online Training for the Financial Advice Sector

Date: Jan 14 - Mar 14

As Marketing Consultant, Maiya led the campaign for Ageas Protect's most successful product launch. Focussing on educational needs rather than product specs, Maiya devised an innovative content-led strategy, amplified by trade press coverage, digital marketing and leverage of social networks and the project recruited and trained over 600 financial advisers in four weeks.

Worthing Community Outreach

Jan 10 - Mar 10

As a field archaeologist, Maiya's enthusiasm for teaching and sharing archaeology landed her a lead role in delivering AOC's community outreach work on a three-month excavation in Worthing. She was responsible for developing and delivering public talks, creating a 'pop-up museum', leading daily site tours and children's activities, as well as co-ordinating and supervising volunteers to create a dedicated community team who kept on coming back for more.

RECENT PROFESSIONAL BACKGROUND

Community Manager

July 2014 - present

Responsibilities include managing the DigVentures newsroom, developing the editorial calendar, oversight of social feeds, co-ordinating blog contributors, and maintaining and supporting a thriving online community.

DigVentures

Marketing Consultant

2011 - 2014

Joining this award-winning start-up as a Marketing Associate in 2010, Maiya started by running the company's first online brand awareness campaign. She continued to build the company's profile and draw in a community of industry advocates. Her responsibilities included campaign planning, product launches, and content strategies covering press, digital content and social media. Maiya also played a key role in establishing an internal sense of community within the company, taking a 'bottom-up' approach to internal communications, nurturing an online discussion forum and bringing colleagues together through events.

Ageas Protect

Field Archaeologist

2009 - 2010

Field archaeologist for high profile commercial companies and consultancies including AOC Archaeology and Phoenix Consulting. Enthusiasm for sharing knowledge and a knack for making people feel included quickly led to having responsibility for liaising with local interest groups, media, arranging and presenting community events, co-ordinating and looking after volunteer groups, supervising and teaching new excavators.

Appendix 2 – Archaeological and Historical Background

The following background for Leiston Abbey is adapted from the Historic England National Heritage List (Historic England 1996), based on original excavation reports produced from work detailed in section 1.4.

The Site Location

The original site of Leiston Abbey, from which the community was removed in 1363 to a new site 3.37km to the south west, is located on a low island in the coastal marshes on the south side of Minsmere, 250m inland from the present shoreline. The monument includes the buried remains of the monastic church and conventual buildings, various ditched enclosures, and a large fishpond with associated water management features, set within a monastic precinct which is still defined in part by existing field boundaries. Also included are the ruins of a chapel on the site of the monastic church, and a World War II pill box camouflaged within the walls of the chapel. The austerity and seclusion from the world sought by the Premonstratensian order are manifest in the original choice of location for the abbey, but the disadvantages and inconvenience of such an isolated and marshy site became increasingly apparent.

Leiston Abbey and the Premonstratensians

From the time of St Augustine's mission to re-establish Christianity in AD 597 to the reign of Henry VIII, monasticism formed an important facet of both religious and secular life in the British Isles. Settlements of religious communities, including monasteries, were built to house communities of monks, canons, and sometimes lay brothers, living a common life of religious observance under some form of systematic discipline. It is estimated from documentary evidence that over 700 monasteries were founded in England. The Premonstratensian orders, or "White Canons", were not monks in the strict sense but rather communities of priests living together under a rule. The first Premonstratensian establishments were double houses (for men and women), but later they founded some 45 houses for men in England. The Premonstratensian order modelled itself on the Cistercian values of austerity and seclusion and founded all its monasteries in rural locations.

Leiston Abbey, dedicated to the Blessed Virgin, was founded at Minsmere in 1182 for 26 canons of the Premonstratensian order by Ranulph de Glanville, Chief Justiciary to Henry II. The original endowment included the manor of Leiston and the churches of St Margaret, Leiston and St Andrew Aldringham, both of which, according to the foundation charter, had formerly been granted to the Augustinian canons of Butley Abbey, of which de Glanville was also patron, and the abbey was further enriched by later endowments and appropriations. The annual value of the abbey holdings is given in the taxation roll of 1292 as 130 pounds 15s 7d, and in the valuation of 1535 as 181 pounds 17s 1d, the largest part of which derived from the manor of Leiston.

In its original location, the abbey was prone to flooding, so the canons were granted a papal licence in 1363 to move to a more favourable spot inland at Leiston, although the original site was retained as a monastic cell, with a chapel dedicated to St Mary. John Green, last abbot but one, resigned his office to live here as an anchorite. In 1531 the church and other buildings on it were demolished and stone from them reused in the construction of the new abbey, built at the expense of Robert de Ufford, who had been granted patronage of the abbey by the crown in 1350.

The Monastic Precinct

The foundations and foundation trenches of the demolished buildings, together with other features, survive below the ploughed surface of a modern field and form crop marks which have been recorded in aerial photographs, showing the layout of the abbey in some detail. The monastic church and conventual buildings occupy the highest point of the island, and the ruins of the later building, identified as the Chapel of St Mary referred to in documentary sources, stand within the eastern end of the nave of the church.

Lower down, to the north, is a fishpond, surrounded by water channels, and to the south of this are remains of ditches defining two large, sub-rectangular enclosures. At the eastern end of the site there are traces of an extensive complex of smaller, rectilinear ditched enclosures.

The area to the north of the pond and its associated features is under grass and contains features surviving as earthworks. It is bordered by an earthen bank which is aligned parallel to the principal medieval water channels and is understood to follow the boundary of the monastic precinct on that side. At the eastern end of the monument, the drain surrounding the ploughed field, marks the limit of recorded features known or thought to be of medieval date. On the south east side, the probable line of the boundary is indicated by the linear crop mark of a ditch and bank or wall, running north east-south west and partly alongside the inner edge of the modern drain which surrounds the field. This feature terminates in a short, inward return, perhaps marking an entrance to the precinct. West of this point there is no continuation visible in the aerial photographs, but the precinct boundary is believed to coincide largely with that of the modern field.

The Claustal Precinct

The church, as defined by crop marks, was cruciform in plan, with transepts to north and south of a crossing east of the nave, and measured c.70m in overall length. The nave was c.38m in length by c.13m and apparently without aisles. The division between the crossing (the area where the canons' choir was normally situated) and the presbytery at the east end of the church is marked by foundations, perhaps for steps or sills for a choir screen, which can be seen to continue the lines of the east walls of the transepts inwards to a wide central opening.

The presbytery was of similar width to the nave and also aisleless, as was normal in churches built by the Premonstratensian order. The foundations of a rectangular structure measuring c.14m north-south by 6m east-west, which can be seen over (or abutting) the south end of the southern transept, may belong to the later use of the site, following the removal of the main body of the community to the new abbey.

The conventual buildings were grouped around a cloister c.30m square on the north side of the church. The plan of the east range, abutting the north transept of the church, is the most clearly defined. At the southern end of the range are the remains of the chapter house, where the abbot and canons met to discuss the daily business of the abbey. This is rectangular and measures c.17m east-west by c.12m. The remainder of the range extends northwards c.37m beyond this, well beyond the northern claustral range, and is c.11m wide. According to the usual monastic arrangement, this will have contained the dorter (canons' dormitory) on the upper floor, above an undercroft subdivided into various apartments such as the parlour and warming house. These subdivisions of the ground plan are clearly visible in the air

photographs, which also show the outline of the reredorter (latrine block) across the northern end of the range and extending eastwards. The crop marks reveal no precise details of the other two ranges, but to the north of the angle between the north range, which contained the refectory, and the west range, they show part of a separate building which, on the evidence of its location, was probably the kitchen. A crop mark recorded to the east of the church suggests the presence there of a large, rectangular building which, by analogy with other monastic sites, is likely to have been the infirmary. The monastic cemetery probably lay to the north of this and east of the dormer range, where the crop marks indicate a large enclosure. Beyond this, at the eastern end of the monument, is the complex of small, ditched enclosures, laid out grid fashion, which probably included gardens and paddocks, perhaps with associated agricultural or service buildings.

The ruined chapel above the site of the monastic church is rectangular, with dimensions of c.15m east-west by 8m. The walls are constructed chiefly of coursed flint rubble in the lower part, but the upper parts above door height are of different build, containing random fragments of reused ashlar and stone mouldings, as well as some brick. They retain various blocked and altered openings of medieval date, including an arched doorway on the south side, and a blocked window with original plastered reveals on the south interior wall. Photographs taken early this century show the gable ends surviving to full height, although the upper parts of these have now fallen.

The pill box, which was constructed within the eastern half of the building during World War II as part of the coastal defences, is of brick faced with cement, with firing embrasures utilising openings in the north, south and east sides of the earlier building, and an entrance on the west side.

The Outer Precinct

The abbey fishpond, the remains of which lie to the north west of the abbey buildings, was linked to a system of artificial water channels which will have supplied the monastery with fresh water for domestic use, including sanitation, as well as for agricultural purposes, and also included drains for foul water. These features are now largely infilled, but survive below the plough soil and produce well defined crop marks. The fishpond, which is still marked on the ground surface by an area of soft, damp soil, is sub-rectangular in plan and measures c.78m east-west by c.46m. Two short channels connect the pond to a broad leat which runs parallel to it on the south side, from the western end of the precinct to the reredorter, which required a water supply for flushing the latrines.

This leat and other, connected channels, constituting a system of supply and drainage, form a rectangular enclosure around the pond. The junction of the channels at the north west corner of the enclosure is obscured by a modern drainage ditch, but they appear to have been connected with a sinuous channel, embanked on the east side, which survives as an upstanding earthwork in the uncultivated part of the precinct to the north.

The flow of water around the system and in and out of the fishpond will have been controlled by sluices, remains of which are also likely to survive below ground. Ditches linked to the principal leat on the south side appear to form part of the same system, and also define two large rectangular enclosures. Across these run narrower ditches which are probably of different date, though on the same alignments as the larger features.

In the north west corner of the marshland enclosure to the north there is a rectangular raised platform, measuring c.30m east-west by 10m, which probably supported a building.

Appendix 3 – Method Statements

The methods for the proposed project will involve a combination of Lidar survey, geophysical survey (resistivity and ground penetrating radar) GIS modelling, archaeological excavation, sampling, palaeoenvironmental sampling and assessment. The methods are linked directly to the project aims and objectives (see Table 1) and detailed below.

Key Questions and Objectives	Lidar Survey	Photogrammetry and Digital Terrain Modelling	Auger Survey	Earthwork Survey and GIS Modelling	Archaeological Excavation	Sampling	Environmental Assessment	Findings Assessment	Synthesis and Data Integration
Q.1	✓	✓							
Q.2	✓								
Q.3	✓	✓							
Q.4				✓					
Q.5				✓	✓		✓		
Q.6				✓	✓				
Q.7				✓	✓	✓	✓		
Q.8			✓		✓	✓	✓	✓	
Q.9			✓			✓	✓	✓	
Q.10			✓			✓	✓		
Q.11							✓		✓
Q.12							✓		✓
Q.13									✓
Q.14									✓

Table 7 – Linking methods with objectives

Remote Sensing

Non-invasive surveys will commence on 10th September and are scheduled for 2 days. This work will be used to accurately position trenches on the unscheduled area around the claustral complex, and subject to the granting of scheduled monument

consent, will also be undertaken in advance of small-scale ground truthing interventions at the edge of the scheduled area. If time permits, further non-invasive work will be undertaken on Cow Marsh Hill, subject to landowner permissions. Specific techniques and methodologies related to the remote sensing phase of the project are detailed below.

Topographic Survey and GIS Modelling

Topographical survey work will be carried out using a Trimble Real Time Differential GPS survey system. The Trimble VRS system is used in conjunction with a GPS Rover unit. It allows for surveying without the use of a site specific fixed base station. This is achieved by connecting to Trimble's network of fixed base stations by means of mobile phone communication. This method is highly efficient and accurate (+/- 2cm) when good signal is available. The survey data is exported from the data logger as a comma delimited file (csv) and a Trimble data collector file (dc). Either of these files can be imported into Trimble GeoSite Communicator, which recognises the feature code library and plots all strings, polygons and labels as intended. All survey and excavation data will be stored within a GIS environment, which will remain the principle conduit for all spatial data throughout the project.

3D Digital Surface and Terrain Modelling

A comprehensive building condition survey will be undertaken on the upstanding Abbey remains), to produce a metrically accurate 3D digital surface model (DSM). The resulting DSM will provide an accurate and versatile record of the form and condition of the upstanding structure for immediate analysis as well as providing a baseline dataset for comparison with future surveys to determine weathering rates and potential damage.

Photogrammetry Survey

The proposed methodology for data collection will meet the equivalent requirements of a level 4 survey, as specified in *Understanding Historic Buildings: A Guide to Good Recording Practice* (Historic England 2006a). This work is not expected to revise existing phasing or interpretation (see Appendix 1) but to provide metrically accurate baseline information for future reference and analysis. The photogrammetry survey will utilize Agisoft PhotoScan 3D Modelling software to detect the feature points of the structure, and match these in different images to create a point cloud. The camera positions will be calculated automatically by the software and a dense reconstruction or geometric model will be built to create a DSM. The resulting model can then be. The resulting DSM can be manipulated for viewing from any angle using a variety of artificial light and shading techniques to highlight certain features, or overlaid or draped with the original photographs for true colour representation.

Images will be captured perpendicular to the structure using telescopic mounted cameras, to deliver optimum results requiring little or no rectification. All images are taken with a 16 megapixel Nikon D7000 digital camera (unless other cameras are specified) with a variety of standard and other lenses and are captured in RAW format for later processing into high resolution JPG and TIF files, and downloaded directly on to the hard disk of the laptop.

Where vehicular access is possible Aerial-Cam can be used to record the larger areas of a structure using perpendicular positioning, as well as going to a greater height to provide general overview and context aerial perspectives. Surface boards will be laid down where necessary to minimise surface impact. Where access is

restricted (inside walls and towers) the Pole-Cam operated in the space of a single person, can be used for perpendicular positioning and for close up detailed images of masonry features etc. The methods used to generate raw data in advance of DSM processing are detailed below:

Ground-level and Gigapan

If necessary, an automatic robotic camera positioning device and ground-level tripod rig will be utilised. This enables the precise capture of multiple and detailed images to a user defined pattern, for extreme resolution large format mosaic and panoramic compositions. Each set of images (which can run into hundreds) are then automatically stitched together using the Gigapan software, to create images which have a wide area perspective and fine detail which can be zoomed into. This equipment has demonstrable benefits inside buildings where large areas of masonry with damage need to assess; it has also proven very effective at recording works of art in fine detail, such as the Triptych by Lucas van Leyden, in Highnam Church, Gloucestershire.

Archaeological Excavation

A limited number of targeted machine trenches (Chapel Hill Field and Cow Marsh Hill) and hand dug test pits will be excavated, with their final position refined by the results of remote sensing, in collaboration with Will Fletcher, Historic England Inspector of Ancient Monuments (Figure 3). These will include:

- One trench targeting a potential apsidal end at the east of the original Abbey church, characterising the archaeological deposits and assessing their survival in of recent ploughing. (Trench 24, one 10 x 2m hand dug test trench).
- One trench to ground truth anomalies identified by resistance survey interpretations of a walkway or building connecting the cloister with an activity area to the north of the precinct. (Trench 25, one 5 x 5m hand dug test pit).
- This trench will assess the previously identified crop marks (1977) and reassess the current interpretation, recovering dating evidence and establishing potential phasing. (Trench 26, one 3 x 15m hand dug test pit).
- A strongly magnetic anomaly to the north east of the standing building has been interpreted as debris from the installation of the WWII building. This trench will ground truth these assumptions and investigate potential industrial activity during the monastic period. (Trench 27, one 10 x 2m hand dug test pit).
- One targeted trench to determine the position in the landscape of this 'hilltop' located in a prominent landscape position and of strategic importance at the 'head' of a navigable canal. (Trench 28, one 3 x 5m hand dug test pit)
- Auger survey of the huge rectangular depression currently interpreted as a fish pond but potentially a navigable dock, undertaking two transects with an Eijkelkamp hand-held gouge auger.

Interventions

All machine excavation will be carried out under constant archaeological supervision using a toothless bucket, and will include visually scanning spoil for artefacts. As soon as archaeological deposits or features are recognised, machining will be stopped and trenches excavated by hand. Each trench will be cleaned by hand where appropriate, planned and photographed prior to any hand-excavation. A

representative section, not less than 1m in width, of the entire deposit sequence encountered will be recorded.

If complex stratigraphy and/ or significant remains (e.g. structural remains, artefact scatters, remains clearly of a funerary nature etc.) are encountered, following consultation with HE, these may only be excavated to the minimum requirement in order to satisfy the project objective, to avoid compromising the integrity of remains that may be either (a) preserved in situ, or (b) excavated in detail during any next phase of research excavation. Interventions will focus on feature intersections in order to establish relative chronologies, and 'clean' sections to maximise retrieval of stratigraphically secure dating evidence and environmental samples.

Full written, drawn and photographic records will be made of each trench and test pit, even where no archaeological remains are identified. A plan at an appropriate scale (1:50 or 1:100) will be prepared, showing the areas investigated and their relation to more permanent topographical features, and the location of contexts observed and recorded in the course of the investigation. Plans, sections and elevations of archaeological features and deposits will be drawn as necessary at an appropriate scale (normally 1:20, or 1:10 for complex features). Drawings will be made in pencil on permanent drafting film.

Written records will be made using pro forma record sheets for each trench or test pit, following the DigVentures single context recording system. Digital photography will be used for all photography of significant features, finds, deposits and general site working. The photographic record will illustrate both the detail and the general context of the principal features and finds excavated, and the Site as a whole.

Augur Survey

Hand-augering will be used (Dutch or gouge auger as appropriate) to investigate a monastic water feature at the north of the site, with data points along 0.5m intervals on a north-west south-east and north-east south-west axis. A maximum of 25 new data points will be taken with location recorded with GPS. Descriptions of all sediments will be made, although it is important to note that in general augering with open-chambered augers is not recommended as suitable for the retrieval of uncontaminated samples for laboratory work, and especially for radiocarbon dating.

Palaeoenvironmental Sampling

All deposits with good palaeoenvironmental potential will be sampled; bulk samples shall be taken from the section as appropriate, under advisement from the project specialist. Context specific samples will be taken by the most appropriate means (kubiena tins, contiguous columns, incremental block, bulk etc.) for multi-disciplinary analysis. All aspects of the collection, selection, processing, assessment and reporting on the environmental archaeology component of the evaluation shall be undertaken in accordance with the principles set out in '*Environmental Archaeology: a guide to the theory and practice of methods, from sampling and recovery to post-excavation*' (English Heritage 2011) and with reference to the Association for Environmental Archaeology's '*Working Paper No. 2, Environmental Archaeology and Archaeological Evaluations*' (1995). Any intact floor surfaces (potentially encountered in Trenches 15, 16 and 19) will be sampled under the direction of a soil micromorphologist.

Bulk Sampling Strategy

Bulk samples will usually be 60 litres in size, depending on the likely density of macrofossils. Ten litre samples will only be used for the recovery of plant macrofossils from waterlogged contexts. Samples will be stored in ten litre plastic buckets with lids and handles. A waterproof label will be fixed to the bucket and will record site code, context number and sample number and number of buckets in comprising the sample. A duplicate label will be retained inside the bucket. Samples will be protected from temperatures below 5° and above 25° Celsius and will be prevented from either wetting or drying out.

- Bulk samples selected for processing shall be wet-sieved/floated and washed over a mesh size of 250 microns for the recovery of palaeobotanical and other organic remains, and refloated to maximise recovery;
- Non-organic residues shall be washed through a nest of sieves of 10mm, 5mm, 2mm, 1mm and 250 micron mesh to maximise finds recovery;
- Both organic and non-organic residues shall be dried under controlled conditions;
- The dried inorganic fractions shall be sorted for small finds or any non- buoyant palaeoenvironmental remains, and scanned with a magnet to pick up ferrous debris such as hammer scale;
- The dried organic fractions shall be sorted under a light microscope to identify the range of species or other material on a presence/absence basis, the degree of preservation of the bio-archaeological material and the rough proportions of different categories of material present;
- In the event that waterlogged deposits are identified and sampled, further processing shall be undertaken as appropriate and agreed, including paraffin flotation to recover insect remains. Any such remains shall be scanned to identify and assess their potential;
- Selection of other types of sample for processing and the methods to be used for processing and assessment shall be undertaken on the advice of the relevant specialist and shall be agreed with the Consultant before implementation.

Contexts that are well stratified and potentially datable are all of value, so a systematic approach to selecting samples for processing and assessment will be taken. These will be divided into three categories:

- Category A (always sampled): contexts where the composition of the sediments are likely to inform us of the use of a particular structure or feature or if the deposits are waterlogged. These will include: *in situ* occupation deposits and fills/layers associated with particular activities; hearths; destruction deposits; basal pit/slot trench fills; waterlogged deposits, cesspits or latrines.
- Category B (always sampled, though discretion should be exercised): deposits identified as containing material that could yield information regarding their origin or the process that produced them. These will include: dumps, middens, upper pit fills with evidence for charred material, shell, bone and industrial waste.
- Category C: deposits containing material which is not necessarily related to the function of the feature to which they are related, but which can

characterise deposits from different areas of the site. These will include: secondary and tertiary fills, postholes, levelling deposits, spreads etc.

Category A and B deposits should always be sampled, and Category C deposits sampled on a random basis (such as 1 in 5). These samples can help to characterise the background noise of a site, so as to highlight spatial or temporal trends and provide material that can be directly compared with those from Category A and B. All samples will be taken in large white 10 litre tubs, with labels placed inside with the deposit and attached to the bucket. All samples will be processed on site in a dedicated floatation and wet sieving area.

Zooarchaeology

If large deposits of bone or marine shell are encountered advice of the project Zooarchaeologist will be sought as regards further sampling. If large deposits of bone or marine shell are encountered the project Zooarchaeologist advice will be sought as regards further sampling. If articulated groups of bones are encountered (as found in previous excavations, for example Hooper 2010), they will be surveyed, recorded *in situ*, (including digital photography and planning), and then excavated to retain the group's integrity. Bones from each articulated limb will be bagged separately. If inhumations or cremation burials are encountered and excavated the surrounding soil will be sampled to retrieve any loose teeth or bone fragments.

All hand collected animal bones and bones from processed samples will be assessed, following English Heritage Environmental Archaeology guidelines (2002). If warranted by the size of the recovered assemblage, it will be assessed using two different quantification methods to determine the most suitable for full analysis, taking into account methods used in comparative assemblages. The assessment will not distinguish between certain taxonomic groups, for example equids (horse and donkey); full speciation should be carried out as part of any recommended analysis, using a vertebrate comparative collection. In addition to quantification of domestic species and occurrence of wild species, the assessment will consider the number of articulated bone groups, and the prevalence of aging, sexing and osteometric data available for full analysis, following standard published conventions. The assessment report will comment on the potential of the assemblage, particularly in the context of the excavation's research questions and current understanding of comparative assemblages. It will also provide recommendations for any necessary future analysis.

Human Osteoarchaeology

In the event of the discovery of human remains (inhumations, cremations and disarticulated fragments) they should be left *in situ*, covered and protected, until the English Heritage Inspector of Ancient Monuments has been informed. If a decision is taken to remove them, they will be fully recorded and excavated in compliance with the relevant Ministry of Justice Licence. The excavation of human remains will be carried out in accordance with the procedures detailed in the document *Excavation and post-excavation treatment of cremated and inhumed human remains* (McKinley and Roberts 1993, IFA Technical Paper 13). Significant assemblages of human remains will be subject to an assessment of DNA preservation to establish potential familial relationships.

Inhumations will be scanned with a metal detector prior to excavation, and the position of possible metallic grave goods will be noted. Wherever possible, each burial will be excavated within a single working day, particularly with regard to visible grave goods. To minimise unauthorised disturbance of human remains, partially

exposed remains will be covered overnight, though in such a way as to not draw undue attention, using loose excavated spoil.

Excavation of inhumations will be undertaken using a trowel, plasterer's leaf, plastic spoon and paintbrush as appropriate depending on the condition of the bones. When lifted the bones will be bagged by skeletal area (skull, axial, upper and lower limbs) with separate bags for the left and right side. A standard series of samples will be taken from each inhumation burial to ensure full recovery of any remaining osseous tissues or small artefacts. Once human remains are removed from inhumation graves, any soil residue remaining at the base of the grave will be retrieved for bulk processing.

Inhumations and cremations will be drawn at a scale of 1:10 and photographed prior to lifting. They will be recorded on Skeleton Record Sheets that form an integral part of the site *pro forma* recording system. The recording will include condition, completeness, articulation, orientation and posture.

Fragile objects found within graves will be lifted with appropriate care and handling to minimise breakage. This may include subsequent controlled excavation under laboratory conditions. A trained conservator will be employed on the site if necessary.

All cremation burials and cremation-related contexts will be excavated and sampled in quadrants to ascertain the distribution of any archaeological components within the fills, with division into spit also if appropriate. Cremation-related features other than burials may be subject to more detailed sub-divisions, the appropriate strategy being developed by a specialist as the size and nature of the remains becomes clear.

Undisturbed and slightly disturbed, but largely intact, urned cremation burials will be lifted *en masse* for excavation under laboratory conditions. The urns will be wrapped in crepe bandages and securely boxed for transportation. Where a vessel has been crushed, thereby disrupting any original internal deposition of the cremated remains, it will be lifted *en masse* after separate recovery of displaced sherds.

All cremation-related contexts will be subject to whole-earth recovery from the point at which any cremated bone or other pyre debris is observed. If deposits of placed human bone are encountered in features, these may be excavated in spits if appropriate. The soils from these features will be bulk sampled.

Finds

If The Finds will be treated in accordance with the relevant guidance given in the Chartered Institute for Archaeologists' *Standard and Guidance for Archaeological Evaluation* (2008), excepting where statements made below supersede them. All artefacts will be retained from excavated contexts, except features or deposits undoubtedly of modern date. In these circumstances sufficient artefacts will only be retained to elucidate the date and function of the feature or deposit.

All artefacts from the evaluation works will, as a minimum, be washed, marked, counted, weighed and identified. Any stratified ironwork will be X-rayed and stored in a stable condition along with other fragile and delicate material. The X-raying of objects and other conservation needs will be undertaken by appropriately qualified conservation specialists. Suitable material, primarily the pottery and non-ferrous metalwork, will be scanned to assess the date range of the assemblage.

Conservation

If Artefacts will be recovered as a matter of routine during the excavation. When retrieved from the ground finds will be kept in a finds tray or appropriate bags in accordance with *First Aid for Finds*. Where necessary, a conservator may be required to recover fragile finds from the ground depending upon circumstances.

After the completion of the fieldwork stage, a conservation assessment will be undertaken which will include the X-radiography of all the ironwork (after initial screening to separate obviously modern debris), and a selection of the non-ferrous finds (including all coins). A sample of slag may also be X-rayed to assist with identification and interpretation. Wet-packed material, including glass, bone and leather will be stabilised and consolidated to ensure their long-term preservation. All finds will be stored in optimum conditions in accordance with *First Aid for Finds* and *Guidelines for the Preparation of Excavation Archives for Long-Term Storage* (Walker, 1990).

The conservation assessment report will include statements on condition, stability and potential for further investigation (with conservation costs) for all material groups. The conservation report will be included in the updated project design prepared for the analysis stage of the project.

Scientific Dating

Although the relocation and dissolution of the Abbey is well dated historically, earlier phases on the Site remain unknown. The moated feature on the edge of the outer court is a particular area of interest, with the potential to establish the presence or otherwise of earlier activity. All structural timber considered suitable for dendrochronology will be assessed on site by the appropriate specialist and retained for analysis if required. Radiocarbon dating will be appropriate for clarifying and linking aspects of archaeological and environmental chronologies, and a strategy for this will be agreed following discussion with Historic England and the relevant specialists following assessment.

Synthesis and Data Integration

The results of the project will be integrated and synthesised with those from the previous investigations (see Section 1.4), and other relevant work within the region and further afield (see Section 1.5). This will include a literature review of other pertinent sites.

Appendix 4 – Risk Log

(To be updated weekly)

Risk number	1	2	3	4
Description	Inclement Weather - Prolonged periods of Rain	Exceptional Weather (Drying exposed Archaeology)	Absence of Core Team Member	Absence of Specialist Team Member
Probability	Medium	Medium-low	Low	Low
Impact	Delay programme of work	Slow progress	Delay programme of work	Delay programme of work
Countermeasures	Provision of Indoor Archiving Tasks + Flexible programme	Provision of Water Bowser + Spray	Reallocation of responsibilities or appointment of alternative	Reallocation of responsibilities or appointment of alternative
Estimated time/cost	3 Days	None	Minimal if done by adjustment	Minimal if done by adjustment
Owner	BW/LWW	BW/LWW	BW/LWW	BW/LWW
Risk number	5	6		
Description	Equipment Theft/Breakages	Serious Site Injury		
Probability	Medium	Medium		
Impact	Delay programme of work	Delay programme of work		
Countermeasures	Secure Lock-up for all digital equipment	Detailed H&S Risk Assessment + daily safety briefing		
Estimated time/cost	3 days	3 days		
Owner	BW/LWW/NS	BW/LWW/NS		